DOE/EIS–0225

Final Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components

Volume III–Comment Response

U.S. Department of Energy
1000 Independence Avenue
Washington, DC 20585

November 1996

THE GREEN PAGES

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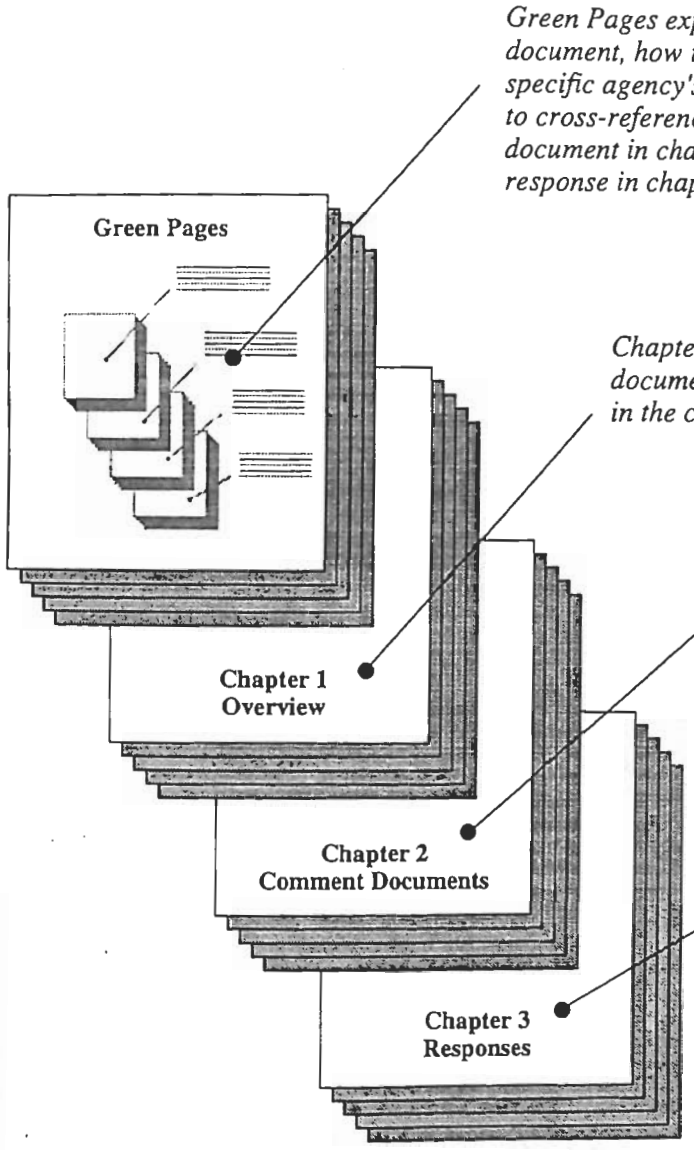
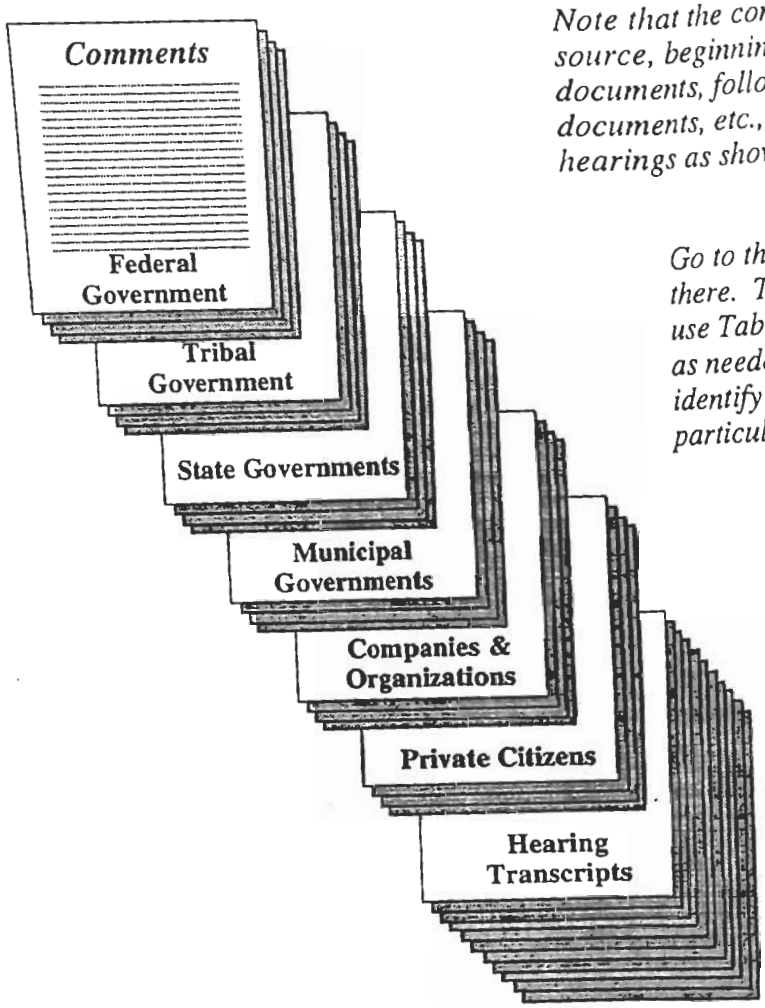
A Quick Reference Guide to Finding Information in This Document

How this Volume Is Structured



How to Find a Particular Document in Chapter 2



Note that the comment documents are organized by source, beginning with Federal Government documents, followed by Tribal Government documents, etc., down to the transcripts of public hearings as shown in the accompanying illustration.

Go to the next page and follow the instructions there. Those instructions will explain how to use Tables GP–1 and GP–2 of the Green Pages as needed to find the document of interest or to identify the specific comments made in a particular document.

How to Find a Particular Comment Response in Chapter 3

Chapter 3 contains responses to all comments. For convenience to the reader, each comment is printed verbatim, followed by the response.

To find a specific comment response in chapter 3, Turn to page GP-26 of the Green Pages and follow the instructions found there.

How to Find a Comment Document in Chapter 2

The documents appearing in chapter 2 are categorized and organized according to their origin. The sequencing of document categories is as follows:

- Letters from the Federal Government (FG)
- Letters from Tribal Governments, i.e., Indian Tribes or Intertribal Councils (TG)
- Letters from State governments (SG)
- Letters from Municipal governments, including counties (MG)
- Letters from private companies or organizations (CO)
- Letters, cards and other documents from private citizens (PC)
- Transcripts from public hearings, including the Technical Exchange (HT)

The parenthetical code after each of the above categories comprises the first two characters of document numbers for that category. For example, document numbers of letters from State governments begin with "SG" and are sequentially numbered within the category, e.g., SG-001, SG-002, etc.

Table GP–1 following this page lists all documents in each category. The name of each commentor (either an organization or a private citizen) is presented along with the comment number(s) and the document number(s) given by each commentor. If the commentor represented an agency or organization, the organization's name was used and the individual commentor's name(s) was presented in parenthesis. By reviewing this list, the commentor may go directly to a facsimile (in chapter 2) of a particular document or hearing transcript of interest.

For example, to locate the document from the Texas Parks and Wildlife Department, look under the listings for State Governments (SG) until the name of the agency is found. Note the accompanying document number, which in this example is "SG-009". Then turn through the documents of the "SG" section (in chapter 2) until you find the document number "SG-009" (i.e, the ninth document in the "SG" section) at the top of a document. That will be the facsimile copy of the document submitted by the Texas Parks and Wildlife Department. In reviewing that document, note the vertical bars that appear in the margin of the document. These show the portions of text representing the comments that are subsequently addressed in chapter 3. The code "SG-009/1" beside the first vertical bar identifies the first comment within document number SG-009. Also shown is an "RC" code (9.009) for the comment, which is used to later locate the responses to those comments in chapter 3.

Chapter 1 of this volume contains an overview of the comments and responses which are individually listed in chapter 3. Table GP–2 of these green pages provides a listing of the comment numbers for each document submitted. One may identify a document of interest in Table GP–1, and then using the document number for that document, find a listing in Table GP–2 of all comment numbers that appear in that document and the information necessary to locate the responses to those comments. Thus, without reading the source document, one could go directly from Table GP–2 to chapter 3 to see the specific comments and responses applicable to that document.

TABLE GP–1.—*Documents Received During Public Comment Period, April 5 - July 12, 1996*

COMMENTOR INFORMATION	DOCUMENT NUMBER
FEDERAL GOVERNMENT	
U.S. Senators Phil Gramm and Kay Bailey Hutchison: Remarks	FG-001
U.S. Representative Larry Combest (Jimmy Clark): Remarks	HT01-03
U.S. Representative Mac Thornberry: 22.002	FG-002, HT01-02
United States Environmental Protection Agency, Region 6 (Robert D. Lawrence): 01.029, 01.030, 05.026, 05.027, 06.060, 06.061, 06.062, 06.063, 06.064, 06.065, 06.066, 06.067, 13.021, 14.138, 14.139, 22.021	FG-003
TRIBAL GOVERNMENTS	
All Indian Pueblo Council, Pueblo Office of Environmental Protection (Tony Begay): 06.042	TG-001
Cheyenne-Arapaho Tribes (Gordon Yellowman): 10.004, 10.005, 10.006, 10.007, 10.008, 10.009	HT17
STATE GOVERNMENTS	
State of Texas, Governor George W. Bush: Remarks	SG-001
State of Texas, Office of the Governor (Roger Mulder): 01.040, 02.028, 02.029, 05.040, 05.041, 05.042, 05.043, 05.044, 05.045, 05.046, 05.047, 05.048, 05.049, 05.050, 05.051, 05.052, 05.053, 05.054, 05.055, 05.056, 05.057, 05.058, 05.059, 06.095, 06.096, 06.097, 06.098, 06.099, 06.100, 06.101, 06.102, 06.103, 06.104, 06.105, 06.106, 06.107, 06.108, 06.109, 06.110, 06.111, 06.112, 06.113, 06.114, 06.115, 06.116, 06.117, 06.118, 06.119, 06.120, 07.024, 07.025, 07.026, 07.027, 07.028, 07.029, 07.030, 07.031, 07.032, 07.033, 07.034, 07.035, 07.036, 07.037, 07.038, 07.039, 07.040, 07.041, 09.018, 09.019, 12.030, 12.031, 13.030, 14.151, 14.152, 14.153, 14.154, 14.155, 14.156, 14.157, 14.158, 14.159, 14.160, 14.161, 14.162, 14.163, 15.059, 15.060, 15.088, 15.089, 15.090, 15.091, 15.092, 15.093, 15.094, 15.095, 15.096, 15.097, 15.098, 15.099, 15.100, 15.101, 15.102, 15.103, 15.104, 15.105, 15.106, 15.107, 15.108, 15.109, 15.110, 15.111, 15.112, 15.113, 15.114, 22.024, 22.025, 22.026, 22.027	SG-003, HT15
State of Texas, Senator Tom Haywood: Remarks	SG-004
State of Texas, Senator Teel Bivins: 02.004, 23.014	HT01-04
State of Texas, Representative David Swinford: 02.003	HT01-05
State of Texas, House of Representatives, Committee on Environmental Regulation (Warren Chisum): Remarks	SG-005
State of Texas, Office of Attorney General (Dan Morales): Remarks	SG-006

TABLE GP–1.—*Documents Received During Public Comment Period, April 5 - July 12, 1996-Continued*

COMMENTOR INFORMATION	DOCUMENT NUMBER
STATE GOVERNMENTS (CONTINUED)	
State of Texas Department of Health, Radiation Control (Joe Martillotti): 11.039, 14.092, 15.056, 15.057, 15.058, 15.065, 16.029	HT15, HT16, HT17
State of Texas Historical Commission, April 22, 1996 (James E. Bruseth, Timothy K. Pertulla): Remarks	SG-007
State of Texas Historical Commission, May 1, 1996 (James E. Bruseth, Timothy K. Pertulla): Remarks	SG-008
State of Texas Natural Resources Conservation Commission (Dan Pearson): 06.094, 22.022	SG-002
State of Texas Natural Resources Conservation Commission (Joe Panketh): 07.004, 07.005, 07.006, 07.007, 07.008, 07.009, 07.010, 07.012	HT05, HT16
State of Texas Natural Resources Conservation Commission (Geof Meyer): 06.049, 06.050, 06.051, 13.011, 14.093, 14.094, 14.095, 14.096, 14.097, 22.018	HT15, HT16
State of Texas Parks and Wildlife Department (Robert W. Spain): 09.009, 09.010	SG-009
State of Texas Bureau of Economic Geology, University of Texas at Austin (Thomas Gustavson): 06.048	HT16
State of New Mexico Environment Department (Gedi Cibas): 02.026, 13.019, 13.020, 14.134, 14.135, 14.136, 14.137, 15.077, 16.031, 17.013	SG-012
State of Nevada, Department of Administration (Julie Butler): 02.030, 02.031, 04.016, 11.049, 16.059, 21.009	SG-010
State of Tennessee, Department of Environment and Conservation (Earl C. Leming): 16.036	SG-011
MUNICIPAL GOVERNMENTS	
City of Amarillo, Mayor Ken Seliger: 15.087	MG-001, HT01-06
City of Amarillo, City Commissioner Diane Bosch: Remarks	HT01-07
Clark County, Department of Comprehensive Planning (Richard E. Holmes): 01.031, 02.027, 16.032, 16.033, 16.034, 16.035, 17.014, 21.007, 23.050	MG-002
Clark County, Department of Comprehensive Planning, Nuclear Waste Division (Russell Dibartolo): 11.006, 16.013, 16.014, 17.003, 23.007, 23.008, 23.009	HT11
City of Richland, (Pam Brown): Remarks	HT14

TABLE GP–1.—*Documents Received During Public Comment Period, April 5 - July 12, 1996-Continued*

COMMENTOR INFORMATION	DOCUMENT NUMBER
COMPANIES/ORGANIZATIONS	
Letter Campaign 1: Remarks	CO-001
Amarillo Chamber of Commerce (Steve Ahlenius): 14.112, 15.073, 15.074	HT15, HT16
Amarillo Economic Development Corporation (Bob Juba): 04.008, 11.022, 11.023, 11.024, 11.025, 11.028, 11.029, 11.030, 11.031, 11.032, 11.033, 11.034, 11.035, 11.036, 11.037, 11.038, 11.040, 15.062, 15.063, 15.064, 15.076, 17.012, 21.005, 23.042	CO-002, HT08, HT15, HT17
Amarillo Economic Development Corporation (Vance Reed): 11.009, 11.010	HT01-08
Hanford Advisory Board (Walt Blair): 01.005, 02.002, 16.015, 23.010	HT14
Hanford Advisory Board (Merilyn Reeves): 13.009, 14.080, 16.026, 22.013, 23.035	CO-003
ORISE (Robert Menard): Remarks	CO-004
Panhandle Area Neighbors And Landowners (Doris and Philip Smith): 01.043, 04.017, 06.126, 06.127, 11.050, 14.179, 14.180, 14.181, 14.182, 14.183, 14.184, 14.185, 14.186, 14.187, 14.188, 14.189, 14.190, 14.191, 14.192, 17.024, 17.025, 17.026, 23.053	CO-005
Panhandle Area Neighbors And Landowners (Doris Berg Smith): 06.057, 11.041, 11.042, 11.043, 11.044, 13.004, 14.107, 14.108, 14.109, 14.110, 14.111, 14.123, 14.124, 14.125, 14.126, 14.127, 14.164, 14.165, 14.166, 14.167, 14.168, 14.169, 14.170, 14.171, 14.172, 14.173, 14.174, 14.175, 14.176, 14.177, 14.178, 15.070, 15.071, 15.072, 17.020, 17.021, 17.022, 17.023, 23.022, 23.046	HT02-09, HT15, HT16, HT17
Panhandle 2000 (Jerry Johnson, Wales Madden): 02.018, 15.044, 16.028	CO-006
Pantex Plant Citizens Advisory Board (final version): 04.002, 04.013, 05.001, 05.002, 05.003, 05.004, 05.005, 05.006, 05.007, 05.008, 05.009, 05.010, 05.011, 05.012, 05.013, 05.014, 05.015, 05.016, 05.017, 05.018, 05.019, 05.020, 06.008, 06.009, 06.010, 06.011, 06.012, 06.013, 06.014, 06.015, 06.016, 06.017, 06.018, 06.019, 06.020, 06.022, 06.023, 06.024, 06.025, 06.026, 06.027, 06.028, 06.029, 06.030, 06.031, 06.032, 06.033, 06.034, 06.035, 06.036, 06.088, 06.089, 06.090, 06.091, 07.021, 07.022, 07.042, 09.001, 09.002, 09.003, 09.004, 09.005, 09.006, 09.007, 09.008, 10.001, 11.013, 11.014, 11.015, 11.016, 11.017, 11.018, 14.011, 14.012, 14.013, 14.014, 14.015, 14.016, 14.017, 14.018, 14.019, 14.020, 14.021, 14.022, 14.023, 14.024, 14.025, 14.026, 14.027, 14.028, 14.029, 14.030, 14.031, 14.032, 14.033, 14.034, 14.035, 14.036, 15.025, 15.026, 15.027, 15.028, 15.029, 15.030, 15.031, 15.032, 15.033, 15.034, 15.035, 15.036, 15.037, 15.038, 15.039, 15.040, 15.085, 15.086, 16.043, 16.044, 16.045, 16.046, 16.047, 16.048, 16.049, 16.050, 16.051, 16.052, 16.053, 16.054, 16.055, 16.056, 16.057, 16.058, 17.004, 17.005, 17.016, 17.017, 21.008, 21.010	CO-008
Peace Action (Jan Sanders): 01.042, 06.124	CO-007, HT01-01, HT02-11

TABLE GP–1.—*Documents Received During Public Comment Period, April 5 - July 12, 1996-Continued*

COMMENTOR INFORMATION	DOCUMENT NUMBER
COMPANIES/ORGANIZATIONS (CONTINUED)	
Peace Farm (Mavis Belisle): 01.022, 06.054, 23.043	HT02-12, HT16, HT17
Serious Texans Against Nuclear Dumping (Beverly Gattis): 01.026, 02.019, 07.011, 12.019, 12.020, 12.021, 13.012, 13.013, 13.014, 13.015, 14.091, 14.103, 14.104, 14.105, 14.106, 14.120, 14.121, 14.122, 15.066, 15.067, 15.068, 15.069, 21.006, 22.017, 22.025, 23.011, 23.012, 23.013, 23.040, 23.044, 23.045, 24.003	SG-003, HT02-01, HT15, HT16, HT17
Southwest Information and Research Center (Don Hancock): 01.021, 01.027, 01.028, 02.009, 02.020, 03.007, 12.013, 12.014, 12.015, 13.006, 13.018, 14.113, 14.066, 14.068, 23.018, 23.019, 23.021, 23.041, 23.047, 23.048, 24.002	HT02-15, HT06, HT13, HT15, HT16, HT17
Southwestern Public Service Company (William T. Crenshaw): 11.026, 21.004, 22.014, 23.036, 23.037	CO-009
Texas A&M University (Jim Rock): 12.018, 15.045, 15.046, 15.049, 15.050, 15.054, 15.055, 15.061, 15.075, 15.078	HT15, HT16
Tri City Industrial Development Council (Sam Volpentest): 02.013, 16.027, 21.003	CO-010
University of Texas (Mike McNerney): 15.047, 15.048, 15.051, 15.052, 15.053	HT15
PRIVATE CITIZENS	
Letter Campaign 2: 01.032, 07.013, 14.142	PC-031
Post Card Campaign: Remarks	PC-032
Clyde Alley: 06.128, 11.048, 17.018	PC-008
Robert Anderson: 23.039	PC-022
Jonell Archer: Remarks	HT16
Robert L. Bass: Remarks	PC-002
David R. Boyle: Remarks	PC-035
Bradfoot: 13.017	HT16
Vernon Brechin: 01.020, 02.014, 02.015, 02.016, 02.017, 03.004, 03.005, 04.006, 04.007, 06.045, 14.088, 14.089, 14.090, 15.043, 22.015, 22.016	PC-024
Paula Breeding: 16.016	HT02-16
Horace Bright: Remarks	PC-007
Rita Calvert: Remarks	HT02-14

TABLE GP–1.—*Documents Received During Public Comment Period, April 5 - July 12, 1996-Continued*

COMMENTOR INFORMATION	DOCUMENT NUMBER
PRIVATE CITIZENS (CONTINUED)	
Addis Charless, Jr.: 06.040, 06.041, 14.081	PC-011
Dorothy Cluskins: 12.016, 12.017, 14.140, 14.141	HT16
Louise Daniel: 02.032, 05.060, 06.125, 13.031	PC-030, HT02-23
Danny Detten: Remarks	HT02-19
Allen Finegold: 01.023, 02.021, 14.098, 14.099, 14.100, 14.101, 14.102, 22.019	HT15, HT17
Rick Geddes: 01.019, 14.082	PC-006
Ross Gideon: 06.055	HT17
Richard S. Goodoll: Remarks	PC-001
Sam Gore: 04.003	HT12
Anna Marie Harkey: Remarks	HT02-13
Jewett (Gene) Huff: Remarks	HT02-20, HT06
Marcia A. Keevan: 05.022, 05.023, 05.032, 05.033, 05.034, 05.035, 05.036, 05.037, 05.038, 05.039, 06.021, 06.037, 06.123, 07.002, 07.003, 13.005, 23.023	PC-016, HT02-04 HT17
Matt Kennedy: 14.002	PC-009
Dan Kerlinsky: 14.049	HT13
Dennis Larson: 01.037, 06.093	PC-029
Bill (Last Name Illegible): 11.020	PC-013
W. F. Lawless: Remarks	PC-015
Susan Lee: 02.022, 14.114, 14.115, 14.116, 14.117, 14.118	HT16, HT17
Al Lodge: Remarks	HT12
David S. Losey: Remarks	PC-020
Harriet Martin: 07.001	HT02-05
Mason & Hanger Company Employees: 06.043, 06.044, 09.011, 10.003, 11.027, 12.010, 12.011, 12.012, 14.083, 14.084, 14.085, 14.086, 14.087	PC-034
Frances Keller Matthews: 06.092	PC-026

TABLE GP–1.—*Documents Received During Public Comment Period, April 5 - July 12, 1996-Continued*

COMMENTOR INFORMATION	DOCUMENT NUMBER
PRIVATE CITIZENS (CONTINUED)	
W. Penland Mayson, Jr.: Remarks	PC-014
David L. Michaels: Remarks	PC-003
Mohammed: Remarks	HT12
Jim Murphy: Remarks	HT02-06
Trish Neusch: 01.044, 02.023, 04.009, 04.018, 05.061, 08.004, 10.013, 11.051, 13.032, 14.119	PC-033, HT02-10, HT16, HT17
Chris Noah: 04.004	HT12
Bill O'Brien: Remarks	HT02-18
Jeri & Jim Osborne: 02.025, 06.058, 06.059, 08.002, 11.045, 11.046, 14.128, 14.129, 14.130, 14.131, 14.132, 14.133, 16.030, 22.020, 23.049	PC-017
Jeri Osborne: 11.008, 14.007	HT02-02
Jim Osborne: Remarks	HT02-03
Mike Osborne: 15.003, 15.004, 15.005, 15.006, 15.007, 15.008, 15.009, 15.010, 15.011, 15.012, 15.013, 15.014, 15.015, 15.016, 15.017, 15.018, 15.019, 15.020, 15.021, 15.022, 15.023, 15.024	PC-021
Jim Parham: Remarks	HT07
Tom Patterson: Remarks	HT02-17
Dana Porter : 03.006, 06.046, 06.047, 08.001, 23.038	PC-023
Anne Reid: 23.020	HT02-21
Wayne Rodgers: Remarks	HT12
Gordon Rodgers: Remarks	HT14
William Seewald: 01.024, 01.025, 02.001, 04.001, 06.056, 13.016, 23.001, 23.002	HT02-08, HT16 HT17
Mary Shennum: 02.024, 05.024, 05.025, 06.068	HT17
Arthur Smith: Remarks	HT12
Jim Dee Smith: 13.010, 14.001	PC-018, PC-019
Tamara Snodgrass: 23.003	HT02-07

TABLE GP–1.—*Documents Received During Public Comment Period, April 5 - July 12, 1996-Continued*

COMMENTOR INFORMATION	DOCUMENT NUMBER
PRIVATE CITIZENS (CONTINUED)	
Elizabeth Sproul: Remarks	PC-004
Joe Stang: Remarks	HT05
L. B. Thomas: 01.033, 01.034, 01.035, 01.036, 03.008, 03.009, 03.010, 03.011, 03.012, 03.013, 03.014, 04.010, 04.011, 04.012, 05.028, 05.029, 05.030, 05.031, 06.069, 06.070, 06.071, 06.072, 06.073, 06.074, 06.075, 06.076, 06.077, 06.078, 06.079, 06.080, 06.081, 06.082, 06.083, 06.084, 06.085, 06.086, 06.087, 07.014, 07.015, 07.016, 07.017, 07.018, 07.019, 07.020, 08.003, 09.012, 09.013, 09.014, 09.015, 09.016, 09.017, 11.047, 12.022, 12.023, 12.024, 12.025, 12.026, 12.027, 12.028, 12.029, 13.022, 13.023, 13.024, 13.025, 13.026, 13.027, 13.028, 14.143, 14.144, 14.145, 14.146, 14.147, 14.148, 14.149, 14.150, 14.193, 15.079, 15.080, 15.081, 15.082, 15.083, 15.084, 16.037, 16.038, 16.039, 16.040, 16.041, 16.042, 17.015, 22.028, 22.029, 22.030, 22.031, 23.051, 23.052, 24.004, 24.005	PC-025
L. O'Brien Thompson: 24.001	HT02-22
David Tracy: 01.041, 03.015, 04.015, 06.121, 06.122, 09.020, 10.011, 10.012, 15.115, 16.060, 17.019	PC-028
Priscilla Tracy: 01.038, 01.039, 04.014, 07.023, 10.010, 13.029, 22.023	PC-027
Unidentified Commenter: 17.027	PC-010
Unidentified Commenter: 11.021	PC-012
Unidentified Commenters (Amarillo Public Hearings): 01.006, 02.005, 11.001, 11.002, 11.003, 11.004, 11.011, 11.012, 14.008, 14.009, 14.010, 15.001, 15.002, 17.001, 17.002, 21.001, 23.016, 23.015, 23.017	HT03, HT05, HT07, HT08, HT10
Unidentified Commenters (North Las Vegas Public Hearings): 01.001, 01.002, 01.003, 01.004, 06.001, 06.002, 11.005, 13.001, 13.002, 13.003, 14.003, 14.004, 14.005, 14.006, 15.008, 16.001, 16.002, 16.003, 16.004, 16.005, 16.006, 16.007, 16.008, 16.009, 16.010, 16.011, 16.012, 22.001, 23.004, 23.005, 23.006	HT11
Unidentified Commenters (North Augusta Public Hearings): 01.018, 03.003, 04.005, 12.005, 12.006, 12.007, 12.008, 12.009, 13.008, 14.069, 14.070, 14.071, 14.072, 14.073, 14.074, 14.075, 14.076, 14.077, 14.078, 14.079, 15.042, 17.008, 17.009, 17.010, 17.011, 18.001, 22.011, 22.012, 23.028, 23.029, 23.030, 23.031, 23.032, 23.033, 23.034	HT12

TABLE GP–1.—*Documents Received During Public Comment Period, April 5 - July 12, 1996-Continued*

COMMENTOR INFORMATION	DOCUMENT NUMBER
PRIVATE CITIZENS (CONTINUED)	
Unidentified Commenters (Albuquerque Public Hearings): 01.007, 01.008, 01.009, 01.010, 01.011, 01.012, 01.013, 01.014, 01.015, 01.016, 01.017, 02.006, 02.007, 02.008, 02.010, 02.011, 02.012, 03.001, 03.002, 05.021, 06.038, 06.039, 10.002, 11.019, 12.001, 12.002, 12.003, 12.004, 13.007, 14.037, 14.038, 14.039, 14.040, 14.041, 14.042, 14.043, 14.044, 14.045, 14.046, 14.047, 14.048, 14.050, 14.051, 14.052, 14.053, 14.054, 14.055, 14.056, 14.057, 14.058, 14.059, 14.060, 14.061, 14.062, 14.063, 14.064, 14.065, 14.067, 15.041, 16.017, 16.018, 16.019, 16.020, 16.021, 16.022, 16.023, 16.024, 16.025, 17.006, 17.007, 22.003, 22.004, 22.005, 22.006, 22.007, 22.008, 22.009, 22.010, 23.024, 23.025, 23.026, 23.027	HT13
Unidentified Commenters (Richland Public Hearings): 11.007, 21.002	HT14
Larry Whicker: Remarks	HT17
Rodney Wilcox: Remarks	PC-005
C E Williams: 06.003, 06.004, 06.005, 06.006, 06.007, 06.052, 06.053, 23.041	HT05 HT16

TABLE GP–2.—*Comment Document Locator*

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
FG-001	No Comments		
FG-002	No Comments		
FG-003	1	01	029
	2	13	021
	3	01	030
	4	06	060
	5	06	061
	6	06	062
	7	06	063
	8	06	064
	9	06	065
	10	05	026
	11	06	66
	12	05	027
	13	14	138
	14	06	067
	15	22	021
	16	14	139
TG-001	1	06	042
SG-001	No Comments		
SG-002	1	06	094
	2	22	022
SG-003	1	14	151
	2	14	152
	3	12	030
	4	12	031
	5	14	153
	6	14	154
	7	09	018
	8	14	155
	9	14	156
	10	14	157
	11	02	028
	12	02	029
	13	14	158
	14	14	159
	15	14	160
	16	14	161

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
SG-003 (cont'd)	17	14	162
	18	06	095
	19	22	024
	20	22	025
	21	06	096
	22	22	026
	23	01	040
	24	06	097
	25	05	040
	26	06	098
	27	09	019
	28	22	027
	29	06	099
	30	06	100
	31	06	101
	32	06	102
	33	06	103
	34	06	104
	35	06	105
	36	06	106
	37	06	107
	38	13	030
	39	14	163
	40	06	108
	41	06	109
	42	06	110
	43	06	111
	44	07	024
	45	07	025
	46	07	026
	47	07	027
	48	07	028
	49	07	029
	50	07	030
	51	07	031
	52	07	032
	53	07	033
	54	07	034

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
SG-003 (cont'd)	55	07	035
	56	07	036
	57	07	037
	58	07	038
	59	07	039
	60	07	040
	61	07	041
	62	06	112
	63	06	113
	64	06	114
	65	05	041
	66	06	115
	67	05	042
	68	05	043
	69	05	044
	70	05	045
	71	05	046
	72	05	047
	73	05	048
	74	05	049
	75	05	050
	76	05	051
	77	05	052
	78	05	053
	79	05	054
	80	05	055
	81	05	056
	82	05	057
	83	05	058
	84	05	059
	85	06	116
	86	06	117
	87	06	118
	88	06	119
	89	06	120
	90	15	088
	91	15	089
	92	15	090
	93	15	091
	94	15	092
	95	15	093
	96	15	094
	97	15	095
	98	15	096
	99	15	097
	100	15	098
	101	15	099
	102	15	100
	103	15	101
	104	15	102
	105	15	103
	106	15	104
	107	15	105
	108	15	106
	109	15	107
	110	15	108
	111	15	109
	112	15	110
	113	15	111
	114	15	112
	115	15	113
	116	15	114
SG-004	No Comments		
SG-005	No Comments		
SG-006	No Comments		
SG-007	No Comments		
SG-008	No Comments		
SG-009	1	09	009
	2	09	010
SG-010	1	02	030
	2	21	009
	3	04	016
	4	02	031
	5	16	059
	6	11	049
SG-011	1	16	036

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
SG-012	1	13	019
	2	13	020
	3	15	077
	4	14	134
	5	14	135
	6	14	136
	7	17	013
	8	14	137
	9	02	026
	10	16	031
MG-001	1	15	087
MG-002	1	23	050
	2	21	007
	3	01	031
	4	02	027
	5	16	032
	6	16	033
	7	17	014
	8	16	034
	9	16	035
CO-001	No Comments		
CO-002	1	11	022
	2	11	023
	3	11	024
	4	11	025
	5	17	012
CO-003	1	13	009
	2	22	013
	3	14	080
	4	23	035
	5	16	026
CO-004	No Comments		
CO-005	1	11	050
	2	04	017
	3	23	053
	4	06	126
	5	06	127
	6	14	179
	7	14	180

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
CO-005 (cont'd)	8	14	181
	9	14	182
	10	01	043
	11	14	183
	12	14	184
	13	14	185
	14	14	186
	15	14	187
	16	14	188
	17	14	189
	18	14	190
	19	14	191
	20	14	192
	21	17	024
	22	17	025
	23	17	026
CO-006	1	15	044
	2	02	018
	3	16	028
CO-007	1	06	124
	2	01	042
CO-008	1	15	02
	2	15	02
	3	15	02
	4	15	02
	5	15	0
	6	15	0
	7	15	0
	8	15	0
	9	15	0
	10	15	
	11	15	
	12	15	
	13	15	
	14	15	
	15	15	
	16	15	
	17	15	
	18	15	

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
CO-008 (cont'd)	19	09	001
	20	09	002
	21	09	003
	22	09	004
	23	09	005
	24	09	006
	25	09	007
	26	09	008
	27	10	001
	28	17	004
	29	17	005
	30	17	016
	31	17	017
	32	05	001
	33	05	002
	34	05	003
	35	05	004
	36	04	002
	37	04	013
	38	14	011
	39	14	012
	40	14	013
	41	14	014
	42	14	015
	43	14	016
	44	14	017
	45	14	018
	46	14	019
	47	14	020
	48	14	021
	49	14	022
	50	14	023
	51	14	024
	52	14	025
	53	14	026
	54	14	027
	55	14	028
	56	14	029
	57	14	030
	58	14	031
	59	14	032
	60	14	033
	61	14	034
	62	06	008
	63	14	035
	64	14	036
	65	11	013
	66	11	014
	67	11	015
	68	11	016
	69	11	017
	70	11	018
	71	05	005
	72	05	006
	73	05	007
	74	05	008
	75	05	009
	76	05	010
	77	05	011
	78	05	012
	79	05	013
	80	05	014
	81	05	015
	82	05	016
	83	05	017
	84	05	018
	85	05	019
	86	05	020
	87	06	009
	88	06	010
	89	06	011
	90	06	012
	91	06	013
	92	06	014
	93	06	015
	94	06	016

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
CO-008 (cont'd)	95	06	017
	96	06	018
	97	06	019
	98	06	020
	99	06	022
	100	06	023
	101	06	024
	102	06	025
	103	06	026
	104	06	027
	105	06	028
	106	06	029
	107	06	030
	108	06	031
	109	06	032
	110	06	033
	111	06	034
	112	06	035
	113	06	036
	114	06	088
	115	06	089
	116	06	090
	117	06	091
	118	16	043
	119	16	044
	120	16	045
	121	16	046
	122	16	047
	123	16	048
	124	16	049
	125	16	050
	126	16	051
	127	16	052
	128	16	053
	129	16	054
	130	16	055
	131	16	056
	132	16	057
	133	16	058
	134	21	070
	135	21	071
	136	07	042
	137	07	021
	138	07	020
CO-009	1	22	01
	2	21	02
	3	23	03
	4	23	05
	5	11	06
CO-010	1	02	04
	2	16	07
	3	21	09
PC-001	No Comments		
PC-002	No Comments		
PC-003	No Comments		
PC-004	No Comments		
PC-005	No Comments		
PC-006	1	01	08
	2	14	08
PC-007	No Comments		
PC-008	1	11	10
	2	17	10
	3	06	10
PC-009	1	14	10
PC-010	1	17	10
PC-011	1	06	10
	2	14	10
	3	06	10
PC-012	1	11	10
PC-013	1	11	10
PC-014	No Comments		
PC-015	No Comments		
PC-016	1	05	10
	2	05	10
	3	05	10
	4	05	10

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
PC-016 (cont'd)	5	05	036
	6	05	037
	7	05	038
	8	05	039
PC-017	1	11	045
	2	23	049
	3	11	046
	4	14	128
	5	14	129
	6	08	002
	7	22	020
	8	14	130
	9	14	131
	10	06	058
	11	06	059
	12	02	025
	13	16	030
	14	14	132
	15	14	133
PC-018	1	14	001
PC-019	1	13	010
PC-020	No Comments		
PC-021	1	15	003
	2	15	004
	3	15	005
	4	15	006
	5	15	007
	6	15	008
	7	15	009
	8	15	010
	9	15	011
	10	15	012
	11	15	013
	12	15	014
	13	15	015
	14	15	016
	15	15	017
PC-021 (cont'd)	16	15	018
	17	15	019
	18	15	020
	19	15	021
	20	15	022
	21	15	023
	22	15	024
PC-022	1	23	039
PC-023	1	23	038
	2	06	046
	3	06	047
	4	08	001
	5	03	006
PC-024	1	22	015
	2	22	016
	3	01	020
	4	14	088
	5	02	014
	6	02	015
	7	02	016
	8	04	006
	9	03	004
	10	03	005
	11	02	017
	12	15	043
	13	14	089
	14	06	045
	15	14	090
	16	04	007
PC-025	1	23	051
	2	23	052
	3	03	008
	4	13	022
	5	22	028
	6	22	029
	7	01	033
	8	01	034

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
PC-025 (cont'd)	9	01	035
	10	16	037
	11	01	036
	12	03	009
	13	03	010
	14	03	011
	15	03	012
	16	03	013
	17	03	014
	18	04	010
	19	04	011
	20	14	193
	21	05	028
	22	05	029
	23	05	030
	24	06	069
	25	06	070
	26	06	071
	27	06	072
	28	06	073
	29	06	074
	30	06	075
	31	06	076
	32	06	077
	33	06	078
	34	06	079
	35	06	080
	36	06	081
	37	06	082
	38	06	083
	39	06	084
	40	06	085
	41	06	086
	42	07	014
	43	07	015
	44	07	016
	45	07	017
	46	07	018

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
PC-025 (cont'd)	47	07	019
	48	08	009
	49	09	012
	50	09	013
	51	09	014
	52	09	015
	53	09	016
	54	11	04
	55	12	00
	56	12	00
	57	12	00
	58	12	00
	59	12	00
	60	12	00
	61	12	00
	62	12	00
	63	13	00
	64	13	0
	65	13	
	66	22	0
	67	22	0
	68	13	0
	69	13	0
	70	13	0
	71	14	
	72	14	
	73	14	
	74	14	
	75	14	
	76	14	
	77	14	
	78	15	
	79	15	
	80	15	
	81	15	
	82	15	
	83	15	
	84	16	

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
PC-025 (cont'd)	85	16	039
	86	16	040
	87	17	015
	88	24	004
	89	24	005
	90	04	012
	91	05	031
	92	06	087
	93	07	020
	94	09	017
	95	14	150
	96	16	041
	97	16	042
PC-026	1	06	092
PC-027	1	01	038
	2	22	023
	3	01	039
	4	13	029
	5	04	014
	6	10	010
	7	07	023
PC-028	1	01	041
	2	06	121
	3	04	015
	4	06	122
	5	10	011
	6	17	019
	7	16	060
	8	09	020
	9	10	012
	10	03	015
	11	15	115
PC-029	1	06	093
	2	01	037
PC-030	1	02	032
	2	13	031
	3	06	125
	4	05	060

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
PC-031	1	01	032
	2	07	013
	3	14	142
PC-032	No Comments		
PC-033	1	13	032
	2	08	004
	3	01	044
	4	05	061
	5	11	051
	6	04	018
	7	10	013
PC-034	1/2	12	010
	3	12	011
	4	12	012
	5	14	083
	6	14	084
	7	14	085
	8	11	027
	9	14	086
	10	14	087
	11	09	011
	12	06	043
	13	06	044
	14	10	003
PC-035	No Comments		
HT01-01	No Comments		
HT01-02	1	22	002
HT01-03	No Comments		
HT01-04	1	23	014
	2	02	004
HT01-05	1	02	003
HT01-06	No Comments		
HT01-07	No Comments		
HT01-08	1	11	010
	2	11	009
HT02-01	1	23	013
	2	23	011
	3	23	012

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
HT02-02	1	11	008
	2	14	007
HT02-03	No Comments		
HT02-04	1	23	023
	2	06	037
	3	13	005
	4	06	021
	5	07	002
	6	07	003
HT02-05	1	07	001
HT02-06	No Comments		
HT02-07	1	23	003
HT02-08	1	23	001
	2	23	002
	3	04	001
	4	02	001
HT02-09	1	23	022
	2	13	004
HT02-10	No Comments		
HT02-11	No Comments		
HT02-12	No Comments		
HT02-13	No Comments		
HT02-14	No Comments		
HT02-15	1	23	018
	2	23	019
HT02-16	1	16	016
HT02-17	No Comments		
HT02-18	No Comments		
HT02-19	No Comments		
HT02-20	No Comments		
HT02-21	1	23	020
HT02-22	1	24	001
HT02-23	No Comments		
HT03	1	11	001
HT04	No Comments		
HT05	1	06	003
	2	06	004
	3	06	005
HT05 (cont'd)	4	06	006
	5	06	007
	6	15	001
	7	15	002
	8	01	006
	9	23	016
	10	23	017
	11	14	008
	12	14	009
	13	14	010
HT06	1	23	021
HT07	1	02	005
	2	11	011
	3	11	012
	4	23	015
HT08	1	11	004
	2	17	001
	3	17	002
HT09	No Comments		
HT10	1	21	0
	2	11	0
	3	11	0
HT11	1	14	0
	2	14	0
	3	14	0
	4	14	
	5	16	
	6	16	
	7	16	
	8	16	
	9	23	
	10	23	
	11	23	
	12	16	
	13	16	
	14	16	
	15	16	
	16	01	

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
HT11 (cont'd)	17	01	002
	18	01	003
	19	11	005
	20	16	009
	21	16	010
	22	13	001
	23	13	002
	24	13	003
	25	22	001
	26	06	001
	27	06	002
	28	01	004
	29	16	011
	30	16	012
	31	16	013
	32	11	006
	33	17	003
	34	23	007
	35	23	008
	36	16	014
	37	23	009
HT12	1	23	028
	2	18	001
	3	04	003
	4	17	008
	5	04	004
	6	14	069
	7	14	070
	8	14	071
	9	17	009
	10	22	011
	11	22	012
	12	23	029
	13	23	030
	14	23	031
	15	12	005
	16	14	072
	17	12	006

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
HT12 (cont'd)	18	12	007
	19	12	008
	20	03	003
	21	14	073
	22	14	074
	23	23	032
	24	17	010
	25	14	075
	26	01	018
	27	12	009
	28	23	033
	29	14	076
	30	17	011
	31	15	042
	32	23	034
	33	14	077
	34	14	078
	35	14	079
	36	13	008
	37	04	005
HT13	1/2	01	007
	3	03	001
	4	05	021
	5	03	002
	6	01	008
	7	06	038
	8	06	039
	9	22	003
	10	22	004
	11	22	005
	12	22	006
	13	22	007
	14	23	024
	15	02	006
	16	16	017
	17	11	019
	18	14	067
	19	12	001

TABLE GP-2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
HT13 (cont'd)	20	12	002
	21	12	003
	22	02	007
	23	01	009
	24	01	010
	25	01	011
	26	01	012
	27	02	008
	28	22	008
	29	02	009
	30	14	068
	31	01	013
	32	17	006
	33	17	007
	34	23	025
	35	22	009
	36	22	010
	37	10	002
	38	23	026
	39	14	037
	40	14	038
	41	16	018
	42	01	014
	43	14	039
	44	14	040
	45	14	041
	46	14	042
	47	14	043
	48	14	044
	49	14	045
	50	16	019
	51	16	020
	52	16	021
	53	14	046
	54	15	041
	55	14	047
	56	14	048
	57	16	022

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	CO
HT13 (cont'd)	58	14	
	59	14	
	60	14	
	61	14	
	62	14	
	63	14	
	64	14	
	65	14	
	66	14	
	67	14	
	68	14	
	69	16	
	70	16	
	71	16	
	72	14	
	73	14	
	74	24	
	75	14	
	76	14	
	77	12	
	78	14	
	79	01	
	80	01	
	81	02	
	82	02	
	83	02	
	84	13	
	85	13	
	86	14	
	87	0	
	88	2	
	89	1	
HT14	1		
	2		
	3		
	4		
	5		
	6		

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
HT15	1	15	045
	2	15	046
	3	15	047
	4	15	048
	5	15	049
	6	15	050
	7	15	051
	8	15	052
	9	15	053
	10	15	075
	11	15	054
	12	15	055
	13	15	056
	14	15	057
	15	15	058
	16	15	059
	17	15	060
	18	15	061
	19	15	062
	20	15	063
	21	15	064
	22	15	065
	23	15	066
	24	23	040
	25	14	091
	26	15	067
	27	15	068
	28	15	069
	29	15	070
	30	15	071
	31	15	072
	32	15	073
	33	15	074
	34	14	092
	35	16	029
	36	14	093
	37	14	094
	38	14	095
	39	14	096
HT15 (cont'd)	40	14	097
	41	14	098
	42	14	099
	43	14	100
	44	14	101
	45	14	102
	46	12	013
	47	12	014
	48	12	015
	49	14	103
	50	14	104
	51	14	105
	52	14	106
HT16	1	14	107
	2	14	108
	3	14	109
	4	14	110
	5	14	111
	6	14	112
	7	02	019
	8	14	113
	9	02	020
	10	12	016
	11	14	140
	12	14	141
	13	12	017
	14	12	018
	15	15	078
	16	06	048
	17a	07	004
	17b	07	005
	18	07	006
	19	07	007
	20	07	008
	21	07	009
	22	07	010
	23	06	049
	24	06	050
	25	06	051

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
HT16 (cont'd)	26	06	052
	27	06	053
	28	06	054
	29	07	011
	30	07	012
	31	22	017
	32	13	011
	33	22	018
	34	13	012
	35	13	013
	36	13	014
	37	13	015
	38	13	016
	39	23	041
	40	01	021
	41	13	017
	42	12	019
	43	12	020
	44	12	021
HT17	1	11	028
	2	11	029
	3	11	030
	4	11	031
	5	11	032
	6	11	033
	7	11	034
	8	11	035
	9	11	036
	10	11	037
	11	11	038
	12	21	005
	13	11	039
	14	11	040
	15	23	042
	16	11	041
	17	11	042
	18	11	043
	19	06	055
	20	23	043

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY	COMMENT NUMBER
HT17 (cont'd)	21	01	
	22	01	
	23	22	
	24	02	
	25	05	
	26	05	
	27	02	
	28	14	
	29	14	
	30	14	
	31	14	
	32	14	
	33	10	
	34	10	
	35	10	
	36	10	
	37	10	
	38	10	
	39	01	
	40	06	
	41	01	
	42	04	
	43	15	
	44	14	
	45	04	
	46	02	
	47	21	
	48	24	
	49	14	
	50	14	
	51	14	
	52	23	
	53	01	
	54	23	
	55	11	
	56	06	
	57	14	
	58	23	
	59	14	

TABLE GP–2.—*Comment Document Locator*-Continued

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY		COMMENT NUMBER
HT17 (cont'd)	60	14		125
	61	14		126
	62	14		127
	63	01		027
	64	03		007
	65	23		047
	66	23		048
	67	01		028
	68	13		018
	69	06		068
	70	05		024
	71	05		025
	72	02		024
	73	06		123
	74	14		164
	75	14		165
	76	14		166
	77	14		167
	78	14		168
	79	14		169
	80	14		170
	81	14		171
	82	14		172
	83	14		173
	84	14		174
	85	14		175
	86	14		176
	87	14		177
	88	14		178
	89	17		020
	90	17		021
	91	17		022
	92	17		023

How to Find a Comment Response in Chapter 3

The comment responses appearing in chapter 3 are categorized and organized according to their topic, or resource category. The sequencing of resource categories is as follows:

- Alternatives (01)
- Relationship to Other EISs (02)
- Infrastructure (03)
- Land Use (04)
- Geology and Soils (05)
- Water Resources (06)
- Air Quality (07)
- Acoustics (08)
- Biotic Resources (09)
- Cultural Resources (10)
- Socioeconomic Resources (11)
- Intrasite Transportation (12)
- Waste Management (13)
- Human Health (14)
- Aircraft Accident (15)
- Intersite Transportation (16)
- Environmental Justice (17)
- Irreversible and Irretrievable Commitment of Resources (18)
- Unavoidable Adverse Environmental Impacts (19)
- Relationship Between Short and Long Term Effects (20)
- Cumulative Impacts (21)
- DOE Policy (22)
- NEPA Process and Procedures (23)
- Miscellaneous (24)

The parenthetical number next to each of the above categories is the resource category identifier for that topic. For example, the resource category identifier for all comments in volume III relating to water resources is "06".

Table GP–1 lists all of the resource code identifier numbers and all of the document numbers associated with each commentor. A commentor may go directly from the list of comment numbers to the Department's response to any of those comments. Comm responses in chapter 3 are grouped by category and then by sequential number within the category. The co of resource category and comment termed a "Resource Category" (RC) For example, the first comment in category "06" would be labeled "RC To facilitate ease of location, each (and its response) in chapter 3 is mark unique "RC" identifier in the left ha

Table GP–2 lists all comment nu appear in each comment document. T the use of Table GP–2, suppose o Table GP–1 to locate the letter writ Porter. The Document Number sho GP–1 for Dana's letter is "PC-023". Table GP–2, one would then look "PC-023" under the left-hand co "Document Number". That entry a "Document Number" column on For illustration, that portion of Ta shown below:

DOCUMENT NUMBER	SEQUENCE NUMBER	RESOURCE CATEGORY
PC-023	1	23
	2	06
	3	06
	4	08
	5	03

To the right of the document nu three more columns. The c "Sequence Number" shows Porter's letter (PC-023) there ar (sequentially numbered 1 thr column headed "Resource Cate

ıe first comment of Dana Porter's letter is bout resource category 23 (NEPA process and rocedures), the second and third comments in ıat letter are about resource category 06 (water esources), the fourth comment is about esource category 08 (acoustics), and the fifth is bout resource category 03 (infrastructure). The ınal column, labeled "Comment Number" tells ıe reader that Dana's five comments are the 8th comment in resource category 23, the 46th ıd 47th comments in resource category 06, the rst comment in resource category 08, and the xth comment in resource category 03.

ontinuing the example, suppose one wanted to e the responses to Dana's two comments on ater resources. One would note the resource tegory (06) and the comment numbers (046 d 047). Dana's two comments on water sources would thus be marked as "RC: .046" and "RC: 06.047" in chapter 3.

find these two comments and their sponses, one would turn to the sixth section of apter 3 (i.e., section 3.6) and scan through the source Categories in the left hand margin til finding "RC: 06.046", Dana's first mment regarding water resources. At this int the reader will see Dana's verbatim mment, along with the response to that mment. Immediately following that comment d its response is the entry for "RC: 06.047", ich is Dana's second comment about water ources.

ving found the entry "RC: 06.046", one will find immediately under it an accompanying ss reference to the document number in ich the comment originated. The marginal ations look like this:

: 06.046
:: PC-023/2

The marginal code labeled "Doc:" shows the document number and sequence number of this particular comment among all other comments that appear in that same document. In this example, the code "Doc: PC-023/2" means that this particular comment ("RC: 06.046") was the second comment in Document Number "PC-023". With this information, the reader may, if desiring to do so, go back to chapter 2 to view the source document and consider the context within which the comment was made.

When a person did not identify himself or herself, during the public meetings, an anonymous identification (such as unidentified speaker) was entered into the transcript. In addition, some of the postcards submitted had illegible signatures. Thus, for these two reasons, there are numerous comments attributed to an unidentified commentor.

In using this volume, note that resource category identifiers 03 through 21 also correspond to the sequence that those resource categories are analyzed within the affected environment and impacts analyses for Pantex Plant (in chapter 4 of volume I). In other words, a reader could know that since water resources has a resource category identifier of "06" and is located in the sixth section of chapter 3 (i.e, section 3.6) of volume III, that the main discussion of the Pantex Plant affected environment and impacts related to water resources can be found in the sixth section of chapter 4 in volume I (i.e, section 4.6). This correlation is intended to make it relatively easy for readers to use volumes I and III together in reviewing both the Final EIS text and the comments related to that text.

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List of Acronyms and Abbreviations

ACRONYMS AND ABBREVIATIONS

.AO	Amarillo Area Office
.DROIT	Analysis of Dispersal Risk Occurring in Transportation
.EDC	Amarillo Economic Development Corporation
.FB	Air Force Base
.GV	Automated Guided Vehicle
.L	Albuquerque Operations Office
.LARA	As Low as Reasonably Achievable
OC	Area of Concern
QCR	Air Quality Control Region
SER	Annual Site Environmental Report
A	Biological Assessment
ACT	Best Available Control Technology
G	Burning Ground
GU	Burning Ground Upgrade
NA	Block Numbering Area
NSF RR	Burlington Northern and Santa Fe Railroad
RAC	Base Realignment and Closure
RL	Ballistic Research Laboratory
AA	Clean Air Act
AMS	Continuous Air Monitoring Systems
DP	Census Designated Place
DR	Conceptual Design Report
EDE	Committed Effective Dose Equivalent
EQ	Council on Environmental Quality
ERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
FR	Code of Federal Regulations
OC	Contaminant(s) of Concern
OD	Chemical Oxygen Demand
OE	U.S. Army Corps of Engineers
ONUS	Continental U.S.
OPC	Contaminant(s) of Potential Concern
RM	Cultural Resource Management
RMP	Cultural Resource Management Plan
RP	Conservation Reserve Program
SA	Canned Subassembly

CWA	Clean Water Act
CY	Calendar Year
DAF	Device Assembly Facility
DCG	Derived Concentration Guidelines
D&D	Decontamination and Decommissioning
DEIS	Draft Environmental Impact Statement
DNA	Defense Nuclear Agency
DNL	Day-Night Average Sound Level
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
DOT	Department of Transportation
DPTRA	Defense Programs Transportation Risk Analysis
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ER	Environmental Restoration
ERAD	Explosive Release Atmospheric Dispersion
ERPG	Emergency Response Planning Guidelines
ES&H	Environment, Safety, and Health
ESL	Effects Screening Level
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FEIS	Final Environmental Impact Statement
FFA	Federal Facility Agreement
FFCA	Federal Facility Compliance Act
FFTF	Fast Flux Test Facility
FICA	Federal Insurance Contributions Act
FM	Farm-to-Market Road
FMEF	Fuels and Materials Examination Facility
FPPA	Farmland Protection Policy Act
FWS	Fish and Wildlife Service
FY	Fiscal Year
GAd	Gross Alpha—dissolved
GAs	Gross Alpha—suspended

GBd	Gross Beta—dissolved
GBs	Gross Beta—suspended
GPS	Global Positioning System
HAP	Hazardous Air Pollutant
HE	High Explosive(s)
HEPA	High Efficiency Particulate Air
H-Gear	Weapons-Specific Handling Gear
HHS	Health and Human Services
HVAC	Heating, ventilation, and air conditioning
HLW	High-Level Waste
HPCAF	Health Physics Calibration and Acceptance Facility
HW	Hazardous Waste
HWTPF	Hazardous Waste Treatment and Processing Facility
ICM	Interim Corrective Measure
ICRP	International Commission on Radiological Protection
IHE	Insensitive High Explosive
ILS	Instrument Landing System
IO	Isolated Occurrence
ISC	Industrial Source Complex
ISCLT2	Industrial Source Complex Long Term, Version 2
ISCST2	Industrial Source Complex Short Term, Version 2
IST	In-Service Training
JCO	Justification for Continued Operation
JTA	Joint Test Assembly
KAFB	Kirtland Air Force Base
LANL	Los Alamos National Laboratory
LCF	Latent Cancer Fatality
LDR	Land Disposal Restrictions
L_{eq}	Equivalent Sound Level
LLNL	Lawrence Livermore National Laboratory
LLMW	Low-Level Mixed Waste
LLW	Low-Level Radioactive Waste
LWR	Light Water Reactor
MACCS	Melcor Accident Consequence Code System
MACT	Maximum Achievable Control Technology
MCAF	Materials Compatibility Assurance Facility
MCL	Maximum Contaminant Level

MDL	Method Detection Limit
MELTER	Model of the Thermal Response of Cargos Transported in the Safe-Secure Trailer Subject to Fire Environments for Risk Assessment Applications
MEOI	Maximally Exposed Offsite Individual
MOBILE 5a	Mobile Source Emission Factor Model, Version 5a
MOU	Memorandum of Understanding
MR	Modified Richmond
MSA	Metropolitan Statistical Area
MTU	Mobile Treatment Unit
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
ND	No Damage
NDEF	Nondestructive Evaluation Facility
NDRC	National Defense Research Committee
NE	Northeast
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFA	No Further Action
NHPA	National Historic Preservation Act
NHW	Nonhazardous Waste
NIOSH	National Institute for Occupational Safety and Health
NLR	Noise Level Reduction
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NTS	Nevada Test Site
OB/OD	Open Burning/Open Detonation
O&I	Operations & Inspection
OMB	Office of Management and Budget
ORR	Oak Ridge Reservation
OSHA	Occupational Safety and Health Administration
OSTP	Old Sewage Treatment Plant
OU	Operable Unit
PA	Programmatic Agreement

	Plastic Bonded Explosives
	Progammatic Environmental Impact Statement
S	Perimeter Intrusion Detection and Alarm System
	Public Law
١	Pollution Prevention Opportunity Assessment
M	Pollution Prevention/Waste Minimization
	Preliminary Remediation Goal
	Probabilistic Risk Assessment
	Prevention of Significant Deterioration
)C	Quality Assurance/Quality Control
S	Radar Airspace Monitoring System
	Research and Development
	Risk Based Concentrations
١	Resource Conservation and Recovery Act
	RCRA Facility Investigation
SF	RCRA Hazardous Waste Staging Facility
II	Regional Input-Output Modeling System
A	Radioactive Materials Management Areas
	Record of Decision
	Region of Influence
	Risk Reduction Standard
	Radioisotopic Thermoelectric Generator
	Storage and Disposition
	Steel Arch Construction
	Safety Analysis Report
١	Superfund Amendments and Reauthorization Act
	Safety Analysis Report for Packaging
EC	South Carolina Department of Health and Environmental Control
١	Safe Drinking Water Act
	Slope Factor
	State Historic Preservation Office
	Sandia National Laboratories
	Special Nuclear Material
	Standard Project Flood
	Savannah River Site
	Stockpile Stewardship and Management
	Safe Secure Tractor Trailer

STAR	Stability Array
START II	Strategic Arms Reduction Treaty
STP	Site Treatment Plan
SVOC	Semivolatile Organic Compound
SWDA	Solid Waste Disposal Act
SWEIS	Site Wide Environmental Impact Statement
SWMU	Solid Waste Management Unit
T&E	Threatened and Endangered
TAC	Texas Administrative Code
TACB	Texas Air Control Board
TBEG	Texas Bureau of Economic Geology
TCP	Traditional Cultural Property
TDCJ	Texas Department of Criminal Justice
TDH	Texas Department of Health
TDS	Total Dissolved Solids
TNRCC	Texas Natural Resources Conservation Commission
TOX	Total Organic Halogen
TPWD	Texas Parks and Wildlife Department
TRU	Transuranic
TSCA	Toxic Substances Control Act
TSD	Transportation Safeguards Division
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
TTU	Texas Tech University
USDA	U.S. Department of Agriculture
UST	Underground Storage Tank
U.S.	United States
U.S.C.	United States Code
UTL	Upper Tolerance Limit
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound
VOR	Very High Frequency Omni-Directional Radio Range
VORTAC	Very High Frequency Omni-Directional Radio Range with Tactical Air Nav
VSI	Visual Site Inspection
WAC	Waste Acceptance Criteria
WM PEIS	Waste Management Programmatic Environmental Impact Statement
WSA	Weapons Storage Area

TF	Wastewater Treatment Facility
TP	Wastewater Treatment Plant
	Extrudable Explosive

CHEMICALS AND UNITS OF MEASURE

Be	beryllium
BGY	billion gallons per year
BOD	Biological Oxygen Demand
°C	degrees Celsius
Ca	calcium
Ci	Curie
$CC1_4$	carbon tetrachloride
CO	carbon monoxide
CFC	chlorofluorocarbons
CFC-12	dichlorodifluoromethane
CFC-113	trichlorotrifluoroethane
cm	centimeter
Cs	cesium
D	deuterium
d	day
dB	decibel
dBA	decibel A-weighted scale
dBC	decibel C-weighted scale
DCE	1, 2-dichloroethylene
DDT	dichlorodiphenyltrichloroethane
DU	depleted uranium
°F	degrees Fahrenheit
ft	feet
ft^2	square feet
ft^3	cubic feet
ft^3/s	cubic feet per second
g	gram
gal	gallon
gpd	gallons per day
g/sec	gram per second
H	hydrogen
H^3	tritium
ha	hectare

C-22	chlorodifluoromethane
	hydrochloric acid
	highly enriched uranium
	hydrogen fluoride
ζ	high melt explosive
	hour
	Hertz
	inch
	kelvin
	kilogram
	kilometer
	square kilometers
r	kilometers per hour
	kilovolt
	kilovoltampere
	kilowatt
	kilowatt hour
	pound
	pounds per hour
	pounds per year
	Liter
	lithium
	press-moldable HMX
	million
	meter
	square meters
	cubic meters
	millicurie (one-thousandth of a Curie)
;	millicurie per gram
nl	millicurie per milliliter
	milligram (one-thousandth of a gram)
	milligram per liter
	million gallons per day
	million gallons per year
	miles
	milliliter
	mixed oxide

mph	miles per hour
mrem	millirem (one-thousandth of a rem)
mrem/yr	millirem per year
m/sec	meters per second
MVA	megavolt-ampere
MW	megawatt
MWe	megawatt electric
MWh	megawatthour
MWt	megawatt thermal
N	nitrogen
nCi	nanocurie (one-billionth of a Curie)
nCi/g	nanocuries per gram
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
O_3	ozone
P	phosphorous
Pa	pascal
Pb	lead
PBX	plastic-bonded explosives
PCB	polychlorinated biphenyl
pCi	picocurie (one-trillionth of a Curie)
pCi/g	picocuries per gram
pCi/L	picocuries per liter
PETN	pentaerythritoltetranitrate
pH	hydrogen-ion concentration
PM_{10}	particulate matter of aerodynamic diameter less than 10 micrometers
ppb	parts per billion
ppbv	parts per billion by volume
ppm	parts per million
psi	pounds per square inch
Pu	plutonium
qt	quart
qtr	quarter
RBC	risk based concentrations
RDX	research development explosive
rem	roentgen equivalent man
sec	second

sulfur dioxide
sulfur oxides
square
strontium
tritium
triaminotrinitrobenzene
1, 1, 1-trichloroethane
trichloroethene
thorium
trinitrobenzene
trinitrotoluene
total organic compounds
total organic halogen
uranium
Underwriter's Laboratory
yard
cubic yards
year
microcurie (one-millionth of a Curie)
microcuries per gram
microgram (one-millionth of a gram)
micrograms per kilogram
micrograms per liter
micrograms per cubic meter
micron or micrometer (one-millionth of a meter)
cm micromhos per centimeter

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CHAPTER 1

Overview

CHAPTER 1
OVERVIEW

INTRODUCTION

March 1996, the Department of Energy epartment or DOE) published the *Draft ironmental Impact Statement for the ntinued Operation of the Pantex Plant and ociated Storage of Nuclear Weapon mponents*. This draft environmental impact tement (EIS) examined the potential ironmental impacts for three alternatives as cribed in chapter 3 of volume I. A Notice of ailability of the Draft EIS was published in *Federal Register* (61 FR 15232) on April 5, 96. The public comment period for the Draft began on April 5, 1996, and was originally nd on July 5, 1996. However, at the request stakeholders in the Amarillo area, the ending e was extended to July 12, 1996. The formal nment period thus ran for 98 days. DOE ed that any comments received after the end he comment period would be incorporated to extent practicable. Comments were epted as late as July 29, 1996.

ring the comment period, public hearings e held in Amarillo, Texas; North Las Vegas, vada; North Augusta, South Carolina; uquerque, New Mexico; and Richland, Washington. Each of these hearings was conducted in workshop format beginning with a presentation that provided an overview of the Draft EIS followed by opportunities for stakeholders to make comments or ask questions. In addition, a separate Technical Exchange Meeting was held in Amarillo with representatives of the State of Texas, City of Amarillo, Panhandle Water Conservation District No. 3, the University Consortium, the Amarillo Economic Development Corporation, and the Pantex Plant Citizens Advisory Board.

The workshop format of the meeting also allowed questions and comments from members of the public as well as the participants listed above. Verbatim comments were recorded at all meetings. In addition, the public was invited to submit comments via mail, toll-free facsimile, electronic mail (Internet), and toll-free telephone. If a comment was answered in the public hearing and needed no elaboration, it is not identified for a response in this EIS.

Attendance figures and transcript codes for each meeting are presented in Table 1.1–1. Attendance is only reported for those people who completed and returned registration forms

TABLE 1.1–1.—*Number of Attendees at Public Hearings/Meetings*

PUBLIC HEARING/MEETING	NUMBER OF ATTENDEES	TRANSCRIPT CODES
marillo (4/22/96)	161	HT01, HT02, HT03, HT04, HT05, HT06
marillo (4/23/96)	54	HT07, HT08, HT09, HT10
s Vegas (4/25/96)	12	HT11
ugusta (4/30/96)	93	HT12
buquerque (5/7/96)	18	HT13
ichland (5/23/96)	16	HT14
marillo Technical Exchange (6/25/96)	122	HT15, HT16, HT17
tal	476	

TABLE 1.1–3.—*Pantex EIS Postcard and Letter Campaigns*-Continued

POSTCARD CAMPAIGN (EXAMPLE, PC-032)–CONTINUED		
Richard DeLong	Joel Gilbert, Jr	Kathy Haus
Floyd Detten	Larry Hendershot	Richard Heldaharen
E. W. Dettmann	Robert Henschen	Robert Holmes
Robert Diller	Joe Henson	Dave Hoppe
Theresa Diller	Maicelle Hidieiey	Eloise Hougal
Gerry Doyle	Nedra Higginbotham	Billye R. Huchton
Gene Drew	Raymond Higginbotham	Eleanor Hudspeth
Geraldine Duan	A. B. Higgins	Sam Hulsey
Paul Dudenhoffor	Alberta Higgins	Mary Hussman
R. J. Duncan	Hilton Higgins	Ralph Hutchison
Alfred Dziuk	Peggy Higgins	Steve Hyrsey
Jim E.	James Hinde	Becky Hysenger
Lewis Earl	R. Hinsol	Inbllt
Mary Eastman	Richard Hoelscher	D. J.
Elihu Edelson	Jean Hollingsworth	Mike Jack
M. J. Elinch	Gene Glazener	Bill Jackson
Thomas Ellis	Ashlee Glencock	Bob Jackson
Newton Ellison	A. W. Gober	Leslie Jasmon
Pat Enfra	Webb GoberBert Golding	John Jenks
B. A. Erpen	Joan Golding	Mildred Jicks
Deborah Faxhoven	Irene Goss Wierner	Joan Jite
Shelli Fernandez	Gertrude Gotegut	Leroy Johnson
Edith Filler	Terre Gows	Cyrilla Jones
H Mark Finduum	James Graves	M. Laure Jones
Chip Formby	June Graves	Edward Jorgott
Boyd Foster	Kathryn Graves	Herbert Jue
Dolores Foster	Bill Gray	Richard Justice
Janetta Fowle	Michael Gray	Keith Kalka
Mary Jo Foxgron	Scott Gray	Roger Kallerberg
Francine Freeds	Jackie Griggs	Jerome Kaplanwald
Suzanne Freeman	Doris Clark Gunn	Andrew Keishern
Patty Frerich	Jatt Gyer	Mary Kennedy
Mark Frey	Mami Hack	H. H. King
Cecilia Fuller	Doris Haires	Carl Kleushens
Don Gabel	Lesley Hall	Agnes Klinke
Jean Gallagher	William Hall	Heather Klouskens
Ed Gar	Ray Hampten	Judy Kregrhouse
Danna Garcia	Michael Hannou	Dana Kretting
Deliah Gavin	Ruth Ann Hansen	Reinard Kunutsen
Mona Gee	Betty Harris	Marilyn Kyr
Ron Gideon	Bobby Hatfield	Leo LaBorde

TABLE 1.1–3.—*Pantex EIS Postcard and Letter Campaigns*-Continued

POSTCARD CAMPAIGN (EXAMPLE, PC-032)–CONTINUED		
Vernon Labure	Erin McMartry	Robert Pope
Thelma Lamm	Allan McMurtrey	Mary Porter
Earl Langys	Donald Meyer	Billie Poteet
Della LeGate	J. Paul Mijilden	Richard Privsr
Nolen LeGate	Michael Miles	Ben Raizen
Noles LeGate	Merilyn Miller	Rebecca Rankin
M. J. Lehennacher	Glen Milner	Carolyn Rapstine
Donald Lemmy	Linda Minchew	Helen Raschke
Jeffrey Levin	Richard Don Minchew	Xila Rekdal
Otto Lippmann	Nick & Nancy Mohr	Cathy Revell
Gladys Loaten	Ann Molesworth	George Ricker
Lee Loe	S. Moneseseth	Lyle Robinson
Carl Looten	Mary Moore	Kenneth Robison
K. Liza Loube	Henry Morris	Arline Rokoback
Theresa Luby	Don Morrison	Louis Romero
Katie Lupton	Elizabeth Morrissett	David Root
Richard Lyston	Jeanette Moser	John Rosely
Frank Mabee	Robert Myers	Claudia Roundtree
Genivieve Maller	Madonna Newburg	Don Rouse
Evans Mank	Roserita Niber	Lawrence Ruther
Edna Marnell	Mary Nicholson	Albert Salbeck
D. Marshall	Melanie Nicholson	Henry Salomon
Luise Martindale	Helen Norwood	Hugh Sanborn
Phyllis Mattek	Bill O'Brien	G. J. Sans
Craig Matthews	Kathy O'Rourke	Johnes Saunders
Doris Matthews	Robert Ocooper	Liara Schilling
Frances Keller Matthews	Robert Ogden	Charles Schlabs
Marta Matthews	Cecil Oglesby	Laure Schlabs
Mary Matthews	Ella Oglesby	Richard Schlabs
Leroy Matthuesen	Gary Oliver	Herbert Schlegel
Beverly Maxin	Betty Olson	Margaret Schultz
. R. McClellan	George Olson	Stephen Schultz
Sandra McClellan	Bobbie Oppermann	Ida Schurmacher
Stan McDonald	Jeri Osborne	Joe Schwerner
Eloise McDougal	Jim Osborne	Elizabet Scott
Teresa McFarel	Karley Parly	Richard Scott
Robert McGee	Roy Parten	J. Scurlock
Lucy McGowan	Pat Patton	Katherine Seewald
/. L. McKennsey	Robert Patton, Jr	William H. Seewald
Phyllis McKenzie	Piolelestineo	Mary Shennum

TABLE 1.1–3.—*Pantex EIS Postcard and Letter Campaigns*-Continued

POSTCARD CAMPAIGN (EXAMPLE, PC-032)–CONTINUED		
Shirley Sider	Joan Strafuss	Dorcas Weather
M. T. Siggi	Cynthia Streun	Helen Welter
Harold Siler	Jo Submon	Jeannine Wendel
Betsy Simpleton	Joe Swann	Jack White
Donna Singleton	Don Sweefetou	George Wilhelm
Franciscan Sisters	Joe Taff	Leo Wilkowski
George Smith	Joyce Taff	Dale Winders
Marshall Smith	Richard Thayer	Anna Marie Wink
Tamara Snodgrass	James Thomas	H. Harbour Winn, III
Karen & Haley Son	T. Thompson	M. T. Winter
Sara Sorelle	Parrs Tim	Benny Womble
Ellen Spear	T. Tusperl	Joan Womble
Mary Springer-Froese	Karen Tusts	Debra Wood
Jim Steiert	Buddy Vance	Jacob Wood
Kerrie Steiert	Joanna Vaughn	P. P. Wood
Pete Steiert	Joanna Vauplin	Marian Yosten
Jerry Stein	Lydia Villanueva	M. V. Z.
Janie Steins	Thein Wah	Leo Zimmeser
Charlie Stengel	B. A. Ward	Louise Wilkowski
R C Stengel	Jake Ward	Jim Williams
Brent Steurker	Patsy Ward	Shirley Wilson
Porter Storey	Dolly Warden	Dori Wimberley
Arthur Story	Atuh Watawlee	Bill Wimberly
Inelda Stousbusy	W. C. Wauln	
Carl Strafuss	Lois Way	

Some of the campaign documents had one or more additional remarks besides those in the example documents or were altered in other ways. Each of these documents was reviewed via the process described above. In each of the campaign documents, the comments or remarks that were the same as those in the example document (of that campaign) were assigned the identical comment numbers as those in the example document. However, any unique comment received its own comment number. By this procedure, repetitive comments were addressed only once within this volume of the EIS. The major themes of the campaigns are summarized in the following paragraphs.

One of the letter campaigns involv participants (see CO-001 for e discussed issues or made statements applicable to other NEPA do particularly the SSM PEIS and the S&D Statements that pertained to this Pan EIS included perceived benefits result current and proposed expansion of Pan operations, including the benefits Amarillo economy. This campaign em that regardless of the levels of activity Plant, DOE must continue to m facilities in a "safe and environmentall manner" in order to protect the publi environment. The campaign stated th Plant had a historical record of safely m hazardous materials, including "Safe

00 pits, and, therefore, urged DOE to ıside Pantex Plant favorably in making :isions related to the two PEISs and the ıtex Plant EIS. The campaign also advocated ıtex Plant as a cost efficient alternative for rent and future work. A listing of individuals o sent in this campaign letter is provided in ɔle 1.1-3.

other letter campaign involving 59 ticipants (see PC-031 for example) listed ɜ perceived inadequacies of the Draft EIS. ɜse included perceived shortcomings in the ount of information provided in cumulative ɔacts analysis and insufficient discussion of ter usage impacts, challenges to assumptions d in the aircraft overflight analysis, a desire building-specific detail in the analysis of -wide impacts, and an assertion that it was easonable to consider placing "hazardous lear materials and the processing or storage nuclear waste" above the Ogallala aquifer. s campaign included some statements or stions identified as individual comments. names of the individuals who submitted one hese campaign letters are provided in Table –3.

the postcard campaign involving 441 ticipants (see PC-032 for example), ımentors expressed opposition to facilities ıt handle nuclear waste or to processes that erate it" including "plutonium processing." ditionally, they voiced opposition to inging plutonium to Pantex from other sites" to the possibility of "long-term storage of onium over the Ogallala Aquifer." This ıpaign concluded with a statement of ference for the type of jobs and development ıin the region that would not endanger kers, families, natural resources, and the ıtation of the region's agricultural products. listing of the individuals who sent in a tcard is provided in Table 1.1–3.

ıddition, many of the letter and postcard ıpaign documents were altered or contained or more statements added by the individual who signed the document. Those statements were considered, but mostly comprised remarks rather than comments on the EIS content. The statements included expressions of support for or opposition to Pantex Plant in general or specific aspects of plant operations, concern for any impacts to specific environmental resources, or criticism of alternatives being examined in this EIS and the PEISs.

DOE recognizes its responsibility to manage facilities and hazardous materials, including plutonium, with operational and environmental controls appropriate for protecting workers, the public, and the environment. DOE continues to work with the U.S. Environmental Protection Agency (EPA), State regulatory agencies, employees, unions, neighbors, and the general public in developing programs and commitments to further improve management of facilities and all hazardous materials, including wastes.

All of these plans and commitments at Pantex Plant have also been considered in the analysis of the alternative sites to determine if there are any conflicts or restrictions that would inhibit these sites from serving as suitable locations for interim pit storage. Impacts of present and future waste management and human health are discussed and analyzed in volume I, sections 4.13 and 4.14, respectively. As discussed in volume I, section 1.3.9 and 1.3.10 of this volume, and the previously mentioned sections of volume I, nothing was found that would inhibit Pantex Plant or the alternative sites from performing the required missions.

DOE understands the importance of the Ogallala aquifer as the principal source of water in the Texas Panhandle. DOE has monitored groundwater quality in the perched and Ogallala aquifers at Pantex Plant for the past 20 years. Impacts of present and future water consumption and quality are discussed and analyzed in volume I, section 4.6. As discussed in section 1.3.5 of this volume and volume I,

section 4.6, nothing was found that would result in a significant impact to the Ogallala aquifer.

DOE believes the EIS adequately and reasonably addresses both the affected environment and any potential impacts to all environmental resources. As for the assumptions and accuracy of the aircraft overflight analysis, DOE has conservatively analyzed the various uncertainties that affect the overall level of risk that an aircraft crash could result in a release of radioactive materials. These issues are presented in volume II, appendix E, Aircraft Accident Analysis. The data, assumptions, and calculations represent the best available and most accurate representation of conditions at Pantex Plant.

The level of local support for the siting of facilities for interim pit storage, long-term storage of surplus and non-surplus fissile materials, disposition of surplus plutonium, and long-term continuation of stockpile stewardship and management activities is not part of the analysis of environmental impacts in accordance with NEPA and, thus, is not addressed in this Final EIS. However, the degree of community support, along with environmental impacts, mission requirements, cost, and technical factors, is considered in the Record of Decision.

1.2 Organization of This Volume

At the beginning of this volume is a section printed on green paper. These "green pages" are a guide to assist readers in quickly locating documents and comments of particular interest. With this guide, the reader can go directly to particular documents or comments without having to read the narratives of any chapter in this volume.

This Comment Response Document is organized into three chapters. Chapter 1 (this chapter) provides an overview of the entire document, including a brief discussion of the major issues that were raised during the comment period and a summary of the changes to the Draft EIS. Chapter 2 is a compendium of the comment documents received, annotated to show the comments that were identified for a response. Chapter 3 provides DOE's responses to the comments. The comments are grouped by resource/issue category so each commentor can easily see, in one section, his or her own comment along with all the comments that other people made about the same subject. Each comment is reproduced verbatim just before the response is provided, so the reader does not have to flip back and forth between the documents in chapter 2 and the responses in chapter 3.

1.3 Discussion of Major Issues and Changes to the Draft EIS

There were 24 categories of comments and a total of 3,753 comments/remarks received. Nearly three-fourths of them were duplicate submissions as a result of the two letter and postcard mail-in campaigns with a total of 5[illegible] participants. Every comment received was considered in the analysis. Each comment was individually reviewed and a response to each is provided in chapter 3 of this volume. There were several categories of comments that were of broad interest or concern. These topics, categorized as "major issues," are listed below in the order in which the topics appear in the EIS:

- Alternatives.
- Relationship to Other EISs.
- Land Use.
- Geology and Soils.
- Water Resources.
- Air Quality.
- Socioeconomic Resources.
- Intrasite Transportation.
- Waste Management.

- Human Health.
- Aircraft Crash.
- Intersite Transportation.
- Environmental Justice.
- DOE Policy.
- NEPA Process and Procedures.
- Out of Scope.

The subsections that follow provide summary discussions of those major issues, organized by topic.

.3.1 Alternatives

Many comments questioned the adequacy of the process used to select site alternatives, as well as the impact analyses of those alternatives. Additional commentors questioned DOE's rationale and objectiveness in assessing Department of Defense (DOD) relocation alternatives since the Long-Term Storage and Disposition of Weapons-Usable Fissile Materials (S&D) PEIS considered DOD facilities to be infeasible.

Many comments questioned the legitimacy of the 20,000 pit storage limit because, reportedly, the U.S. stockpile was greater than 25,000 weapons. Other comments questioned the 20,000 number because the START II treaty commits to a ceiling of 3,500 deliverable weapons. Concern was expressed that the START II commitments could result in interim pit storage exceeding the 20,000-pit limit. In addition, commentors felt the storage limit was inaccurate because 2,000 weapon disassemblies per year for 10 years (plus the current inventory) could result in interim storage of more than 28,000 pits.

ite Selection Process

he scope of the Pantex Plant EIS included /aluation of potential DOE and DOD sites :rving as alternative pit storage sites. A DOE ite Screening Committee systematically ;sessed a large number of candidate sites to :termine the range of reasonable alternative tes. To screen candidate sites, DOE applied :clusionary (e.g., under DOE control through least 2007) and favorability criteria (e.g., :gree of construction required to adapt existing cilities for the pit storage mission). As a sult, DOE identified the Device Assembly acility and P-Tunnel at the Nevada Test Site JTS), the Fuels and Materials Examination acility at Hanford Site, and P-Reactor at avannah River Site (SRS) as reasonable DOE ternatives for interim pit storage.

parallel, 60 DOD installations were screened / the Nuclear Weapons Council staff. The ouncil staff determined that only the Manzano Weapons Storage Area (WSA), located on Kirtland Air Force Base (KAFB) (at Albuquerque, New Mexico), and Seneca Army Depot (at Romulus, New York) were feasible.

Subsequently, the Air Force agreed to become a Cooperating Agency in the preparation of this EIS regarding the Manzano WSA. However, because Seneca Army Depot was approved for closure in September 1995, in accordance with the *Defense Base Closure and Realignment Act of 1990 (Public Law 101-510)*, this facility was not available as a candidate site.

After a site visit to validate suitability, the Manzano WSA was determined to be a reasonable alternative site for interim storage of plutonium in pit form. DOE believes the interim storage alternatives evaluated in this EIS, including the Manzano WSA, represent a reasonable management course for interim storage of plutonium in pit form.

Basis for the 20,000 pit storage limit

As originally discussed in the January 1994 *Environmental Assessment for Interim Storage of Plutonium Components at Pantex* (DOE/EA-0812), the Nuclear Weapons Stockpile Memoranda and corresponding planning and production documents direct the retirement rates for weapons held in DOD custody. In response, DOE has determined the need for interim storage of up to 20,000 plutonium pits.

Chapter 2 of the SSM PEIS discusses in detail the national security policies, responsibilities, strategies, and directives placed upon DOE. For the reasonably foreseeable future, eight principal drivers were used for defining the direction and scope of the U.S. nuclear weapons stockpile. Of the eight, the Strategic Arms Reduction Treaty (START) II protocol is the most useful in helping define a specific time period to bound the reasonably foreseeable future.

The START I treaty and the START II protocol only control the number of strategic nuclear weapons that can be loaded on treaty-specified and verified strategic missiles and bombers. These deliverable nuclear weapons are limited to 6,000 by the START I treaty and 3,500 by the START II protocol. The treaties do not control the total stockpile or the composition of strategic and nonstrategic nuclear weapons. The U.S. stockpile will be larger than 6,000 under START I and 3,500 under START II because the stockpile includes retaining weapons in nonstrategic nuclear forces, DOD operational spares, and spares to replace weapons attrited by DOE surveillance testing. Additional language has been added to volume I, chapters 1 and 2, to clarify this issue.

However, should treaty commitments, Presidential directives, or congressional legislation further reduce the weapons stockpile and increase the need for additional storage above the 20,000 number, DOE would address the environmental impacts in future NEPA documentation.

1.3.2 Relationship to Other EISs

The majority of comments illustrated a need for clarifying the relationship of this Pantex Plant EIS with respect to DOE's other major PEISs (i.e., Waste Management [WM] PEIS, SSM PEIS, S&D PEIS) and two Site-Wide EISs (i.e., NTS EIS and Los Alamos National Laboratory (LANL) EIS). Commentors also asked for more simplified documents and help in improved public understanding of the relationships between DOE's major PEISs and EISs. A commentor questioned the reason the SSM PEIS evaluated complete closure of the Pantex Plant, whereas the Pantex Plant EIS did not.

Other commentors expressed a wide range of reasons for selecting (preferred alternatives) or eliminating sites under consideration in each of the DOE PEISs and Site-Wide EISs mentioned above.

Relationship of Pantex Plant EIS to Other NEPA Documents

The WM PEIS, the SSM PEIS, the S&D PEIS, the NTS EIS, the LANL EIS, and the Pantex Plant EIS relationships are described in chapter 1 of each document. Their respective summaries provide simplified, descriptive information relevant to the decisions in each of the six EISs. However, these documents address issues that are extremely complex and there is a limit to the degree these issues can be simplified without scientific and programmatic validity.

ıme time, DOE has attempted to better clarify ıe relationships through the addition of text to ɔlume I, sections 1.7.1 through 1.7.5.

ontinued operation of Pantex Plant and ;sociated storage of nuclear weapon ɔmponents, including interim storage of utonium pits, are within the scope of this EIS. he Pantex Plant EIS does not include ɔerations for processing or reprocessing of utonium. Long-term storage of surplus and ɔn-surplus fissile materials, including utonium pits currently in interim storage at ıntex Plant are within the scope of the S&D EIS.

he S&D PEIS evaluates alternatives for the ng-term storage of weapons-usable fissile aterials and for the disposition of weapons- ;able plutonium declared surplus to national defense needs by the President. Long-term continuation of stockpile stewardship and management missions, including Pantex Plant assembly, disassembly, and high explosive (HE) operations, are within the scope of the SSM PEIS. The SSM PEIS evaluates environmental impacts of alternatives including downsizing of sites, relocation of missions, complete closure of sites (e.g., Pantex Plant, Kansas City Plant, Oak Ridge Reservation) and the capability to fabricate new pits and process and reprocess (e.g., reuse) existing pits.

Detailed discussions of DOE's purpose and need for action, range of alternatives, and other EIS relationships are provided in each PEIS. Detailed discussions defining differences in interim storage criteria and long-term storage criteria; "surplus pits" versus "strategic pits"; and disposition alternatives are also presented.

3.3 Land Use

Numerous concerns were expressed regarding the potential harm to croplands, livestock, and ;gribusiness from the potential contamination of the soil and water surrounding Pantex Plant. Concern was also expressed over the brevity of text devoted to discussion of agriculture and ;gribusiness within the Texas Panhandle.

ıe Pantex Plant EIS describes land use within 80-kilometer (50-mile) radius of Pantex ant. Rural, urban, agricultural, commercial, sidential, industrial, institutional, and creational land uses are discussed.

ınd use in the 80-kilometer Region Of fluence (ROI) is predominately agricultural. ıe majority of this area is rangeland located ɔng the Canadian River drainage to the north d along a tributary of the Red River to the uth of the plant. Cropland is the second largest tegory of land use, with areas containing both yland crops and irrigated land. Commercial, ;idential, industrial, and institutional areas are ntered around the population centers, and ɔresent a small part of the total land use within ; ROI. Livestock operations in this area are ɔresented by dairy operations and beef cattle in feedlots, as well as open range grazing. Four dairies and one creamery are located within the area. Carson County, located within the ROI, is among the top counties in Texas for production of wheat, grain and sorghum, and is a substantial contributor of corn crops. The counties of Castro, Deaf Smith, Hansford, and Swisher are the areas that contain the greatest number of cow-calf units within the ROI.

The major employers in the area are service industries, retail trade, manufacturing, public utilities, construction, wholesale trade, finance and realty, public administration, and agriculture. While agriculture is not the major employer in the ROI, it is an important industry. The concerns of the farmers and livestock growers in the vicinity of Pantex Plant are important to DOE. The future plans for the

plant are regulated by various environmental protection measures to monitor the use of the Ogallala aquifer and the possibility of contaminants migrating into the rich soil of the Panhandle area. The continued operations at Pantex Plant are not expected to alter the environment of the surrounding area. Likewise, the construction or modification of the six proposed facilities will not significantly change the existing environment. The interim storage of 12,000 to 20,000 pits at the plant would not increase the potential for contamination at the site, or in the surrounding ROI. However, the commentors concerns are appreciated, and several sections of the Final EIS, including volume I, section 4.4, Land Resources, have been augmented with additional information and analysis concerning the agricultural practices within the ROI.

1.3.4 Geology and Soils

One significant issue is whether there are geologic faults in the Pantex Plant region that are, or may be, "capable" under the definition of 10 CFR 100 Appendix A and, therefore, Pantex Plant may be an unsuitable location for nuclear facilities.

Another issue raised was the possibility of salt dissolution resulting in sinkholes and fractures in the immediate vicinity of the Pantex Plant.

Other commentors requested more information about soil contamination and what will be done to clean these areas of contamination.

Geology

A description of regional geology, including the location of geologic faults, has been added to volume I, section 4.5.1. A geological cross-section of the region has also been included. This cross-section shows the fault in the Permian rocks deep beneath Pantex Plant.

10 CFR 100 appendix A contains guidance on the siting and design of nuclear reactors. Since there is no reactor at Pantex Plant, and this EIS does not consider any proposal to locate a reactor at the plant, this guidance can only be applied in a general way to the facilities at Pantex Plant. The guidance includes criteria to determine the area in which faults should be investigated, how the faults should be evaluated, and how those evaluations should be taken into consideration in the design of the facility. 10 CFR 100 appendix A does not forbid the siting of facilities near faults, even faults that are determined to be "capable" in accordance with the guidance. It does, however, require that the facility be designed be able to withstand the effects of earthquakes from the faults.

There have not been any comprehensive studies performed in accordance with the criteria in 10 CFR 100 appendix A to determine the capability of each of the faults in the region. Pantex Plant does, in fact, lie on a deep subsurface fault. However, there is no evidence that this fault extends into the more recent rocks and sediments; therefore, the cross-cutting principle can be used to determine that this fault has not been active since the Permian era, about 286 million years ago. In the absence of these studies, the procedure used for evaluating the risk from earthquakes to Pantex Plant assumes that the largest earthquake expected in the region can happen anywhere in the region (DOE 1994aa).

Risk analyses of existing facilities take into consideration the robustness of the facility and the frequency of the earthquakes. The risk

elease of radioactive material resulting from arthquakes has been assessed for Pantex Plant. olume I, section 4.14 presents the accident cenarios that resulted from a screening of otential accidents at Pantex Plant. A suite of 1 accident scenarios were identified as risk gnificant. These accidents included both high-equency low-consequence events, such as ose that occur during normal operations, and w-frequency high-consequence events, such s aircraft crashes and seismic events.

our scenarios discuss the risks associated with e release of radioactive material due to ismic events. There is no plausible scenario which criticality could occur at Pantex Plant ue to actinides present in soils interacting with rface groundwater. Section 4.5.1 in volume I ntains a description of regional seismicity. he Pantex Plant *Environmental Information ocument* (Pantex 1996f) contains a more tailed description. Additional details on the sessment of risk in this EIS can be found in olume II, appendix D.

alt Dissolution

lt dissolution is a process that has resulted in ajor post-Permian structures. In Carson unty, a large depression is filled with diment of the Ogallala Formation. Presence the Ogallala deposits in the depression dicates that the basin existed prior to Ogallala ne and that the local dissolution was derway prior to or during the deposition of the gallala Formation (Pantex 1996). Recent rk (TBEG 1994a) using shallow seismic data s determined that the structure beneath the ayas at Pantex Plant shows subsidence of gallala strata attributed to dissolution of derlying salt beds.

nsiderable attention has been given to the ssible origin of playas. A summary of playa velopment is provided as follows: "These ndforms are the result of a series of ermittently active processes, including wind, vial erosion and lacustrine deposition, pedogenesis, dissolution of soil carbonate, salt dissolution and subsidence, and animal activities, that collectively produced the typically shallow and roughly circular playa basins on the High Plains. We infer that playa basins are stable landforms that, once initiated, remain as part of the landscape" (Gustavson, 1994).

Playas are not sinks or sinkholes. For a sinkhole, the actual hole in the ground results from an abrupt collapse of the underground cavity that resulted from the dissolution of salt. While the formation of the sinkhole can happen within days, the cavity that is the cause of the sinkhole is the result of dissolution taking place over geologic time. An example of a sink, involving 2.0×10^6 tons of material, occurred in Hall County in 1994. There is no evidence for, nor expectation of, the formation of sinkholes at Pantex Plant. There is no plausible scenario for the release of hazardous materials even if a sinkhole of similar size occurred at Pantex Plant beneath a magazine containing pits. Since recorded history in the Texas Panhandle, there are no accounts of industrial complexes, buildings, etc., incurring damage as the direct result of sink holes. None of the playas at or near Pantex Plant are the direct result of sinkholes. Playa formation is hypothesized to be the collective result of numerous processes, both physical and chemical.

Soil Contamination

The scope and mission of the Pantex Plant environmental restoration (ER) program is to: assess all inactive sites, which includes solid waste management units; determine the nature and extent of contamination; and perform remediation to eliminate any substantial present or future threat to human health and the environment. Additionally, Pantex Plant currently plans to perform advanced remedial actions (i.e., interim and voluntary actions) where feasible. Remediation activities are currently underway on ditches and playas while a groundwater treatability study is being

conducted to determine the most effective method(s) to clean up contaminants (e.g., RDX) detected in the perched groundwater. The treatability system began operating just eight months after the initial boundary contamination was discovered. The treated water now meets drinking water standards as confirmed by co-sampling conducted by the Texas Natural Resources Conservation Commission (TNRCC) (Pantex, 1996; Pantex 1996c).

The ER program is currently being conducted under the *Resource Conservation and Recovery Act* (RCRA) in accordance with the Hazardous Waste Permit and EPA and State of Texas regulations, with a goal of gaining full public, trustee, and regulatory agency acceptance. All decisions and determinations associated with the ER program are made in negotiation with the regulators. The *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA) (Superfund) also applies to Pantex Plant because EPA placed Pantex Plant on the National Priorities List on May 31, 1[illegible]. Negotiations are currently underway with EPA and the State of Texas to integrate the CERCLA and RCRA processes. The current plan is to complete the remediation process in such a way as to satisfy both RCRA and CERCLA requirements. The Pantex Plant ER program is detailed in the Pantex Plant ER Program Fast Action Plan (DOE 1995e). This plan establishes an aggressive remediation schedule with a goal of initiating remediation at all sites by the year 2000, thereby meeting the State of Texas "Clean Texas 2000 Initiative."

The latest data on soil contamination has been incorporated into this Final EIS. Volume I, section 4.5.1 provides additional details on specific ER projects.

1.3.5 Water Resources

The primary issues and concerns related to water resources included:

- *The status and conditions of wastewater discharge permits;*
- *Surface water quality decision criteria used in the Pantex Plant EIS;*
- *Wastewater discharge into ditches and playas;*
- *The nature and extent of groundwater contamination in the perched and Ogallala aquifers;*
- *The importance of the Ogallala aquifer as a valuable regional groundwater resource; and*
- *The status of environmental restoration programs, such as groundwater contamination prevention, corrective actions, and cleanup.*

Status and Conditions of Wastewater Discharge Permits

Discussion of the status and conditions of wastewater discharge permits for the Pantex Plant has been updated in volume I, section 4.6.1.1 and volume II, appendix C. Because the State of Texas applies regulations through concentration limits specified in permits, the decision criteria for surface water compliance is based on the permit limits established in the National Pollutant Discharge Elimination System (NPDES) Permit and Wastewater Discharge Permit for Pantex Plant. Pantex Plant has worked very closely with EPA Region 6 and TNRCC to produce wastewater discharge permits (EPA NPDES Permit No. TX-0[illegible] and TNRCC Wastewater Discharge Permit No. 02296) that provide stringent wastewater discharge requirements and are protective

ıman health and the environment. The Pantex ant wastewater discharge permit limits meet exceed applicable requirements for surface ater.

NRCC calculated effluent limitations that are .sed on the Texas State Water Quality andards (30 TAC 307). The actual effluent nitations, cited in the permits, are more ingent than those calculated by the TNRCC d reported in its Fact Sheet. As stated in the PDES Permit, EPA accepted the statistical lculations provided by Pantex Plant and has tablished metals limitations on a case-by-case sis through best professional judgment under ction 402 (a) of the *Clean Water Act* for best ailable technology economically available. addition to the constituents that are regulated the permits, the Pantex Plant Environmental otection Department also monitors for other emical constituents to provide additional surance that any changes in water quality are otective of human health and the vironment.

rface Water Quality Decision Criteria

spected contaminants of concern were ermined by comparing tabulated annual erage values to the following defined surface ter quality decision criteria:

- Texas State Water Quality Criteria for fresh water acute aquatic life protection and human health protection for water and fish.
- EPA Region 6 NPDES Permit (No. TX-0107107) and TNRCC Wastewater Discharge Permit (No. 02296).
- DOE Derived Concentration Guides (DOE Order 5400.5) for radionuclide health standards.

Texas State Water Quality Criteria for uatic Life and Texas State Water Quality teria for Human Protection are used as ision criteria for comparative purposes. EPA gion 3 Risk Based Concentrations (RBC) delines were used in the Draft Pantex Plant as surface water quality decision criteria only for those constituents that did not have established surface water quality standards, Pantex Plant wastewater discharge permit limits, or DOE Derived Concentration Guides (DOE Order 5400.5) for radionuclide.

However, because the EPA NPDES and TNRCC Wastewater Discharge permits have been finalized, the NPDES and Wastewater Discharge permit requirements have replaced the RBC Guidelines as decision criteria in volume I, section 4.6.1.1 and volume II, appendix C. EPA and TNRCC determined which constituents would have recording requirements and/or permit limits specified in the NPDES and Wastewater Discharge permit, based on a review of the most recent surface water quality data available for the main outfalls and internal outfalls at Pantex Plant.

TNRCC Permit Fact Sheet (TNRCC 1995a) states that the known uses of the receiving waters are high quality aquatic life use and contact recreation. The uses for the unclassified waters are intermittent playa lakes with no significant aquatic life uses. Acute aquatic life criteria apply. There is no reference to drinking water standards or Risk Reduction Rules being applicable criteria for Pantex Plant surface water in either the TNRCC or EPA permits or their respective Fact Sheets.

The decision criteria for radionuclide constraints are the DOE Derived Concentration Guides (DOE Order 5400.5) under the *Atomic Energy Act of 1954* (as amended) (42 U.S.C. 2011). DOE is authorized to protect public health and safety and the environment in conducting programs, such as Pantex Plant operations. The purpose of DOE Order 5400.5 is "To establish standards and requirements for operations of the DOE and DOE contractors with respect to protection of members of the public and the environment against undue risk from radiation."

It is DOE's objective to operate its facilities and conduct its activities so that radiation exposures to members of the public are maintained within

the limits established in this Order and to control radioactive contamination through the management of real and personal property. It is also a DOE objective that potential exposures to members of the public are as far below the limits as is reasonably achievable and that DOE facilities have the capabilities, consistent with the types of operations conducted, to monitor routine and non-routine releases and to assess doses to members of the public. In addition to providing protection to members of the public, it is DOE's objective to protect the environment from radioactive contamination to the extent practical.

Wastewater Discharge into Ditches and Playas

TNRCC Wastewater Discharge Permit No. 02296 (as amended) requires that within one year of the effective date (June 14, 1996) of the permit, Pantex Plant must conduct a study to determine the feasibility of eliminating or minimizing discharges to playa lakes and open ditches or improving the quality of discharge. A thorough evaluation of existing contamination in all drainage ditches and playa basins is currently ongoing. Methodologies and plans for implementation are discussed in the Ditches and Playas Interim Corrective Action Work Plan (Stroller 1996). Information regarding this work plan has been summarized in volume I, section 4.6.1.1. The results of those investigations, as well as the effect of continued discharge are pending review (Alternative to Discharge at Playa 1). Pantex Plant's Environmental Protection Department conducts environmental monitoring on a routine basis to ensure that permit limits are not exceeded. The results of environmental monitoring activities are summarized and presented in annual environmental reports that are available to the public.

Nature and Extent of Groundwater Contamination in the Perched and Ogallala Aquifers

An expedited site characterization was conducted in 1994 and 1995 to determine the extent of the perched aquifer, nature of recharge, and direction of groundwater flow. Data collected during the Pantex Plant expedited site characterization was used to predict contaminant movement and evaluate cleanup options for perched groundwater. The perched aquifer occurs as a result of localized groundwater mounds that form beneath the playas from focused surface water recharge. The existence of the perched aquifer is also dependent on the occurrence of a fine-grained zone, reported to be approximately 9.1 to 15.2 meters (30 to 110 feet) thick. This fine grained zone impedes the downward movement of infiltrating groundwater. The fine-grained zone has an irregular surface, and generally occurs 305 meters (300 feet) below land surface.

Where the fine-grained zone is present, perched groundwater collects in sand and gravel deposits that form subsurface channel features. The perched aquifer is thickest beneath Playa 1, which is considered to be a source of focused recharge to the perched aquifer. Groundwater in the perched aquifer is considered to flow radially away from Playa 1. Recharge varies laterally between playa, interplaya, and drainage ditch environments. It is important to note that the perched aquifer is stratigraphically higher (closer to the surface) and not directly hydraulically connected with the underlying Ogallala aquifer. The depth to groundwater ranges from 64 to 88 meters (210 to 290 feet) below land surface in the perched aquifer and from 104 to 140 meters (340 to 460 feet) in the underlying Ogallala aquifer.

Additional investigations have been conducted on private property south and southeast of the Pantex Plant. DOE has completed a Groundwater Protection Project that investigated the potential for contaminant migration in homestead wells that are located to the Pantex Plant and southeast of the property boundary. Although low levels of contamination were detected by TNRCC

omestic Ogallala well located on private operty southeast of Pantex Plant proper, forts to mitigate further contamination have en completed. The well in question has been operly plugged and sealed under the pervision of the TNRCC. A replacement gallala well has been drilled and completed to event further potential cross-contamination of e Ogallala aquifer. Information regarding ntex Plant's Groundwater Protection Project presented in volume I, section 4.6.1.2.

nportance of the Ogallala Aquifer as a aluable Regional Groundwater Resource pply

ie Ogallala aquifer is the principal aquifer and ajor source of water for the Texas Panhandle d the South Plains, as well as parts of New exico, Oklahoma, Colorado, Kansas, ebraska, Wyoming, and South Dakota. Water e at Pantex Plant accounted for only 0.7 rcent of the total estimated water use in rson County for 1995. In 1995, Carson unty irrigated 25,751 hectares (63,629 acres), ing 101 billion liters (26.6 billion gallons) per ar, or an average annual withdrawal of 1.6 llion liters (0.42 million gallons) per acre.

ntex Plant is located on approximately 3,700 ctares (9,100 acres) of DOE land. If Pantex nt property were used for agricultural, rather n industrial uses, then approximately 3,600 ctares (8,900 acres) could require irrigating, uming that the approximate area of the three site playas [79.7 hectares (197 acres)] were cluded. Under such circumstances, proximately 14 billion liters (3.7 billion lons) per year of groundwater might be hdrawn for irrigation. The plant pumped 618 llion liters (163 million gallons) for industrial domestic uses in 1995. As a result, icultural activities at Pantex Plant could uire up to 23 times as much water if used for ical Carson County agricultural activities.

der the upper bounding conditions of the 00 weapons level, annual groundwater use projections are 1,011 million liters (267 million gallons) per year. This represents an increase of approximately 64 percent over the plant's industrial and domestic water uses of 618 million liters (163 million gallons) in 1995. In Fiscal Year (FY) 1995, Pantex Plant's actual water usage was approximately 33 percent of the plant's total groundwater production capacity. For the 2,000 weapons scenario, the projected water usage is 53 percent of the plant's total capacity of 1,890 million liters (500 million gallons). Furthermore, for the 2,000 weapons per year scenario, Pantex Plant groundwater withdrawals would only account for 0.8 percent of the total estimated annual groundwater withdrawals in Carson County.

Status of Environmental Restoration Programs for Water Resources

Pantex Plant maintains an Environmental Protection Department and an ER program to monitor soil and water quality so that any present or potential threat to human health and the environment is identified and can be corrected. Groundwater contamination has occurred in the perched aquifer as a result of past site-related activities. For the last seven years, the Pantex Plant ER program has assessed inactive sites, conducted investigations to determine the nature and extent of contamination, and implemented remediation strategies to eliminate any present or future threat to human health and the environment. DOE implemented a Groundwater Protection Project to clean up the groundwater to residential drinking water standards beyond the facility boundary. The purpose and objectives of the project are discussed in volume I, section 4.6.1.2.

Remediation activities that are currently underway at Pantex Plant include contaminated soil removal in the vicinity of on-site ditches and playas and a groundwater treatability study to determine the most effective method(s) to clean up perched groundwater. The treatability system began operating just eight months after

the initial boundary contamination was discovered. The treated water now meets drinking water standards, as confirmed by co-sampling conducted by the TNRCC (Pantex, 1996; Pantex 1996c). Evidence of natural attenuation and degradation of high explosive compounds, including trinitrotoluene (TNT), have been documented during the treatability studies (PC 1996n).

Summary of Changes to the Draft EIS

Volume I, section 4.6.1.1 has been updated to discuss new EPA NPDES and TNRCC Wastewater Discharge permit requirements, revised surface water quality decision criteria, and corrective measures for wastewater discharge into ditches and playas. Volume I, section 4.6.1.2 has been updated with new information regarding the nature and extent of groundwater contamination in the perched and Ogallala aquifers and the status of ER projects such as groundwater contamination prevention, corrective actions, and cleanup.

1.3.6 Air Quality

One of the principal air quality issues centered on the comparison of the results of the TNRCC air modeling and the modeling performed for this EIS. A related concern was that a significant number of air pollutants were perceived as left out of the EIS modeling. TNRCC, in reviewing the emissions sources and pollutants reported in the Draft EIS, did not find 8 emissions sources of 51 hazardous air pollutants that were on the TNRCC list. Another issue was the variance between the modeling results, which showed no exceedances for particulate matter (PM_{10}), and the sampling data collected by TNRCC, which showed a few exceedances of the National Ambient Air Quality Standard (NAAQS).

One of the most frequently mentioned concerns was the fact that there was no discussion of the continuing efforts to develop an alternative to the Burning Ground.

Another issue was the placement of monitoring stations at Pantex Plant and the location and adequacy of the modeling performed for the residences surrounding the plant.

Air Modeling

The air modeling for the EIS indicates that alcohols exceeded the TNRCC Effects Screening Level (ESL) at the plant boundary and at one of the nearby residences. The TNRCC air modeling indicated that alcohols would exceed the ESL at the plant boundary, but not at the nearby residences. The TNRCC modeling was based on a screening process whereby all pollutants were assumed to be located at one point and calculations were made to determine resulting concentrations at the fence line.

The EIS air modeling used the actual location of each source emission and modeled the resulting concentrations at the fence line produced by simultaneous emissions of all pollutants from their respective sources. The results were very comparable to the TNRCC study, with both modeling exercises indicating that only alcohols exceeded the ESL at the fence line. This outcome was affected by the fact that at the time, the specific emission rates of each type of alcohol at each source were not available. Therefore, in the EIS modeling, all of the alcohols for which individual emission rate information was not available were modeled

gether as a group and compared to the ESL for e individual alcohol that had the lowest ESL. ecause the 1-hour ESLs for the specific cohols used by the plant vary from 101 to ,800 $\mu g/m^3$ (micrograms per cubic meter), is was a very conservative assumption.

nce the Draft EIS was published, the quantity each type of alcohol in the group present at e plant has been determined. In actuality, of e 19 types of alcohols used by the plant, only ie (1-octanol) had an ESL less than 600 g/m^3. The quantity of 1-octanol present at the ant is only one gallon, which represents less an 0.05 percent of the total quantity of cohols at the plant. Conversely, the two types alcohols stored in greatest quantities at the ant are 2-propanol (isopropyl alcohol) and thanol (methyl alcohol), which comprised 105.1 gallons (63.2 percent) and 456 gallons 5.1 percent), respectively, of the plant ventory. The 1-hour ESLs for isopropyl cohol and methanol are 7,856 and 2,620 $/m^3$, respectively. The third most common m of alcohol at the plant is ethyl alcohol, iich had an inventory of 107.3 gallons (6.11 rcent of the plant inventory) and has a 1-hour L of 18,800 $\mu g/m^3$.

divide the previously modeled concentration the group of alcohols into the specific types l quantities of alcohols that could be emitted, total concentration of all alcohols was then rated by the percentage of each type of ohol that is present at the plant. The ncentrations thereby derived for each alcohol re then compared to the ESLs for the specific ohols involved. The result is that no alcohols eed their respective ESLs at any point on the ce line or at any offsite residence modeled. lume I, section 4.7.1 and volume I, Table 4.1-2 have been revised to reflect these nges.

lowing receipt of a list of those sources and issions included in the TNRCC modeling, cks were made against the EIS modeling abase. All eight of the sources at issue were formerly used facilities that were inactive by the time the EIS modeling was performed. All but three of the pollutants modeled by TNRCC were also modeled during the preparation of the EIS. The maximum fence line concentrations of the pollutants, both those listed in the *Clean Air Act (42 U.S.C. 2011)* and those listed by TNRCC, were compared to the appropriate TNRCC ESLs. However, only the results for those chemicals that are listed under the *Clean Air Act,* as amended (Nov. 1990), and those that exceeded their ESLs were reported in the Draft EIS.

In addition, the results for criteria air pollutants were also reported. All of the maximum fence line concentrations for all of the chemicals TNRCC used in its modeling have been included in volume I, section 4.7 and volume II, appendix B of the Final EIS to provide a complete picture of all pollutants. There were three pollutants that had not been included in the modeling: dimethylformamide, ketene, and total suspended particulates (TSP). The first two have been added to the modeling results in the Final EIS. The third pollutant was included in the PM_{10} modeling, as there is no longer a standard for TSP. Changes have been made in the Final EIS to reflect this information.

The variances between PM_{10} monitoring data and modeling results are explained by several factors:

- The dust particles causing the monitoring exceedances could well have occurred as a result of offsite agricultural operations (or relatively short-duration construction activities onsite) and simply blown across the air sampling stations along with the plant emissions. It is not possible for the model to account for offsite generated particulates that combine with onsite emissions.
- The air sampling stations are located well inside the fence line of the plant, whereas the modeling results were

reported at the fence line, further from Pantex Plant sources. With the greater distance from sources, concentrations at the fence line would be expected to be lower than onsite.

- The meteorology for modeling was that for 1988, as standardized by TNRCC. The air samples showing exceedances, however, were taken in the 1992-1995 period.

Burning Ground Alternative

The Burning Ground is used to sanitize explosives components/materials and treat explosives waste and materials contaminated with explosives. It is operated under RCRA regulations for HE waste treatment. Air emissions from the ongoing Burning Ground activities are subject to general air quality conditions established in the Hazardous Waste Permit. The permit states that this facility shall be operated in accordance with and subject to the applicable provisions of the Texas Solid Waste Disposal Act and the Texas Clean Air Act as amended, Chapter 382 of the Texas Health and Safety Code, and all applicable rules, regulations, and orders of the TNRCC. The resulting ash shall be managed so as to not cause or contribute to a condition of "air pollution" as defined in subchapter 382.003 of the Texas Health and Safety Code.

As stated in the Draft EIS, the plant conducte study in 1994 that determined that the Burn Ground is the Best Available Cor Technology. However, after discussions w stakeholders, the plant initiated another study further examine base hydrolysis as a fu technology to sanitize and demilitarize components as well as to treat HE residues. T clarification has been added to the Final E Alternative HE disposal methods are discus and analyzed in volume II, appendix G.

Air Monitoring and Concentrations Residences

Under an Agreement in Principle between D and the State of Texas (November 19 TNRCC implemented a non-regulatory monitoring program at Pantex Plant determined placement of monitors. The res of the monitoring program are discusse volume I, section 4.7.

To supplement this monitoring program quality modeling was performed for the E The air quality modeling analyzed concentrations at the residences surrounding Pantex Plant, including several residences the south side of the plant. The location of residences used in the modelling was cor The incorrect map has been replaced with a map showing locations of all the reside modeled (see volume I, section 4.7.1.3).

3.7 Socioeconomic Resources

Commentors questioned the use of different employment multipliers in the Pantex Plant EIS, SSM PEIS, and S&D PEIS.

Commentors expressed concern about cumulative impacts to the economy because of past and future closures of Federal facilities or operations. For example, the future closure of the U.S. Department of Interior's Bureau of Mines Helium Plant, the Amarillo Air Force Base closure in 1968, the Bell helicopter plant closure in 1990, and the cancellation in 1988 of the DOE program for a mine geologic repository for spent nuclear fuel and high-level radioactive waste in Deaf Smith County.

Commentors stated that agriculture forms the basis for the long-term economy of the Texas Panhandle. Related concerns were about potential impacts to the agricultural economy and tax revenues. Other concerns were about damage to the reputation of agricultural products from Pantex Plant activities or related accidents. Commentors asked for more emphasis on these issues in the Final EIS.

When looking at the 500-weapons employment level, some commentors were concerned about the impact on future revenues for governing bodies compared with current revenues. Commentors asked that additional analyses on tax revenues be added to the Final EIS. There was also concern over the loss of jobs if Pantex Plant is downsized, creating economic impacts and outmigration.

nomic Modeling

SSM PEIS, S&D PEIS, and Pantex Plant all use the U.S. Bureau of Economic alysis' regional economic model known as gional Input-Output Modeling System MS II) as the basis for employment and me impact analysis. This nationally gnized model is used by government ncies, university researchers, and private nomists throughout the country to measure onal economic impacts. It is designed to be sitive to differences in the economy from region to another.

differences in the employment multipliers ented in the three documents are not ause of the models used but because of the erences in the inputs provided to the models he authors of those documents. These inputs te to a number of factors, including the size he ROI, the type and mix of activities lved in the projects being considered; the number of direct employees needed; the average income per employee or total payroll; the money spent on local purchases of goods and services to support Pantex Plant operations or construction and operation of new facilities; the money spent by Pantex Plant workers in the local economy; and the average wage rate applied to direct and indirect workers.

Differences in these inputs at different points in time can generate different indirect employment multipliers. The type and mix of activities involved in the programs described in the three referenced documents are different and each requires significantly different inputs which may or may not be locally available within the ROI. This also contributes significantly to different multiplier values in the three documents.

One commentor expressed concern about the employment multiplier of 2.65 used in the Pantex Plant EIS, which is different from the

3.87 multiplier used in a study conducted for the Amarillo Economic Development Corporation.

As stated before, DOE chose to use the RIMS II model as the basis for employment and income impact analysis. Pantex Plant is a major contributor to the employment in the region. However, the employment multiplier is a derived value and would differ even when the same researcher is looking at different industrial activities. We believe that a multiplier of 1.65 indirect jobs for each direct Pantex Plant job, which translates to a total job multiplier of 2.65, is more realistic when considering the proposed and alternative actions being analyzed in the Pantex Plant EIS.

Cumulative impacts include the incremental impacts of the actions when added to other past, present, and reasonably foreseeable future actions. A discussion of the past activities affecting the ROI, such as the closure of the Amarillo Air Force Base in 1968, the cancellation of the DOE geological repository program in Deaf Smith County in 1988, and the closure of the Bell Helicopter Plant in 1990, has been added in volume I, section 4.11.1.5 of this EIS. These impacts are reflected in the baseline employment and population estimates that form the basis for evaluation of impacts from the proposed action and alternatives. Thus, impacts resulting from the cancellation of the repository program in Deaf Smith County on the Pantex Plant ROI, for example, have been addressed in the description of the affected environment and are reflected in population projections for the No Action Alternative. Cumulative economic impacts of planned or reasonably foreseeable DOE actions have been discussed in volume I, section 4.11.5.

As mentioned under Cumulative Impacts in volume I, section 4.2, information on other Federal (non-DOE), State or local projects including private developments was sought through contacts with Federal and State regulatory agencies, the Amarillo Economic Development Corporation, the Panhandle Municipal Water Authority, and the City of Amarillo. This effort yielded only one future action (future closure of the Helium Plant) that would contribute to the cumulative impacts in the Pantex Plant ROI.

Agricultural Economy

Risk assessments conducted in the Pantex Plant EIS have shown that plant activities do not adversely impact agricultural operations in the ROI. This is clearly indicated by the growth of the agricultural economy in the ROI over the past several decades since Pantex Plant has been in operation.

The contribution of agriculture to the regional economy of the Texas Panhandle is described in volume I, section 4.11.1.5 of the EIS. This section evaluates and summarizes available data on both farm and non-farm workers. Volume I, Table 4.11.1.5–2 presents data on growth in the agricultural industry in the region from 1982 to 1992. In summary, the value of crops grown and sold in the ROI has increased by 151 percent relative to the 142 percent increase in the Producer Price Index for Crude Foodstuffs and Feedstuffs. Additional information on economic impacts to agriculture has been provided in volume I, section 4.11.

Tax Revenues and Jobs

At the 500 weapons activity level, the Pantex Plant workforce would be reduced by 1,351 workers, Additionally, another 2,351 indirect workers could lose their jobs in the Pantex Plant ROI. For analysis purposes, it was assumed that all direct workers and 50 percent of the indirect workers would leave the Pantex Plant ROI as a result of this action. With a household size of 2.85, this would mean an outmigration of 9,685 persons. It was further assumed, for simplicity in calculation, that all workers live in the City of Amarillo. Based on the current property tax revenue of $457, the revenue loss in the City of Amarillo would be approximately $2[illegible]

approximately 3.6 percent of the total
venues of the City in 1994.

reality, this number would be lower since
ne of these workers do not live in Amarillo
d the per capita revenue generated in the ROI
unties is generally lower than in the City of
narillo. Also, not all unemployed workers,
ticularly the indirect workers, are likely to
ve the Pantex Plant ROI immediately or even
er a longer period. Additional information on
pacts to overall tax revenues has been
vided in volume I, section 4.11.2.1.

e Record of Decision for the SSM PEIS will
ntify whether Pantex Plant would be
wnsized or not. If downsizing does occur, the
ected communities can request DOE to
vide financial assistance for community
istance and planning.

)E will, in any event, keep the public
ormed of its actions on a regular basis and
n after any decision is made. Any decision
t would result in downsizing would require a
nal workforce restructuring plan and
itional public participation opportunities in
ordance with *National Defense Authorization Act of 1993* (Public Law 102-484). The DOE Office of Community and Worker Transition has the capability to help the facility and community transition in the case of downsizing. The office oversees DOE policies to facilitate worker transition, including worker retraining, education, and relocation assistance.

A reduction to the 500 weapons activity level could contribute to a combined loss of 3,715 jobs (1,400 direct plus 2,315 indirect jobs). This would increase the unemployment rate in the ROI from approximately 4.1 percent to 6.2 percent and could trigger outmigration. Compared to the total employment of 107,000 in Amarillo (ACC 1996), this reduction would represent approximately 3.5 percent of the Amarillo area employment and 3.7 percent of its total personal income of $3.65 billion in 1994.

It should be noted that reduced workforce at Pantex Plant, or even the closure of the plant, would not necessarily result in instant outmigration of population. Even after the closure of the plant, workers would continue to be employed at the site for decontamination and decommissioning of plant facilitates over a number of years.

.8 Intrasite Transportation

he majority of the comments regarding Intrasite Transportation were requests for additional te-specific information or clarification of various topics. Several comments requested formation regarding onsite vehicle accidents at KAFB.

number of comments were received relating to the pyrophoric nature of plutonium and whether is is an issue of concern for pit storage. Additionally, many comments requested further formation on pit and pit container surveillance.

number of commentors requested additional clarification on the scope of dosimetry estimates ovided in volume I, section 4.12.

FB Accident Experience

icular accident statistics for KAFB are ntained by the U.S. Air Force. For 1995, e were a total of 271 vehicle accidents within KAFB; 241 were minor and 30 were major. A major accident involves a loss of life or damage in excess of $10,000. For 1994, there were a total of 283 vehicle accidents within KAFB; 233 were minor and 50 were major. The

potential for vehicle accidents involving pit shipments was considered in the EIS analysis. It was concluded that it is not reasonably foreseeable that a vehicular accident on KAFB would occur with the severity necessary to result in a release of plutonium from an AT–400A container within a Safe Secure Tractor Trailer (SST). As discussed in volume I, section 5.5.1, the controlled transportation route on KAFB does not contain threats that could create the severe environment required to lead to a dispersal of plutonium. In addition, base personnel traffic would be controlled as SST convoys pass through the base roads. Thus, other vehicles would not pose a threat to the SSTs while on KAFB.

Pit Pyrophoricity

Pyrophoricity is not a realistic concern during pit storage. Plutonium metal in large pieces (such as is present inside pits) does not burn upon exposure to air. Plutonium metal can be handled in air and is often processed and stored in normal air glove boxes. Spontaneous ignition only occurs when plutonium is present as particles less than 0.2 millimeter thick and then only on exposure to temperatures in excess of 150°C. Larger samples must be exposed to temperatures in excess of 500°C before ignition. Formation of such small particles is difficult.

Analysis of plutonium pits subjected to mechanical deformation or stress shows plutonium does not burn or spread as a result of chemical reaction with air. Plutonium oxide forms when plutonium metal or a compound of plutonium reacts with oxygen. The oxide forms an adherent layer on the metal surface and acts as a barrier that slows the rate at which additional oxygen can react. The oxide is the most stable compound of plutonium in an oxygen-containing environment.

Pits have been under careful scrutiny for many years through various DOE programs, particularly the Weapons Quality Assurance Testing Program, that includes the Pit Surveillance Program and an accelerated aging program, to ensure that aging-related defects do not develop in pits. A routine stockpile surveillance has been performed on the pits for 20 to 30 years in more hostile environments than Zone 4. Information from that surveillance indicates that containers will not be expected to degrade over the interim storage period.

The AT–400A container is designed for a 50 year life. A pit and pit container surveillance program will continue for the AT–400A container. This surveillance program will minimize the likelihood of undetected failures of the pits and/or containers.

Dosimetry Data

The DOE Transportation and Staging Department is responsible for pit storage activities as well as interzone transfers of nuclear material. Historical dosimetry data and a description of responsibilities for this department is provided in volume I, section 4.12.1. This historical dosimetry data is correlated with historical material transfers to estimate impacts from operations. The Transportation and Staging Department has a cumulative dose of 3.642 person-rem for 1993. This information is provided in volume I, section 4.12.1.3.

The dose estimate presented includes not only the expected doses from weapons transfers but also the expected doses from the interzone transfers of 20,000 pits as part of the repackaging project. The No Action Alternative dose numbers presented include not only the expected doses from weapons operations but also the expected doses from the interzone transfers of only 12,000 pits as part of the repackaging project.

The Proposed Action includes continued weapons operations and pit transfers for repackaging. For the pit storage relocation alternatives, both of these activities will

ormed in addition to the activities ciated with offsite pit shipments.

offsite shipment of pits from Pantex Plant ld require the removal of pits from the Zone 4 magazines and the loading and restraining of pits within an SST vehicle. The performance of these activities will increase the worker exposure total, as discussed in volume I, section 4.12.

9 Waste Management

Many comments questioned DOE's material management capabilities based on the Department's past history of managing hazardous materials like plutonium and wastes. Commentors questioned where all the waste would go, the lack of licensed facilities to manage DOE wastes, and management mistakes.

Several commentors asked what types of wastes and volumes of waste are generated during dismantlement operations and pit storage activities. Other commentors were concerned that relocation of pit storage activities would adversely impact candidate sites' waste operations and environmental restoration activities.

Commentors questioned which activities were subject to RCRA regulation, permits, CERCLA regulation, and related impacts.

te Management (Including Hazardous erials)

recognizes that all its facilities and all its dous materials, including plutonium, re varying levels of operational and onmental controls to protect the workers, public, and the environment. DOE is dering programmatic waste management gies and solutions for the next 20 years the WM PEIS to resolve vital waste gement issues. Depending on the site, type ste, and site management strategies, most disposal practices do not require licenses. e DOE is required to obtain and maintain a e or permits (including Federal Facility ments and Agreed Orders), DOE ues to work with EPA, States, employees, s, stakeholders, and the general public to op programs and commitments to better ge its facilities and all hazardous materials, ing wastes. All of these plans and itments have been considered for the sed sites to determine if there are any cts or restrictions that would inhibit these sites from serving as good locations for the facilities proposed in the EIS. Nothing was found that would inhibit Pantex Plant or the alternative sites from performing the required missions.

DOE understands the importance of the Ogallala aquifer as the principal aquifer and major source of water in the vicinity of Pantex Plant. Under the existing DOE environmental monitoring program, groundwater monitoring of the perched and Ogallala aquifer has been conducted at Pantex Plant for the past 20 years. Impacts of present and future water quality are discussed and analyzed in volume I, section 4.6. As discussed in volume I, section 1.3.5 and section 4.6, nothing was found that would result in a significant impact to the Ogallala aquifer.

Waste Types and Volumes

Pantex Plant generates primarily four categories of waste (low-level radioactive waste [LLW], low-level mixed waste [LLMW], hazardous waste [HW], and nonhazardous nonradioactive

waste [NHW]) during the assembly and disassembly of nuclear weapons, certain maintenance and modification activities regarding the nuclear weapons stockpile, monitoring of nuclear weapons, and quality assurance testing of weapon components. Waste volume projections are provided in volume I, Table 4.13.1.2–3 and volume I, section 4.13.1.2, Waste Categories and Operations. Pit storage activities generate less than 1 cubic meter (1.3 cubic yards) annually of LLW, LLMW, HW, and NHW each. This small amount of waste would not impact current waste management and environmental restoration activities at candidate sites.

RCRA, CERCLA, Permits

DOE and regulatory organizations monitor the current hazardous material storage and surrounding environment. Pantex Plant operates under several permits, including operations at the Burning Ground. LLMW is managed in accordance with the Agreed Order and Site Treatment Plan-Compliance Plan, 30 TAC 335, the RCRA Part B Permit, and 40 CFR 260-280. LLW is managed in accordance with DOE requirements including the NTS Defense Waste Acceptance Criteria Certification and Transfer Requirement Program (NVO–325).

In regard to past environmental management practices at Pantex Plant, in 1989 the EPA conducted a RCRA Facility Assessment resulting in a Consent Order to investigate and correct 144 solid waste management units. In 1991 the RCRA Facility Investigation was incorporated into the Pantex Plant RCRA Part B hazardous waste permit. Pantex Plant was placed on the Superfund National Priorities List in 1994. As restoration work continues, a tri-party Federal Facility Agreement is currently being negotiated to outline the reporting requirements, schedules, and funding for the ER program. According to the best available information, the majority of the ER activities are expected to be completed by the year 2000.

Pantex Plant continues to implement a Pollu Prevention/Waste Minimization (PP/W program to reduce environmental imp through waste avoidance and w minimization. This program was rece awarded the President's "Closing the Ci award. Pantex Plant is one of only 22 Fed facilities to have won this award. Pantex P is also active in the Clean Texas 2000 pollu prevention program. Volume II, appendi contains detailed information of the PP/WM

The environmental impacts of w management at Pantex Plant and the relocation alternative candidate sites, inclu the regulatory framework for LLW and LLM are discussed and analyzed in volume I, sec 4.13, chapter 5, and chapter 6, as appropri KAFB is the only alternative storage candidate that has a RCRA Part B permit iss to a non-DOE agency. If responsibilities land and operations (all or in part) of the K Manzano WSA changes from the Air Forc DOE, RCRA permit modifications woul required (see 40 CFR 270 criteria). These of modifications are considered administr in nature and require only regulatory age approval.

NTS, SRS, and Hanford Site hazardous wa generation and mixed waste generation covered under existing RCRA Part B permit interim status permits. Clarifying language been added to volume I, sections 5.5.1 and regarding permitting issues, including mi waste, as appropriate.

For DOE to continue to fulfill its responsibil as mandated by statute, Presidential direct and Congressional authorization a appropriation, the generation of solid wa including "nuclear waste" is an unavoida result. Recently, in response to numer public requests for independent regula oversight of radioactive source, spe material, and by-product material, the Secret has created an independent Working Group External Regulation. This working grou

:sently reviewing various alternatives for ernal oversight of activities at DOE's nuclear facilities and is expected to submit a report by the end of 1996.

3.10 Human Health

Numerous commentors expressed their concern that all current and future operations at Pantex Plant be conducted in a safe and environmentally sound manner. This is the main thrust of essentially all the comments received on this topic. Many other comments questioned the origin of risk factors used to calculate health effects from radiological exposures. One commentor questioned why specific epidemiological studies were not discussed in the EIS. Several commentors questioned the adequacy of conclusions drawn from past epidemiological studies and expressed their desire for future studies.

Comments also were received regarding synergism between radiological and chemical exposure. Others requested further clarification of the risks from radiological exposure.

alth Effects

: primary purpose of the EIS is to provide the is for DOE decision makers to make proper isions regarding potential environmental)acts of current and future operations at itex Plant and alternative sites, taking into sideration all public concerns. DOE is mitted to the safe operation of Pantex Plant, well as the protection of the public, the ironment, and the facility employees.)rmation regarding current and future rations at Pantex Plant are presented in ous sections of the EIS as well as the Pantex it Environmental, Safety, and Programmatic)rmation Documents (Pantex 1996, 1996z, 6a).

E uses risk factors that are recommended by 1 national and international radiological :ection organizations. The public and upational health risk for normal radiological rations analyzed in this EIS use the two :-to-risk conversion factors for the public workers established in the National earch Council's Committee on the logical Effects of Ionizing Radiation BEIR eport (NAP 1990). These risk factors have been endorsed by the International mission on Radiological Protection (IRCP), the National Committee on Radiation Protection and Measurements, the EPA, and the Nuclear Regulatory Commission. These risk factors are 0.0005 deaths per person-rem to the general public and 0.0004 deaths per person-rem for workers (the lower number for workers accounts for the absence of children in the workforce). This approach is consistent with other EISs prepared by DOE.

Both the BEIR committee and ICRP are independent organizations. As part of the development of risk factors, these organizations review appropriate epidemiological studies. Details on the epidemiological studies reviewed to develop the latest risk factors are available in the following document: BEIR V National Research Council, "Health Effects of Exposure to Low Levels of Radiation," National Academy Press, Washington, DC, 1990 (NAP 1990).

Past, present, and future health studies of Pantex Plant workers and the surrounding communities are described in volume I, section 4.14.1. To date, these studies indicate that there have been no significant excess cancer mortality incidences in the Pantex Plant area related to plant operations. There have been no verifiable indicators as to any short- or long-term health

impacts at Pantex Plant. Public exposure to radiological effluents has conventionally been of extremely small dose due to DOE safeguards and the nature of the missions conducted at the facility.

DOE Headquarters Office of Epidemiological Studies initiated an epidemiological surveillance program at Pantex Plant in 1993 to address the current health status of the workforce. The program tracks and analyzes the occurrence of illness and injury on a continuing basis. Monthly data collection began on January 1, 1994; data and reports are issued on a semiannual basis. These reports provide an ongoing assessment of any health problems that may be associated with Pantex Plant operations. The Pantex Plant 1994 annual report is currently available.

One commentor referenced critiques of the 1985 Pantex Plant workforce mortality study (Geiger 1992). This document criticizes DOE epidemiological studies that compare health outcomes of DOE workers with those from the community at large.

Because workers tend to be healthier than the general public, potential adverse health outcomes from workplace radiological exposures may be missed in the comparison of DOE workers with the community at large (Healthy Worker Effect). The authors of the referenced Geiger report reanalyzed data from the 1985 Pantex Plant workforce mortality study with a proposed approach to account for the healthy worker effect. By using this approach, the authors suggested that numerous DOE epidemiological studies overlooked potential adverse health impacts. However, the approach suggested by the authors supports the conclusions of the 1985 mortality study (Aquavella 1985).

A follow-up of this 1985 mortality study is planned. The update will be conducted by National Institute of Occupational Safety and Health (NIOSH) as part of a research program funded by DOE under a Memorand Understanding with the Department of and Human Services. The follow-up st NIOSH is scheduled to commence either 1996 or early 1997. The study will p additional years of data on the m experience of Pantex Plant workers.

Chemical and Radiological Synergism

There is insufficient scientific evide quantify synergistic effects between r and chemical exposures, if any. Effects exposures are modeled individually accepted scientific standards and mode calculated effects from these exposu shown individually to be extremely low

Clarification of Radiological Risks

Volume I, section 4.14 provides an an the potential health effects of the ongo at Pantex Plant and each of the alternati health effects are expressed as exces fatalities as a result of radiological exp workers and the public from normal o and from accidents. The radiological e to the workers and the public can be by models or by historical informatio exposures can be converted to exce fatalities by using dose conversion fac

Based on DOE's recommended risk 0.0004 deaths per person-rem, an ex 330 person-rem will result in 0.13 exc fatalities. A description of this cal provided in volume I, section 4.14. interpretation of this impact is th number of excess cancer fatalities w occur if numerous groups were exp level. Because the value is small likely impact from this exposu individual group is zero excess canc This description is provided in volur 4.14.2.1–2, Evaluation of Risk. descriptions are entirely consistent. only in the level of explanation.

3.11 Aircraft Crash

Many comments expressed concern regarding application of the Draft DOE Standard on Aircraft Crash Analysis, and why the values for hit probability changed from those presented in the 1993 Zone 4 Safety Analysis Report (SAR) and a 1994 Environmental Assessment (EA) (DOE 1994w).

Another frequent comment involved the consideration of the recent ValuJet crash in the analysis, including the consideration of this aircraft's high angle of impact (75 degrees).

Many citizen concerns involved the location of the Amarillo International Airport in relation to the plant. People also expressed concern about the number of flights taking-off and landing in connection with the modification and maintenance facility at the Amarillo International Airport.

: Probability

e 1993 Zone 4 SAR and 1994 EA results re found to be in error. The value of 5×10^{-6} for hit probability was obtained ough an incorrect application of the Solomon del, and was later withdrawn from the safety is for Pantex Plant. When this analysis was alculated, the resulting value for hit bability was 1.95×10^{-5}. This low to mid ^{5} range value agrees with the results obtained n two previous independent analyses ducted for Pantex Plant and also agrees with results obtained for this EIS. Table 4.15.1.3-1 volume I provides a comparison of results n these analyses.

gle of Impact

ed on the recent tragedy of the ValuJet sh, commentors suggested that the analysis redone with an impact angle of 75°, the mated impact angle of this particular crash. 15° impact angle used in the Draft EIS was sen based on guidance provided in the July 5 Draft DOE Standard (DOE 1995z). This le has been shown to be conservative. A sitivity study was conducted using angles of act ranging from 0° up to 90°. The results of study indicated that the risks associated 1 high impact angles are approximately 10 es lower than those modeled for the Draft because high impact angles result in zero l distances. The results of the EIS analysis cate that greater than 90 percent of the risk olves skidding aircraft.

Amarillo International Airport Operations

Pantex Plant's is located near Amarillo International Airport. DOE, in association with the Federal Aviation Administration (FAA), is currently engaging in measures to reduce the number of overflights of Pantex Plant. These measures involve shifting the approach paths away from the plant, and include relocating the Very High Frequency Omni-Directional Radio Range with Tactical Air Navigation (VORTAC) and installation of a Global Positioning System (GPS). Currently, the Draft DOE Standard does not allow for consideration of these measures. It has been estimated that, when taken into account, the proposed overflight reduction measures could result in an 82 percent total relative risk reduction.

All of the post-maintenance flights referred to by the commentors must file with the FAA before an aircraft can embark. These aircraft must meet all of the same FAA requirements applicable to other aircraft. An experienced, certified crew will check the aircraft prior to the flight. These flights are included in the Radar Airspace Monitoring System (RAMS) data and FAA take-off and landing operations data for the Amarillo International Airport. These aircraft will be taking-off into the wind just like all other aircraft. The percentage of take-off operations on Runway 04, the main runway, (35.9 percent) was obtained from the windrose.

1.3.12 Intersite Transportation

Many commentors requested more information regarding the routes used by DOE Transportation Safeguards Division (TSD) for hazardous material shipments. Additionally, many comments requested further information regarding the interaction between TSD and State and local agencies.

Several other commentors requested more information about the AT-400A transportation container.

TSD Operations

TSD operations comply with the requirements of 49 CFR 177 for selecting, notifying drivers thereof, and adhering to preferred routes. The majority (90 percent) of TSD travel is over interstate highways. The remaining 10 percent is over routes that meet specified conditions for deviating from the preferred route. Regulations permit deviation from the preferred route when necessary for safety or security. TSD personnel are briefed on construction, congestion and severe weather along the route prior to travel. TSD crews make every effort to alter a route or change travel time to avoid potential traffic hazards.

Federal regulations permit TSD deviation from the requirements regarding notification of the routes used. Routes used are classified, compartmented information that may not be disseminated except to persons with appropriate security clearance and a need to know.

TSD directs and manages an emergency management drill and exercise program that involves facility personnel, resources, and offsite elements. To stay proficient in all aspects of TSD convoy operations, TSD annually plans, implements, monitors, and performs follow-up analysis for couriers called in-service training (IST). For each iteration of IST, TSD invites participation from State police agencies. These police agencies train with TSD in all aspects of the program, but TSD's primary interest is in their participation in convoy tactical training with emphasis on law enforcement link-up in the case of an emergency. The present (F IST program has both Arkansas and M State Police participation. In FY 95, the A State Police and the Oklahoma State participated, and in 1994 the Texas Depa of Public Safety participated.

TSD has a liaison program through w communicates with law enforcement and safety agencies throughout the country, them aware of TSD operations. The program provides law enforcement information to assist them in recognizing vehicles should they be involved in an acc and what actions to take in conjunction w actions of the couriers in the rig and vehicles.

AT–400A Containers

The design of the AT–400A contain currently being finalized. There are only prototype containers in existence. AT–400A container is currently under certification testing at Sandia N Laboratories (SNL). The performance that the package designer must use to Type B packaging against empir established hypothetical accident test con of the transport are prescribed in N Regulatory Commission regulations (10 71.73) and are discussed in appendix volume II.

Following certification testing by SNL will develop a Safety Analysis Repo Packaging (SARP) for the AT–400A

RP provides DOE with a detailed safety lysis and risk assessment of the container's formance for its intended mission and ected useful lifetime. Following acceptance ıe final SARP, DOE will issue a certification he AT–400A. The schedule for preparation ıe SARP is not yet available.

gain certification as a Type B package, the -400A must pass the testing requirements eloped by the Nuclear Regulatory Commission to ensure satisfactory performance under accident conditions. DOE has developed and will implement a pit and container surveillance program for the AT–400A container. This program will evaluate the long-term performance of the container and the integrity of the pit.

Volume I, section 4.12 has been revised to include more information about the above topics.

.13 Environmental Justice

ecutive Order 12898 requires the analysis of environmental effects on low income and minority pulations to include human health, social, and environmental effects. Commentors felt that the ironmental justice analysis was limited to human health effects of the Proposed Action and did include the social and economic effects as required by Executive Order 12898.

mmentors expressed concern regarding adequacy of training programs and safety information workers and the community, especially regarding different literacy rates and/or primary guage difficulties that might exist among disadvantaged populations.

re was also concern regarding the radiation exposure to workers and the minority community.

ironmental Justice Analysis

al and economic (socioeconomic) impacts e continued operations at Pantex Plant have considered in volume I, section 4.11, economic Resources. In volume I, section Environmental Justice, the location of rity or low-income populations, identified igures 4.17.1–1 and 4.17.1–2 of the Draft leads to the conclusion that no oportionately high social and economic cts occur on minority or low-income lations from Pantex Plant operations. The n the Final EIS has been revised to state conclusion. Section 4.17.2 provides ssion of beneficial economic impacts to majority and minority populations.

an health impacts resulting from Pantex operations are strongly tied to the aphic location of minority and low-ıe populations. If minority or low-income populations were concentrated in the immediate vicinity of the plant, there would be a possibility that such a population could be disproportionately impacted. The Pantex Plant EIS has analyzed the potential for offsite release in both routine and accident conditions and has not identified a release scenario that would cause a disproportionate effect on minority or low-income populations.

Concerns of all individuals, whether belonging to majority or a minority and whether living in urban or rural areas are taken into consideration within the overall context of the assessment of potential impacts on population in the ROI.

Training, Safety Information and Radiation Exposure

Health and safety issues are an important part of Pantex Plant operations and have been taken into consideration in this EIS. Occupational

Safety and Health Administration and implementing DOE Orders address safety and health issues for all workers at Pantex Plant regardless of minority or income status, including radiation exposure. Operations at the plant expose workers to occupational hazards during the normal conduct of their work activities. Occupational safety and health training that includes specialized job safety and health training appropriate to the work performed is provided for all plant employees.

DOE and Pantex Plant have initiated a program of improving communication with public by providing fact sheets, speakers exhibits, information fairs, open houses, presentations with material geared elementary school students. In addition specific inquiries can be made to the Pantex Plant information office to obtain further information on training programs and worker safety. Additional information on workers is provided in volume I, section 4.14.1.5.

1.3.14 DOE Policy

Numerous comments were received opposing the storage and reprocessing of plutonium at Pantex Plant. These individuals were concerned about the possibility that plutonium could contaminate the environment. They would like to see all operations in this area halted.

Concern was also voiced for additional independent regulatory oversight at the plant. TNRCC feels that the public would be better served, and that there would be less potential for errors in waste management, if oversight responsibilities at the plant were shared. There were suggestions that State and Federal Trustees should be consulted during the remedial process so that appropriate restoration activities could be incorporated into remedial actions at the plant.

Several commentors were concerned with the lack of specific information in the EIS regarding international controls and inspections of the pits at Pantex Plant and the alternate site locations.

Storage and Reprocessing

DOE is committed to the continuance of, and the continued development of, programs and directives to better manage its facilities throughout the Nation. DOE operation of Pantex Plant is conducted through varying levels of operational and environmental controls to protect the workers, the public and the environment. The probability of contamination from interim pit storage was determined to be unlikely based on the analysis performed in this EIS. The existence of the pits is a reality. Handling them with the utmost care and security until a long-term solution is available is the focus of this document. The Department is working to address present and future issues in the nuclear industry in a manner that benefits everyone.

Regulatory Oversight

There are numerous measures in place at the plant to monitor and update compliance standards for all phases of work performed. DOE has an ongoing commitment to work with EPA, TNRCC, stakeholders, and the general public to further the development of the Pantex Plant ER Program. The areas of personal safety to workers and the surrounding population as well as numerous environmental regulations are in effect to address these issues before they become concerns. To address this concern, the Secretary created a Working Group on Environmental Regulation to review the alternatives for activities conducted at DOE's nuclear facilities. A report from this working group is expected to be released in late 1996.

rnational Inspection

has not yet established its procedures for national surveillance or inspections of pits. ils concerning the frequency of the ctions and the manner of inspections has yet to be established. Accessibility to the pit storage locations at pit storage sites will be addressed in future DOE policy. This issue was not considered to be a significant factor in the selection of Pantex Plant or any of the other four alternate sites.

15 NEPA Process and Procedures

ny commentors questioned whether they could trust the Pantex Plant EIS. Commentors pressed concern that too little information was presented, analysis was limited, and the cument was too narrow in scope to adequately address the issues at Pantex Plant.

merous concerns were voiced regarding the effectiveness of the notification for the public arings. Individuals felt that there was not enough advance notice of the meetings, that the eduling was difficult for working people to attend, and that the announcement was not ching a racially diverse representation of the concerned public.

eral comments were made regarding the lack of cost information relative to Pantex Plant l alternate sites. There was also concern that the significance of impacts was not uniformly cussed as required by the CEQ guidelines.

er commentors noted that it was difficult to review two PEISs and the Pantex Plant EIS at same time, due to the short review period and the size of the documents. It was also stated t the document is too complicated for individuals of limited education in the affected areas read, and a request was made to find an alternate means of informing the public of the tents of the document.

nt of Information Presented

Pantex Plant EIS was prepared in dance with the CEQ *Regulations for menting the Procedural Provisions of the nal Environment Policy Act* (40 CFR 1508) and DOE NEPA Regulations (10 1021). These regulations describe how to y with the "action forcing" procedures of

. requires that the government assess any Federal action that may significantly the quality of human environment. It es the government to seriously consider impacts and make that information ble to public officials and citizens before ons are made and actions are taken. The on maker may, however, take into consideration not only environmental, but also economic, technical, and other factors, such as national security, before a final decision on project implementation is made. This decision is published in a ROD.

DOE has presented a "full and fair discussion of significant environmental impacts" and has "informed the decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." As directed, DOE has focused on significant environmental issues and alternatives, while reducing an accumulation of extraneous background data in the EIS. Sources of additional information are referenced throughout the EIS.

Public Notification

Public scoping and commenting requirements are addressed in 40 CFR 1501.7 and 1503, respectively. The Pantex Plant EIS followed this direction in its attempts to reach the broadest area of citizenry possible. Comments were requested from Federal, State, and local agencies, concerned citizen groups, and individuals who had expressed an interest during the scoping process or while the document was being prepared. Notices were publicized in the *Federal Register*, as well as in local newspapers and radio spots. Public hearings and meetings were held, fact sheets were distributed, and e-mail and telephone contacts were provided, as well as addresses of DOE personnel to whom citizens could mail comments and information requests.

In an effort to accommodate citizens' work schedules, public hearings in Texas were held throughout the day, as well as late into the evening. Except for Nevada, all hearings were held with afternoon and evening sessions to encourage public attendance. DOE realizes that this is not a perfect system. There are some individuals that will not receive notification and that will not be able to attend the public hearings. Although the law does not require additional notification, DOE will take these concerns into consideration for future EISs.

Although the Notice of Availability for the Draft EIS was issued less than a month before the first public hearing was conducted, the comment period was extended to July 12, 1996, during which time the public could submit comments in writing, by telephone, at a technical information exchange meeting, or via electronic mail. CEQ regulations require a minimum comment period of 45 days. For this EIS, the Department extended the comment period to 98 days. Comments were accepted as late as July 29, 1996.

Each of the documents (SSM PEIS, S&D PEIS, and Pantex Plant EIS) had a public comment period, inclusive of public hearings/meet
required by NEPA. During this time, the
was encouraged to comment orally
hearings, in writing, by telephone, or by
The comment periods for these doc
overlapped. It was felt that the public wo
better served to have one meeting wh
possible to discuss as many of the docum
appropriate, depending on the geogr
location of the meeting. This form
addressed prior stakeholder requests to
the number of meetings the public had to
The effort was intended to provide the
with as much information as possible
allow for as long a comment period as co
scheduled.

The workshop format used for the
hearings was also a response to stake
requests for this type of format. The
hearing structure, including the
presentation of the three EISs, the wo
format, the time periods for formal tes
the provision of space for displays by
groups, and the times for sessions, were
in consultation with the Pantex Plant
Advisory Board.

Cost and Other Information

The NEPA process is not a cost-benefit
process. Rather, the law requires that a
document be prepared to ensur
environmental impacts are documented
any decision is made on a major Federal
Costs are not required in order to
environmental impacts. volume I, ch
describes the affected environment
potential environmental impacts expect
the continued operations of Pantex P
well as the associated interim storage of
weapon components. Non-envir
issues such as cost differences am
alternatives have not been developed
EIS. The technical aspects of dismant
are information that is not available
documents for security reasons. P
processing is not an alternative covered

Long-term management of the nuclear pile is within the scope of the SSM PEIS, long-term storage and the final sition of plutonium is addressed in the PEIS.

CEQ regulations require each Federal :y to interpret and administer the policies, ations, and public laws in accordance with \ and the CEQ Regulations, and to ment procedures to make the NEPA ss more useful to the decision maker and ublic (40 CFR 1500.2). CEQ Regulations :r state that "significantly" as used in \ requires considerations of both "context" 'intensity" (40 CFR 1508.27). Context s that significance of an action must be zed in several contexts, such as the society whole, the affected region, the affected sts, and the locality. Intensity refers to the ity of impacts and is examined using 10 ia that are discussed in 40 CFR 1508.27. her words, significance is a judgement than a defined outcome.

In consideration of the guidance contained in the CEQ regulations, DOE pursues a policy of presenting the facts regarding the potential environmental impacts of each resource area without drawing conclusions as to the significance of those impacts in the EIS itself. The reader is allowed to draw his/her own conclusions about the significance based upon the facts presented. Likewise, the decision maker considers the facts presented in each resource area, as well as the cumulative impacts in terms of both context and intensity. The judgement of the decision maker as to the significance of these impacts is then considered along with other factors such as national policy, Departmental mission, and technical considerations in making the decision on a course of action.

Several of the commentors have suggested a need for the government to develop a means of reaching individuals of limited education. DOE will continue its efforts to reach the broadest possible segments of affected populations when discussing its proposed activities.

6 Out of Scope

y comments were received in support of continuation or expansion of the existing mission e Pantex Plant. Other comments expressed a general opposition to plutonium processing uclear storage at the Pantex Plant.

comments were received that were .e the scope of this particular EIS. For ple, comments about the underground g of nuclear weapons at NTS are outside ope of the Pantex Plant EIS. Out of scope ients were noted but not responded to in IS.

ition, many remarks were not identified as dual comments. For clarity, statements ted during the comment period were identified as "comments" when they specifically relate to the discussions of the alternatives and environmental analyses in the EIS. The Department's responses to these comments are provided in this volume of the EIS. Conversely, general expressions of convictions, personal opinions, or support for or opposition to the continued operation of Pantex Plant are termed "remarks" and are acknowledged, but not provided responses in the EIS.

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CHAPTER 2

Comment Documents

CHAPTER 2
COMMENT DOCUMENTS

INTRODUCTION

ɔter 2 is a compendium of the comment ments received during the public comment ıd, annotated to show their comments.

"green pages" at the very front of this ne provide a set of instructions for locating ments and comments that are of particular ɜst.

INDEX OF COMMENT DOCUMENTS

documents appearing in this chapter are orized and organized according to their ı. The sequencing of document categories follows:

Letters from the Federal Government (FG).

- Letters from Tribal Governments, i.e., Indian Tribes or Intertribal Councils (TG).
- Letters from State governments (SG).
- Letters from Municipal governments, including counties (MG).
- Letters from private companies or organizations (CO).
- Letters, cards, and other documents from private citizens (PC).
- Transcripts from public hearings, including the Technical Exchange (HT).

The parenthetical code after each of the above categories comprises the first two characters of document numbers for that category. For example, document numbers of letters from State governments begin with "SG".

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PHIL GRAMM
TEXAS

United States Senate
WASHINGTON, D.C. 20510-4302

May 5, 1996

The Honorable Hazel O'Leary
Secretary
U.S. Department of Energy
Forrestal Building
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Secretary O'Leary:

Thank you for the opportunity to comment on the U.S. Department of Energy's (DOE) Programmatic Environmental Impact Statements (PEISs) on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials. Please also consider this our comment on the Pantex Site-Wide Environmental Impact Statement, since most of the issues addressed in these documents are identical.

First and foremost, we are adamant that any current and future functions at Pantex be conducted in a safe and environmentally sound manner. Our first priority is to ensure that any expansion at Pantex be implemented in a way that does not impair the health or safety of area residents or have an adverse effect on the environment. These goals serve as a prerequisite to any current and future activities at Pantex, including expansion.

We are pleased that DOE selected Pantex as the preferred alternative for assembly/disassembly, thereby abandoning earlier plans to transfer those functions to the Nevada Test Site (NTS). However, by failing to recognize Pantex as the preferred candidate site for new and/or consolidated stockpile management facilities, the DOE overlooked the best site for maintaining the integrity of the U.S. nuclear stockpile and attaining maximum efficiencies and cost savings.

Pantex is perhaps the most cost-effective alternative for any new construction of SSM facilities. First, labor costs, utility rates, and water and land availability at Pantex, as well as public support, are more amenable than those at any other Complex site. It is appropriate to consider Pantex as an alternative site for all future defense-related facilities to complement activities at the national labs (such as the planned Atlas Facility and plutonium pit fabrication site at Los Alamos National Laboratory [LANL]). DOE makes no mention of a strategic plutonium reserve that we believe is important to our future national security needs, even though the PEIS mentions that strategic storage should be co-located with disassembly. We believe Pantex should be the preferred site for such a mission in coordination with its management functions. The location of additional defense-related activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost to the American people. In its deliberations, DOE should insist that budgetary comparisons between Pantex and other sites are accurate, and include capital, transportation, training, remediation, and other costs.

Consistent with the strengths identified above for increased stewardship and management duties, the high explosives (HE) functions should also remain at Pantex. Because the production assembly/disassembly functions remain at Pantex, the HE fabrication duties should be present at the corresponding site. After all, the SSM draft admits that Pantex must retain HE capabilities to process the inventories already on site from dismantling. Therefore, the least expensive alternative is to maintain HE functions at Pantex. We adamantly disagree with the statement in the PEIS that there are no advantages to siting high explosives at Pantex rather than the national labs. The capitol outlay alone necessary for transfer is cost prohibitive. In addition, should future need arise for new weapons production, it will be critical to have the HE facilities at the weapons production/assembly site.

As the sole DOE-authorized facility for assembly and disassembly of nuclear weapons, Pantex has historically handled these functions in a safe and efficient manner for more than 40 years. One of the challenges faced after dismantling a significant portion of the nuclear stockpile is the processing or disposal of the materials that remain. In meeting this challenge, Pantex could continue to store plutonium which is already at the site and upgrade facilities for any and all storage options being considered by DOE with minimal cost and difficulty. Pantex currently safehouses more than 8,000 surplus pits, and plans are being made to ship additional pits from Rocky Flats to Pantex. It makes little sense to re-create storage facilities at another site and then unnecessarily transport large amounts of plutonium across the county from Pantex.

We also believe Pantex should be designated the preferred site for any disposition options and related functions. It makes budgetary and policy sense to site disposition where storage already exists. Furthermore, it makes no sense from any perspective, budget or otherwise, to site strategic storage at one site and surplus at another. Pantex should be selected for both storage functions. Pantex has the necessary safety, security, and surveillance capabilities to accommodate an expanded role with minimal costs and it is the production site closest to Los Alamos, the planned pit fabrication site.

Based upon these reasons, we respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management and stewardship functions as well as consolidation of all plutonium storage and disposition and any related functions. Thank you again for the opportunity to comment on these documents.

Yours respectfully,

PHIL GRAMM
United States Senator

KAY BAILEY HUTCHISON
Untied States Senator

MAC THORNBERRY
[illegible] District
[illegible]

Congress of the United States
House of Representatives

COMMITTEE ON NATIONAL SECURITY
COMMITTEE ON RESOURCES
JOINT ECONOMIC COMMITTEE

~~April 3~~, 1996
May 7,

The Honorable Hazel R. O'Leary
Secretary of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Re: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statements (PEISs), and the Pantex Site-Wide Draft Environmental Impact Statement.

Dear Secretary O'Leary:

I made oral comments at the April 22 hearing in Amarillo on the pending PEISs affecting Pantex and the nuclear weapons complex. I am writing to re-emphasize some of my remarks and provide additional comment on other issues.

I believe the analysis in the Draft PEIS for Stockpile Stewardship and Management is deficient for a number of reasons, as described below.

The SSM PEIS does not deal adequately with the need to maintain adequate production capacity over the next ten or more years. During this period, it will be the Stockpile Management program at the four production plants which will replace weapons components, rebuild weapons, and maintain the capability and expertise to reconstitute the nuclear weapons stockpile should world events require it. However, the draft PEIS focuses almost exclusively on preserving the capabilities and core competencies of the national nuclear weapons laboratories. I recognize that preserving the weapons capabilities of these laboratories reflects essential national requirements. But too little attention has been paid to preserving the critical capacity and unique assets that exist at the department's productions plants. I am concerned that the planned reductions at Pantex and the other production plants, as portrayed in the PEIS, are so severe that they will seriously impact the plants' ability to properly support the near-term and long-term safety and reliability of the nation's nuclear weapons stockpile.

The entire SSM analysis regarding the size of the stockpile and associated manufacturing capacity is based on optimistic, rather than conservative, assumptions about future arms control agreements. The SSM PEIS relies too heavily on a workload assumption of 1,000 warheads in the future stockpile, a number far lower than even the 3,500 set in the unratified START II treaty. The administration's budget request also reflects this unjustified optimism. We must not cede the victory we gained in the Cold War through the planned obsolescence of our production capability, which can only be regained at greater cost in later years.

The SSM PEIS analysis and preferred alternatives are based on incomplete national security policy considerations. The most dramatic deficiency is the failure to include current Congressional legislation (e.g. the National Defense Authorization Act for Fiscal Year 1996) and associated national security policy guidance in the PEIS assumptions, analyses, and conclusions. This PEIS needs to be redone based on the full range of national security policies, both Presidential and Congressional. The conclusions of the just completed House and Senate markups for Fiscal Year 1997 should also be taken into consideration in the final PEIS.

Regarding where the high explosives production mission should be sited, I have been to Los Alamos and Pantex and talked to officials at both sites. However, I have yet to hear a credible explanation as to why that mission should not remain at Pantex. The public hearings only served to strengthen my conviction that Pantex is the best and most economical site. At the hearing, an official from the Albuquerque Operations Office admitted that Pantex presently has all of the needed capability and that it would be more expensive to move high explosives functions to the labs. I urge you to select as the preferred alternative the best and most cost-effective site -- Pantex.

FG-002/1
15.116

Regarding the Pantex Site-Wide Draft Environmental Impact Statement, I believe the analysis of the "airplane crash" scenario is deficient. How can it be that the probability of a crash causing a release has increased since your 1994 Finding of No Significant Impact, particularly after Pantex and the Amarillo Airport have worked together to reduce overflights of the plant and taken other preventative measures? I urge the DoE to correct the analytical errors and act to avoid wrongfully depriving Pantex of future functions for which it may be selected.

As a final note, I am very concerned about the Albuquerque Operations Office criticizing DoE and contractor officials for having contractor employees comment at the hearings. In effect, Albuquerque is censoring those individuals on issues, such as cost, on which they are the best source of information. I find it remarkable that the exercise of First Amendment rights at a hearing of this importance, which has the stated purpose of eliciting information and public comment, would cause officials at Albuquerque to call on the Amarillo Area Office to "control their people." That this occurred in the aftermath of the "gag order" incident is even more egregious.

I look forward to our continued work together on these issues. I would appreciate a response from you on these matters.

Sincerely,

Mac Thornberry
Member of Congress

cc:

U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, VA 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington DC 20026

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUL 2 8 1996

Ms. Nanette Founds
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Founds:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality Regulations (CEQ) for Implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the U.S. Department of Energy (DOE) Draft Environmental Impact Statement (DEIS) for continued operation of the Pantex plant and associated nuclear component storage located at the existing Pantex facility near Amarillo, Texas.

EPA classifies your DEIS and proposed action as "EC-2," i.e., EPA has "Environmental Concern" and requests additional information. Although the EPA has no objections to the preferred action alternative, continued operation and storage at the Pantex site; we have identified some environmental concerns and are requesting additional information for clarification purposes. Our classification will be published in the Federal Register according to our responsibility under Section 309 of the Clean Air Act, to inform the public of our views on proposed Federal actions.

Detailed comments identifying our concerns and needed information are provided in an enclosure to assist you in preparation of the Final EIS. Should you have any questions, please contact the appropriate Regional Environmental Review Coordinator, Mike Jansky (EPA Region 6) at (214) 665-7451 or Dave Farrel (EPA Region 9) at (415) 774-1575, for assistance.

We appreciate the opportunity to review the DEIS. We request that you send our office two (2) copies of the Final EIS at the same time that it is sent to the Office of Federal Activities (2251A), EPA, 401 M Street, S.W., Washington, D.C. 20460.

Sincerely yours,

Robert D. Lawrence

Robert D. Lawrence, Chief
Office of Planning and
Coordination

Enclosure

DETAILED COMMENTS
CONTINUED OPERATION OF PANTEX PLANT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

BACKGROUND:

Most nuclear weapons use a nuclear package with two assemblies: a primary assembly is used as the initial energy source while a secondary assembly provides additional explosive energy release. The primary assembly has a central core, called the "pit," surrounded by a layer of high explosives. A "pit" is typically composed of plutonium-239 and other materials. The Department of Energy (DOE) proposes to continue conduoting nuclear weapons operations at the Pantex Plant and to increase the on-site interim storage levels of pits from 12,000 to 20,000 pits. The DEIS also evaluates relocation of some or all of the Pantex interim storage activities to 4 alternate sites. The alternative sites include: Savannah River Site near Aiken, South Carolina; the Nevada Test Site near Las Vegas, Nevada; Hanford Site near Richland, Washington; and the Manzano Weapons Area at Kirtland Air Force Base in Albuquerque, New Mexico.

GENERAL COMMENTS:

Pollution Prevention

The EPA would like to commend DOE for Appendix G in Volume II on pollution prevention and waste minimization. We find Appendix G to be comprehensive in scope, informative to the reader, and a model which other DOE NEPA documents may find beneficial.

Interim Storage

FG-003/1 01.029

The DEIS makes reference to "interim storage"of plutonium pits at three DOE sites (Nevada; South Carolina; Washington State) and a Department of Defense site at Kirtland Air Force Base, New Mexico. However, the DEIS did not define what constitutes "interim storage," either a fixed period of years or decades, or until a permanent storage facility is approved, upgraded or built. If possible, the Pantex FEIS should define the minimum and maximum time limits expected by DOE for "interim storage" (we recognize the difficulty in this because nuclear storage projects often run into problems that delay their proposed timeliness).

Energy Efficiency and Water Conservation

FG-003/2 13.021

EPA suggests that Appendix G should reference the requirements of Executive Order 12902, Energy Efficiency and Water Conservation at Federal Facilities (March 8, 1994), particularly for the 6 new construction projects at Pantex listed in Table 3.1.1.1-1 (gas analysis laboratory, materials compatibility assurance facility, etc.) Section 306 of Executive

FG-003/2 13.021 continued

Order 12902 contains specific requirements regarding the construction of new facilities owned by the United States. Additionally, the Final EIS would be strengthened if it could discuss whether this Executive Order has any implication on the proposed interim storage of plutonium pits in Nevada, South Carolina, New Mexico and Washington State in terms of energy and water conservation.

Plutonium Pit Weight

FG-003/3 01.030

It would be helpful if the Final EIS could provide the tonnage of the 8,000 to 20,000 pits that would be relocated under the interim pit storage alternative. If allowable under the national security considerations, it is recommended that the FEIS quantify the weight in terms of plutonium, other nuclear material, and other constituents such as Resource Conservation and Recovery Act (RCRA) regulated hazardous waste.

PANTEX ALTERNATIVE
(EPA Region 6)

FG-003/4 06.060

1. Page 4-57, second paragraph: In this paragraph and at other places in the text it is asserted that the discharge water from the plant meets the surface water quality permit requirements. Because it is acknowledged in the document that leakage from waterways and playas enters the ground, EPA guidelines for ground water quality are of concern here. Under EPA's "Strategy for the 90's" report of the Ground Water Task Force, the Maximum Contaminant Levels (MCLs) established under the Safe Drinking Water Act (SDWA) are to be used as reference points in evaluating ground water quality. This draft EIS also recognizes the significance of these MCLs when it lists them as "decision criteria" for ground water analyses presented in Volume II. The requirements under the National Pollutant Discharge and Elimination System (NPDES) do not include all of the contaminants for which MCLs have been set for public water supply systems under the Safe Drinking Water Act and in many cases the limits set under NPDES are higher than those under the SDWA. Under these circumstances, we recommend that Pantex consider protecting the ground water by either lining the ditches and playas with impermeable materials or, alternatively, treating the effluent to the level required to maintain, or restore to, SDWA MCLs in the ground water. Discussion on this matter should be included in the Final Statement.

FG-003/5 06.061

2. Page 4-62, last paragraph: The first bullet describes "unsaturated sands of the Blackwater Draw Formation and upper Ogallala" at the surface, but the diagram on page 4-64 indicates that the Blackwater Draw Formation consists of clay. This inconsistency should be clarified in the Final Statement.

FG-003/6 06.062

3. Page 4-65, third paragraph: It is stated that the perched aquifer "exhibits radial flow." By way of clarification, the Final EIS should note that the flow is radial from Playa #1,

FG-003/6 06.062 continued

suggesting that the playa is a major source of recharge locally.

4. Page 4-67: The map illustration depicts a domestic water well to the southeast of the Pantex property, just outside the area of the perched aquifer. The well appears to be in the flow direction of the ground water in the perched aquifer and may be in danger of contamination from ground water in the perched aquifer. The Final EIS should identify the boundaries of the contaminated perched aquifer and establish what risk may exist, if any, for the potential contamination of the Ogallala aquifer.

FG-003/7 06.063

5. Page 4-71, third paragraph: It is indicated here that the quality of surface water being discharged is described earlier at Section 4.6.1.1. However, there is no description of the discharge water quality at the point cited. It would be helpful if the FEIS could provide a complete description of the discharged water chemistry within the text.

FG-003/8 06.064

6. Page 4-72, second paragraph: It is difficult to visualize all the information about water quality and contaminant locations described here and would be helpful to have one map to display this information in the Final Statement. It would also be helpful if the FEIS could have a section describing the past and current chemical quality of discharges. Section 4.6.1 makes a general attempt at this goal but is too generalized. The Final Statement should list specific contaminants and major components of water chemistry, and describe any changes through time. A table showing concentration ranges, averages, etc., would be appropriate for this discussion.

FG-003/9 06.065

7. A number of contaminants have been identified in the soil and ground water (Table 4.5.1.3.3-3) at the existing site. The Final EIS should document what measures have been taksn to avoid potential contamination by the sources identified.

FG-003/10 05.026

NEVADA TEST SITE (NTS) ALTERNATIVE
(EPA Region 9)

Groundwater and Seismicity at Nevada Test Site

BACKGROUND:

Two sites at the Nevada Test Site (NTS) were assessed for the interim storage of plutonium pits, the P-Tunnel area and the Device Assembly Facility area. The Pantex DEIS (Volume I, p. 5-8) indicates that ground water at the two NTS sites is characterized by a "deep water table," although depth to ground water is not specifically quantified in the DEIS.

FG-003/11 06.066

A prior Department of Energy EIS reviewed by EPA Region 9(FEIS, Tritium Supply & Recycling, October 1995, Volume I, p. 4-114) stated that the depth to ground water at NTS ranges from 500 to 2,400 feet. The Tritium FEIS also indicated that "there are... areas of perched water that lie at considerably shallower depths"

at NTS. The DEIS (Volume I, p. 5-16) states that earthquakes pose the greatest natural threat to storage of plutonium pits at NTS. The Cane Springs Fault was identified as the most significant seismic risk. However, the DEIS indicates that four faults in the NTS vicinity (Mine Mountain Fault, Carpetbag Fault, Yucca Flat Fault and Cane Spring Fault) "are capable of generating earthquakes of up to 0.85g," which is an 8.5 quake on the Richter scale.

FG-003/12 05.027

According to the Tritium FEIS (Volume I, p. 4-117), the maximum credible earthquake on the Cane Spring Fault is expected to produce a peak acceleration of 0.67g, a 6.7 quake on the Richter scale. The Cane Springs Fault is three to five miles from the Device Assembly Facility.

The following comments relate to the proposed interim storage of plutonium pits at NTS in terms of seismic risk and the potential for ground water contamination should the plutonium pits be damaged in a quake:

1. The FEIS should recognize that the P-Tunnel at the NTS is due west of two parallel faults, the Carpetbag Fault approximately five miles away and the Yucca Fault approximately seven to ten miles away. The Tritium FEIS (Volume I, p. 4-117) describes both the Yucca and Carpetbag Faults as "capable faults," as defined by the Nuclear Regulatory Commission regulations 10 CFR Part 100, Appendix A. However, the Tritium FEIS reported that the "possible magni- tude, intensity, and acceleration of earthquakes along the Yucca and Carpetbag faults have not been estimated." The DEIS gives the impression that quakes along any of the four faults in the NTS area could have an 8.5 magnitude on the Richter scale (Volume I, p. 5-16).

FG-003/13 14.138

EPA believes that the FEIS should provide more documentation as to potential ground water impacts should an earthquake harm the plutonium pit facility or render it inaccessible. In particular, we are concerned that DOE may have concluded that leaving the plutonium pits inside the P-Tunnel (should it collapse) may have less environmental impact than attempting to retrieve the pits from inside a collapsed P-Tunnel (due to wording in the Pantex DEIS that impacts to workers and the public from radionuclide releases would be "negligible" because the plutonium containers would be sealed inside the collapsed tunnel).

Additionally, potential NTS impacts to ground water such a scenario were not discussed in the Pantex DEIS. We recommend that the FEIS provide more information on the depth to ground water in the Device Assembly Facility and P-Tunnel areas and whether keeping plutonium pits in a collapsed tunnel may ultimately cause a migration of radioactivity to ground water.

FG-003/14 06.067

The Pantex FEIS should discuss whether either of the areas is characterized by "perched water...at considerably shallower depths..." as described in the Tritium FEIS. If so, the Pantex FEIS should provide additional information on the ground water impacts that are reasonably foreseeable should the plutonium pits be damaged in a quake. The Pantex FEIS should also outline DOE's intentions regarding the retrieval of plutonium pits in such a situation, as well as, the feasibility of monitoring the pit storage facility. The DEIS (Volume I, p. 5-17) gives the impression that the plutonium pits would remain entombed.

FG-003/15 22.021

2. We ask that the FEIS provide further discussion regarding the wording on p. 5-17 of Volume I that "Some mitigation of a tunnel collapse would be needed after a major seismic event. A separate assessment of the risk associated with the mitigation would be necessary..." The Pantex FEIS should better define what is meant by "some mitigation" and a "separate assessment" (would the separate assessment be a NEPA document?). The FEIS should discuss what risks would be analyzed in the separate assessment: radionuclide emissions, worker health and safety, ground water contamination, etc.

FG-003/16 14.139

3. The Pantex Summary (Table S-2) identifies the environmental impacts associated with the alternative pit storage relocation sites. For NTS, the range of potential accident scenarios are limited to two: puncture of a pit due to a forklift accident and an aircraft crash. Potential seismic hazards at NTS are not recognized in Table S-2, as they were in Volume I. We, therefore, recommend that Table S-2 be modified to recognize NTS seismic hazards. Table S-2 should also reflect seismic conditions that may exist at the proposed interim pit sites in South Carolina, New Mexico and Washington State. Modifications to Table S-2 should be incorporated into the FEIS.

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ALL INDIAN PUEBLO COUNCIL
Pueblo Office of Environmental Protection
Post Office Box 3256 • Albuquerque, New Mexico 87190 • (505) 884-0480 • FAX (505) 883-7682

May 28, 1996

Nanette D. Pounds
U.S. Department of Energy
Albuquerque Operations Office
P O.B Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Pounds,

This letter is in response to the Draft Environmental Impact Statement (EIS) for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components. The All Indian Pueblo Council's Pueblo Office of Environmental Protection are glad for the opportunity to comment of this document.

The Pueblo Office of Environmental Protection has the responsibility of protecting the environment of the nineteen Indian Pueblo tribes in the state of New Mexico. We have reviewed the draft EIS with this in mind.

TG-001/1
06.042

There should be an addition to Table 6.5-4 in the Water Resource row. This table in the draft EIS has only the New Mexico state environmental statutes. Of these 19 Pueblo Indian tribes, six have received EPA approval for water quality standards under the treatment of state designation. These six are Isleta Pueblo, Sandia Pueblo, San Juan Pueblo, Santa Clara Pueblo, Picuris Pueblo and Nambe Pueblo. And of the six, Isleta Pueblo is the closest in proximity and downstream on the Rio Grande river from the Manzano Weapon Storage Area at the Kirtland Air Force base which is one of the alternative sites. Other Pueblo tribes have draft water quality standards that they anticipate approval soon.

It is only proper and respectful to mention the Pueblo water quality standards in table 6.5-4.

Sincerely,

Toney R. Begay, Sr. Environmental Scientist
All Indian Pueblo Council
Pueblo Office of Environmental Protection

CC: Everett Chavez, AIPC/POEP
Blane Sanchez, Isleta Pueblo
File

05/08/96 10:18 ☎ --- AL EISPS 005

STATE OF TEXAS
OFFICE OF THE GOVERNOR

GEORGE W. BUSH
GOVERNOR

May 6, 1996

The Honorable Hazel O'Leary
The Secretary of Energy
U.S. Department of Energy
Washington, D.C. 20585

Re: Comments on Stockpile Stewardship and Management and Storage and Disposition of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statements

Dear Madam Secretary:

The Pantex Nuclear Weapons Plant has been a key component in our nation's ability to achieve and maintain a strong national defense. The success at Pantex is a result of several factors, including good managers and dedicated, skilled, hard-working, efficient, and safety-conscious employees.

This nation continues to face an uncertain future with many risks. An effective strategy for diminishing those risks is to retain our core of expertise at the Pantex Plant. The Programmatic Environmental Impact Statements now being reviewed demonstrate that such a strategy is the best option for our nation's taxpayers.

The Pantex Plant enjoys broad community support because it has successfully demonstrated it can safely carry out its mission of assembling and disassembling nuclear weapons. That history of safety, success, and efficiency is the foundation for the future of the Pantex Plant.

The State of Texas is prepared to continue to assist Pantex with the significant role it plays in keeping the United States the defender of the free world.

Sincerely,

GEORGE W. BUSH

Post Office Box 12428 Austin, Texas 78711 (512) 463-2000 (Voice)/(512) 475-3345 (TDD)

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Barry R. McBee, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Dan Pearson, *Executive Director*

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

June 27, 1996

RECEIVED
JUL 02 1996
GOVERNOR'S BUDGET OFFICE

Mr. T.C. Adams
Governor's Office of Budget and Planning
P.O. Box 12428
Austin, Texas 78711

Re: U.S. Department of Energy (DOE)
Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components
TX-R-96-04-03-0001-50-00

Dear Mr. Adams:

The Texas Natural Resource Conservation Commission (TNRCC) has reviewed the above-referenced Environmental Impact Statement, and our technical review comments are enclosed. The joint comments of the State's natural resource trustees are also enclosed.

SG-002/1
06.094

The TNRCC is concerned that contamination in the perched aquifers beneath the site indicates that past and present industrial discharge practices at the Pantex facility have not been fully protective of natural resources at the site. The DOE should insure that the threat of increased contamination to the Ogallala aquifer and contaminant exposure to ecological receptors is limited to the maximum extent practical.

In order to reduce DOE's residual liability for injury to natural resources, the State and Federal trustees encourage DOE to continue to work with the trustees during the remedial process so that appropriate restoration will be incorporated into remedial activities.

SG-002/2
22.022

We applaud DOE's willingness to share its information concerning radioactive contaminants; however, the TNRCC permit does not include radionuclide parameters. And as we have stated before, the TNRCC recommends that the DOE share regulatory oversight with another federal or state agency to minimize the potential for further injury to natural resources.

P.O. Box 13087 • Austin, Texas 78711-3087 • 512/239-1000

Mr. T.C. Adams
Page 2
June 27, 1996

Thank you for the opportunity to participate in this review process. I believe these comments will assist the DOE in considering use of the Pantex facility. If you have any questions regarding these comments, please feel free to contact Mr. David Duncan, Director, Intergovernmental Relations Division, at (512) 239-3510.

Sincerely,

Dan Pearson
Executive Director

Enclosures

cc: Commissioners

Texas Natural Resource Conservation Commission

INTEROFFICE MEMORANDUM

TO: Sidney Wheeler, Intergovernmental Relations DATE: June 14, 1996

FROM: Ginny King, TNRCC Natural Resource Trustee Program

SUBJECT: **Joint Trustee Comments to the Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components**

As Lead Administrative Trustee (LAT) on behalf of the State Trustees, Texas General Land Office (TGLO), Texas Parks and Wildlife (TPWD), and Texas Natural Resource Commission (TNRCC), this memo is written to provide the State Trustees' comments on the "Draft Environmental Impact Statement for the Continued Operation of the Pantex Superfund Site and Associated Storage of Nuclear Weapon Components."

General Comments:

The Trustees for the State of Texas strongly support the President of the United States and the Department of Energy (DOE) in the unilateral efforts to reduce the number of armed nuclear warheads worldwide. We further recognize the difficult responsibility of storing and stockpiling the Nation's disassembled nuclear weaponry. However, the DOE is one of the Federal Trustees for natural resources and has the responsibility of protecting those natural resources from injury on behalf of the public. In order to protect those natural resources from further injury, the Trustees recommend that the DOE incorporate more stringent environmentally protective practices at the Pantex Superfund site.

The Trustees do not oppose the DOE plan to construct an expanded Hazardous Waste Treatment and processing Facility (HWTPF). However, contamination in the perched aquifers beneath the site indicate that past and present industrial discharge practices at the Pantex facility have not been fully protective of natural resources at the site. A treatment facility that is constructed and maintained properly will prevent further injury to natural resources. In addition, the increase of industrial discharge volume to 2.9 million liters may exacerbate contamination problems if additional measures are not taken by DOE to protect valuable groundwater resources. DOE should insure that the threat of increased contamination to the Ogallala aquifer and contaminant exposure to ecological receptors is limited to the maximum extent practical.

Specific Comments:

1. Page 1-12, Section 1.2.2.3 Environmental Restoration: The information communicated in this text does not necessarily constitute restoration of the natural resources that have been injured as a result of the releases of hazardous substances at this site. In order to perform actual environmental restoration, the nature and extent of contamination must be determined to evaluate the potential injuries to natural resources. After such a determination, and in

This information is duplicated in the following letter.

cooperation with the other Federal and State Trustees, restoration projects should be designed that will appropriately compensate the public for injury to natural resources. Performing remediation as needed to comply with all appropriate regulatory requirements does not necessarily constitute compensatory restoration for injury to natural resources. In order to reduce DOE's residual liability for injury to natural resources, the State and Federal Trustees encourage DOE to continue to work with the Trustees during the remedial process so that appropriate restoration will be incorporated into remedial activities.

2. Page 3-2, Section 3.1.1 Proposed Action: Care should be taken to ensure that the continued operation of Pantex Plant activities including "quality assurance testing of weapon components and the research and production of weapon components" is conducted in a fashion that will not increase DOE's liability for injury to natural resources.

3. Page 3-3 Performing environmental protection and environmental restoration activities: please see specific comment #1.

4. Page 4-2, Affected Environment: The document states that an area of 50 miles surrounding the Pantex site will be considered the region of influence. The Trustees are concerned that this area will not encompass the potential area of natural resources that could be impacted since:

   a) the lateral extent of the perched aquifer has not been determined; and

   b) documented contamination in the Ogallala and its flow direction provide the potential for this contamination to impact various environmental receptors outside this radius.

5. Page 4-3, section 4.2 Impact Assessment Methodologies, geology and soils: Impacts should be assessed on the destruction of any geologic feature not just those specified unique.

6. Page 4-3, Section 4.2 Impact Assessment Methodologies, water resources: The qualitative assessment of water quality impacts from wastewater and stormwater runoff does not adequately address potential impacts to surface water and groundwater resources at the Pantex Plant. Furthermore, it does not consider existing contamination in the sediments, surface water and groundwater and their cumulative impacts. The text should be corrected to reflect what actions would be necessary to thoroughly address the potential impacts to these natural resources.

7. Page 4-4, Biotic Resources: The text states that US Fish and Wildlife Service and appropriate State agencies have been used in the process of determining whether Pantex Plant operations would impact any plant or animal. This is incorrectly stated. The Trustees understand that an ecological screen has not yet been completed for this site and an ecological risk assessment has not been performed. The text should be corrected to reflect what has actually been assessed at this site and which agencies were involved.

8. Page 4-37 Environmental Restoration Process at Pantex Plant: see comment #1

Review Comments by the TNRCC NRTP
Page 3

9. Page 4-55 Affected Environments: The text states that there is not evidence that contaminants found in the perched zone have migrated to the Ogallala aquifer. This is inaccurate and should be corrected to reflect that there is documented contamination in the Ogallala aquifer.

10. Page 4-62, Section 4.6.1.2 Groundwater: While the discharges that are permitted by EPA and TNRCC have protective standards which presently do not allow excessive levels of contaminants, existing contamination is already present in the perched aquifer and the playas. Therefore, the continual discharge of wastewater provides a hydraulic head potentially driving those contaminants into the Ogallala. Contamination in the Ogallala has been documented and more stringent actions are required in order to prevent further migration of contamination which could result in greater injury to an extremely valuable groundwater resource.

11. Page 4-69, Section 4.6.1.2 Groundwater, Perched Aquifer portion: see comment #9

12. Page 4-72, Groundwater Quality: The absence of trinitrotoluene in the perched aquifer may not be due to a reduction in the discharge of this contaminant but rather an indication of it breaking down to degradation compounds in the environment. Also, the text states that levels of trichloroethene occurring at the site barely exceed the Risk Reduction Standards (RRS) decision criteria of 5 micrograms per liter. Data used to make this determination may not be representative of actual levels of contamination at the site. To accurately determine what is occurring at this site, properly screened intervals in groundwater monitoring wells to accurately measure "sinking chemicals, metals, radio nuclides and high explosives," as well as the proper suite of analyses, should be employed for all potential contaminants of concern.

13. Page 4-78, Section 4.6.2.1 Impacts of Continued Operations; Weapon-related activities, Surface water: A thorough evaluation and consideration of existing contamination in surface water and sediments of receiving waters at the Pantex site is needed to adequately assess the potential impacts of waste water discharges. Cumulative impacts of preexisting contamination and projected waste loads must be considered.

14. Page 4-79, Section 4.6.2.1 ... Groundwater- Potential impacts to the groundwater quality from wastewater discharge activities are not negligible. See comment #10.

15. Page 4-80, Section 4.6.2.1 Groundwater: The TNRCC permit does not include radionudide parameters. In order to prevent further injury to natural resources, DOE regulatory oversight should be shared with another appropriate agency. Also, see comment #10 and 15.

cc: Richard Seiler, Manager, TNRCC NRTP
Don Pitts, TPWD
Diane Hyatt, TGLO
Bob Short, USFW Arlington
Steve Spencer, DOI
Ron Gouguet, NOAA CRC Region 6
Geof Meyer, TNRCC RCRA

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
OFFICE OF WASTE MANAGEMENT
REVIEW COMMENTS
OF THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATIONS OF THE PANTEX PLANT AND ASSOCIATED STORAGE OF NUCLEAR WEAPONS COMPONENTS (March, 1996)

Industrial and Hazardous Waste Division/Corrective Action Section:

1. Hazardous Waste Treatment and Processing Facility (HWTPF) - As noted in the EIS, the Hazardous Waste Treatment and Processing Facility is necessary for compliance with the Agreed Order and Site Treatment Plan, which was negotiated in good faith with the TNRCC and issued on October 3, 1995. The No Action alternative in the EIS eliminates the HWTPF at Pantex, which threatens to put Pantex in noncompliance with the Agreed Order. At no time during the negotiations of the Agreed Order did DOE indicate that construction of the HWTPF was contingent upon an alternative selection process such as represented in the EIS. It is the TNRCC's opinion that, since the current activities at Pantex are the same now as they are in the No Action alternative, DOE should modify the No Action alternative to include development and use of the HWTPF. In other words, DOE should consider the fate of the HWTPF independent of any actions associated with the EIS.

2. Ogallala Contamination - The EIS should be revised to reflect that the Ogallala has been impacted by Pantex operations, as evidenced in recent contaminated samples obtained from Mr. Cockrell's private off-site wells.

3. Homestead Wells - The EIS should note that the low vertical permeability of the fine grained zone may be compromised by abandoned homestead wells. These wells could provide contaminant pathways through the fine grained zone to the Ogallala. The potential for this to occur has been demonstrated at the Cockrell farm east of the Pantex Plant.

4. Facility Boundary - The EIS should mention that DOE will take whatever action is practicable to clean contaminated groundwater to the residential drinking water standards beyond the facility boundary (page 4-69).

5 Regulatory Oversight - The TNRCC would be more willing to embrace Pantex's mission within the State of Texas if DOE would promote independent regulatory oversight for radioactive source, special nuclear, or byproduct material. We applaud DOE's willingness to share its information concerning radioactive contaminants; however, it is our opinion the public would be better served and potential waste management errors minimized if the oversight authority was shared with the TNRCC

Page 1

6. Risk - The risk from ingestion of hazardous substances should also be included when calculating risk to on-site workers. The EIS only accounts for risk from inhalation.

7. Pantex Plant Playas - The Risk Reduction Rules (RRR) (30 Texas Administrative Code (TAC), §335, Subchapter S), which include references to the Texas State Water Quality Criteria (30 TAC §307), do apply directly to the Pantex Plant Playas, contrary to the statement on page C-2.

8. Surface Water Quality Values - The surface water quality values determined in accordance with the RRR take precedence over the Risk Based Concentration Guidelines from EPA Region 3 (Section C.1.2). The EPA Region 3 Guidelines are not appropriate standards to apply when values are available in the Texas Surface Water Quality Criteria, the Federal Safe Drinking Water Act, or the Texas Regulations for Control of Radiation (TRCR) (30 TAC §336).

9. Tables C.1.2-1 through C.1.2-3 - The standards listed in Table C.1.2-1 should cite values based on the RRR, rather than EPA Region 3 Guidance. For instance, the standard for antimony should be 0.006 milligrams per liter (mg/L), based on the RRR, rather than 0.015 mg/L cited for EPA Region 3 Guidance.

   The standard for gross alpha activity, according to the RRR, should be 15 picocuries per liter (pCi/L), rather than N/A. No water quality standard is provided by the Texas Surface Water Quality Criteria; therefore, the RRR specify use of the drinking water standard.

   The proposed drinking water standard of 50 pCi/L (4 millirems per year) should also be cited for beta particle activity.

   The TNRCC requests that DOE revise Table C.1.2-1 to cite the more stringent surface water quality standards for radionuclides that are developed in accordance with the RRR. As such, the standard for plutonium-239/240 would be 2E-8 microcuries per milliliter (μCi/ml), based on the TRCR standards. Radium-226 and Radium-228 would be 6E-8 μCi/ml, based on proposed federal Drinking Water Standards. Tritium would be 1E-3 μCi/ml, based on the TRCR standards. Uranium-234 and Uranium-238 would be either 3E-7 μCi/ml, the TRCR standards, or 20 μg/L, the proposed Drinking Water Standard, which ever is more stringent.

10. Constituents of Concern - The constituents of concern for groundwater should not be limited to those constituents that exceed risk based concentrations (Section C.2.2, page C-4). In addition, the nature and extent of contamination must be based on background values or laboratory Practical Quantitation Limits (PQL), rather than risked based values. These issues were addressed in DOE's revised Sampling and Analysis Plan and the TNRCC's subsequent approval with modification.

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
OFFICE OF AIR QUALITY
REVIEW COMMENTS
OF THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED
OPERATION OF THE PANTEX PLANT AND ASSOCIATED STORAGE
OF NUCLEAR WEAPONS COMPONENTS (March, 1996)

Monitoring Operations Division/Ambient Monitoring Section:

1. The footnote on National Ambient Air Quality Standards (NAAQS) in Table 4.7.1.3-1 in Volume 1 is inaccurate. Both ozone and PM10 NAAQS are based on expected exceedances, meaning that non-sampling days must be accounted for when calculating attainment determination. The NAAQS is attained when the expected number of days per calendar year, averaged over a three-year period, with maximum hourly average concentration for ozone and 24-hour average concentration for PM10 above the standard is equal to or less than one. SO2 annual, NO2 annual, and lead quarterly NAAQS are not to be exceeded. CO one-hour and 8-hour and SO2 3-hour and 24-hour standards cannot be exceeded more than once per calendar year.

2. In the discussion of air monitoring results on page 4-93 of Volume 1, it is stated that methylene chloride was found at 213 ppbv on July 6, 1993. There is no mention that this concentration was seven times the effects screening level (ESL). Further review and analysis of the methylene chloride data by Toxicology and Risk Assessment staff concluded that this one time episode would not result in any long- term health effects. Although there is detailed discussion of slightly above ESL concentration of 1,2 dibromoethane, this additional discussion on methylene chloride is left out.

3. TNRCC air monitoring at Pantex has found a number of exceedances of the PM10 NAAQS. Although modeling by TNRCC and the EIS staff did not predict possible PM10 violations, actual exceedances happened mainly due to blowing dust and localized earth moving activities. Precisely this kind of scenarios are anticipated in the Consolidation Alternative if additional construction activity takes place at Pantex. The EIS addresses this issue in section 4.7.6 on page 4-118 by stating that mitigation measures will be undertaken to alleviate temporary dust emissions from construction activities. These are standard TNRCC- approved mitigation measures for particulate emission control.

4. TNRCC Modeling staff reviewed Appendix B, Air Quality Analysis, of the Sitewide EIS and their comments are submitted separately. Additionally, the EIS used the same model, the Industrial Source Complex Model, that the TNRCC used for modeling Pantex emissions. EIS modeling was performed in accordance with the EPA guidance document, "Guidelines for Air Quality Models" (revised) and TNRCC guidance document, "Air Quality Modeling

Guidelines." The modeling approach used by the EIS is different from the one used by TNRCC. However, both models arrived at the same conclusion.

5. TNRCC used a tiered modeling approach that included a blend of screen and refined modeling techniques because of the large number of fugitive emission locations, buildings, and pollutants, whereas the EIS modeling used a refined dispersion model to accommodate the large number of emission sources and pollutants.

6. In the TNRCC approach, the TNRCC modeling results were added to the results of the modeling conducted by Radian Corporation in support of a permit application. Radian modeling addressed predicted impacts of emissions from the burning ground and container storage area. Therefore, TNRCC used an additive modeling approach to account for emissions from some of the buildings to assess plant wide emission impact. Using this approach, TNRCC modeling concluded that no predicted exceedances of the criteria pollutant impact public health. The maximum concentrations of alcohols predicted at the property line was slightly above the ESL, but concentrations of alcohols predicted at the nearest residence was below the ESL.

7. Using a different approach, ELS modeling also concluded that there would be no exceedance of the NAAQS for criteria pollutants and that the only hazardous air pollutant that exceeded its ESL was alcohols. Again, predicted maximum concentrations of alcohols for 11 residences located near Pantex were below ESL.

The nonradiological air quality impacts due to the No Action Alternative and the Consolidation Alternative will be minimal, especially if mitigation measures are taken to control particulate emissions due to increased vehicular traffic and construction activity.

Page 2

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
OFFICE OF AIR QUALITY
REVIEW COMMENTS
OF THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE PANTEX PLANT AND ASSOCIATED STORAGE OF NUCLEAR WEAPONS COMPONENTS (March, 1996)

Air Quality Planning Division/Permit Modeling Unit:

Data reviewed were contained in Tables B.3.6-1 through B.3.6-9 and Tables B.4.1-1 through B.4.2-3 of the EIS. Please note that no modeling input and output files were available to assist in our review. Therefore, a comparison was made of the emission rates and results presented in the EIS to the emission rates and results reported in the TNRCC's *Modeling Analysis of the Pantex Plant Amarillo, Texas*, dated June 1995.

Some of the sources modeled by the TNRCC were not listed in Table B.3.6-1 of the EIS, so we assumed they were not modeled. However, in the TNRCC analysis the predicted concentrations for the pollutants emitted from the omitted sources, plus all other applicable sources, were less than the respective National Ambient Air Quality Standard (NAAQS). Following is a list of pollutants and omitted sources:

- CO emissions from EPNs 54, 85, and 160,
- NO_x emissions from EPNs 85, 157 and 160, and
- PM_{10} emissions from EPNs 157 and 160.

All predicted concentrations in the EIS were less than those reported by the TNRCC except for alcohols, hydrogen chloride, methylene chloride, and PM_{10}. Except for alcohols, the concentrations for all pollutants were below the respective Effects Screening Level (ESL) or NAAQS. The predicted concentration for alcohols was only slightly higher than the TNRCC-predicted value and less than twice the ESL.

The EIS Tables B.4.2-1 and B.4.2-2 do not include all the pollutants reviewed by the TNRCC. Therefore, we assumed that the EIS did not include an evaluation for them. However, the TNRCC reported in its analysis that no concentrations for these pollutants were predicted to exceed an ESL or state standard. The omitted pollutants follow:

1,3,5- Trinitrobenzene
1-Butanol
2,4,6- Trinitrotoluene
2,4-Dinitrotoluene
2,6-Dinitrotoluene
2-Nitronaphthalene
2-Ethoxyethanol
Acetone

Page 1

Acetylene
Aluminum
Ammonia
Barium
Benz(a) anthracene
Benz(a) pyrene
Bismuth
Butadiene
Butane
Butene
Calcium
Chlorinated Fluorocarbon
Copper
Cyanogen
Cyclohexane
Cyclohexanone
Dimethylformamide
Dioxane
EthaneEthyl Acetate
Ethyl Ether
Ethylene
Formic Acid
Iron
Isobutane
Isobutanol
Ketene
Lithium
Magnesium
Methane
Methane, dichloro
N-Butyl Alcohol
Non-F Solvents
Ortho-dichlorobenzene
Propane
Propene
Pyrene
Pyridine
Silicon
Tetrahydrofuran
Titanium
Total Suspended Particulate
Trichlorofluoromethane
Trichlorotrifluoroethane

Page 2

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
OFFICE OF AIR QUALITY
REVIEW COMMENTS
OF THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE PANTEX PLANT AND ASSOCIATED STORAGE OF NUCLEAR WEAPONS COMPONENTS (March, 1996)

Toxicology & Risk Assessment Section:

1. On Page 4-93, Paragraph 2, 2nd Sentence: "AQCR 211 is designated by EPA as "better than national standards" for total suspended particulates..."

   Comment: To our knowledge there is no national standard for total suspended particulates. EPA replaced the Total Suspended Particulate standard with the particulate matter standard during the late 1980's.

2. On Page 4-95, Paragraph 5, 2nd Sentence, there is a typographical error.

   Comment: "TRNCC" should be changed to "TNRCC".

3. On Page 4-95, Section: Air Quality Modeling and Corresponding Tables:

   Comment: It is not clear in the narrative whether the air dispersion modeling referenced was conducted as part of the Agreement in Principle or as part of the permit application submitted by the DOE.

4. On Page 4-97, Table 4.7.1.3-4:

   Comment: The following ESLs need to be corrected:

Ethene, Trichloro:	135 ug/m3 for the annual ESL 1350 ug/m3 for the 30-minute ESL.

5. On Page 4-98, Table 4.7.1.3-4:

   Comment: The following ESLs need to be corrected:

Methanol:	262 ug/m3 for the annual ESL 2620 ug/m3 for the 30-minute ESL.

6. On Page 4-99, Table 4.7.1.3-4:

   Comment: The format of the ESL should be converted to be consistent with the other ESLs represented in the table (e.g., 135 ug/m3 should be 1.35 x 10E2).

SG-003
STATE GOVERNMENTS

JUL 12 '96 16:17 FR ROGER MULDER 512 463 6178 TO 95058456392 P.02/38

STATE OF TEXAS
OFFICE OF THE GOVERNOR

GEORGE W. BUSH
GOVERNOR

July 12, 1996

Ms. Nanette Founds
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

Dear Ms. Founds:

Enclosed are the comments from the State of Texas regarding the Pantex Site-Wide Environmental Impact Statement. As you know, a request has been made to extend the commenting period since the Final DOE Standard for calculating the probability of an aircraft crash into the Pantex storage areas has not been released.

While we believe it is imperative that an extension for comments should be granted on those issues related to the aircraft crash estimates, comments on the rest of the document are included in this submission.

Once again, the Office of the Governor would like to thank the U.S. Department of Energy for the opportunity to offer comments on the document. As has been stated on numerous occasions, the State of Texas remains committed to ensuring that all current and future missions at Pantex be conducted in a safe and environmentally sound manner.

This office continues to believe that the Site-Wide EIS correctly concludes that a continuation of current dismantlement and disassembly missions at Pantex will have no significant impact on the health of workers nor any significant adverse impacts on the environment in the Amarillo area.

Likewise, this office continues to believe that any future missions at Pantex related to plutonium can be successfully carried out, provided the following three criteria are met:

Post Office Box 12428 Austin, Texas 78711 (512) 463-2000 Dial 7-1-1 For Relay Services (512) 475-3165 (TDD)

SG-003
STATE GOVERNMENTS

JUL 12 '96 16:17 FR ROGER MULDER 512 463 6178 TO 95058456392 P.03/38

1. Continued Local Support Is Earned
2. Proven Technology Is Utilized
3. Independent Oversight Is Guaranteed

During the public hearings in Amarillo on April 22 and 23, 1996, a number of issues were raised directly related to the Pantex Site-Wide EIS. A few of those are:

Comment:

SG-003/1
14.151

In Section 4.14.2.1 (p. 4-219 of the text) and in Figure 4.14.2.1-1 (p. 2-224) a classic error is made in explaining potential latent cancer fatalities. The error is to use risk estimates for exposures to large populations and to assume that applying that risk estimate to a specific group of workers allows for definitive conclusions about that group. In this example, the figure provides the correct explanation. The text is misleading and might cause confusion in the community by indicating that the 330 plant workers would suffer a certain number of cancers.

Question:

SG-003/2
14.152

Health effects are important to understand. The section on continued operations talks about health effects for workers. A statement is made that workers *would* experience additional cancers.

In the figure, a different explanation is used. The statement in the figure is that an average number of cancers could occur if many groups of workers were exposed. The final statement was that the *most likely outcome is zero cancers.*

What is the correct explanation?

Pantex Site-Wide EIS Comments
July 12, 1996
Page Three

Comment:

SG-003/3 12.030

Table S-1 in the Summary, under intrasite transportation, presents person-rem information (Summary page-18). The table is supported by Section 4.12 in the main text. An underlying baseline person-rem appears to be incorporated into the estimates for the Proposed Action alternative. Neither the main text nor the table clearly state the assumptions used. The person-rem shown for the Pit Storage Relocation alternative adds the estimated person-rem for pit storage relocation and the person-rem from the 2,000, 1,000, and 500 weapons levels under the Proposed Action alternative. Thus, while implementing the Pit Storage Relocation alternative, plant workers are assumed to receive the person-rem associated with the Proposed Action alternative. The radiation exposures for individual workers for the alternatives are within regulatory guidelines and do not have any public health significance.

Questions:

SG-003/4 12.031

In Table S-1 for the Proposed Action alternative, 50 workers receive 61 person-rem for 2,000 weapons. Next, 50 workers receive 48 person-rem for 1,000 weapons. Finally, 50 workers receive 41 person-rem for 500 weapons. How does one scale these numbers? The same type of calculations are made for the No Action alternative. Again, the numbers for person-rem do not follow the amount of work.

In the Pit Storage Relocation alternative, the amount of person-rem from the Proposed Action alternative appears to be added to what happens for pit storage relocation. How can one add the person-rem for these two alternatives? Is the same person-rem used two different times?

Comment:

SG-003/5 14.153

Appendix D, "Human Health," does very little to explain how the impact to human health is derived or calculated. This appendix is more of an explanation of the risk assessment methodology than human health.

Pantex Site-Wide EIS Comments
July 12, 1996
Page Four

Comment:

SG-003/6 14.154

The U.S. Department of Energy's Office of Emergency Management (NN 60) and the Office of Emergency Response (DP 23) fund the DOE's Atmospheric Release Advisory Capability (ARAC) which is housed at the Lawrence Livermore National Laboratory. ARAC's computer models, which have world-wide acceptance, have been called into service in many real-time responses to both real and potential accidental releases of radioactive material. The Three-Mile Island nuclear power plant accident in 1978, the 1986 Chernobyl disaster in the former Soviet Union, and the U.S. Air Force Titan II missile accident in Damascus, Arkansas are just a few examples. In addition, the ARAC models have been utilized in every nuclear weapons accident exercise since NUWAX 79. Pantex Plant is an "ARAC Site" and is linked to the ARAC center in Livermore via a computer-to-computer connection. ARAC operators are familiar with Pantex operations and can respond in a matter of a few minutes with a computer model graphic output showing the trajectory of the plume of contamination in the event of an accident. When, and if, a real accident occurred at Pantex it would be the ARAC models and the ARAC capability that DOE would call upon to response in real time.

Question:

Since ARAC is funded by Doe Headquarters and is ready to respond to a radiological accident at Pantex, why did DOE choose to use a model like ERAD to assess consequences for this EIS?

Comment:

SG-003/7 09.018

In Volume I, Section 4.2 "Impact Assessment Methodologies " (p.4-4), under "Biotic Resources," it is stated that "Impacts to wetlands are mostly related to the potential discharge of contaminants to the playas."

Question:

How can impacts to wetlands be related to potential discharges of contaminants? Only actual discharges can have impacts.

Pantex Site-Wide EIS Comments
July 12, 1996
Page Five

Comment:

Table 4.11.1.6-1 presents revenues for the governing bodies within the Pantex ROI (p 4-165).

Question:

If Pantex is reduced to the 500 weapons activity level, what would be the impact to these revenues?

Again, thank you for allowing us to comment. I look forward to resolving these important issues.

If you have any questions, please call me at 512/463-1866.

Sincerely,

ROGER MULDER
Director, Pantex

TDH

Texas Department of Health

David R. Smith, M.D.
Commissioner

1100 West 49th Street
Austin, Texas 78756-3189
(512) 458-7111

Carol S. Daniels
Deputy Commissioner for Programs

Randy P. Washington
Deputy Commissioner for Health Care Financing

Radiation Control
(512) 834-6688

Roy L. Hogan
Deputy Commissioner for Administration

July 2, 1996

Ms. Nanette Founds
U. S. Department of Energy
Albuquerque Operations Office
Post Office Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Founds:

SG-003/8
14.155

Enclosed are comments on the Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Nuclear Component Storage. Enhancement of public safety, protection of public health and the prevention of environmental degradation are crucial factors for assessing Pantex Plant mission accomplishment. Texans must be assured that these issues will receive sufficient attention prior to any decisions regarding plant operations. Thorough and complete assessment of consequence analyses to a satisfactory confidence level is required to support the decisions under consideration.

Efforts now underway and programmed to begin in the near future to update assessments and refine estimates of radiological and other health impacts from plant operations on the workers and on the general public must be maintained on schedule to increase confidence in and acceptance of the continued mission at Pantex Plant. We will continue to follow these important issues to satisfactory conclusion.

Page 2, U. S. Department of Energy

We appreciate having been provided the opportunity to participate in this process. If we can be of any further service, please do not hesitate to contact us.

Sincerely,

Joseph A. Martillotti
Pantex Special Project Coordinator
Division of Compliance and Inspection
Bureau of Radiation Control

Enclosure

cc: R. Mulder/Office of the Governor
V. Bartley/DOEAAO

TEXAS DEPARTMENT OF HEALTH
Bureau of Radiation Control
Pantex Plant Sitewide Environmental
Impact Statement DRAFT Comments

SG-003/9 14.156 — In the Summary, page S-9, right column, it is stated that 8.1 E-6 Latent Cancer Fatalities (LCF) per year would result from and aircraft crash into a facility with a weapons high explosive detonation. Scenario 3, described in Volume I, page 4-229 conflicts with this statement, indicating that the increased risk is 1.8 E-11 latent fatal cancers per year. Table 3.14.2.1-4 in Volume I page 4-228, Excess Cancer Fatality Risk for Scenario 3 lists 5.1 E-6. These figures need to be verified, reconciled, and, if necessary, corrected.

SG-003/10 14.157 — In the Summary, page S-10, left column, it states that from an aircraft crash into Zone 4 facilities, 1.5 E-6 LCF per/yr for 20,000 pits and 9.8 E-7 LCF per yr for 8,000 pits would result. Table 4.14.2.1-4, Volume I, page 4.228, Scenario 9 lists 6.0 E-8 excess cancer fatality risk. For Zone 4 weapons storage, 6.8 E-7 LCF/yr is given on page S-10. Scenario 3 in Table 4.14.2.1-4 lists 5.1 E-6 excess cancer fatality risk. Page 4-250 lists the increase in fatal cancer risk as approximately 2.2 E-11 increase in fatal cancer risk (compared to a baseline risk of 1.5 E-3 per yr). These figures need to be verified, reconciled, and, if necessary, corrected.

SG-003/11 02.028 — In the Summary, page S-11, right column, the discussion on Stockpile Stewardship and Management Draft PEIS omits the "Downsize Pantex with transfer of HE Operations" option briefed as a preferred alternative at the April 22-23, 1996 meetings. The Stockpile Management Preferred Alternatives Report, pages 17 through 20 discusses fiscal impacts related to the transfer of HE operations for fiscal years 1996 through 2020. If this issue is anticipated to impact on the Texas Panhandle during the tenure of the Pantex SWEIS, the effect of transporting a large number of HE components over the roadways needs to be included.

SG-003/12 02.029 — In the Summary, page S-12, right column, the Light Water Reactor disposition alternative from the Storage and Disposition of Weapons-Usable Fissile Materials PEIS has not been removed, although it was indicated in the April meetings that the LWR was no longer being considered for Pantex. This issue requires clarification.

SG-003/13 14.158 — In the Summary, Table S-1, page S-20 gives a 4 E-12 increase in fatal cancer risk, whereas in the same table, on page S-26 a duplicate entry gives 3 E-12. Volume I, page 4-229, Scenario 3 lists an increased risk of 1.8 E-11 LCF per year. Table 4.14.2.1-4, Scenario 3 gives 5.1 E-6 Excess Cancer Fatality Risk. Volume II page 4-250, right column lists 2.2 E-11 increase in fatal cancer risk (per yr). These figures need to be verified, reconciled, and, if necessary, corrected.

SG-003/14 14.159 — In the Summary, Table S-2, page S-25 right column, sixth line, between "in" and "0.04", insert "0.11 LCF and".

SG-003/15 14.160 — In Volume I, page 4-155, right column, the projected population in the ROI in 2055 ranges between 214,353 and 246,464. Figure 4.14.2.1-1, page 4.223 gives the ROI population of 267,107 for risk estimates. Volume II, page D-28, left column, gives the population in the ROI as 267,107 for fatal cancer estimates. An explanation of the different populations is necessary, or one of the ROI needs to be re-named.

SG-003/16 14.161 — In Volume I, page 4-215, right column, the statement concerning the Pantex Epidemiologic Surveillance 1994 Annual Report should be updated to indicate that the report has been released. (The 1995 Annual Report may also be available by the time the Final Report is issued.)

TDH/BRC Pantex SWEIS Comments, Pg 2

SG-003/17 14.162

In Volume I, page 4-223, Figure 4.14.2.1-1, fifth line from bottom incorrectly refers to Table 4.14.2.1-3. The correct reference is Table 4.2.1.1-4. A similar error was noted in Volume II, Appendix E, page E-23, left column at the end of paragraph E.3.1.6.

In Volume I, page 4-264, shipment of chemical high-explosive material does not address shipment of main charges from other DOE sites. The "Downsize Pantex with transfer of HE operations" option", presented as the preferred option in the SS&M PEIS, would necessitate large numbers of shipments of these components. The deletion of relatively few raw HE shipments and subsequent increase in transportation risks from these components needs to be adequately assessed here.

Barry R. Mcbee, *Chairman*
R. E. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Dan Pearson, *Executive Director*

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

June 27, 19

Mr. T C. Adams
Governor's Office of Budget and Planning
P.O. Box 12428
Austin, Texas 78711

Re: U.S. Department of Energy (DOE)
Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components
TX-R-96-04-03-0001-50-00

Dear Mr. Adams:

The Texas Natural Resource Conservation Commission (TNRCC) has reviewed the above-referenced Environmental Impact Statement, and our technical review comments are enclosed. The joint comments of the State's natural resource trustees are also enclosed.

SG-003/18 06.095

The TNRCC is concerned that contamination in the perched aquifers beneath the site indicates that past and present industrial discharge practices at the Pantex facility have not been fully protective of natural resources at the site. The DOE should insure that the threat of increased contamination to the Ogallala aquifer and contaminant exposure to ecological receptors is limited to the maximum extent practical.

In order to reduce DOE's residual liability for injury to natural resources, the State and Federal trustees encourage DOE to continue to work with the trustees during the remedial process so that appropriate restoration will be incorporated into remedial activities.

SG-003/19 22.024

We applaud DOE's willingness to share its information concerning radioactive contaminants; however, the TNRCC permit does not include radionuclide parameters. And as we have stated before, the TNRCC recommends that the DOE share regulatory oversight with another federal or state agency to minimize the potential for further injury to natural resources.

Thank you for the opportunity to participate in this review process. I believe these comments will assist the DOE in considering use of the Pantex facility. If you have any questions regarding these comments, please feel free to contact Mr. David Duncan, Director, Intergovernmental Relations Division, at (512) 239-3510.

Sincerely,

Dan Pearson
Executive Director

Enclosures

cc: Commissioners

Texas Natural Resource Conservation Commission
INTEROFFICE MEMORANDUM

TO: Sidney Wheeler, Intergovernmental Relations DATE: June 14, 1996

FROM: Ginny King, TNRCC Natural Resource Trustee Program

SUBJECT: Joint Trustee Comments to the Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components

As Lead Administrative Trustee (LAT) on behalf of the State Trustees, Texas General Land Office (TGLO), Texas Parks and Wildlife (TPWD), and Texas Natural Resource Commission (TNRCC), this memo is written to provide the State Trustees' comments on the "Draft Environmental Impact Statement for the Continued Operation of the Pantex Superfund Site and Associated Storage of Nuclear Weapon Components."

General Comments:

SG-003/20 22.025

The Trustees for the State of Texas strongly support the President of the United States and the Department of Energy (DOE) in the unilateral efforts to reduce the number of armed nuclear warheads worldwide. We further recognize the difficult responsibility of storing and stockpiling the Nation's disassembled nuclear weaponry. However, the DOE is one of the Federal Trustees for natural resources and has the responsibility of protecting those natural resources from injury on behalf of the public. In order to protect those natural resources from further injury, the Trustees recommend that the DOE incorporate more stringent environmentally protective practices at the Pantex Superfund site

SG-003/21 06.096

The Trustees do not oppose the DOE plan to construct an expanded Hazardous Waste Treatment and processing Facility (HWTPF). However, contamination in the perched aquifers beneath the site indicate that past and present industrial discharge practices at the Pantex facility have not been fully protective of natural resources at the site. A treatment facility that is constructed and maintained properly will prevent further injury to natural resources. In addition, the increase of industrial discharge volume to 2.9 million liters may exacerbate contamination problems if additional measures are not taken by DOE to protect valuable groundwater resources. DOE should insure that the threat of increased contamination to the Ogallala aquifer and contaminant exposure to ecological receptors is limited to the maximum extent practical

Specific Comments:

SG-003/22 22.026

1 Page 1-12, Section 1.2.2.3 Environmental Restoration: The information communicated in this text does not necessarily constitute restoration of the natural resources that have been injured as a result of the releases of hazardous substances at this site. In order to perform actual environmental restoration, the nature and extent of contamination must be determined to evaluate the potential injuries to natural resources. After such a determination, and in

Review Comments by the TNRCC NRTP
Page 2

SG-003/22 22.026 continued

cooperation with the other Federal and State Trustees, restoration projects should be designed that will appropriately compensate the public for injury to natural resources. Performing remediation as needed to comply with all appropriate regulatory requirements does not necessarily constitute compensatory restoration for injury to natural resources. In order to reduce DOE's residual liability for injury to natural resources, the State and Federal Trustees encourage DOE to continue to work with the Trustees during the remedial process so that appropriate restoration will be incorporated into remedial activities.

SG-003/23 01.040

2 Page 3-2, Section 3.1.1 Proposed Action: Care should be taken to ensure that the continued operation of Pantex Plant activities including "quality assurance testing of weapon components and the research and production of weapon components" is conducted in a fashion that will not increase DOE's liability for injury to natural resources.

SG-003/22 22.026 continued

3. Page 3-3 Performing environmental protection and environmental restoration activities: please see specific comment #1.

SG-003/24 06.097

4 Page 4-2, Affected Environment: The document states that an area of 50 miles surrounding the Pantex site will be considered the region of influence The Trustees are concerned that this area will not encompass the potential area of natural resources that could be impacted since:

a) the lateral extent of the perched aquifer has not been determined, and

b) documented contamination in the Ogallala and its flow direction provide the potential for this contamination to impact various environmental receptors outside this radius.

SG-003/25 05.040

5. Page 4-3, section 4 2 Impact Assessment Methodologies, geology and soils: Impacts should be assessed on the destruction of any geologic feature not just those specified unique.

SG-003/26 06.098

6. Page 4-3, Section 4.2 Impact Assessment Methodologies, water resources: The qualitative assessment of water quality impacts from wastewater and stormwater runoff does not adequately address potential impacts to surface water and groundwater resources at the Pantex Plant. Furthermore, it does not consider existing contamination in the sediments, surface water and groundwater and their cumulative impacts The text should be corrected to reflect what actions would be necessary to thoroughly address the potential impacts to these natural resources.

SG-003/27 09.019

7. Page 4-4, Biotic Resources: The text states that US Fish and Wildlife Service and appropriate State agencies have been used in the process of determining whether Pantex Plant operations would impact any plant or animal. This is incorrectly stated. The Trustees understand that an ecological screen has not yet been completed for this site and an ecological risk assessment has not been performed. The text should be corrected to reflect what has actually been assessed at this site and which agencies were involved

SG-003/28 22.027

8. Page 4-37 Environmental Restoration Process at Pantex Plant: see comment #1

Review Comments by the TNRCC NRTP
Page 3

SG-003/29 06.099

9. Page 4-55 Affected Environments: The text states that there is not evidence that contaminants found in the perched zone have migrated to the Ogallala aquifer This is inaccurate and should be corrected to reflect that there is documented contamination in the Ogallala aquifer.

SG-003/30 06.100

10. Page 4-62, Section 4.6.1.2 Groundwater: While the discharges that are permitted by EPA and TNRCC have protective standards which presently do not allow excessive levels of contaminants, existing contamination is already present in the perched aquifer and the playas. Therefore, the continual discharge of wastewater provides a hydraulic head potentially driving those contaminants into the Ogallala. Contamination in the Ogallala has been documented and more stringent actions are required in order to prevent further migration of contamination which could result in greater injury to an extremely valuable groundwater resource.

SG-003/31 06.101

11. Page 4-69, Section 4 6.1.2 Groundwater, Perched Aquifer portion: see comment #9

SG-003/32 06.102

12. Page 4-72, Groundwater Quality: The absence of trinitrotoluene in the perched aquifer may not be due to a reduction in the discharge of this contaminant but rather an indication of it breaking down to degradation compounds in the environment. Also, the text states that levels of trichloroethene occurring at the site barely exceed the Risk Reduction Standards (RRS) decision criteria of 5 micrograms per liter. Data used to make this determination may not be representative of actual levels of contamination at the site. To accurately determine what is occurring at this site, properly screened intervals in groundwater monitoring wells to accurately measure "sinking chemicals, metals, radio nuclides and high explosives," as well as the proper suite of analyses, should be employed for all potential contaminants of concern.

SG-003/33 06.103

13. Page 4-78, Section 4.6.2.1 Impacts of Continued Operations; Weapon-related activities, Surface water: A thorough evaluation and consideration of existing contamination in surface water and sediments of receiving waters at the Pantex site is needed to adequately assess the potential impacts of waste water discharges. Cumulative impacts of preexisting contamination and projected waste loads must be considered.

14. Page 4-79, Section 4 6.2 1 ... Groundwater. Potential impacts to the groundwater quality from wastewater discharge activities are not negligible. See comment #10.

SG-003/34 06.104

15. Page 4-80, Section 4 6.2 1 Groundwater: The TNRCC permit does not include radionuclide parameters. In order to prevent further injury to natural resources, DOE regulatory oversight should be shared with another appropriate agency. Also, see comment #10 and 15.

cc: Richard Seiler, Manager, TNRCC NRTP
Don Pitts, TPWD
Diane Hyatt, TGLO
Bob Short, USFW Arlington
Steve Spencer, DOI
Ron Gouguet, NOAA CRC Region 6
Geof Meyer, TNRCC RCRA

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
OFFICE OF WASTE MANAGEMENT
REVIEW COMMENTS
OF THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATIONS OF THE PANTEX PLANT AND ASSOCIATED STORAGE OF NUCLEAR WEAPONS COMPONENTS (March, 1996)

Industrial and Hazardous Waste Division/Corrective Action Section:

1. Hazardous Waste Treatment and Processing Facility (HWTPF) - As noted in the EIS, the Hazardous Waste Treatment and Processing Facility is necessary for compliance with the Agreed Order and Site Treatment Plan, which was negotiated in good faith with the TNRCC and issued on October 3, 1995. The No Action alternative in the EIS eliminates the HWTPF at Pantex, which threatens to put Pantex in noncompliance with the Agreed Order. At no time during the negotiations of the Agreed Order did DOE indicate that construction of the HWTPF was contingent upon an alternative selection process such as represented in the EIS. It is the TNRCC's opinion that, since the current activities at Pantex are the same now as they are in the No Action alternative, DOE should modify the No Action alternative to include development and use of the HWTPF. In other words, DOE should consider the fate of the HWTPF independent of any actions associated with the EIS.

SG-003/35 06.105

2. Ogallala Contamination - The EIS should be revised to reflect that the Ogallala has been impacted by Pantex operations, as evidenced in recent contaminated samples obtained from Mr. Cockrell's private off-site wells

SG-003/36 06.106

3 Homestead Wells - The EIS should note that the low vertical permeability of the fine grained zone may be compromised by abandoned homestead wells. These wells could provide contaminant pathways through the fine grained zone to the Ogallala. The potential for this to occur has been demonstrated at the Cockrell farm east of the Pantex Plant.

SG-003/37 06.107

4 Facility Boundary - The EIS should mention that DOE will take whatever action is practicable to clean contaminated groundwater to the residential drinking water standards beyond the facility boundary (page 4-69).

SG-003/38 13.030

5. Regulatory Oversight - The TNRCC would be more willing to embrace Pantex's mission within the State of Texas if DOE would promote independent regulatory oversight for radioactive source, special nuclear, or byproduct material. We applaud DOE's willingness to share its information concerning radioactive contaminants; however, it is our opinion the public would be better served and potential waste management errors minimized if the oversight authority was shared with the TNRCC.

SG-003/39 14.163

6. Risk - The risk from ingestion of hazardous substances should also be included when calculating risk to on-site workers The EIS only accounts for risk from inhalation.

SG-003/40 06.108

7. Pantex Plant Playas - The Risk Reduction Rules (RRR) (30 Texas Administrative Code (TAC), §335, Subchapter S), which include references to the Texas State Water Quality Criteria (30 TAC §307), do apply directly to the Pantex Plant Playas, contrary to the statement on page C-2

SG-003/41 06.109

8. Surface Water Quality Values - The surface water quality values determined in accordance with the RRR take precedence over the Risk Based Concentration Guidelines from EPA Region 3 (Section C 1.2) The EPA Region 3 Guidelines are not appropriate standards to apply when values are available in the Texas Surface Water Quality Criteria, the Federal Safe Drinking Water Act, or the Texas Regulations for Control of Radiation (TRCR) (30 TAC §336).

SG-003/42 06.110

9. Tables C.1.2-1 through C.1.2-3 - The standards listed in Table C.1.2-1 should cite values based on the RRR, rather than EPA Region 3 Guidance. For instance, the standard for antimony should be 0.006 milligrams per liter (mg/L), based on the RRR, rather than 0.015 mg/L cited for EPA Region 3 Guidance.

The standard for gross alpha activity, according to the RRR, should be 15 picocuries per liter (pCi/L), rather than N/A. No water quality standard is provided by the Texas Surface Water Quality Criteria; therefore, the RRR specify use of the drinking water standard.

The proposed drinking water standard of 50 pCi/L (4 millirems per year) should also be cited for beta particle activity.

The TNRCC requests that DOE revise Table C.1.2-1 to cite the more stringent surface water quality standards for radionuclides that are developed in accordance with the RRR. As such, the standard for plutonium-239/240 would be 2E-8 microcuries per milliliter (μCi/ml), based on the TRCR standards. Radium-226 and Radium-228 would be 6E-8 μCi/ml, based on proposed federal Drinking Water Standards. Tritium would be 1E-3 μCi/ml, based on the TRCR standards. Uranium-234 and Uranium-238 would be either 3E-7 μCi/ml, the TRCR standards, or 20 μg/L, the proposed Drinking Water Standard, which ever is more stringent.

SG-003/43 06.111

10. Constituents of Concern - The constituents of concern for groundwater should not be limited to those constituents that exceed risk based concentrations (Section C.2.2, page C-4). In addition, the nature and extent of contamination must be based on background values or laboratory Practical Quantitation Limits (PQL), rather than risked based values. These issues were addressed in DOE's revised Sampling and Analysis Plan and the TNRCC's subsequent approval with modification.

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
OFFICE OF AIR QUALITY
REVIEW COMMENTS
OF THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE PANTEX PLANT AND ASSOCIATED STORAGE OF NUCLEAR WEAPONS COMPONENTS (March, 1996)

Monitoring Operations Division/Ambient Monitoring Section:

SG-003/44 07.024

1. The footnote on National Ambient Air Quality Standards (NAAQS) in Table 4.7.1.3-1 in Volume 1 is inaccurate. Both ozone and PM10 NAAQS are based on expected exceedances, meaning that non-sampling days must be accounted for when calculating attainment determination. The NAAQS is attained when the expected number of days per calendar year, averaged over a three-year period, with maximum hourly average concentration for ozone and 24-hour average concentration for PM10 above the standard is equal to or less than one. SO2 annual, NO2 annual, and lead quarterly NAAQS are not to be exceeded. CO one-hour and 8-hour and SO2 3-hour and 24-hour standards cannot be exceeded more than once per calendar year.

SG-003/45 07.025

2. In the discussion of air monitoring results on page 4-93 of Volume 1, it is stated that methylene chloride was found at 213 ppbv on July 6, 1993. There is no mention that this concentration was seven times the effects screening level (ESL). Further review and analysis of the methylene chloride data by Toxicology and Risk Assessment staff concluded that this one time episode would not result in any long- term health effects. Although there is detailed discussion of slightly above ESL concentration of 1,2 dibromoethane, this additional discussion on methylene chloride is left out.

SG-003/46 07.026

3. TNRCC air monitoring at Pantex has found a number of exceedances of the PM10 NAAQS. Although modeling by TNRCC and the EIS staff did not predict possible PM10 violations, actual exceedances happened mainly due to blowing dust and localized earth moving activities. Precisely this kind of scenarios are anticipated in the Consolidation Alternative if additional construction activity takes place at Pantex. The EIS addresses this issue in section 4.7.6 on page 4-118 by stating that mitigation measures will be undertaken to alleviate temporary dust emissions from construction activities. These are standard TNRCC- approved mitigation measures for particulate emission control.

SG-003/47 07.027

4. TNRCC Modeling staff reviewed Appendix B, Air Quality Analysis, of the Sitewide EIS and their comments are submitted separately. Additionally, the EIS used the same model, the Industrial Source Complex Model, that the TNRCC used for modeling Pantex emissions. EIS modeling was performed in accordance with the EPA guidance document, "Guidelines for Air Quality Models" (revised) and TNRCC guidance document, "Air Quality Modeling

SG-003/47 07.027 continued

Guidelines." The modeling approach used by the EIS is different from the one used by TNRCC. However, both models arrived at the same conclusion

SG-003/48 07.028

5. TNRCC used a tiered modeling approach that included a blend of screen and refined modeling techniques because of the large number of fugitive emission locations, buildings, and pollutants, whereas the EIS modeling used a refined dispersion model to accommodate the large number of emission sources and pollutants.

SG-003/49 07.029

6. In the TNRCC approach, the TNRCC modeling results were added to the results of the modeling conducted by Radian Corporation in support of a permit application. Radian modeling addressed predicted impacts of emissions from the burning ground and container storage area. Therefore, TNRCC used an additive modeling approach to account for emissions from some of the buildings to assess plant wide emission impact. Using this approach, TNRCC modeling concluded that no predicted exceedances of the criteria pollutant impact public health. The maximum concentrations of alcohols predicted at the property line was slightly above the ESL, but concentrations of alcohols predicted at the nearest residence was below the ESL.

SG-003/50 07.030

7. Using a different approach, EIS modeling also concluded that there would be no exceedance of the NAAQS for criteria pollutants and that the only hazardous air pollutant that exceeded its ESL was alcohols. Again, predicted maximum concentrations of alcohols for 11 residences located near Pantex were below ESL.

SG-003/51 07.031

The nonradiological air quality impacts due to the No Action Alternative and the Consolidation Alternative will be minimal, especially if mitigation measures are taken to control particulate emissions due to increased vehicular traffic and construction activity

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
OFFICE OF AIR QUALITY
REVIEW COMMENTS
OF THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE PANTEX PLANT AND ASSOCIATED STORAGE OF NUCLEAR WEAPONS COMPONENTS (March, 1996)

Air Quality Planning Division/Permit Modeling Unit:

SG-003/52 07.032

Data reviewed were contained in Tables B.3.6-1 through B 3.6-9 and Tables B 4.1-1 through B.4.2-3 of the EIS. Please note that no modeling input and output files were available to assist in our review. Therefore, a comparison was made of the emission rates and results presented in the EIS to the emission rates and results reported in the TNRCC's *Modeling Analysis of the Pantex Plant Amarillo, Texas*, dated June 1995.

SG-003/53 07.033

Some of the sources modeled by the TNRCC were not listed in Table B.3.6-1 of the EIS, so we assumed they were not modeled However, in the TNRCC analysis the predicted concentrations for the pollutants emitted from the omitted sources, plus all other applicable sources, were less than the respective National Ambient Air Quality Standard (NAAQS). Following is a list of pollutants and omitted sources:

- CO emissions from EPNs 54, 85, and 160,
- NO_x emissions from EPNs 85, 157 and 160, and
- PM_{10} emissions from EPNs 157 and 160.

SG-003/54 07.034

All predicted concentrations in the EIS were less than those reported by the TNRCC except for alcohols, hydrogen chloride, methylene chloride, and PM_{10}. Except for alcohols, the concentrations for all pollutants were below the respective Effects Screening Level (ESL) or NAAQS. The predicted concentration for alcohols was only slightly higher than the TNRCC-predicted value and less than twice the ESL.

SG-003/55 07.035

The EIS Tables B.4.2-1 and B.4.2-2 do not include all the pollutants reviewed by the TNRCC. Therefore, we assumed that the EIS did not include an evaluation for them. However, the TNRCC reported in its analysis that no concentrations for these pollutants were predicted to exceed an ESL or state standard The omitted pollutants follow:

1,3,5- Trinitrobenzene
1-Butanol
2,4,6- Trinitrotoluene
2,4-Dinitrotoluene
2,6-Dinitrotoluene
2-Nitronaphthalene
2-Ethoxyethanol
Acetone

SG-003/55 07.035 continued

Acetylene
Aluminum
Ammonia
Barium
Benz(a) anthracene
Benz(a) pyrene
Bismuth
Butadiene
Butane
Butene
Calcium
Chlorinated Fluorocarbon
Copper
Cyanogen
Cyclohexane
Cyclohexanone
Dimethylformamide
Dioxane
EthaneEthyl Acetate
Ethyl Ether
Ethylene
Formic Acid
Iron
Isobutane
Isobutanol
Ketene
Lithium
Magnesium
Methane
Methane, dichloro
N-Butyl Alcohol
Non-F Solvents
Ortho-dichlorobenzene
Propane
Propene
Pyrene
Pyridine
Silicon
Tetrahydrofuran
Titanium
Total Suspended Particulate
Trichlorofluoromethane
Trichlorotrifluoroethane

SG-003
STATE GOVERNMENTS

JUL 12 '96 16:25 FR ROGER MULDER 512 463 6178 TO 95058456392 P.22/38

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
OFFICE OF AIR QUALITY
REVIEW COMMENTS
OF THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE PANTEX PLANT AND ASSOCIATED STORAGE OF NUCLEAR WEAPONS COMPONENTS (March, 1996)

Toxicology & Risk Assessment Section

SG-003/56 07.036

1. On Page 4-93, Paragraph 2, 2nd Sentence: "AQCR 211 is designated by EPA as "better than national standards" for total suspended particulates..."

   Comment: To our knowledge there is no national standard for total suspended particulates. EPA replaced the Total Suspended Particulate standard with the particulate matter standard during the late 1980's.

SG-003/57 07.037

2. On Page 4-95, Paragraph 5, 2nd Sentence, there is a typographical error.

   Comment "TRNCC" should be changed to "TNRCC".

SG-003/58 07.038

3. On Page 4-95, Section: Air Quality Modeling and Corresponding Tables:

   Comment. It is not clear in the narrative whether the air dispersion modeling referenced was conducted as part of the Agreement in Principle or as part of the permit application submitted by the DOE

SG-003/59 07.039

4. On Page 4-97, Table 4.7.1.3-4.

   Comment: The following ESLs need to be corrected:

Ethene, Trichloro.	135 ug/m3 for the annual ESL 1350 ug/m3 for the 30-minute ESL.

SG-003/60 07.040

5. On Page 4-98, Table 4.7.1 3-4:

   Comment: The following ESLs need to be corrected.

Methanol	262 ug/m3 for the annual ESL 2620 ug/m3 for the 30-minute ESL.

SG-003/61 07.041

6. On Page 4-99, Table 4.7.1.3-4

   Comment: The format of the ESL should be converted to be consistent with the other ESLs represented in the table (e.g., 135 ug/m3 should be 1.35 x 10E2).

SG-003
STATE GOVERNMENTS

L 12 '96 16:25 FR ROGER MULDER 512 463 6178 TO 95058456392 P.23/38

DIVISION OF EMERGENCY MANAGEMENT
TEXAS DEPARTMENT OF PUBLIC SAFETY

GEORGE W. BUSH
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JAMES R. WILSON
Director

TOM MILLWEE
Coordinator

July 5, 1996

Roger Mulder
Director, Special Projects
Environmental Policy Division
Office of the Governor
1100 San Jacinto, Room 415
Austin, Texas (via Interagency Mail)

Dear Mr. Mulder:

We have reviewed the draft *Pantex Site-Wide Environmental Impact Statement*. Our comments are attached.

My point of contact for this matter is Russ Lecklider. Please contact Mr. Lecklider at 424-2429 if you have any questions regarding our comments.

Sincerely,

Tom Millwee
State Coordinator

STM:RPL:ss

Attachment: DEM Comments on Draft *Pantex Site-Wide Environmental Impact Statement*

PL-1-96/07.comm.ltr

JUL 12 '96 16:25 FR ROGER MULDER 512 463 6178 TO 95058456392 P.24/38

Division of Emergency ManagementComents
on the
Draft *Pantex Site-Wide Environmental Impact Statement*

Section 4.16, Interstate Transportation of Nuclear & Hazardous Materials·

Section 4.16.1 indicates that non-radiological consequences of transportation were not considered in the analysis. Various DOE publications indicate that DOE is considering moving the high explosives fabrication mission from the Pantex Plant to Lawrence Livermore National Laboratory (LLNL) or Los Alamos National Laboratory (LANL) or both. It appears that such a relocation could significantly increase the risk of a hazardous materials transportation accident. Currently, explosives are shipped to Pantex in bulk and fabricated into components; the components are then installed in weapons. This arrangement requires a limited number of bulk shipments of explosives to Pantex and means that fabricated HE components are transported within the Pantex Plant site.

Should the high explosives fabrication mission be moved to LLNL or LANL, bulk shipments would be made to those laboratories and the HE components would be fabricated and packaged for shipment at those sites. The components would then have to be shipped by Safe Secure Tractor-trailer (SST) over public highways for substantial distances to the Pantex Plant for use. Since packaged, fabricated components typically occupy much greater volume than the raw materials used to make them, a substantial number of hazardous materials shipments would be required. Such shipments increase the risk to the public of traffic accidents and the effects of accidents involving explosive cargo, which frequently include fires and explosions.

RL-1-96/C7:ev-eis

JUL 12 '96 16:25 FR ROGER MULDER 512 463 6178 TO 95058456392 P.25/38

CENTER FOR RESEARCH IN WATER RESOURCES
THE UNIVERSITY OF TEXAS AT AUSTIN
Mail: CRWR · J.J. Pickle Research Campus · UT Austin · Austin, Texas 78712 *Telephone: (512) 471-3131*
Delivery: CRWR · 10100 Burnet Road, Bldg. 119 · Austin, Texas 78758 *FAX: (512) 471-0072*

Date: July 11, 1996

To: Roger Mulder
Office of the Govenor

From: Randall Charbeneau

Subject: Draft EIS for Pantex

SG-003/62
06.112

- The sections that deal with Geology and Soils, and with Water Resources are generally well done. One issue that is still not adequately covered relates to the perched aquifer. The extent of the fine-grain zone which forms the perching layer is not known. The question of what happens to the perched aquifer is not discussed. Does the fine-grained zone pinch out with the perched aquifer groundwater flowing off the side, down to the Ogallala? Alternatively, will the perched aquifer eventually migrate through the fine-grained zone and down to the Ogallala? All that the Draft EIS acknowledges is "Recharge to the area aquifers is not fully understood."

SG-003/63
06.113

- Groundwater was not considered as a pathway for exposures potentially impacting human health. An obvious concern of some people in the area is contamination of the Ogallala from Plant activities. In what way were groundwater scenarios considered, and what pathway assumptions were used?

SG-003/64
06.114

- Table C.2.2-2 in Volume II provides data on chemical concentrations measured in the perched aquifer. A great deal of data is here, but I do not believe that it represents all available data. The Draft EIS should explain what data was used and what data was not used, and why.

- The conclusions drawn with respect to potential impacts on Geology and Soils, and Water Resources appear to the well based.

Bureau of Engineering Research

SG-003
STATE GOVERNMENTS
PAGE 21 OF 37

JUL 12 '96 16:26 FR ROGER MULDER 512 463 6178 TO 95058456392 P.26/3

BUREAU OF ECONOMIC GEOLOGY
THE UNIVERSITY OF TEXAS AT AUSTIN

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10100 Burnet Road, Bldg. 130 · Austin, Texas 78758-4497

July 10, 1996

U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Attention, Ms. Nanette Founds

Dear Ms. Founds:

The following are review comments on the "Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components" from staff at the Bureau of Economic Geology of The University of Texas at Austin.

General Comments:

SG-003/65 05.041 Sections 4.5 and 4.6, which describe water resources and geology and soils, do not provide sufficient information for the reader to determine if environmental impacts could result from continued operations and storage of nuclear weapons at Pantex.

SG-003/66 06.115

SG-003/67 Some of the maps in this document are used without referencing or obtaining permission of the author. Figure 4.5.1.2-1 was published by Gustavson (1991), but attributed to [illegible]

[illegible]

JUL 12 '96 16:26 FR ROGER MULDER 512 463 6178 TO 95058456392 P.27/38

Ms. Nanette Founds
July 10, 1996
Page 2

SG-003/71 05.046 Page 4-29, Stratigraphy, para. 1. The variable lithologies of the Ogallala and Blackwater Draw Formations are not described. These descriptions should include a brief discussion of the complex heterogeneity of the Ogallala and Blackwater Draw because the variation in sediment types controls ground water flow in the formation.

SG-003/72 05.047 Page 4-29. Sentence describing the lower part of the Ogallala implies that the fine-grained zone is the base of the lower Ogallala and generally confuses channel deposits above the fine-grained zone (which actually falls within the middle part of the Ogallala) with predominantly fluvial Ogallala sediments within the lower part of the Ogallala Fm below the fine-grained zone.

SG-003/73 05.048 Page 4-29, Stratigraphy, para. 1, ln 29. The fine-grained zone is not a sandstone. Limited available core from the fine-grained zone shows interbedded sands, silty sands, and muds. Because of the variability of sediments in this unit, the vertical hydraulic conductivity varies by 3 orders of magnitude. Geophysical logs and core show that at least part of the fine-grained zone consists of fining upward sequences of fine sand, silty to clayey sand, and mud. Furthermore, these sediments are not lithified; thus, they are not sandstones.

SG-003/74 05.049 Page 4-30, Figure 4.5.1.1-2. Well PXSB-03 is not just coarse sand. There are about 50 feet of sand and gravel near the bottom of the well.

SG-003/75 Page 4-31, para. 3, ln 1. Salt dissolution and accompanying subsidence or collapse are rapid processes on a human time scale. More than 2,000,000 tons of salt are dissolved each year along the eastern margin of the High Plains in the Texas panhandle.

[illegible]

SG-003/80 05.055

Page 4-33, Soil Types, para. 2 or 3. No attempt is made to point out that Randall clay soils are Vertisols and that deep desiccation cracks and root tubules, which are potential pathways for recharge, are characteristic of these soils. Furthermore, these soils have a udic moisture regime, which means that water moves down through the soil at some time in most years. That is, recharge occurs through even these clay soils.

SG-003/81 05.056

Page 4-33, Soil Types. In the discussion of soil sampling activities, there is no mention of the preliminary soil sampling that took place as a result of the May 1989 tritium release. This is a significant problem resulting from this omission for two reasons. First, there is no mention of this event or the known areas of contamination within this report. Second, there have still not been any characterization efforts completed beyond the initial preliminary assessment, to determine the amount of contamination from this tritium release. This lack of characterization continues despite, at least using one data set, the apparent increasing tritium levels in perched ground water in the area of playa 1.

SG-003/82 05.057

Page 4-35, Figure 4.5.1.2-2. Pantex is incorrectly located on the map. The correct location is approximately 1/4-inch to the northeast of the center of the black square or immediately adjacent to the system of faults and earthquake locations that mark the buried Amarillo Uplift. The city of Amarillo is not located on the map.

SG-003/83 05.058

Page 4-50. The statement is made that there is no surface expression of sinkholes or fractures associated with salt dissolution in Carson County. We argue that, based on seismic data at the plant, the playas themselves are a sinkhole-like expressions of salt dissolution.

SG-003/84 05.059

Page 4-50, Wepons Related Activities, para. 2, ln 2. The statement is made that the "potential impacts due to subsidence (resulting in sinkholes and/or surface rupture) are considered negligible because salt dissolution is a slow process relative to human activities." While the rate of salt dissolution may be slow relative to geologic time, the surface expression of salt dissolution can be catastrophic and result in the loss of life and property. Another inaccurate statement in this same paragraph refers to the absence of sinkholes in Carson County. Paine (1994) demonstrated that many playa basins in the vicinity of the Pantex Plant formed as a result of surface subsidence over areas of salt dissolution. In this context playa basins are similar to sinkholes found elsewhere in the salt dissolution zone. Thus, it is inaccurate to imply that there are no subsidence features in Carson County by simply stating that there are no sinkholes. A better approach would be to explain that sinkholes are the product of catastrophic, rapid collapse into an underground cavern. Playa basins on-the-other-hand formed in part as the result of relatively slower surface subsidence over areas of salt dissolution.

SG-003/85 06.116

Page 4-55, Affected Environment, para. 2, ln 19. The statement is made that there is no evidence that the contaminants found in the perched aquifer have migrated to the Ogallala aquifer. Only a few (2 or 3) Ogallala aquifer monitor wells are located in areas where there is perched ground water present. There are no Ogallala monitor wells beneath badly contaminated areas such as Zone 12, so there are no data on which to base the conclusion that no contamination has occurred. Furthermore, the unsaturated zone between the Ogallala and perched aquifers has not been sampled so it is not known if these waters and sediments have been contaminated.

SG-003/86 06.117

Page 4-62, Ground water, para. 1. There is no discussion of sediment heterogeneity, which strongly affects ground water flow rates.

SG-003/87 06.118

Page 4-63, Figure 4.6.1.2-1. Why are there no monitor wells in the area of playa 4 ? Considering all of the discharge that has occurred bpm zone 12 south to playa 4, it would seem appropriate to determine the nature of the hydrogeology in this area.

SG-003/88 06.119

Page 4-65, Perched Aquifer, para. 2, ln 1. Contrary to this confusing statement, there are areas at Pantex where perched ground water is present, but where gravel channels are not present and vice versa. The presence of gravel channels does not control the presence of perched aquifers; it is the presence of a stratigraphic horizon (in this case the fine grained zone) with a vertical hydraulic conductivity lower than the flux of recharge water moving through the unsaturated zone. It is quite obvious that if the gravel channels were underlain by a coarse sand then no perched aquifer would have formed.

SG-003/89 06.120

Page 4-69, para. 4, ln 6. If the spread of contaminants in the perched aquifer is limited to the confines of the perched aquifer in buried channel deposits, then why are there so many perched aquifer monitor wells in Zone 12 with contaminants, but located outside the gravel channel as mapped on page 4-66? It seems obvious that something other than gravel channels is, at least in part, controlling flow in the perched aquifer and that contaminants are present in perched aquifer water outside the gravel-filled channel.

If you have any questions concerning these comments, please call me at (512) 471-0232.

Sincerely yours,

Thomas C. Gustavson
Senior Research Scientist

TCG:mk

cc: R. Mulder, Governor's Office
T. Grimshaw, BEG
J. Raney, BEG

JUL 12 '96 16:28 FR ROGER MULDER 512 463 6178 TO 9585845639 2 P.30/38

COLLEGE OF ENGINEERING
THE UNIVERSITY OF TEXAS AT AUSTIN

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July 12, 1996

Mr. Roger Mulder
Director, Pantex
Office of the Governor
P. O. Box 12428
Austin, TX 78711

Dear Mr. Mulder,

We have reviewed both the Draft Site Wide EIS and the draft working documents used for preparing the Final EIS. We have also met with DOE personnel and contractors preparing the DOE Standard for evaluating probabilities for aircraft accidents. After this review, we present the following written comments and request that they be addressed in the Final EIS.

SG-003/90
15.088

1. As of this date, July 11, 1996 - the eve of the closing of the comment period for the draft EIS - those personnel from Tetra Tech responsible for preparing the Final EIS have not (1) received the Final DOE standard, (2) have not received the final technical support documentation, and (3) have no idea if the probability of an aircraft crash into a Pantex plutonium storage facility is 1 or 100 in a million. Therefore, at the close of this comment period, we can not verify their results because none is available. What is known is that everything published in the draft EIS will be changed based upon the new DOE standard.

SG-003/91
15.089

2. The aircraft crash rates are fixed in the DOE standard; however, do not have access to either the Technical Support Documentation nor the data from which the accident crash rates (usually reported as accidents per hundred thousand flying hours) have be calculated into a crash probability for each takeoff, for each landing, or an inflight rate per square mile. This calculation requires many assumptions and several different steps. From interviews, we have determined the draft DOE standard does a credible job in establishing these crash rates. However since DOE contractors have denied access to both the data and the technical support documentation, we request that that the following points of potential errors be addressed by the DOE contractor, reviewed by a competent authority, and be included in the Final EIS:

SG-003/92
15.090

A. Military Crash Rates - Military aircraft perform touch and go landings for proficiency training only with an instructor on board. Additional landing practice is accomplished as a low approach with the wheels not touching the runway. The civilian tower counts this low approach as two operations (1 takeoff and 1 landing) but no record of a landing is recorded in the military records. We request details of how this discontinuity in the raw data is accounted for in the DOE standard. We request that following data be published in the Final EIS for all military aircraft with significant impact at the Pantex facility, accident and crash rates per hundred thousand flying hours, average hours per sortie; average landings and low approaches per sortie; and number of crashes attributed to landing, takeoff, and inflight categories.

12 '96 16:28 FR ROGER MULDER 512 463 6178 TO 9585845639 2 P.31/38

Mr. Roger Mulder
July 12, 1996
Page 2

SG-003/93
15.091

B. General Aviation Inflight Crash Rates - It was pointed out in interviews that there are 422 off-airport crashes per year of general aviation aircraft in the United States which are considered in the calculation of the probability inflight crash rate. This data may be true, but it would be overly conservative to assume the probability of crash into a vacant or farming square mile was equal to the probability of crash into a built up areas such as the Pantex compound. Many general aviation crashes are the result of engine failure, nearly all general aviation aircraft have flight controls that function without power and pilots are trained to attempt forced landings in those emergencies. No pilot given a inflight situation where some flight control remains, would aim at the Pantex compound rather than away from the reinforced structures at the compound. Given the good weather conditions at Amarillo and the relatively open spaces surrounding the Pantex compound, the crash rate cited in the DOE standard should be greatly reduced for the local application of inflight general aviation aircraft.

SG-003/94
15.092

3. In general we feel the DOE standard is a tremendous improvement in accuracy over the previously used Solomon model for predicting the probability of an aircraft crash into a facility. The Solomon model was far too overly conservative in the estimate of the contribution of high altitude overflight aircraft. Since this new DOE standard corrects the inflight contribution of the Solomon model, we would logically expect that the probability of an aircraft crash into the Pantex plutonium storage facilitates should decrease from previous studies that used the Solomon model. We request that the Final EIS provide some narrative description of the new calculation of hit probability in comparison to the previously conducted studies and a short justification for the differences in the findings.

SG-003/95
15.093

4 After reviewing the draft EIS and conducting interviews, we recommend that the DOE standard in its application to the Pantex facility be localized for the conditions and aircraft traffic in the following ways:

SG-003/96
15.094

A. The small military aircraft subcategory which makes up a large portion of the traffic at Amarillo Airport must be studied by specific aircraft types. The T-38 and T-1 aircraft which are the dominate aircraft types in the traffic stream must have separate hit probabilities as well as separate release probabilities.

SG-003/97
15.095

B. The closure of Reese AFB in Lubbock, Texas by December 1996 will have a significant effect on the forecast T-1 and T-38 traffic at Amarillo Airport and therefore attempts must be made to use the actual forecast numbers rather that past history for these aircraft.

SG-003/98
15.096

C. The collection of RAMS data at Amarillo Airport has provided the Department with a very good record of the number and types of aircraft and their ground track in comparison to the Pantex facility. This data should be used when necessary to adjust DOE standard crash rates which are based upon a total average of all airports throughout the United States. The takeoff ground tracks for Runway 04 do not follow the typical pattern assumed when the data was collected for the DOE standard.

D. When using the RAMS data, insure that military aircraft that are in formation be counted as multiple aircraft rather than as a single aircraft.

SG-003/99 15.097

E. The Pantex facility has super stout structures and consideration of the structural capacity and resistance to aircraft penetration should be accurately modeled.

SG-003/100 15.098

F. The effective aircraft crash skid length should be localized to consider the local conditions at the Pantex facility.

SG-003/101 15.099

G. The FAA and DOE have agreed to several mitigation measures to reduce the probability of aircraft impact into Pantex and we applaud those efforts. The draft EIS provided an estimate of the effectiveness of these measures using the Solomon model which were significant. Although the application of this new model in the DOE Standard will probably estimate the effectiveness of these measures as insignificant, we believe they are significant and should be estimated separately.

SG-003/102 15.100

5. We recommend that DOE continue to collect radar data at the Amarillo airport as a mitigation item for the Site Wide EIS. We highly recommend that the current method of tracking radar should be improved with DOE funding a state-of-the-art system that is equal to the noise monitoring systems installed at many major airports in the US. This system should be automated and integrated with a geographical information system and be turned over to the airport for their use in airport planning.

Sincerely,

Michael T. McNerney, Ph.D., P.E.
Director
Aviation Research Center

MTM ls

James C Rock
Department of Nuclear Engineering
Texas A&M University
College Station TX 77843-3133

11 July 1996

Subject: Aircraft Accidents and the Draft Pantex Site Wide Environmental Impact Statement (SWEIS)

SG-003/103 15.101

1. First, let me start by observing that the Department of Energy (DOE) has created the best available models for assessing the probability of an aircraft accident at any point in the country. Second, DOE is to be congratulated for using their models in their Environmental Impact Assessments. Third, DOE is continuing to improve their aircraft accident models. Unfortunately, this continuous improvement poses difficulty for those who try to comment on the draft SWEIS for Pantex. A major shift in modeling assumptions occurred between July 1995 and July 1996. The predicted annual risk of an aircraft accident in any square mile has increased as a result of changes in the model, not as a result of changes in the aeronautical environment in the vicinity of the Pantex Plant

COMMENT: The aircraft accident risk depends as much on the aeronautical environment as it does on the assumptions of the model used for predictive purposes. The final SWEIS must clearly portray both effects. It is important that this issue be addressed in the Executive Summary as well as in the EIS itself.

SG-003/104 15.102

2. The discussion in the SWEIS points out that an Aircraft Accident can be an initiating event in a scenario that leads to public exposure to radioisotopes. Because this is a very unlikely event, the authors attempt to quantify the probability of the event. The Draft SWEIS used the Draft DOE Guidelines for Aircraft Accident Prediction (July 95, Revised). During the period of public comment, HQ DOE announced its intent to publish final guidelines, now promised for mid-July 1996. Further, DOE wants the final SWEIS to be based on the final guidelines. The new paradigm is that aircraft accident locations are best predicted on the basis of the locations of previous accidents. The location probability density function is a smoothed average over the whole nation for en route accidents. For near airport accidents it is a smoothed function of all accidents as a function of distance and direction from a composite runway. This is a major change from the draft guidelines and prior accident models. These assumed the impact location would be near the point along an established "flyway" where an aircraft encountered difficulty and used probability factors with dimensions of accident probability per mile of flight.

Preliminary calculations show that the new model predicts accident rates 2 to 10 times higher than the older models.

SG-003/104
15.102
continued

QUESTION: Since the Pantex SWEIS will be the first to use the new DOE Aircraft Accident Guidelines, and since it may be used to compare predicted accident probabilities at Pantex to those at other DOE facilities, how does DOE intend to explain the changed paradigm to members of the public and to senior decision makers?

3 In cooperation with FAA, DOE has initiated several mitigation measures to reduce the probability of an aircraft accident involving Pantex facilities. These include moving the back course localizer 6 degrees west and creating GPS instrument approaches that move takeoff and landing operations more than 2 miles away from Pantex. Plans exist to move the VOR onto the airport from its present location near then Pantex fence line. This will reroute high altitude traffic away from Pantex facilities. Unfortunately, the new accident model, based only on the history of previous aircraft accidents, is unable to demonstrate reduced accident probabilities from mitigation measures. From conversations with Kamiar Jamali, DOE did not intend this model to be used for mitigation design. It is designed to provide a common basis for comparing one DOE location to another. Nevertheless, as existence proof for the benefit of mitigation measures, note that the White House is surrounded by a no-fly zone.

SG-003/105
15.103

QUESTION: Request that DOE insure that the final SWEIS give appropriate credit for mitigation measures completed and contemplated. See the next comment for a suggestion.

4. To better understand the true flight environment at Amarillo, DOE installed the RAMS system to record the flight tracks of every aircraft operating near the Pantex Plant. This data has been analyzed by Dr. Y.T. Lin of Sandia Labs. In his paper, "Assessment of Aircraft Risk Reduction at Pantex Plant," he uses actual RAMS data to compute the probability density function for aircraft distance from zone 4 for all recorded aircraft. Dr Lin uses this data to make three relevant points:

SG-003/106
15.104

1 It shows dramatic differences in overflight activity on days when the USAF is flying compared to days when there are no military flights

2 Only a small fraction of all flights approach within 2 miles of zone 4

3 The daily total of high altitude en route flights and low altitude en route flights provide no clue as to the location of the VOR or of the FAA route structure. These flights are better modeled as uniformly distributed

QUESTION Can Dr Lin's approach to analyzing RAMS data be used to demonstrate efficacy of mitigation measures?

5. The proposed DOE Standard 3014-96, uses a hierarchical accident analysis scheme starting with simple, conservative models and progressing towards complex, accurate models. A screening level of risk < 1E-6 / yr is recommended. If at any point in the progression, the aircraft crash probability falls below this level, no further analysis is required. It is presumed that other initiating events become more important than aircraft accidents at this probability level. There are two problems with this approach. First, it leads some to believe that only when the aircraft accident probability is below 1E-6 / (sq mi* yr) has an adequate margin of safety been provided. Second, the base accident rate for general aviation aircraft is on the order of 500 /yr over 4,000,000 sq mi, or about 1E-4/(sq mi * yr). There are four other categories of aircraft in the DOE guidelines, each with their own accident rate: large military, small military, commercial air carrier and commercial air taxi. Thus, the total aircraft accident probability in the continental United States is above the screening rate, and full analysis is mandated by the DOE standard.

SG-003/107
15.105

COMMENT: DOE should very clearly explain the meaning of their screening level and of any aircraft accident probabilities computed for the Pantex SWEIS. The Pantex SWEIS will be the first to use the new geographic based guidelines. Other DOE laboratories and locations have analyzed their aircraft accident risk using earlier draft guidelines. Since DOE claims the aircraft accident model is designed to compare relative risk among DOE facilities, the revised prediction for all DOE sites should be included in the Pantex SWEIS. This means that the new guidelines need to be applied to all DOE operating locations so that Pantex can be viewed in proper relationship to the others.

6. Although the geographic modeling approach is an interesting exercise, the SWEIS should also contain complete Amarillo Aircraft accident data from 1970 to 1996. This data should then be explained in the context of the aircraft accident model. That is, based on the accident model, is the real experience an expected outcome?

SG-003/108
15.106

COMMENT: Suggest using the binomial distribution to estimate the confidence in the predicted accident rate. Use confidence interval principles to determine if the location and frequency of observed accidents are in reasonable agreement with the model.

7. Personnel at HQ DOE understand the difficulty of explaining the aircraft accident probabilities to the public. In a lively discussion at SAIC on 9 Jul 96, hosted by Tim Haley and chaired by Kamiar Jamali, the suggestion was made that EIS analyses not report the aircraft accident probabilities. These probabilities are intermediate results from the model and do not indicate public health risk. An accident is merely a potential initiating event. The suggestion was that the EIS should focus on the release probabilities, instead. This movement from "hit probability" to "release probability" involves many intermediate layers of modeling. First, one must assume the angle of impact for the aircraft. Second, assume an impact velocity and

SG-003/109
15.107

SG-003/109 15.107 continued

compute the skid distance during which the aircraft retains sufficient kinetic energy to penetrate a storage magazine or transport trailer and storage container. Third, compute the probability that an aircraft will impact within the dangerous skid distance from the facility heading toward that facility. Fourth compute the probability that a fire or a dense part of the aircraft will penetrate or destroy the facility. Clearly, the probability that all of the above events occur together is many orders of magnitude smaller than the simple probability that an aircraft hits near a critical facility or transporter. It is also clear that values assigned to the coefficient for each step affect the confidence interval about the point estimate of the release probability. The understandable tendency is to assign worst case values to all parameters to create an upper bound on the estimated release probability. For purposes of communicating to the public, it is desired to have an estimate of the central tendency, the median or the mean value of the release probability as well.

COMMENT: Include both the worst case and the mean value of the release probability due to aircraft accidents. The difference between point estimates of the worst case and of the typical case will give public officials an internally consistent estimate of the safety factors built into the prediction algorithm used.

SG-003/110 15.108

8. Not all structures proposed for storage and handling operations at Pantex are constructed in the manner and with the materials assumed in the DOE structural vulnerability analysis. That analysis seems to assume standard rebar reinforced concrete construction techniques. At Pantex there are some facilities that are more stout and some that are less stout than the analysis in the draft SWEIS seems to assume. Bundling the stout structures into the analysis probably creates a pessimistic estimate of the true risk of release.

COMMENT: Suggest DOE obtain data from a test involving crashing an F-4 into a section of a commercial reactor containment vessel. Use that data as a basis for assessing the likelihood that a small military aircraft crash could be an initiating event for a release incident in a stout structure. Then assess the effect on the overall risk to Pantex operations.

SG-003/111 15.109

9. The present model seems to assume that an accident that results in internal spalling of a structure will produce a release. This assumption seems overly conservative for pits stored in approved storage or shipping containers. Again, the data from the F-4 Crash Test may provide valuable clues to the appropriateness of the analytical assumptions in the release models.

COMMENT: Clarify in the EIS the release probability from spalling incidents. This may be one of the factors leading to an overly pessimistic assessment of the consequences of an aircraft accident. Since pits will be stored without chemical explosives, spalling seems an unlikely source for damaging both the storage container and the cladding on the pit.

SG-003/112 15.110

10. In the aircraft accident consequence analysis, the DOE model assumes that either a direct impact or a skidding impact can lead to a release. The model assumes that the aircraft (or its dense structures acting as kinetic missiles) retains dangerous velocities for the entire skid. In reality, the velocity slows continuously during the skid. The target area is computed from the actual facility dimensions, the aircraft wingspan and the skid distance. The skid distance is the dominant factor in target area.

QUESTION: Why not use a linearly decreasing velocity as a conservative means for estimating remaining kinetic energy during a skid? This would dramatically reduce the area involved in target zones and would refine the point estimate of critical aircraft accident probability.

SG-003/113 15.111

11. The structural damage modeling assumes all aircraft in a single FAA category pose similar risk to structures. These categories are useful for licensing, air traffic control and taxing purposes, but may not be ideal for accident analysis. For example, both a T-37 and an F-15 are included in the small military category. The T-37 has much less kinetic energy than an F-15, and has much smaller components that could become missiles. The damage potential of a T-37 matches that of many general aviation aircraft better than it does an F-15. Nevertheless, the default portions of the DOE guidelines treats them identically.

QUESTION: Why does DOE use FAA categories rather that a more technical criteria to group aircraft? Suggest a product of wing loading and gross weight as a better metric. Aircraft with high wing loading always approach faster than those with low wing loading. Aircraft with high gross weights always have more stout pieces in their structures and engines than aircraft with low gross weights.

SG-003/114 15.112

12. Dr Lin's analysis of nearest point of approach for each flight trajectory provides an alternative for site-specific accident modeling. It is not likely that his work can be extended to a full analysis of RAMS data within the promised schedule for the final SWEIS. However, his work does suggest that a careful examination of consequence analysis assumptions may be in order. One is tempted to believe that aircraft flying directly over a facility may pose the greatest risk. However, any aircraft impacting a facility from within a cone above that facility must impact at a very large glide slope angle. At angles greater than 30 degrees, there is virtually no skid distance. Thus the facility floor plan is the target area for impact from above. Because this area is much smaller than that assumed in the DOE guidelines, the probability of this accident is much smaller

QUESTION: Can the distribution of the points of closest approach be used to determine both the slant range and the line of sight angle to critical facilities? The effective target area for each facility will depend strongly on the impact angle. This effect is not included in the DOE guidelines because they default to a specified point estimate of the impact angle. The basis for

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SG-003/114 15.112 continued

this assumption is apparently discussed in the technical support documents for the DOE Standard, but that is not yet published, and may not be published for several more months.

COMMENT: A Monte Carlo analysis is likely the right means for accommodating this important effect.

SG-003/115 15.113

13 A full risk assessment of aircraft accident potential would include a term for a collision between an aircraft and a transport trailer, either on site during transport between structures or off site during cross country transport. No such term is evident in the draft SWEIS.

COMMENT: Suggest that the probability of an aircraft accident impacting a transporter be computed. Due to the short duration of exposure while in transit, it is expected that this risk will be shown to be negligible compared with other risks associated with fixed storage facilities.

SG-003/116 15.114

14 The tiered approach to aircraft accident modeling encourages the analyst to perform increasingly complex computations if the screening level has been exceeded in the prior step. The next step for the Pantex modeling effort involves using actual aircraft specific accident rates rather than using average accident rates for each of the identified five aircraft categories. It is also possible to use available accident rates for the most commonly observed aircraft in a category and to use the category specific rates for the remainder.

COMMENT: If accident rates are assigned to specific aircraft (such as the USAF T-1, T-37 and T-38 aircraft), then verify that the appropriate rates are used for the remaining aircraft in that category. These may be derived from aircraft specific accident data or estimated by marginal analysis of the entire category to determine the portion of the accident rate appropriate to the remaining aircraft types.

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TOM HAYWOOD
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April 19, 1996

U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, VA 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, DC 20026

RE: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons Useable Fissile Material Draft Programmatic Environmental Impact Statements (PEIS)

To Whom It May Concern:

As the Texas State Senator representing 36 Northern Texas Counties, including Carson County in which the Pantex facility is located, I want to thank you for the opportunity to provide comment on the United States Department of Energy's (DOE) Draft Programmatic Environmental Impact Statements (PEIS) on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons Usable Fissile Materials. This letter will also serve as my comment on the Pantex Site-Wide Draft Environmental Impact Statement, as most of the issues addressed in that document are identical to the issues addressed in the SSM and S&D PEISs.

I want to stress my support for DOE's earlier decision to abandon plans to transfer assembly/disassembly function to the Nevada Test Site. Your decision to select Pantex as the preferred alternative for those functions recognizes that transfer to Nevada would have been cost prohibitive, and would not have provided adequate facilities to meet future needs. However, the failure to recognize Pantex as the preferred site for new and/or consolidated stockpile management facilities has overlooked the best site for maintaining the integrity of the United States nuclear stock-

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April 19, 1996
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pile and attaining maximum efficiencies and cost savings.

Before addressing the two Impact Statements individually, I want to stress that any current or future Department of Energy functions at Pantex must be conducted in a safe and environmentally sound manner. While I am confident that current procedures are more than adequate, I also am adamant that any expansion at Pantex be implemented in the same fashion. The residents of the Texas Panhandle have come to expect Pantex operations to be handled in a way that does not impair their health or safety, and future plans should recognize that necessity.

Stockpile Stewardship and Management PEIS

Pantex is the most cost effective alternative for any new construction of SSM facilities. Labor costs, utility rates, and water and land availability at Pantex, as well as public and political support in the surrounding community, are more amenable to DOE needs than at any other site.

Pantex should be considered as a site for all future defense related programs to complement activities at the national laboratories, including the planned Atlas Facility and the plutonium pit fabrication site at Los Alamos National Laboratory. The location of additional defense related programs at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost.

While the Department of Energy makes no mention of a strategic plutonium reserve to meet future national security needs, the PEIS mentions that strategic storage should be co-located with disassembly. Pantex should clearly be the preferred site for such a mission in coordination with its management functions.

The strengths identified above supporting increased stewardship and management for Pantex also support the continuation of High Explosives (HE) fabrication at that site. Just as strategic and surplus storage should remain with disassembly, HE functions should remain co-located with assembly. The DOE SSM draft indicates that Pantex should retain HE capabilities on site to process inventories accrued from dismantling; therefore the continuation of HE functions at Pantex is clearly the least expensive alternative available to DOE. I strongly disagree with the draft PEIS statement that siting HE activities at Pantex offers no advantages over the national labs. The cost of transferring such functions is cost prohibitive, and such plans ignore the possibility of future weapon production activities, which would require a full HE capability at Pantex, and ignore the admitted necessity of continued limited HE activity at Pantex.

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U.S. Department of Energy
April 19, 1996
Page Three

I believe that many factors argue for the continued operation of HE activities
Pantex, in addition to an expansion of its existing stewardship and manageme
activities. In all of the above cases, I want to stress that the Department of Ener
should insist that budgetary comparisons between Pantex and other sites are accur
and include capital, transportation, training, remediation, and other costs.

Fissile Materials (Plutonium) Storage and Disposition PEIS

As the sole Department of Energy authorized facility for assembly and disassemb
of nuclear weapons, Pantex has served our country for more than 40 years. It h
handled these functions in a safe and efficient manner, and should continue to do s

As our nation continues its program of dismantling a large portion of our nuclea
deterrent, one of the challenges we face is processing, storing, or disposing the fissi
materials that remain. Pantex clearly offers the best solution to this vexing problem

Acknowledging the importance of cost savings, Pantex has the existing capability t
store the plutonium already at the site, and could easily expand and upgrade existin
facilities to meet any or all of the storage options being considered by DOE. For th
reasons identified in the SSM PEIS, the Pantex facility could accomplish this wit
minimal cost and difficulty.

Pantex already houses more than 8,000 surplus pits, with more pits scheduled fo
transfer from the Rocky Flats facility. The re-creation of storage facilities at anothe
site, and the costs and dangers associated with transporting large amounts o
plutonium across the country, makes little sense budgetarily or politically. The
common sense solution to this problem is to site strategic storage and surplus
functions at the same place as disassembly. Since facilities for all three functions
already exist at Pantex, this common sense solution is practical, reasonable, and
unarguable.

All possible factors argue for Pantex's continued and expanded role in storage of
disassembled fissile material. It has the necessary safety, security, and surveillance,
it has the most cost efficient operations, it has existing structures and facilities, and
it is the closest production site to Los Alamos, the planned pit fabrication site.

Based on the reasons outlined in the above two comments on the draft Programmatic Environ
Impact Statements, I urge the Department of Energy to designate Pantex as the preferred alte
site for all existing and new stockpile management and stewardship functions, as well as consol
of all plutonium storage, disposition, and related functions.

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TEXAS HOUSE OF REPRESENTATIVES

Committee on
Environmental Regulation
74th Texas Legislature

Warren Chisum
Chairman

Mike Jackson
Vice Chairman

March 27, 1996

U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, VA 22302

Re: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statements (PEISs).

Thank you for the opportunity to comment on the U.S. Department of Energy's (DOE) Programmatic Environmental Impact Statements (PEISs) on Stockpile Stewardship and Management (SSM) and Storage Disposition (S&D) of Weapons-Useable Fissile Materials. Please also consider this my comment on the Pantex Site-Wide Draft Environmental Impact Statement, since most of the issues addressed in these documents are identical.

First and foremost, I am adamant that any current and future functions at Pantex will be conducted in a safe and environmentally sound manner. Our first priority is to ensure any expansion at Pantex be implemented in a way that does not impair the health or safety of area residents or have an adverse effect on the environment. These goals serve as a prerequisite to any current or future activities at Pantex, including expansion.

I. **Generally:** I am pleased that DOE selected Pantex as a preferred alternative for assembly/disassembly, thereby abandoning earlier plans to transfer those functions to the Nevada Test Site (NTS) which would have been cost prohibitive and never been adequate to meet future needs. However, by failing to recognize Pantex as the preferred candidate site for new and/or consolidated stockpile management facilities, the DOE overlooks the best site for maintaining the integrity of the U.S. nuclear stockpile and attaining maximum efficiencies and cost savings.

II. SSM PEIS:

1. **Pantex is the best place to site new construction/stewardship activities.** Pantex is perhaps the most cost-effective alternative for any new construction of SSM facilities. Labor costs, utility rates, water and land availability at Pantex, as well as public and political support, are more amenable than those at any other Complex site. It is appropriate to consider Pantex as an alternative site for all future defense-related facilities to complement activities at the national labs (such as planned Atlas Facility and plutonium pit fabrication site at Los Alamos National Laboratory [LANL]). DOE makes no mention of a strategic plutonium reserve that is necessary to meet future national security needs, even though the PEIS mentions that strategic storage should be co-located with disassembly. Pantex should be the preferred site for such a mission in coordination with its management functions. The location of additional defense-related activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost to the American people. In its deliberations, *DOE should insist that budgetary comparisons between Pantex and other sites are accurate, and include capital, transportation, training, remediation, and other costs.*

2. **Pantex is the best site to continue High Explosives fabrication.** Consistent with the strengths identified above for increased stewardship and management duties, the high explosives (HE) functions should also remain at Pantex. Because the production assembly/disassembly functions remain at Pantex, the HE fabrications duties should be present at the corresponding site. After all, the SSM Draft admits that Pantex must retain HE capabilities to process the inventories already on site from dismantling. Therefore, the least expensive alternative is to maintain HE functions at Pantex. I adamantly disagree with

Derek Seal, Committee Clerk
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Robert Saunders, Edmund Kuempel, Mark Stiles
Jerry Yost, Robert Talton, Dawnna Dukes, Charlie Howard

the statement in the draft PEIS that there are no advantages to siting high explosives at Pantex as opposed to the national labs. The capital outlay alone necessary for transfer is cost prohibitive. In addition, should future need arise for new weapons production, it will be critical to have the HE facilities at the weapons production/assembly site.

III. **Fissile Materials (Plutonium) Storage and Disposition PEIS:** As the sole DOE-authorized facility for assembly and disassembly of nuclear weapons, Pantex has historically handled these functions in a safe and efficient manner for more than forty years. One of the challenges faced after dismantling a significant portion of the nuclear stockpile is processing or disposal with the materials that remain. The DOE is considering several options. Once again, acknowledging cost savings considerations, Pantex could continue to store plutonium which is already at the site and upgrade facilities for any and all storage options being considered by the DOE with minimal cost and difficulty. Pantex currently safehouses more than 8,000 surplus pits and plans are being made to ship additional pits from Rocky Flats to Pantex. It makes little sense to re-create storage facilities at another site and then unnecessarily transport large amounts of plutonium across the country from Pantex. The budgetary and political costs for such a decision would be enormous. Because of these costs, Pantex also should be designated the preferred site for any disposition options and related functions. It makes budgetary and policy sense to site disposition where storage already exists. Furthermore, it makes no sense from any perspective, budget or otherwise, to site strategic storage at one site and surplus at another. Pantex should be selected for both storage functions. Pantex has the necessary safety, security, and surveillance capabilities to accommodate an expanded role with minimal costs and it is the production site closest to Los Alamos, the planned pit fabrication site.

IV. **Conclusion:** Based upon these reasons, I respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management and stewardship functions as well as consideration of all plutonium storage and disposition and any related functions. Again, thank you for the opportunity to comment on these documents.

Sincerely,

Warren Chisum

Warren Chisum

Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

May 13, 1996

The Honorable Hazel R. O'Leary
Secretary of Energy
7A257 Forrestal Bldg.
1000 Independence Ave., S.W.
Washington, D.C. 20585

Re. COMMENTS REGARDING FUTURE ACTIVITIES AT PANTEX

Dear Secretary O'Leary:

Upon review of the three interrelated environmental impact statements ("EISs") regarding the reconfiguration and future of the Department of Energy's nuclear weapons complex,[1] I am becoming increasingly concerned that the Department of Energy ("DoE") may soon decide to process plutonium pits at the Pantex facility. I am furthermore concerned--once again--that the Texas Panhandle will become the *de facto* permanent dump for the nation's surplus plutonium supply. Given the 24,000 year half-life of plutonium and the distinct possibility that the environmental, political, and social issues surrounding any other permanent disposition of plutonium will not be resolved in the foreseeable future, this is an ominous development for Texas.

I have attached previous correspondence between DoE and my office dating back to 1991. As is readily apparent from that correspondence, I have long been firmly opposed to both propositions. Unfortunately, it now appears that we are moving closer to decisions by DoE that will unfairly burden Texans during the coming decades and needlessly impose risks on the farmers and ranchers who depend upon the Ogalalla Aquifer underlying Pantex.

A decision by DoE to begin plutonium reprocessing, with its attendant problems and risks for residents throughout the Panhandle, or a decision to store surplus plutonium (*i.e.*, nuclear waste) on a medium- or long-term basis, is unacceptable to this office. Accordingly, I have instructed my staff to renew its efforts to develop all available legal options to prevent DoE from turning the Texas Panhandle into a *de facto* nuclear waste dump, or another Rocky Flats.

I realize that you and your office have made great strides in incorporating the concerns of all stakeholders in your decision-making process. For that, you deserve much credit. Unfortunately, I do not believe that the

[1] The three EISs are (a) the PEIS on Storage and Disposition of Weapons-Usable Fissile Materials (which discusses, *inter alia*, the mixed-oxide fuel option in the most detail and discusses the alternatives, including a facility to cut the pits in two and process them into metal or oxide; to process other types of plutonium, and to mix plutonium with uranium to make mixed oxide fuel (MOX) to be used in nuclear power plants); (b) the Site Wide EIS for Pantex (which discusses the Pit Reuse facility in lesser detail); and (c) the PEIS on Stockpile Stewardship and Management.

512 463-2100 P.O. BOX 12548 AUSTIN, TEXAS 78711-2548

May 13, 1996
Page 2

solutions that DOE appears to be adopting solve the environmental and bureaucratic problems associated with storing and/or disposing of plutonium for decades, centuries, and even millennia.

Sincerely,

Dan Morales

Dan Morales
Attorney General

Enclosure

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Albuquerque, NM 87185-5400

Jay Rose
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Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

May 20, 1991

Mr. James R. Nicks
Associate Deputy Assistant Secretary for
Nuclear Weapons Complex Configuration
U.S. Department of Energy
DP-40; GA-045
1000 Independence Avenue, N.W.
Washington, D.C. 20585

Re: Requests for Additional Hearing in Texas for Reconfiguration PEIS scoping

Dear Mr. Nicks:

I respectfully request that the Department of Energy ("DOE") add an additional scoping hearing location in Austin, Texas for its Programmatic Environmental Impact Statement ("PEIS") on the reconfiguration of the nuclear weapons complex. The importance of the reconfiguration issue to all of Texas demands, I believe, no less.

In its March 4, 1991 announcement of the dates and locations for the planned PEIS scoping hearings, DOE listed only a single hearing for Texas--Amarillo, on July 24, 1991. 56 Fed. Reg. 8990. Unfortunately, the Texas state capital, where the central offices of the state agencies overseeing DOE's Texas operations are located, is more than 500 miles from Amarillo. Traveling to Amarillo to make a presentation at DOE's scoping hearing would be an undue drain on state resources and could result in fewer comments from state agencies. Although state agencies will likely submit written comments in response to DOE's solicitation, we believe that the spirit of DOE's public notice and comment process, which includes these hearings, would be better served by personal appearances by state officials. 56 Fed. Reg. 5590. February 11, 1991.

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The holding of an additional hearing in Texas would not require DOE to establish any new precedents in scheduling scoping hearings. First, providing two hearings in a state would not be inconsistent with DOE's plan to hold two hearings in New Mexico in Albuquerque and Sante Fe, which are less than 100 miles apart. Second, providing a hearing at a location not being considered for expanded activities would not be inconsistent with DOE's plan to hold a hearing in Atlanta, Georgia despite the proximity of facility locations in Columbia, South Carolina and Oak Ridge, Tennessee (only 215 and 225 miles away, respectively).

Thank you for your cooperation. Please do not hesitate to call me or Special Assistant Attorney General Sam Goodhope at (512) 463-2191 if you have any questions.

Sincerely,

Dan Morales

Dan Morales
Attorney General

DM/lb

cc: Governor Ann Richards
Lieutenant Governor Bob Bullock
Chairman Buck Wynne, Texas Water Commission
Mr. Steven Spaw, Texas Air Control Board
Commissioner Rick Perry, Texas Department of Agriculture
Commissioner Robert Bernstein, Texas Department of Health
Speaker Gib Lewis, House of Representatives
Senator Lloyd Bentsen
Senator Phil Gramm
Texas Congressional Delegation

Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

October 16, 1991

Secretary of Energy
James D. Watkins
Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Secretary Watkins:

As you know, the nation's nuclear weapons are disassembled at the Pantex Plant near Amarillo, Texas. Your department has also identified the Pantex Plant as the primary storage or disposal site for the radioactive components of retired nuclear weapons until such time as you develop alternative, long-term storage or disposal sites. (DoE, "Nuclear Weapons Complex Reconfiguration Study," January 1991, DoE/DP-0083, p. 161; and Adm. R.M. Barr, "Testimony Before the Senate Committee on Governmental Affair," January 25, 1991.)

I am writing you today to express my profound concern that the Pantex Plant may ultimately become the long-term storage or disposal facility for fissile material from disassembled nuclear weapons if your department is unsuccessful in securing a permanent storage or disposal facility elsewhere. I strongly urge you to share with state officials your department's short-term and long-term plans for storing or disposing of fissile material at Pantex. Texans must be involved in your decisions regarding these important matters, which will have a great impact on our state for generations to come.

Reductions in the nuclear weapons stockpile announced recently by President Bush indicate that the total amount of plutonium from disassembled weapons to be stored or disposed of will reach 84,000 pounds. This figure does not include other fissile material (such as highly enriched uranium) obtained from disassembled warheads, nor does it take into account the increasing rate of nuclear weapons disassembly likely to result from the rapid improvement in United States-Soviet relations. Furthermore, this figure does not include the significant, if not substantial, amount of mixed waste (i.e., radioactive waste mixed with hazardous waste) which will be generated.

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Secretary Watkins
October 16, 1991
2

Texans certainly take pride in the role of Pantex workers, who are retiring weapons of great destruction in the face of decreasing global tensions and the reduced threat of nuclear war. As Attorney General of Texas, however, I am responsible for the protection of the citizens and the environment of our state, and I am committed to preventing Pantex from becoming the de facto long-term waste disposal site for the fissile material of the Department of Defense and the Department of Energy.

Sincerely,
Dan Morales
Dan Morales
Attorney General

cc: Honorable Lloyd Bentsen
Honorable Phil Gramm
Honorable Bill Sarpalius

Honorable Ann Richards

Honorable Teel Bivins
Honorable Rick Crawford
Honorable John Smithee
Honorable David Swinford

Secretary Cheney, Department of Defense
William K. Reilly, Administrator, EPA
John Hall, Chairman, Texas Water Commission

Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

March 3, 1992

The Honorable James D. Watkins
Secretary of Energy
United States Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Secretary Watkins:

Thank you for your letter of January 9, 1992, in response to my letter of October 16, 1991. Unfortunately, your letter provides little comfort about the Department of Energy's plans regarding the "staging" or storage of plutonium and other nuclear material at Pantex. I am further distressed by the testimony of the Department of Energy ("DoE") at the hearing before the Senate Governmental Affairs Committee on February 25, 1992.

I am profoundly concerned that DoE has failed to consult with the public and Texas state agencies in developing safe and viable plans for handling radioactive components from retired nuclear weapons until the department has developed alternative, long-term storage or disposal sites. Assistant Secretary Claytor confirmed at the Senate hearing that Pantex will be the "interim staging" area for plutonium cores extracted from approximately 15,000 nuclear weapons during the next ten years.

The thrust of Assistant Secretary Claytor's testimony is strikingly consistent with:

(1) DoE's position, stated on page 162 of the Nuclear Weapons Complex Reconfiguration Report, that "*[a] single DOE storage facility, preferably located at the weapon disassembly site, should be sufficient to serve all DOE interim requirements for fissile components,*" and

(2) the testimony of Rear Admiral Barr, Deputy Assistant Secretary for Military Applications, before the Senate Governmental Affairs Committee on February 25, 1991. ("*Right now, there is storage at Pantex which we are using. . . We are looking at the long-term needs for a storage facility, probably at Pantex but not certainly, that would handle our needs for storing exactly the kind of things [i.e., dismantled nuclear weapons*

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components, as well as plutonium and uranium removed from such weapons] we have been just talking about.")(Emphasis added.)

I do not know what DoE means by "interim staging" area, nor is it clear what DoE means by "storage facility." I am concerned, however, that these terms may imply that Pantex will ultimately become the long-term storage or disposal facility for material from dismantled nuclear weapons.

Pantex is not suitable for long-term or permanent nuclear material storage. The Ogallala Aquifer lies underneath a thin veneer of soil at Pantex. The aquifer is the lifeblood for ranchers and farmers in the immediate area as well as throughout the central United States. The citizens of Texas living in Amarillo and the surrounding communities receive their water directly from wells located near Pantex. The value of the agricultural industry, i.e., crops, livestock, and livestock products in the High Plains Trade Area surrounding Pantex, is approximately $3 to $4 billion dollars *per annum*. Texas supplies 25% of the nation's grain-fed beef; 75% of the state's beef production comes from the High Plains Trade Area.

In addition to the nuclear material or waste storage issue, I do not believe that DoE has fully considered the ramifications of quickly expanding (without adequate and comprehensive planning) the nuclear weapons dismantling process at Pantex. The General Accounting Office ("GAO") has reported persistent safety and health problems at Pantex. (Nuclear Health and Safety: More Attention to Health and Safety Needed at Pantex (GAO/RCED-91-103, April 15, 1991)). According to testimony presented by GAO at the Senate Governmental Affairs hearing on February 25, 1992, "[a]s a result [of these safety and health problems], DOE could not adequately ensure that [Pantex] was operating safely." (J. Dexter Peach, Assistant Comptroller General, GAO). Mr. Peach went on to testify:

*Over the next several years, DOE must take custody of and dismantle thousands of nuclear weapons that the Department of Defense will retire. **The capability of DOE to safely dismantle so many weapons could present a problem and tax the limited capabilities of DOE resources at the Pantex Plant.*** (Emphasis added.)

I find it shortsighted and unacceptable, therefore, that DoE has not adequately involved state officials in developing workable long-term and short-term plans by which DoE can safely fulfill its nuclear weapons dismantling mission. A review of safety issues by the Defense

Nuclear Facilities Safety Board is an inadequate substitute for full and meaningful state participation. I find it unthinkable, moreover, that DoE is about to begin an unprecedented nuclear weapons dismantling program in the absence of a formulated department-wide safety policy.

In order to allay my concerns about safety at Pantex, I would appreciate answers to the following:

(1) Has the Final Safety Analysis Report ("FSAR") for Pantex been completed yet? If so, has it been sufficiently updated to reflect the change in Pantex's mission? If it has not been updated, what is the schedule for revising the FSAR? (I request that I be furnished with a copy of the existing report(s).) The FSAR, I believe, will have a direct impact upon the local government needs analysis that is currently underway. Does DoE envision revisiting the needs analysis, given the change of Pantex's mission? Is DoE reanalyzing nuclear criticality in light of Pantex's new mission? What now is the worst-case scenario covered in the FSAR? What steps has DoE taken to address GAO's concerns? What further steps must now be taken in light of Pantex's new mission?

(2) Have emergency planning efforts been modified to take into account the new mission of Pantex? What analysis has been done with respect to the increased transportation needs associated with disassembling 2,000 warheads per year? How will the highways, streets and roads of Texas be impacted by the importing of thousands of warheads into the state? Will DoE guarantee funding to ensure that local and state agencies receive full reimbursement of oversight costs to ensure the safety of Texas citizens?

(3) As the nuclear weapons disassembly work increases, the handling and disposal of high explosive components from the weapons will increase. High explosive material known to be radioactively contaminated or potentially contaminated has been stored for several years awaiting final disposal. Other such material has been burned. A large-scale disassembly program as currently envisioned by DoE will produce unparalleled quantities of high explosives that will require disposal. What are DoE's plans to ensure that safe disposal and burning of the high explosives will keep pace with the dismantling process? Do more environmentally sound disposal methods exist?

(4) A number of hazardous and radioactive materials are obtained from dismantled warheads, including Plutonium-239,

Uranium-235, Uranium-238, Beryllium, high explosives, Lithium-6, and Tritium. What are DoE's plans for handling each of these materials? Are any additional materials being retrieved from the dismantled warheads?

(5) Regarding the "staging" of the plutonium pits, how many "igloos" are being used for plutonium "staging"? How many igloos are capable of "staging" plutonium, based upon the current FSAR? Such structures, initially designed for storing conventional explosives, may be inadequate for long-term "staging" of plutonium. Is DoE in possession of any studies or analyses regarding the adequacy of igloo storage for nuclear material? Please provide such studies or analyses to my office.

Given the unsuitability of Pantex as a "staging" or storage facility for dismantling nuclear weapons components, I strongly urge you to share with state officials your department's short-term and long-term intentions for dismantling, storing or disposing of nuclear weapons at Pantex, as well as documented responses to the questions listed above. It is essential that our citizens be involved in DoE's decisions regarding these important matters, as they will have a great impact on the State of Texas for generations to come.

As the Attorney General of Texas, it is my duty to ensure that the situation that has developed in other states does not occur in Texas. For example, in 1970 the Federal government assured the State of Idaho that nuclear waste would not be stored--"staged"--above the Snake River Aquifer after 1980. Unfortunately for the citizens of Idaho, plutonium-contaminated waste remains stored at the Idaho National Engineering Laboratory today, and furthermore the Snake River Aquifer has now been found to be contaminated with carcinogenic organic solvents. I must have assurances that plutonium and other radioactive materials will not remain indefinitely at Pantex in the same manner that radioactive and hazardous waste remains in Idaho, South Carolina and Washington.

I firmly believe that the only way to ensure that problems with plutonium and other nuclear waste do not arise at Pantex, as they have in other states, is to provide for independent state review and oversight. I therefore fully support the establishment of a Technical Review Group or Environmental Monitoring Council composed of state agency and Federal representatives, as well as independent experts from universities, other independent organizations, and other impacted parties. It is, of course, imperative that the group receive full funding from the DoE to carry out its responsibilities. Please put

me in touch as soon as possible with your designated representative in order that we may begin to formulate the charter for such a group.

Surely with so much at stake for the local communities and the State of Texas, the least we can expect is full cooperation from your department. A timely, positive response to this letter and the establishment and full funding of the joint Technical Review Group or Environmental Monitoring Council would be good first steps on DoE's part.

In closing, I am putting DoE on notice that I am committed to preventing Pantex from becoming the *de facto* long-term nuclear waste disposal site for DoE and the Department of Defense. It is not satisfactory for you to respond to my concerns by saying that the "staging" and management of nuclear and hazardous material will be determined by the Record of Decision after the Programmatic Environmental Impact Statement is completed in 1993. We cannot wait until 1993--"staging" of plutonium at an facility ill-equipped for such purposes is occurring now in my state. We will cooperate with you and your department to develop a safe, sound and credible program to safely dismantle nuclear weapons, but we cannot stand by and allow a potential environmental disaster to develop in the State of Texas.

We, like all Americans, fully support DoE's efforts to reduce the threat to the world from nuclear weapons. We do not desire to impede the disarmament process or disparage the work our fellow-citizens are doing to dismantle nuclear weapons. However, I must insist that this work be done in a carefully planned, safe and environmentally sound manner. We must not exchange one set of problems for another. The proper approach at this stage is to develop and implement a safe and environmentally sound program, overseen and approved by the appropriate state agencies.

I have asked Special Assistant Attorney General Sam Goodhope to coordinate my office's efforts in this matter. He will be available to answer any questions your staff may have with respect to my intentions. He can be reached at 512/463-2191.

Thank you.

Sincerely,

Dan Morales

Dan Morales
Attorney General

cc: Honorable George Bush

Honorable Lloyd Bentsen
Honorable Phil Gramm
Honorable Bill Sarpalius
Honorable Albert Bustamante

Honorable John Glenn
Honorable Sam Nunn
Honorable James Exon
Honorable John Dingell
Honorable John Spratt

Honorable Dick Cheney, Secretary of Defense
Honorable William K. Reilly, Administrator of EPA

Honorable Ann Richards, Governor, State of Texas
Honorable Bob Bullock, Lt. Governor, State of Texas
Honorable Gib Lewis, Speaker of the House, State of Texas

Honorable Teel Bivins
Honorable Ron Lewis
Honorable Rick Crawford
Honorable John Smithee
Honorable David Swinford

John Hall, Chairman, Texas Water Commission
Steven N. Spaw, Executive Director,Texas Air Control Board
David Lacker, Bureau of Radiation Control
William Fisher, Bureau of Economic Geology
Robert A. Lansford, Chief, Division of Emergency Management, Department of Public Safety
Judge Jay Roscilius, Carson County Judge
Keith Adams, Mayor of the City of Amarillo

Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

May 29, 1992

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable James D. Watkins
Secretary of Energy
United States Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Secretary Watkins:

Thank you for your response of March 26, 1992, in response to my letter of March 6, 1991. I also appreciate the briefing given to state and local government officials at Pantex on April 10, 1992. Your letter and the briefing have provided us useful and new information.

Unfortunately, the information we have received leads me to conclude that a crisis is developing at Pantex which will force the citizens of Texas to unfairly bear the burden of precipitous and imprudent action on the part of the Department of Energy ("DoE"). I remain deeply committed to preventing Pantex from becoming the *de facto* permanent nuclear waste disposal site for the DoE. Until the issue of a permanent storage location for the dismantled nuclear weapons components is formally resolved, I believe it is inappropriate to proceed with "interim" storage at Pantex.

Furthermore, DoE's current plan to dismantle thousands of nuclear weapons and store the plutonium at Pantex violates the National Environmental Policy Act of 1969 ("NEPA") because no site-specific environmental impact statement ("EIS") for such activities has been completed for Pantex. The EIS completed by DoE in October 1983 for Pantex is outdated and clearly does not cover the dismantling and storage activities currently underway at Pantex. A site-specific EIS must be completed for the reasons stated herein.

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1. DoE's Current Efforts to Comply with NEPA With Respect to the Decision to Double Stack Plutonium-filled Drums are Insufficient.

DoE has already decided to complete an Environmental Assessment ("EA") regarding its proposed plans for multiple stacking and automated monitoring of the drums containing the plutonium pits. The EA is scheduled to be completed in December 1992.

At the present rate of disassembly, however, Pantex will be at full storage capacity and DoE will have to start double-stacking the plutonium-filled drums approximately one year from now—April 1993. Your staff has assured us that the double stacking will not begin until the EA and new Safety Analysis Reports ("SARS") are completed. However, unless the EA produces a finding of no significant impact ("FONSI"), an EIS will have to be completed on the new storage program. The new EIS on double stacking would have to be completed between December 1992 and April 1993 if the Pantex weapons disassembly program is not to be delayed.

It is impossible to do an accurate, satisfactory EIS in such a short time. This leads me to believe that DoE may already be assuming that the EA will produce a FONSI. The new storage program will produce what may be the greatest concentration of plutonium anywhere on earth, unless there is a similar facility in the former Soviet Union. It is difficult to conclude that no significant environmental impact is likely, and that therefore no EIS need be done. Yet, this is precisely what the EA must conclude if the disassembly program is not to be slowed or stopped in order to do an EIS.

The assumption that the EA will produce a FONSI violates NEPA because it predetermines the EA outcome and, furthermore, may improperly narrow the scope of the EA.

2. The DoE Determination to Change the Mission of Pantex from Assembly and Disassembly to Disassembly and Storage Constitutes a Major Federal Action Having a Significant Effect on the Environment: Therefore, DoE Must Complete an EIS Before Proceeding.

The storage configuration of the plutonium-filled drums constitutes only a very small part of the dismantling and storage process. Yet, the mere reconfiguration of drum storage has already caused DoE sufficient concern to complete an EA. Logically, if the reconfiguration of the drums by itself

necessitates the completion of an EA,[1] then clearly the proposed Pantex dismantling and storage program in its entirety establishes the need for a rigorous and full EIS. Such an EIS would fully inform your agency about all of the profound environmental and socio-economic ramifications associated with the proposed expanded nuclear weapons dismantling and storage program at Pantex.[2]

The fundamental change of Pantex's mission requires that the following issues, among many others, be addressed by DoE in a site-specific EIS:

1). What effect will the increased burning of high explosives have on the area surrounding Pantex?

2). What effect will the dramatic increased demand on workers and the facilities have on worker safety, productivity, and plant safety?

3). What effect will the storage of so many plutonium pits at one location have on security risks?

4). What effect will the new dismantling and storage program at Pantex have on the generation of low-level radioactive, mixed, and hazardous waste?[3]

5). What effect will legal and community opposition in other states to becoming the long-term repository for DoE's nuclear waste have on the period of time the disassembled nuclear weapons must be stored at Pantex?

---

[1] Although, as described above, I believe that an EIS must be completed before DoE can double stack the plutonium-filled drums.

[2] I note that in a hearing before the House Armed Forces Services Committee held on April 28, 1992, you testified that you have designated Kansas City to be the preferred consolidation site for the nonnuclear manufacturing activities associated with the weapons complex. Accordingly, given the Kansas City Plant's change in mission apparently, you directed that an EA be done for the Kansas City Plant.

[3] I note with considerable concern that DoE has included budget items for the fiscal years 1992 to 1996 for the construction of a $14 million incinerator at Pantex to burn low-level radioactive waste (depleted uranium, thorium, and tritium), hazardous waste, solvents, mixed radioactive/hazardous waste, and classified metal components generated at Pantex. I can only surmise that such a facility is required because of the increased nuclear weapons disassembly activity.

In sum, the changing of the mission of Pantex from assembly and disassembly to solely disassembly and storage of thousands of dismantled nuclear weapons clearly and logically constitutes a major Federal action triggering the need for a site-specific EIS for Pantex. The State of Texas therefore respectfully requests that DoE conduct an EIS (that fully complies with NEPA) regarding the dismantling and storage program currently underway at Pantex. The site-specific EIS must appropriately consider the alternatives to storing--interim or otherwise--disassembled nuclear weapons components at Pantex.

In closing, we have received reports that DoE may react negatively to our concerns about Pantex's operations and may consequently "penalize" our communities by deciding against possible Pantex expansion or by relocating Pantex operations to another facility. My response has been that it is unthinkable that DoE officials would engage in economic blackmail in order to avoid an open discussion of environmental concerns. I trust that I am correct on this point. Economic development and environmental protection and safety are not mutually exclusive. Pantex can be expanded safely and in a sound environmental manner. Working cooperatively, we can provide for economic expansion, as well as environmental protection in the Texas Panhandle.

I look forward to hearing from you within thirty (30) days from receipt of this letter. Thank you.

Sincerely,

Dan Morales

Dan Morales
Attorney General

cc: Honorable Lloyd Bentsen
Honorable Phil Gramm
Honorable Bill Sarpalius
Honorable Albert Bustamante

Honorable John Glenn
Honorable Sam Nunn
Honorable Al Gore
Honorable James Exon
Honorable John Dingell
Honorable John Spratt

Secretary Watkins
May 29, 1992
Page 5

Honorable Dick Cheney, Secretary of Defense
Honorable William K. Reilly, Administrator of EPA

Honorable Ann Richards, Governor, State of Texas
Honorable Bob Bullock, Lt. Governor, State of Texas
Honorable Gib Lewis, Speaker of the House, State of Texas

Honorable Teel Bivins
Honorable Ron Lewis
Honorable Rick Crawford
Honorable John Smithee
Honorable David Swinford

John Hall, Chairman, Texas Water Commission
Steven N. Spaw, Executive Director,Texas Air Control Board
David Lacker, Bureau of Radiation Control
William Fisher, Bureau of Economic Geology
Robert A. Lansford, Chief, Division of Emergency Management, Department of Public Safety
Judge Jay Roselius, Carson County Judge
Keith Adams, Mayor of the City of Amarillo

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3. Article Addressed to:
JAMES D. WATKINS
SECRETARY OF ENERGY
U.S. DEPT. OF ENERGY
1000 INDEPENDENCE AVE., SW
WASHINGTON DC 20585

4. Article Number: P 852 480 161
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7. Date of Delivery: JUN 05 1992
8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3800, June 1988

The Secretary of Energy
Washington, DC 20585

December 21, 1992

The Honorable Ann W. Richards
Governor of Texas
Austin, Texas 78711

Dear Governor Richards:

I committed to you previously that an Environmental Assessment (EA) would be prepared, analyzing the potential environmental consequences of storing additional plutonium components (pits) at the Pantex Plant in Amarillo, Texas. In keeping with that commitment and the Department's policy to foster open communication, and in accordance the Department's regulations implementing the National Environmental Policy Act, I am forwarding to you this EA for State review and comment prior to approval by the Department. Additional copies along with the guidelines for providing comments have been forwarded to Ms. Susan Rieff, Director of Environmental Policy.

The proposed action described in this EA would increase the number of pits to be stored at Pantex for a period of time of approximately 5 to 10 years. The EA also examines other alternatives and their consequences. The proposed action would be implemented by expanding the current storage capacity at the Pantex Plant, employing additional existing facilities, and using a new storage configuration that permits more pits to be stored safely and securely in each facility. As an interim measure, the proposed action provides a cost-effective method for the Pantex Plant to continue its mission of disassembly of nuclear weapons coming out of the Nation's stockpile, without impact to the public or the environment. As part of our efforts, a Safety Analysis Report (SAR) was completed and is available for review by state representatives at the Pantex Plant.

Specifically, up to about 20,000 pits are proposed to be stored at Pantex Plant Zone 4 until long-term plutonium storage facilities are available as part of the Nuclear Weapons Complex Reconfiguration. The interim storage would be in effect pending the implementation of a decision on the long-term disposition and storage of plutonium in the nuclear weapons complex. The Department of Energy is currently developing a Programmatic Environmental Impact Statement (PEIS) on the reconfiguration of the nuclear weapons complex. That PEIS will address options for the long-term storage and disposition of plutonium and should be available for public review in late 1993. A final PEIS and Record of Decision are expected to be issued in mid-calendar year 1994.

Mr. Roger Mulder of your staff previously requested and the Department agreed to expand the EA review period to 45 days from the date of receipt by the State of Texas. In addition, the Assistant Secretary for Defense Programs will be scheduling meetings with your office, the Attorney General, and other appropriate State officials and agencies to provide a technical presentation in order to facilitate full understanding of the EA and the analysis that was accomplished to support this EA.

I appreciate your past and continuing support for the important work that lies ahead for the Pantex Plant. We are very much aware of our responsibilities to the people of Texas and the great support they have consistently given to our Nation's defense efforts.

We are committed to assuring a safe and environmentally sound operation at the Pantex Plant. You should find the EA to be thorough in its analysis of the potential environmental impacts of the proposed action.

Sincerely,

James D. Watkins
Admiral, U.S. Navy (Retired)

Enclosure

Department of Energy
Washington, DC 20585

DEC [illegible]

Ms. Susan Rieff
Director of Environmental Policy
Office of the Governor
P.O. Box 12428
Austin, Texas 78711

Dear Ms. Rieff:

The U.S. Department of Energy (DOE) proposes to allow increased interim storage of plutonium pits at the Pantex Plant near Amarillo, Texas.

An environmental assessment (EA) has been prepared to analyze the potential environmental consequences of this proposed action and its alternatives. This EA was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations implementing NEPA, and the DOE NEPA regulations. Five copies of the EA are enclosed.

The Secretary of Energy has forwarded the EA to the Governor under separate cover.

Section 1021.301(d) of the DOE NEPA regulations [(57 Federal Register 15122 (April 24, 1992)] requires that DOE provide a State and any American Indian tribe that would host a proposed DOE action the opportunity to review and comment on an EA for that action before DOE's approval of the EA. This process is intended to foster early and open communication between DOE and affected States and Indian tribes. Accordingly, the enclosed EA is provided to the State of Texas for review. As requested by Mr. Roger Mulder, Office of the Governor of the State of Texas, the response period has been expanded to 45 days from the date of receipt by the State of Texas. Comments sent within this period will be considered prior to approval of the EA. Comments sent after that will be considered to the extend possible. If the State of Texas has any comments on this EA, please provide them to Mr. Daniel Rhoades, Acting Director, Pantex Program Office, DP-6.2, Defense Programs, U.S. Department of Energy, Washington, D.C., 20585. (301) 903-2410. If the State of Texas has no comments, please notify Mr. Rhoades as soon as possible.

If you or your office wishes to receive further information about this project, please contact Ms. Constance Soden, Director, Environment and Health Division, U.S. Department of Energy, P.O. Box 5400, Albuquerque, New Mexico, 87115, (505) 845-5586. For further information about the NEPA process, please contact Ms. Carol Borgstrom, Director, Office of NEPA Oversight, 1000 Independence Avenue, S.W., Washington, D.C., 20585, (202) 586-4600.

Sincerely,

Richard A. Claytor
Assistant Secretary
for Defense Programs

Enclosures

cc:
Roger Mulder, Office of the Governor of Texas
Greg Rudy, GP-3.2
Henry Garson, DP-3.2

Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

March 19, 1993

The Honorable Hazel O'Leary
Secretary of Energy
Washington, D.C. 20585

Re: Environmental Assessment for the Interim Storage of Plutonium Components at the Pantex Plant

Dear Secretary O'Leary:

The Office of the Attorney General ("OAG") has reviewed the draft environmental assessment ("EA") for the "interim" storage of plutonium components at the Pantex plant. We appreciate the opportunity to review the draft EA and look forward to working with the Department of Energy ("DOE") to ensure that the operation of the Pantex plant does not threaten the health and safety of its workers and neighbors and the natural resources of the Panhandle area.

I strongly believe, however, that the draft EA is deficient and that until an environmental impact statement ("EIS") is completed, DOE will not be in compliance with the National Environmental Policy Act of 1969 ("NEPA"). The EIS process would ensure the full input of the public and ensure that DOE would take a "hard look" at the environmental and socio-economic consequences of its proposed activities, consider viable alternatives to the method currently chosen by DOE, and ensure that the adverse environmental and socio-economic consequences of its actions are minimized.

I have been deeply concerned about the activities at Pantex since I first came into office in 1991.[1] While I remain proud of the work done by the workers at Pantex, I also remain profoundly concerned that generations of Texans will be forced to live with a decision regarding the storage of thousands of pounds of plutonium made behind closed doors.

As you know, DOE has operated in the past pursuant to a policy of "decide, announce, defend." I believe that addressing this legacy is one of

[1] For your convenience, I have enclosed copies of all of the correspondence I sent to your predecessor, Secretary Watkins. See Attachment A.

your greatest challenges. Your office, reflecting the new direction of a new administration, has an historic opportunity to break with the past 12 years and to ensure that DOE does not continue with an exclusionary vision of how it ought to accomplish its mission.

DOE's conclusions regarding environmental impacts in the draft EA reflect the extremely--and impermissible--narrow crafting of the issue assessed by the draft EA rather than the reality of dismantling thousands of nuclear warheads over the coming years and storing, it would appear, nearly 50 tons of plutonium at a single site for an unknown period of time. Moreover, I believe that the conclusions constitute a post hoc rationalization of a DOE decision to turn Pantex into the de facto storage facility for plutonium, rather than the product of a "hard look" at the consequences of DOE's dismantling and storage activities it desires to undertake at Pantex.

More specifically, the draft EA is deficient for the following reasons:

(1) DOE has failed to adequately consider via alternatives to increasing the storage capacity at Pantex;

(2) DOE has improperly segmented the dismantling and storage activities undertaken and to be undertaken at Pantex; and

(3) DOE has failed to adequately assess the risk of dismantling thousands of nuclear warheads and storing the plutonium pits at Pantex.

I. DOE has failed to adequately consider viable alternatives to increasing the storage capacity at Pantex.

DOE's analysis of alternatives to the proposed action of expanded interim storage is extremely superficial at best. This failure to seriously analyze the alternatives indicates that DOE has already determined to go forward with increased interim storage at the Pantex plant and that the draft EA was produced simply to pay lip service to the requirements of the National Environmental Policy Act.

II. DOE has improperly segmented the dismantling and storage activities undertaken and to be undertaken at Pantex.

DOE has improperly segmented the analysis of its proposed increased activities at Pantex. While the possible environmental effects of increased interim storage are discussed, the draft EA completely ignores the environmental consequences resulting from the increase in

dismantling activities necessitating the increased storage. The draft EA should include, inter alia, a comprehensive analysis of the increase in waste generated at the plant as a result of the increased dismantlement activities.

For example, in past DOE budget requests and in the Pantex Plant's Environmental Restoration and Waste Management Five Year Plan for Fiscal Year 1993, the Department refers to a high explosives incinerator (see page 6-31 of FY 1993 Five Year Plan). Given that the need for this incinerator necessarily relates to the increased dismantlement activities at Pantex, it would appear that the potential environmental impacts from the incinerator should have been discussed in the EA.

We also note that in the DOE budget request for FY 1993 that DOE requested funds for a "Hazardous Waste Treatment and Processing Facility."[2] According to DOE's description provided to OMB:

> This facility will permit the treatment and declassification of low-level radioactive waste (depleted uranium, tritium and thorium), hazardous waste, solvents, mixed waste, and classified metal components generated at Pantex Plant.

Again, it would appear that the potential environmental impacts from the waste treatment facility, in the event DOE pursues construction of the facility, should have been discussed in the EA.

Furthermore, the cumulative environmental effects associated with the increase in movement of warheads into Pantex, the generation of waste products, and the movement and storage of plutonium pits should have been more adequately analyzed.

III. DOE has failed to adequately assess the risk of dismantling thousands of nuclear warheads and storing the plutonium pits at Pantex.

DOE has failed to adequately address safety and risk issues in the draft EA. This is a fundamental deficiency of the draft EA.

A. Lack of Meaningful Safety Policy.

DOE has long been criticized for its failure in developing a set of comprehensive and satisfactory safety procedures, i.e., a "safety policy," for its nuclear weapons facilities. Without such an overarching, meaningful safety policy against which to measure fundamental safety policy decisions at its sites, it is difficult to understand how the DOE

[2] See Attachment B.

under your predecessor was able to adequately develop the "Safety Analysis Report" (or "SAR") which preceded the draft EA and upon which much of the analysis of the draft EA was based. Moreover, it is difficult to understand how, if the draft EA would have properly analyzed the complete range of dismantlement activities at Pantex, DOE could adequately develop SARS for each of the activities associated with the dismantlement and storage of the nuclear weapons.

As stated by the Office of Technology Assessment:[3]

> In its Final Report on DOE Nuclear Facilities, the DOE Advisory Committee on Nuclear Facility Safety ["ACNFS"] noted that the job of solving the operational and safety problems at the DOE weapons complex is "far from complete" and that some of the problems "will take into the next century" to correct.[4]

Although DOE did issue a new Nuclear Safety Policy in September 1991, DOE was subsequently criticized by the ACNFS in its final report for substituting nebulous language such as "continuous improvement" for measurable standards; for paying little attention to the largely chemical nature of the risk at some DOE facilities; and for inadequately treating the inevitable conflict between safety and production responsibilities by simply asserting that they are "compatible." The ACNFS's report stated that DOE needs to spell out how safety goals will be achieved, how priorities will be set, how self-assessments will be judged, and how progress and success will be measured.[5]

At this time, we are not confident that DOE under your predecessor provided sufficient guidance to its regional and field offices for them to make meaningful decisions about acceptable risks, risk assessment methodology, and procedures and policies to identify and minimize safety risks. Such decisions would, of course, be

[3] OTA Assessment Proposal: Managing Nuclear Materials from Warheads, Feb. 1, 1992; submitted to Senate Committee on Governmental Affairs.

[4] [Footnote in original.] Advisory Committee on Nuclear Facility Safety, "Final Report on DOE Nuclear Facilities," report prepared for the Secretary of Energy, U.S. Department of Energy, Washington, D.C., Nov. 1991, p.11. The ACNFS vigorously advocated the development of a department-wide safety policy which would allow different parts of the DOE to make internally consistent decisions between possibly conflicting values such as safety and production.

[5] S.e.e. Statement by J. Dexter Peach, Assistant Comptroller General, General Accounting Office, given at Hearing before the Senate Committee on Governmental Affairs of Nuclear Disarmament on Department of Energy, Feb. 25, 1992 ("Hearing"), p. 5.

reflected in the SAR or SARS providing the basis or bases of the EA or EAs. I believe that production of an EIS would ensure the public that important risk and safety issues were clearly and fully analyzed.

More specifically, the draft EA does little to allay our concerns about the potential safety problems that could arise from DOE's proposed activities. Of particular concern to us is the analyses in the draft EA of the probability of an airplane crash with Zone 4 Pantex plant structures and the potential impacts on the Ogallala Aquifer from a plutonium dispersal accident in Zone 4. We refer you to the comments submitted by the Texas Air Control Board and the Texas Department of Public Safety (Division of Emergency Management). Furthermore, we refer you to several issues raised by the City of Amarillo and the Counties of Potter and Randall regarding potential effects of the maximum winds of a category F4 tornado, as well as the possibility of terrorist actions involving an aircraft.

In analyzing both the potential airplane crash and impacts on the Ogallala aquifer of a dispersal accident, it is apparent that DOE relied on inaccurate assumptions and employed inappropriate methodologies. **Given the seriousness of the deficiencies in these analyses, this office cannot have any confidence in DOE's ultimate conclusions concerning the possible environmental impacts of interim storage at the Pantex plant.**

B. Lack of Resources to Ensure Safety.

It is not only the lack of a meaningful DOE safety policy against which to measure a safety analysis which makes the draft EA deficient, it is also the lack of an adequate analysis of whether Pantex has the necessary resources to undertake its new mission.[6] As stated by the GAO:

> Over the next several years, DOE must take custody of and dismantle thousands of nuclear weapons that the Department of Defense will retire. **The capability of DOE to safely dismantle so many weapons could present a problem and tax the capabilities of DOE resources at the Pantex Plant in Texas.** Storage of weapon components at

[6] Until the last two years, the mission of Pantex was to construct and dismantle nuclear warheads. The components of dismantled weapons, including the plutonium pits, were shipped back to the facility from which they came originally. The mission of Pantex today--to dismantle thousands of warheads, store and manage the plutonium pits extracted therefrom, and to help maintain a nuclear weapon stockpile a fraction of the size which existed during the Cold War--is clearly different. Such a change in mission may in and of itself necessitate an EIS.

> the plant, the **projected workload** to accomplish this work, and the transportation of weapons to the plant are important issues that need to be examined carefully. (Emphasis added.)[7]

I believe the adequacy of resources issue needs to be more fully addressed.

IV. Closing Comments

DOE provides no basis for the estimated interim storage time frame of 6-10 years. Given that DOE does not yet have a proposal for long-term plutonium disposition, the statement in the EA that the time required to implement decisions regarding long-term storage and/or disposition is expected to be within a 6-10 years time frame is not credible. I am concerned that the analysis of potential environmental impacts has been premised on an interim storage period that is unrealistic. If anything can be learned from DOE's civilian high-level waste site experience and the attempts by the states to locate low-level radioactive waste sites, it is that nuclear waste storage issues are very difficult to resolve and take far longer to resolve than first anticipated.

Many of the concerns raised in this letter are addressed in detail in the comments submitted to you by the Texas Air Control Board, the Bureau of Economic Geology, and the Texas Department of Health's Bureau of Radiation Control. Comments by other state agencies, individuals, and citizen groups identify other areas of concern in the draft EA. I am hopeful that the DOE will respond to each of these comments, especially those of the above-mentioned state agencies.

When DOE first proposed increased interim storage of plutonium pits at Pantex, I requested that your predecessor direct DOE to prepare an EIS that would address the impacts of the increased dismantlement and storage activities at Pantex. I respectfully repeat this request now. It is apparent from the draft EA that DOE will not run out of storage capacity at the Pantex plant until the fourth quarter of 1993, at the earliest. DOE has sufficient time to complete an EIS that will adequately address the potentially devastating environmental impacts that could result from the proposed increased interim storage.

The preparation of an EIS by DOE would demonstrate DOE's commitment under your guidance to fully protecting the health, safety,

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[7] Statement by Victor S. Rezendes, Director, Energy Issues, GAO, given at Hearing, p. 6.

and environment of this state and its citizens and would mark an historic new direction for DOE towards full and legitimizing public participation and open decision making. I welcome your suggestions as to how we might encourage and support your efforts in the future.

Sincerely,

Dan Morales

Dan Morales
Attorney General

The Secretary of Energy
Washington, DC 20585

January 19, 1994

The Honorable Dan Morales
Attorney General
State of Texas
Austin, Texas 78711

Dear Mr. Morales,

The Department has finalized the Environmental Assessment and issued a Finding of No Significant Impact limiting interim storage of plutonium components (pits) at the Pantex Plant to no more than 12,000 until further documentation can be prepared under the National Environmental Policy Act.

Over the past year the Department has been working with State and local officials to prepare an Environmental Assessment that examined the Department's plans for the interim storage of plutonium components in a way that addressed the concerns of the citizens of the Amarillo area and other interested stakeholders. Your staff has been extremely helpful in this regard. As a result of this dialogue, the Department has arrived at a better and more informed decision.

The decision supported by the Finding of No Significant Impact provides for the continuation of dismantlement activities at Pantex for approximately three years. During this period a more detailed Environmental Impact Statement will be prepared as described below. Based on the helpful input we received from State and local officials and other stakeholders, the Department is committed to the following:

- The Department will complete a Site-Wide Environmental Impact Statement covering all current and proposed facilities and activities at Pantex including dismantlement and storage of the resulting nuclear materials and classified weapons components (pits). A Record of Decision will be issued by November 15, 1996. Prior to the issuance of that Record of Decision, DOE will store no more than 12,000 pits at Pantex, unless a Presidential determination requires dismantlement of more than 2,000 warheads per year at Pantex. Information regarding an increase beyond 2,000 per year will be conveyed to the Pantex Citizen's Advisory Board.

- Subject to completion of the scoping process, the Department envisions that the Pantex Site-Wide Environmental Impact Statement will now address all storage requirements including alternative locations for all plutonium, highly enriched uranium, tritium, and classified weapons components that result from the Pantex dismantlement activities. Scoping meetings for this Environmental Impact Statement will be held in Amarillo and at other sites that might be affected by the activities at Pantex by no later than June 30, 1994. Likewise, public hearings on a draft Environmental Impact Statement will be held in Amarillo and at other sites that might be affected by the activities described in that draft Environmental Impact Statement.

- The Reconfiguration Programmatic Environmental Impact Statement is scheduled to be completed in 1995. It will analyze all reasonable long-term pit storage alternatives and discuss the disposition options that DOE is considering. The Record of Decision will include decisions on pit storage locations.

- The aircraft crash analysis in the 1983 Pantex Environmental Impact Statement considers such an accident credible and that offsite releases of radioactivity are possible. Therefore, the Department will review the existing Pantex emergency response plan to ensure it adequately addresses the consequences of an aircraft accident. DOE will immediately consult with the City of Amarillo, the Federal Aviation Administration and other stakeholders, as well as the Air Force, Army, Navy, and Marines, on the desirability and feasibility of using alternative civilian and military flight patterns and will publicly disclose the results of such consultations.

- DOE will ensure that the type and level of environmental monitoring at Pantex meets all legal requirements. DOE will consult with the public regarding the adequacy of environmental monitoring at Pantex and will make available to the public, in a timely manner, monitoring and inspection information.

- DOE will initiate consultations with the State of Texas to develop mechanisms for independent monitoring of pit storage, and will cooperate with requests made by the State to monitor pit storage. Storage will be carried out in a manner that DOE believes can be compatible with verification, although international verification procedures are not in place now.

- Background radiation exposure rates will be monitored and evaluated in Zone 4 at the Pantex Plant. A baseline will be established in consultation with the public and made available. Corrective measures will be developed for instances when the baseline is exceeded.

- Radiation exposure rates both inside and outside the plutonium storage magazines will be maintained at levels that do not result in doses to employees that exceed those allowed by the DOE Radiation Control Manual. Emphasis will be placed on ensuring that doses to employees will be maintained as low as reasonably achievable (ALARA). The performance of the Pantex site management and operating contractor in this area will be evaluated in accordance with DOE's Award Fee process. A contractor administrative limit of 1 rem-per-year effective dose equivalent is currently in effect for all Pantex operations. A reduction of the administrative limit to 500 mrem-per-year effective dose equivalent for Zone 4 operations will be implemented when the horizontal palletized multiple stacking configuration identified in the Environmental Assessment is approved.

- Monitoring of exposure rates both inside and outside the magazines will be conducted. Exposure rates that may potentially exceed DOE or administrative dose limits shall be promptly mitigated.

- Dismantlement at Pantex will continue and pit storage will be expanded to include the Zone 4 Steel Arch Constructions consistent with the Environmental Assessment and the Final Safety Analysis Report except that all magazines will use the preferred configurations in the Environmental Assessment.

- DOE has no current plans to process or reprocess plutonium at Pantex, conduct destructive analysis of pits at Pantex, transport pits from other sites to Pantex, or store special nuclear material other than in pit form at Pantex, except for: 1) staged weapon radioisotopic thermoelectric generators that await return to Los Alamos National Laboratory; 2) commercially obtained plutonium check sources used for radiation detection monitors; and 3) staged drums containing trace amounts of plutonium, resulting from weapon dismantlement operations at Pantex, that will be shipped offsite as waste. Any DOE proposal to change this position will require additional National Environmental Policy Act documentation and public review prior to a decision being made.

- In consultation with stakeholders, new procedures for information dissemination will be implemented.

- Any new Finding of No Significant Impact, should one prove necessary, that relies on the Environmental Assessment for Interim Storage of Plutonium Components at the Pantex Plant will be issued only after consultation with the State and other affected stakeholders regarding DOE's views on the need for a revised Finding of No Significant Impact and after a public meeting in Amarillo to consider the proposed Finding of No Significant Impact. If a new Finding of No Significant Impact is issued it will respond to comments received during the consultation and public meeting process.

Also, I want to take special note of the invaluable contribution on your part and that of your staff in facilitating the establishment of the Pantex Plant Citizen's Advisory Board. The establishment of the Pantex Advisory Board is an important and vital step in the Department's efforts to build trust and openness with the community.

A copy of the final Environmental Assessment along with the Finding of No Significant Impact is enclosed. As the Department moves to implement its commitments, we look forward to continued discussions and cooperation with the State of Texas, its elected officials, and its citizens.

Sincerely,

Hazel O'Leary

Enclosure

Office of the Attorney General
State of Texas

DAN MORALES
ATTORNEY GENERAL

July 1, 1994

Mr. David R. Rosson, Jr.
U. S. Department of Energy
Albuquerque Operations Office
P. O. Box 5400
Albuquerque, New Mexico 87185-5400

Re: Pantex Plant Site-Specific EIS

Dear Mr. Rosson:

As Secretary O'Leary is aware, I have been advocating the completion of a site-specific Pantex Plant environmental impact statement ("EIS") for the past few years. I am gratified that the Department of Energy ("DoE") has realized that such an EIS is in the best interests of the citizens of Amarillo and the Texas Panhandle. I have some comments, however, regarding the scope of the EIS.

DoE is in the midst of preparing at least three programmatic environmental impact statements ("PEIS"): the Nuclear Weapons Reconfiguration PEIS, the Waste Management PEIS, and the recently announced Fissile Materials Storage and Disposition PEIS. It appears that the PEISs are on different and unrelated time tracks. I am hopeful that the DoE will take immediate steps to ensure that the various NEPA-required documents that are being prepared by DoE will be coordinated.

DoE should acknowledge once and for all that shutting down operations at Pantex is simply not a reasonable alternative that requires EIS analysis. DoE clearly has no intention of shutting down the Pantex Plant. The false spectre of a Pantex Plant shutdown should be removed from any discussion of the Pantex Plant's future.

More specifically:

- DoE should state clearly the criteria for determining what is "surplus" plutonium and what is "strategic reserve" plutonium. DoE should also indicate how much plutonium each category contains.

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- The development of a mixed waste treatment facility at Pantex is neither practical nor desirable. The very small amount of mixed waste that is generated at Pantex does not justify the construction of a new mixed-waste facility.

- Storage, treatment, or processing of radioactive materials other than plutonium should not be considered to be within the scope of the EIS. Our concerns apply particularly, but not exclusively, to highly enriched uranium and tritium.

- Department of Defense facilities should be considered as alternative storage sites. This is particularly important in light of the storage problem that DoE was faced with earlier this year when it was quickly running out of storage space at Pantex before the environmental assessment on storage was completed. At that time DoE had essentially two options: violate NEPA or shut down the disassembly operations. DoE should have a backup storage facility so that the nation is not put in that same quandary again.

Many other issues must be carefully considered in the EIS, particularly the potential dangers of storing the nation's entire inventory of plutonium pits at a site that also serves as the nation's only assembly and disassembly facility. I continue to be seriously concerned about the possibility of long-term storage of plutonium at Pantex, particularly if the plutonium will require any form of processing. I also continue to be concerned about any potential processing or reprocessing of plutonium of any other radioactive material at the Pantex Plant, as well as the transfer to Pantex of plutonium from any other DoE site.

With further regard to the plutonium storage issue, I believe that the research facility established through the efforts of Congressman Sarpalius, other local elected officials such as Mayor Seliger, and the business community (and apparently supported by the community as a whole), should receive adequate funding to fully assess whether the design and construction of an enhanced plutonium management facility for the interim storage of plutonium would be viable or economic, and whether it, as an alternative to the present "igloo" storage system, would provide a significantly extra margin of safety for the citizens and environment of the Panhandle area. Inherent in such analyses would be a critical determination as to what constitutes "interim." Furthermore, the Pantex Plant Citizens Advisory Board ("PPCAB") ought to be fully consulted with as to what steps can be taken to ensure that "interim" plutonium storage does not become long-term storage.

When I received Secretary O'Leary's commitment in April 1993 to establish the site specific advisory board, the PPCAB, it was my desire that the board be meaningfully and fully included in discussions and analyses regarding environmental issues such as those that will be included in the EIS. Thus, as the scoping process continues and the preparation of the EIS begins, I trust that the Pantex Plant Citizen's Advisory Board will be kept fully informed by DoE and consulted with as appropriate. Thank you.

Sincerely,

Dan Morales

Dan Morales
Attorney General

c: Secretary O'Leary, Department of Energy

TEXAS HISTORICAL COMMISSION
George W. Bush • Governor
John L. Nau, III • Chairman
Curtis Tunnell • Executive Director
The State Agency for Historic Preservation

April 22, 1996

Mr. Bruce G. Twining
Manager
Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Re: Draft Environmental Impact Statement (EIS) for the Continued Operation of the Pantex Plant and Associated Nuclear Component Storage.
(DOE, F2)

Dear Mr. Twining:

Thank you for affording us an opportunity to comment on the above-referenced EIS. We were surprised to learn that so many archeological studies have been conducted at the Pantex plant in recent years because this department has no record of consultation with DOE on archeological studies since 1992. At that time, we requested information on the archeological surveys DOE was proposing to conduct at Pantex (see enclosed copy). However, we never learned any more about this work until the draft EIS for the continued operation of the plant was sent to us for review last month.

According to the draft EIS, several surveys and archeological reports have been completed since 1992 (see enclosed copy of pages 4-148 and 4-149). However, because this office was not afforded an opportunity to comment on these reports, Section 106 consultation has not been completed. We have recently requested copies of all archeological reports prepared for Pantex since 1992 from the Amarillo Area Office, and look forward to reviewing them.

If we may be of further assistance, please contact Mr. Bill Martin of my staff at 512/463-5867.

Sincerely,

for James E. Brusseth, Ph.D.
Deputy State Historic Preservation Officer

Sincerely,

Timothy K. Perttula, Ph.D.
Assistant Director for Antiquities Review

JEB/TKP/wam

cc: Ms. Vicki Battley, Pantex Plant

DEPARTMENT OF ANTIQUITIES PROTECTION
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Era include standing structures, building foundations, and features reflecting these periods (Pantex 1995a:12-9). Brief histories of Pantex Plant covering the period 1942–1992 have been prepared by B.H. Carr (Carr 1992), N.A. Stricker and R.M. Post (Legacy 1994 and 1994a). Pantex Plant began as Pantex Ordnance Plant in 1942, with its primary mission being the production of military ordnance. Since 1951, Pantex Plant has had Cold War and post-Cold War missions, including the fabrication of high explosive(s) (HE) for nuclear weapons, nuclear weapons assembly and disassembly, and repair and modification of existing nuclear weapons (Pantex 1995d:12-8, 12-9).

Surveys/Inventories

Surveys of archaeological resources have been conducted at Pantex Plant since the first professional archaeological study conducted by West Texas State University during the spring of 1981 (MH 1981). Over 4,000 hectares (10,000 acres) were surveyed during this initial effort, including the main Pantex Plant Site and Pantex Lake (Pantex 1995d:12-2). Other field investigations included the following: a 1992 Ditches and Playas *Resource Conservation and Recovery Act* Facility Investigation study by Mariah Associates; Phase II test excavations of 23 archaeological sites on Pantex Plant from 1993 through 1994 by Geo-Marine, Inc.; and a 1994 cultural resources survey of 1,700 hectares (4,200 acres) of previously unsurveyed land at Pantex Plant conducted by Geo-Marine, Inc. (Battelle 1993; USCOE 1994; USCOE 1994b). The 1994 study involved land owned by TTU and leased to DOE. In addition, 971 hectares (2,400 acres) of DOE land were systematically resurveyed in 1994 by Geo-Marine, Inc. (MH 1995b:1, 25).

Consultation Incomplete

During the 1981 survey, remains of 42 prehistoric Indian camps and three pre-World War II farmsteads were identified. Except for one historic site (farmstead), all sites were found near Pantex Lake and Playas 1, 2, and 3 on the main plant site. None of the sites appeared to qualify for the National Register of Historic Places (NRHP). The 1992 survey of ditches and playas identified 5 new sites and 39 isolated occurrences (IOs). Three of the sites and 14 IOs were located along the perimeter of Playa 2, and 2 sites and 25 IOs were located along the perimeter of Playa 4. The 1994 survey on TTU land identified 6 Native American sites, 2 historic sites, and 17 IOs. The 1994 resurvey of DOE land identified 4 new prehistoric Native American sites and 22 IOs (MH 1995b:79).

A comprehensive survey of the historical resources at Pantex Plant was conducted from 1992 to 1994, when DOE authorized an inventory of World War II buildings constructed between 1942 and 1945 (Pantex 1995d:12-9; Legacy 1994 and 1994a). Initially, survey work focused on World War II standing structures, such as buildings used for magazine storage and bomb-loading lines, in the active zones of Pantex Plant. Through 1993 and 1994, survey efforts expanded to other World War II Era standing structures that had not been previously surveyed, and World War II Era foundations and ruins inside historical boundaries of Pantex Ordnance Plant. This effort inventoried an additional 29 World War II standing structures and documented 82 foundations and ruins (Pantex 1995d:12-9). Historical resources still exist in the general area of Pantex Plant and include structures such as guard tower foundations, the Dunnage Mill Complex ruins, standing and in-use water towers, and a control lab foundation.

Cold War operations at Pantex Plant date from 1951 to 1991. Although historical resource surveys for this period of Pantex Plant operations have not yet been conducted, plans are currently being developed to begin such a survey. Completion of this work, combined with the surveys and evaluations of archaeological and World War II resources, will

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lead to the implementation of a comprehensive CRMP scheduled for completion by late 1998. The CRMP at Pantex Plant considers resources from the Cold War period to be among the most important historical resources at Pantex Plant (Pantex 1995d:12-16). As part of the comprehensive CRMP, an impact mitigation plan will be developed for preservation of cultural resources on Pantex Plant Site. Many of these resources have remained relatively undisturbed because of the security maintained by Pantex Plant during the past 50 years. Until a CRMP can be completed in CY 1998, cultural resources will continue to be managed and protected by DOE through interim plans and procedures and sections 106 and 110 of the NHPA.

Cultural Resources Eligible for National Register Listing

Eligibility criteria for listing cultural resources on the NRHP are contained in CFR, Title 36, Part 60 (36 CFR 60.4). Eligibility criteria are met if a cultural resource has integrity and exhibits any of the following characteristics:

- Association with events that have made a significant contribution to the broad patterns of our history.
- Association with the lives of persons significant in our past.
- Illustration of a type, period, or method of construction; for its aesthetic values or for its representation of the work of a master; or if it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may be likely to yield, information important in prehistory or history.

Earlier survey work on prehistoric sites at Pantex Plant did not result in a consensus on prehistoric sites eligible for the NRHP (MH 1981; Mariah 1992). However, test excavations conducted from 1993 to 1994 on 23 prehistoric sites did result in a recommendation that 22 out of the 23 sites may be ineligible for listing (USCOE 1994b; Pantex 1995d:12-7). No determinations of NRHP eligibility for Native American archaeological sites at Pantex Plant have been made (Pantex 1995d:12-7).

Only one historic site at Pantex Plant was considered potentially eligible for NRHP listing; however, due to the amount of disturbance at the site and its failure to meet the evaluation criteria discussed above, it is likely to be ineligible for NRHP listing. No other historic sites were recommended as potentially eligible for NRHP listing (Mariah 1992:3; USCOE 1994b:174).

Numerous World War II historical resources at Pantex Plant are potentially eligible for listing under the criteria discussed above (Pantex 1995d:12-16). Based on recommendations by Legacy's 1994 survey, the Texas State Historic Preservation Office (SHPO) has prepared a list of 45 World War II Era properties potentially eligible for NRHP listing at Pantex Plant (Legacy 1994 and 1994a; Pantex 1995d:12-16).

4.10.1.2 *Native American Groups*

In 1994, 10 Native American tribes known to have traditional interests in the Pantex Plant area were notified by Pantex Plant regarding their potential interest in proposed activities to be addressed in the Pantex EIS; these included the following: the Comanche Tribe of Oklahoma; the Kiowa Tribe of Oklahoma; the Apache Tribe of Oklahoma; the Mescalero Apache Tribe; the Jicarilla Apache Tribe; the Cheyenne-Arapaho Tribe of Oklahoma; the Wichita and Affiliated Tribes; the Caddo Tribe of Oklahoma; the Delaware Tribe of Western Oklahoma; and the Fort Sill Apache Tribe (Pantex 1995d:8–5). The Jicarilla and

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TEXAS HISTORICAL COMMISSION

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The State Agency for Historic Preservation

May 1, 1996

Mr. Bruce G. Twining
Manager
Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Re: Draft Environmental Impact Statement (EIS) for the Continued Operation of the Pantex Plant and Associated Nuclear Component Storage.
(DOE, F2)

Dear Mr. Twining:

This letter replaces our letter of April 22 and provides clarification of our comments regarding the Pantex Draft EIS. We have learned that the EIS addresses Section 110 of the National Historic Preservation Act, not Section 106 as we had assumed in our letter of April 22. With the clarification of this issue by DOE at a May 1 meeting, we agree that the EIS addresses Section 110 issues. Moreover, the EIS is a good step toward achieving compliance with Section 110.

Concerning our comment that consultation with Section 106 has not taken place for archeological studies, we have found evidence in our files that DOE has consulted with this office about archeological sites at the Pantex Plant. Extensive consultation has occurred regarding historic buildings with representatives of the National Register Programs Office and Division of Architecture at the Texas Historical Commission. Our primary concern, however, was that the archeological reports listed on page 4-148 of the Draft EIS have not been formally submitted to us for review. This situation was also resolved at the May 1 meeting, with DOE agreeing to have its contractor prepare a timetable for the submission of the reports along with National Register eligibility determinations for archeological sites.

We regret any misunderstanding our initial comments may have caused. In an effort to prevent future miscommunication, DOE and our agency have exchanged letters specifying the appropriate points of contact for issues related to archeology and architecture at Pantex. If we may be of further assistance concerning archeological issues, please contact Mr. Bill Martin of my staff at 512/463-5867.

Sincerely,

James E. Bruseth, Ph.D.
Deputy State Historic Preservation Officer

Sincerely,

Timothy K. Perttula, Ph.D.
Assistant Director for Antiquities Review

JEB/TKP/wam

cc: Ms. Vicki Bartley, Pantex Plant
Mr. Roger Mulder, Governor's Office

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WALTER LAMPHEY
Beaumont
PERRY R. BASS
Chairman-Emeritus
Ft. Worth

TEXAS
PARKS AND WILDLIFE DEPARTMENT
4200 Smith School Road • Austin, Texas 78744 • 512-389-4800

ANDREW SANSOM
Executive Director

May 22, 1996

Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

Attention: Nanette D. Founds
SWEIS Project Manager

Dear Ms. Founds:

Texas Parks and Wildlife Department (TPWD) staff has reviewed the Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components, Summary, Volume I-Main Report, and Volume II-Appendixes. TPWD has the following comments for your consideration.

SG-009/1
09.009

While we recognize Pantex efforts to discover the amount and extent of the historical contamination and Pantex current contaminant reduction in progress, we are concerned about impacts to wildlife from historic contamination listed in the report. Due to the unknown extent of the historical contamination, TPWD requests Pantex continue to describe the extent of contamination and encourages efforts to clean up or rectify the contaminant impacts. Consider incorporating a time line showing past efforts and future efforts in contaminant identification and clean up. If available, please send Joan Glass of our staff copies of completed reports describing potential wildlife impacts.

SG-009/2
09.010

TPWD is also concerned about the unidentified minnow species from Pantex Lake. Because there are 6 Federally listed *Notropis* with 2 additional State listed *Notropis* species, the minnow species should be identified by a competent scientist. You may request assistance in identification of the minnow by contacting the TPWD Freshwater Studies Program aquatic biologist, Kevin Mayes at 512/754-6844. Upon contacting Mr. Mayes for identification, a minimum of 5 specimens can be sent to him at 300 C.M. Allen Parkway, Bldg. B, San Marcos, TX 78666.

Department of Energy
Ms. Nanette Founds
Page 2

Thank you for the opportunity to review the Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components. Please call Dave Buzan at 512/389-4634 or Joan Glass at 817/867-7956 if you have any questions.

Sincerely,

Robert W. Spain, Chief
Habitat Assessment Branch
Resource Protection Division

RWS:JG:bsl

cc: Joan Glass, Texas Parks & Wildlife Department,
Waco Office
Kevin Mayes, Texas Parks & Wildlife Department,
San Marcos Office

BOB MILLER
Governor

STATE OF NEVADA

JOHN P. COMEAUX
Director

DEPARTMENT OF ADMINISTRATION
Capitol Complex
Carson City, Nevada 89710
Fax (702) 687-3983
(702) 687-4065

July 12, 1996

Ms. Nanette Founds
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

Re: SAI # 96300158: State of Nevada's Comments on the Draft Environmental Impact Statement for the Continued Operations of the Pantex Plant and Associated Storage of Nuclear Weapons Components (DOE/EIS-0225D)

Dear Ms Founds:

Thank you for providing the State of Nevada the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the U.S. Department of Energy's (DOE) Pantex Plant located near Amarillo, Texas. As you may recall, in June of 1994, we provided extensive scoping comments on the Notice of Intent for this DEIS. In those comments, we noted that the Nevada Test Site was being considered as an off-site storage location for up to 8,000 plutonium pits. After reviewing the subject DEIS, we found that Nevada is still under consideration, along with three other off-site locations, for the storage of plutonium pits. To reiterate our comments presented in June 1994, the State of Nevada remains firmly opposed to storing nuclear components such as plutonium pits at the Nevada Test Site.

Proposed Action:

For the reasons discussed below, Nevada officials strongly support the Proposed Action in the DEIS, which stipulates that Pantex would retain storage of the plutonium pits and would provide for future storage of up to 20,000 pits over the next ten years. We support this interim action without regard to pending decisions concerning the long-term storage of strategic reserve pits and/or storage and disposition of surplus pits. As you know, these concurrent decisions are being evaluated in DOE's Stockpile Stewardship and Fissile Materials Programmatic Environmental Impact Statement (PEIS) documents.[1]

SG-010/1
02.030

In reference to interim storage of plutonium pits at Pantex, Nevada's position on this issue continues to be that DOE should adopt a proposed action for the permanent disposition of surplus plutonium pits before selecting new interim or long-term storage sites for this long-lived material. In addition, to reduce duplication in storage, transportation, and security costs and to address risks associated with the proliferation of weapons-grade plutonium, DOE should consider adopting a program that combines materials disposition (e.g., plutonium vitrification) with long-term plutonium storage.

Implementing the Proposed Action as defined in the DEIS would enhance such a program; it would also help prevent redundant shipping campaigns of plutonium bearing material on public roads and highways. This is important since excessive

[1] Stockpile Stewardship and Management Draft Programmatic Environmental Impact Statement (DOE/EIS-0236), and Storage and Disposition of Weapons-Useable Fissile Materials Draft PEIS (DOE/EIS-0229).

SG-009
STATE GOVERNMENTS

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STATE GOVERNMENTS

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SG-010
STATE GOVERNMENTS

PAGE 3 OF 7

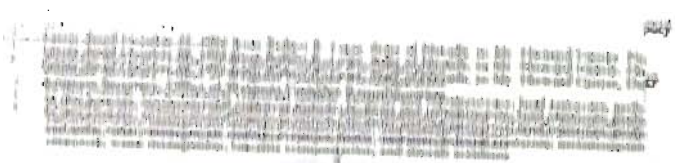
DOE Draft EIS
Pantex (DOE/EIS-0225D)
July 12, 1996
SAI # 96300158
State Clearinghouse Comments

transportation of plutonium on public roads remains controversial and is generally unacceptable to the public. For all of these reasons, officials in Nevada have long stated that "DOE should link long-term materials consolidation and management with options for final materials disposition."[2]

Pit Storage Relocation Alternative:

SG-010/2
21.009

In reference to the detailed analysis of potential environmental effects at the two sites under consideration for pit storage at the Nevada Test Site (the Device Assembly Facility [DAF] and the P-Tunnel Complex), we concur that pit storage at either of these sites would not have any direct "significant" environmental impacts on existing environmental resources.[3] We note that new construction at the Test Site would occur within existing facilities [inside the DAF or P-Tunnel complex] and/or on adjacent lands that are already disturbed. Because of this, we have purposely forgone a detailed review of the "direct" environmental impacts presented in the DEIS. There are, however, certain "indirect" and largely cumulative impacts that could result from pit storage at the Nevada Test Site. For example, if plutonium pits were placed in the P-Tunnel complex, local and/or regional earthquakes could pose significant seismic risks that might lead to tunnel collapse. In this regard, we concur that, if Nevada is



SG-010
STATE GOVERNMENTS

PAGE 4 OF 7

selected for pit storage, a separate assessment of the risks associated with seismic events would be required.[4]

Also, we were surprised that an analysis of indirect cumulative impacts was not provided in the DEIS for any of the off-site storage locations. This is significant, since a decision authorizing centralized plutonium storage and/or disposition will play a key role in determining the potential cumulative environmental impacts and radiological human health risks at the federal site(s) selected for such an activity. Hence, if DOE selects one of the off-site locations for interim pit storage (i.e., changing the proposed action), then a cumulative impact analysis must be provided for the selected site(s). Such an analysis must also account for impacts associated with interim pit storage in relationship to other department-wide programmatic decisions[5] involving treatment, storage, and disposition of other waste streams at the selected site(s).

SG-010/3
04.016

In an unrelated issue, we note that the Nevada Test Site is described in the DEIS as a "government owned, contractor-operated facility, currently managed by Bechtel Nevada [and] DOE owns the 864,000 acre site in Nye County, Nevada."[6] This statement is incorrect. DOE does not "own" the Nevada Test Site. The Test Site occupies public lands that have been withdrawn for nuclear testing purposes only. The Final EIS for [illegible]

See DEIS page 5-17, paragraph one.

Examples include decisions concerning treatment and disposal of low-level waste, mixed low-level waste, disposition of Greater-Than-Class-C, disposal of Special Case Waste, etc.

DEIS, page 5-3 paragraph three

Public Land Orders 805, 1662, 2568 and 3579. Bureau of Land Management (BLM), 1984. Continuation of Withdrawals, Department of Energy, Nevada Test Site 4310-84. (This file is located at

SG-010/3 04.016 continued

Site do, in fact, limit the use of the site to weapons testing and related research and development facilities only. Moreover, when the Nevada Legislature ceded its jurisdiction to the public lands that now comprise the site, it did so on the basis of certain stipulated uses (i.e., nuclear testing) as defined in the Public Land Orders. Thus, while many believe the lands comprising the Nevada Test Site are federal lands, they are in fact public lands that have been withdrawn for a specific national defense purpose, and that purpose does not include long-term storage of fissile materials, nor development of any major disposition technologies such as plutonium immobilization.

Since this is a viable issue that cannot be ignored or dismissed, officials in Nevada have continued to encourage the DOE to propose a path forward to address future federal actions that could alter the stipulated mission of the Test Site. These same concerns were recently repeated by DOE[8] and substantiated in formal comments prepared by the Department of Interior for the Nevada Test Site, Site-Wide Draft EIS (DOE/EIS 0243).[9]

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the BLM State Office in Reno, Nevada.

[8] U.S. Department of Energy, February 1996. Storage and Disposition of Weapon-Usable Fissile Materials, Draft Programmatic Environmental Impact Statement, Summary (DOE/EIS-1229-D), Page S-20. (The PEIS states that certain alternatives, such as consolidation of Highly-Enriched Uranium along with an estimated 38 tons of weapons-grade plutonium at the Nevada Test Site (NTS), would be *"inconsistent with the NTS withdrawal."*

[9] In formal comments for the Nevada Test Site, Site-Wide EIS, the Dept. of Interior noted that "the Test Site is comprised of public lands withdrawn by the Secretary of the Interior, who has continuing responsibilities at the Test Site, for a specific use. The original orders (PLO No 805) withdrew lands for weapons testing . . . [and] a substantial change in use would require a new withdrawal." Letter to Carol M. Borgstrom DOE from Patricia Sanderson Port, DOE Regional Environmental Officer, April 24, 1996.

Summary:

SG-010/4 02.031

As previously suggested, State officials in Nevada believe that DOE should link long-term fissile materials consolidation and storage with options for final materials disposition, and we believe the proposed action presented in the Draft EIS for Pantex supports this concept. As such, we continue to advocate a strategy that would bring together long-term pit storage with one or more of the plutonium disposition treatment options being considered in DOE's Storage and Disposition PEIS.

SG-010/5 16.059

Embracing this strategy will reduce risks and risk perception issues associated with the unnecessary transportation of fissile materials on public roads and highways throughout the country. Clearly, a prolonged shipping campaign of plutonium pits along the nation's highways, especially through large urban areas like Las Vegas, will cause significant adverse socioeconomic and cultural impacts even if no accidents occur. Research has demonstrated that nuclear-related activities such as radioactive material transportation have the potential to result in significant socioeconomic impacts.[10] These impacts originate in intense negative perceptions and avoidance behaviors by the public, and public and media interest in "things nuclear" makes it almost certain that these negative perceptions will adversely affect a community's quality of life and subsequently its commercial, residential, and business investment opportunities. Thus, we contend that DOE should do everything possible to limit the movement of these dangerous materials.

SG-010/6 11.049

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[10] See State of Nevada, Nuclear Waste Project Office. Publication numbers NWPO-SE 022-89; 056-93; and 063-95.

Again, we appreciate the opportunity to provide comments on the Draft EIS for the Pantex Plant. If you have any questions about these comments, please contact me or Mr. John B. Walker, Nuclear Waste Project Office, at 702-687-3744.

Sincerely,

Julie Butler

Julie Butler, Coordinator
State Clearinghouse, DOA/SPOC

JB\jbw
cc: Governor Bob Miller
Nevada Congressional Delegation
Perry Comeaux, Dept. of Administration
Robert R. Loux, NWPO
Harry Swainston, Deputy Attorney General
Lew Dodgion, Nevada Division of Environmental Protection
Affected State Agencies
Leo Penne, State of Nevada, Washington Office
John Thomasian, NGA
Terry Vaeth, Joseph Fiore, Don Elle, DOE/NV
Carol M. Borgstrom DOEHQ\NEPA
Ann Morgan, State Director, BLM
Members – NTS CAB

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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DOE OVERSIGHT DIVISION
761 EMORY VALLEY ROAD
OAK RIDGE, TENNESSEE 37830-7072

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JUN 24 1996
IN SOLID WASTE ASSISTANCE

June 20, 1996

Justin P. Wilson, Commissioner
Tennessee Department of Environment and Conservation
c/o Mr. Dodd Galbreath, Tennessee Environmental Policy Office
14th Floor L&C Tower
401 Church Street
Nashville, Tennessee 37243-1553

Dear Commissioner Wilson

Document NEPA Review – Draft Environmental Impact Statement: Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapons Components, DOE/EIS-0225D, March, 1996

The Tennessee Department of Environment and Conservation, DOE Oversight Division (TDEC/DOE-O) has received a Draft Environmental Impact Statement (EIS) concerning the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapons Components. The subject EIS has been reviewed in accordance with the requirements of the National Environmental Policy Act (NEPA) and associative regulations of 40 CFR 1500-1508 and 10 CFR 1021 as implemented, for your concurrence and transmittal to the following DOE office:

Ms. Nanette D. Founds
US Department of Energy
Albuquerque Operations Office
PO Box 5400
Albuquerque, NM 87185-5400

After review and research, the Division has the following comments. In Section 4.16 Intersite Transportation of Nuclear and Hazardous Materials, "Depleted Uranium," Page 4-257 it is stated, *"DU components removed from dismantled weapons are shipped to the Y-12 Plant at ORR for prestorage processing and interim storage."* Please provide information on the metric ton

SG-011/1
16.036

Justin Wilson, Commissioner
June 20, 1996
Page Two

SG-011/1
16.036
continued

amount of depleted uranium currently stored on the Oak Ridge Reservation (ORR) and the metric ton amount that will be shipped from the Pantex facility. Please provide the historical metric ton amount of depleted uranium at the ORR. Also provide information on the environmental impacts for the interim storage of depleted uranium at the ORR. The Division contends that if the historical levels of depleted uranium stored (interim) at the ORR are exceeded, additional NEPA documentation should be prepared to adequately address the impacts to human health and environment.

The Division requests these comments be given full consideration in the preparation of the Final Environmental Impact Statement for Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapons Components.

The Division looks forward to receiving future project documents and correspondence. If you have any questions regarding this Division's review, please contact Dale Rector at (423) 481-0995 or Steve Nisley at (423) 481-0163.

Sincerely

Earl C. Leming
Director

em340.99

SG-012
STATE GOVERNMENTS

PAGE 1 OF 3

State of New Mexico
ENVIRONMENT DEPARTMENT
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-2850

GARY E. JOHNSON
GOVERNOR

BRUCE E. KING
SECRETARY

July 3, 1998

Nanette Founds
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, N.M. 87185-5400

Dear Ms. Founds:

RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERAT OF THE PANTEX PLANT AND ASSOCIATED STORAGE OF NUCLEAR WEAP COMPONENTS; U.S. DEPARTMENT OF ENERGY (MARCH 1998)

The following transmits New Mexico Environment Department (NMED) staff comments concern the above-referenced Draft Environmental Impact Statement (DEIS).

(1) Some of the actions appear to (potentially) be in conflict with NMED laws and regulations

a) Vol. I, page 6-4, 6.5 Pit Storage Sites, under the paragraph referring to Kirtland Force Base: The U.S. Department of Energy (DOE) must be in compliance with a Federal Facility Compliance (FFC) Order issued by New Mexico under the provisi of the Federal Facility Compliance Act. The FFC Order has jurisdiction ov generation and storage of mixed waste and site treatment plans for its disposition (p.5-60, 5.8.1.10 Waste Management, "The pit storage operations would generate less than 1 cubic meter (1.3 cubic yards) of solid, low-level, and hazardous wastes.").

SG-012/1
13.019

SG-012/2
13.020
13.077

b) Mention of the New Mexico Federal FFC Order is confusing. The FFC Order addresses the generation of hazardous and mixed waste (one of the storage and treatment activities associated with the pits), but does not address storage of plutonium pits. Could you please clarify?

Nanette Founds
July 3, 1998
Page 2

SG-012/3
15.077
continued

SG-012/4
14.134

SG-012/5
14.135

SG-012/6
14.136

residents, they are recommend for inclusion in the final version of the DEIS. The issues in question include the following:

SG-012/8 14.137

- Does the close proximity of the pit storage to weapons presently stored in the Manzano WSA pose an increase in potential nuclear accidents? Why would they not pose a problem?

SG-012/9 02.026

- One alternative considered in the DEIS could have been placing plutonium in a permanent disposal, deleting interim storage (especially at Manzano WSA) as an alternative.

SG-012/10 16.031

- Transportation of the pits is a very serious task. What assurances exist for safe transportation? For example, are the transporters meeting speed limits, obeying other traffic rules and using defensive driving techniques to reduce transportation risks? If drivers are not complying with safe driving techniques, accident risks are increased. These concerns should be addressed in the DEIS.

We appreciate the opportunity to comment on this document. Please let us know if you have any questions.

Sincerely,

Gedi Cibas, Ph.D.
Environmental Impact Review Coordinator

NMED File No. 982ER

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CITY OF AMARILLO

May 3, 1996

KEL SELIGER
MAYOR

U.S. Department of Energy
Office of Reconfiguration
P O. Box 3417
Alexandria, VA 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, DC 20026

Re: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statements (PEISs).

Dear Sirs:

Thank you for the opportunity to comment on the U.S. Department of Energy's (DOE) Programmatic Environmental Impact Statements (PEISS) on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials. Also, please consider these my comments for the Pantex Site-Wide Environmental Impact Statement (SWEIS).

As the mayor of Amarillo, I have an obvious personal stake in the activities at Pantex as this plant is the largest employer in the region. But my first and foremost responsibility is to the welfare of the people and environment which is why I am adamant that any current and future functions at Pantex will be conducted in a safe and environmentally sound manner. While the Amarillo economy would surely benefit from an expansion of Pantex, my first priority is to ensure any expansion be implemented in a way that does not impair the health or safety of area residents or have an adverse affect on the environment.

That being said, I noted with great interest at the April 22-23 hearings that many of our residents who make their living "off the land" (including public officials such as Congressman Mac Thornberry and St. Rep. David Swinford) have recognized DOE's findings that there are "no significant impacts" of any planned or current activities at Pantex. While the safeguarding the environment is a prerequisite to any current or future activities at Pantex, I want to ensure that Pantex is not "passed over" for any functions which could be performed safely. Further,

P.O. BOX 1971 AMARILLO, TEXAS 79186-0001 806/378-4000 FAX 806/378-9384

such incorrect applications of NEPA serve to mislead, and in some cases unjustly concern, our residents. I urge DOE to correct its findings which unfairly discriminate against Pantex by rankings which are not based on "significant" impacts.

I. Generally. By failing to recognize Pantex as a candidate site for new stockpile management facilities, the DOE overlooks the best choice for consolidation of functions to maintain the integrity of the U.S. nuclear stockpile and attain maximum efficiencies and cost savings. Pantex played an important role in our Cold War victory and the plant will continue to serve as the sole DOE site for maintaining a safe and reliable nuclear deterrent to meet our national security needs.

II. SSM PEIS:

1. Pantex is the best place to site new construction/stewardship activities. I support DOE's finding that Pantex is the best site for assembly/disassembly and related management functions. Pantex is perhaps the most cost-effective alternative for any new construction of SSM facilities. First, labor costs, utility rates, and water and land availability at Pantex, as well as public and political support, are more amenable than those at any other Complex site. The location of new or consolidated activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost to the American people. In this regard, I recall, at the 1995 Notice of Intent hearings in Amarillo, that DOE said it "will not build duplicative facilities, *unless DOE decides to do so.*" If I ran the City of Amarillo this way, we would be swimming in red ink. In its deliberations, *DOE should insist that budgetary comparisons between Pantex and other sites are accurate, and include capital and transportation costs.*

2. Pantex is the best site to continue High Explosives fabrication. Consistent with the strengths identified above for increased stewardship and management duties, the HE functions should also remain at Pantex. Since assembly/disassembly functions will remain at Pantex, it follows that HE fabrications duties should be present at the same site. Should the need arise for new weapons production, it will be critical to have the HE facilities at the production site. Further, DOE officials at the April 22-23 hearings admitted that it would cost more to move these functions to the labs, and that the labs lacked the critical quality assurance capability which Pantex already possesses. How then can DOE assert that there is no cost advantage to either site? Again, DOE is ignoring not only the cheapest site, but the best site for maintaining our nuclear deterrent.

III. Fissile Materials Storage and Disposition PEIS. As the sole DOE-authorized facility for assembly/disassembly for nuclear weapons, Pantex has historically handled these functions in a safe and efficient manner. Once again, acknowledging cost savings considerations, DOE should maintain the current storage of surplus and Strategic Reserve plutonium which is already at the site and upgrade facilities for expanded long-term missions. Pantex currently safehouses more than 8,500 surplus pits and plans are being made to ship the pits from Rocky Flats to Pantex. It makes little sense re-create storage facilities at another site and then transport

large amounts of plutonium across the country from Pantex. DOE said at the hearing "it made sense" to collocate strategic storage and assembly/disassembly to minimize transportation, and to collocate strategic storage with surplus storage, since the strategic stockpile may be declared surplus at some point. DOE should not only recognize that storage should follow disassembly, but also that certain disposition options should follow storage to minimize transportation and other costs. In addition, since most of the plutonium deemed surplus is already at Pantex, and given Pantex's close proximity to LANL (the new site for pit fabrication), it makes practical and economic sense to site any plutonium disposition functions at Pantex.

MG-001/1
15.087

IV. Site-Wide EIS. I am concerned about the "plane crash" analysis. As Mayor, I have been deeply involved in efforts to reduce overflights over the plant, and other preventative measures. How can it be that the probability of a crash causing a release has increased since your 1994 Finding of No Significant Impact, after Pantex and the Amarillo Airport? Even the DOE officials at the hearings conceded that their analysis had serious problems, and needed to be corrected. I urge your office to correct these errors, and act to avoid wrongfully depriving Pantex of future functions for which it may be selected.

V. Conclusion. Based upon these reasons, I respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management functions as well as consolidation of plutonium disposition and control. Thank you for the opportunity to comment on these reports.

Yours truly,

Kel Seliger

Kel Seliger
Mayor of Amarillo

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Clark County

Department of Comprehensive Planning

RICHARD E. HOLMES
DIRECTOR

CLARK COUNTY GOVERNMENT CENTER
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FAX: (702) 386-6940

July 5, 1996

Ms. Nanette Founds
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

SUBJECT: Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components [The "DEIS"].

Dear Ms. Founds:

With this letter, the staff of the Clark County Department of Comprehensive Planning is submitting its formal comments on the above-referenced *DEIS*. Members of our respective staffs have already identified or discussed many of these matters at a public hearing in Las Vegas on 25 April 1996 and at a teleconference on 5 June 1996 [See letter dated June 17, 1996, Bechtel to Bergman]. We feel that these exchanges were beneficial in that we were able to readily share our views and knowledge regarding the *DEIS* and related issues. Thus, the following comments either reiterate or expand upon our previous discussions.

MG-002/1 23.050

We recognize that the *DEIS* follows the standard NEPA-mandated DOE format of identifying alternatives and then comparing and contrasting these alternatives by describing potential impacts on a number of environments. This standard format is well-recognized as a reliable and valid process to identify traditional impacts that may result from a major federal activity such as that described in the *DEIS*. However, we feel that the approach falls short of addressing the concerns of those persons and institutions most affected by the proposed project, namely those located in proximity to the site of the proposed activity and those located along related transportation routes.

Residents of Clark County and visitors to the area certainly fall within this definition and we would expect that their perceptions and concerns would be taken into account as the *Pantex EIS* is finalized and the record of decision is reached. Accordingly, we have made comments in two areas, one covering general issues [Section 1.0] and the other addressing procedural issues [Section 2.0]. We appreciate your full consideration of our comments and we would be happy to elaborate on any of the points raised in this letter.

1.0 General Issues

1.1 The EIS must take into account cumulative impacts on Clark County that may result from the selection of the Nevada Test Site [NTS] as a storage or disposal site for a number of DOE activities.

MG-002/2 21.007

Given the approach taken in the *DEIS* that identifies only impacts from this one activity, it is not possible to reliably estimate the impacts to a geographic area or jurisdiction that may result from a number of initiatives taken by DOE. That is, even though other related NEPA studies are mentioned, there appears to be no analysis of potential interaction among the various DOE activities that are referenced. While any one activity may have negligible impacts on Clark County, significant impacts would result from a scenario where the NTS is selected a major site for storage or disposal of nuclear materials. Based upon the fact that the NTS is mentioned prominently in a number of ongoing DOE EISs, this latter situation is a distinct possibility.

1.2 Clark County questions the intent of DOE to actively pursue the proposed action alternative of storage of pits at the Pantex Plant.

MG-002/3 01.031

The *DEIS* makes reference to extensive restoration work that is being planned or is in progress at the Pantex and Hanford sites. We question whether it is sound policy to conduct such environmental restoration work at Pantex, a majority which will be completed by 2000, and then store the plutonium pits on site, even for the short term. Given this, it would appear the pit storage relocation alternative may be more attractive than is presently represented in the *DEIS*. And, the NTS may emerge as the most feasible site for such relocation, since it is relatively close to the Pantex Plant, there are minimal environmental restoration plans for the NTS [as compared to other candidate sites] and there are frequent mentions of the NTS as a disposal or storage site in other DOE EISs.

MG-002/4 02.027

For example, the *Stockpile Stewardship and Management PEIS* includes an alternative which describes the complete closing of the Pantex Plant with its capabilities relocated to NTS, Los Alamos and Lawrence Livermore facilities. The Pantex *EIS* does <u>not</u> address the implications of this alternative. This issue should be addressed in the final *EIS* and the *Record of Decision*.

2.0 Procedures

2.1 The Region of Influence [ROI] for the NTS alternative must be expanded to include the Clark County Urban Area through which all shipments are planned.

MG-002/5 16.032

As with other DOE EISs, the defined region of influence for the assessment of impacts is 50 miles around a potential site. From Clark County's standpoint, this is a major flaw in the study since the bulk of the impacts would result from the transportation of the plutonium pits and not the storage itself. This is because the storage technology is relatively advanced and the possible NTS storage sites are well isolated and controlled. Use of the ROI around the specific storage site practically guarantees findings of no impact.

MG-002/5 16.032 continued

However, all highway routes that are under consideration for shipment of the plutonium pits pass through Clark County on the most congested areas of the State of Nevada on roads that are undergoing major construction, and in areas where the number of accidents and accident rates are the highest in the state. Expansion of the ROI to at least 100 miles around the Mercury entrance to the NTS would allow full consideration of any impacts due to use of these routes.

MG-002/6 16.033

2.1.1 Perceptions of Risk. The interstate route [I-15] historically used for DOE shipments to the NTS and now being considered for the additional Pantex shipments, is within one-half mile of the Las Vegas Strip and downtown areas. This is among the most popular tourist destinations in the country. This means that over 3,000,000 tourists who visit this area annually would be exposed to transportation safety risks and may perceive the area as dangerous and/or one to avoid, even under incident-free operation. Should even a minor incident [e.g., unanticipated stoppage] or accident occur in this area, perceptions of its seriousness may be amplified to a point that fewer people may choose this area as their pleasure or business destinations. Even a minor downturn in the tourist cycle could have a devastating effect on the southern Nevada economy. Although the effects of perceived risk are not easily quantifiable, this variable must be taken into account as routes are screened and evaluated.

MG-002/7 17.014

2.1.2 Environmental Justice. The population along the Interstate and nearby connectors includes a disproportionate number of minority and low-income individuals [38% minority and low-income, as compared to Clark County's 24%]. In addition, U.S. 95, the connector between the Las Vegas Urban Area and the NTS, serves the fastest-growing area of the country with regard to new residents and highway construction. Designation of a transport route for plutonium pits along this corridor may serve to slow down such growth or, possibly, result in a general lowering of property values. Use of the constricted ROI causes these important issues to be ignored. This is another example where a procedural convention virtually guarantees that potential impacts may not be identified.

MG-002/8 16.034

2.1.3 Accident Analysis and Emergency Management Measures. Another example of the serious constriction placed on impact assessment by a 50-mile ROI has to do with the analysis of accidents and need for emergency management measures. Because the ROI takes into account only on-site areas, the impacts are so small as to be judged insignificant and transportation and emergency safety issues do not need to addressed. Further, the new storage/transportation container, the AT-400A, now under development, has not had real world experience and its operational characteristics and vulnerability to acts of terrorism are open to question. Again, this becomes insignificant if impacts are not being considered outside the narrowly-defined ROI.

In summary, we feel that all impacts that have been addressed in the *DEIS* must be reconsidered using at least a 100- mile radius from the *Mercury entrance* to the NTS in order to arrive at a realistic appraisal of potential impacts of relocation of the pits to that site. This would lead to a realistic appraisal of potential impacts due to transportation, the most public aspect of siting a storage area for plutonium pits [and other waste] at the NTS.

2.2 Transportation route selection processes should employ techniques that provide for comparisons among routes based on variables agreed upon by DOE, officials of affected local jurisdictions and other stakeholders.

MG-002/9 16.035

While we accept the findings of the transportation risk analysis that is based on the probability of a occurrence times its consequences, we are not convinced of the validity of this approach for shipments to the NTS. The Clark County Urban Area, with Las Vegas as its hub, contains the major concentration of traffic and congestion in this mainly rural county. When the population, traffic, impedance, distance and other variables for links in the urban area are aggregated with those of all other links on a potential route, inside and outside Nevada, the relative weight and importance of the urban links is diminished. This then leads to a smoothing of the data and the usual result of insignificant risk.

We ask that the DOE take another approach in assessing risk and impact of transportation of nuclear materials - that of comparative risk assessment as endorsed by the U.S. Department of Transportation in its *Guidelines for Selecting Preferred Highway Routes for Highway Route Controlled Quantity Shipments of Radioactive Materials*, August 1992. This approach places emphasis on comparison of routes on variables that are important in decision-making processes, rather than on probability figures that are almost always insignificant and not interpretable to government decision-makers. For example, comparisons may be made on exposure of special populations, impact on environmentally sensitive areas and even relative risk of negative perceptions. This type of analysis on prospective routes selected for analysis in cooperation with affected jurisdictions would provide understandable results and a higher level of confidence in DOE actions than is now the case. As you know, Clark County is willing to provide up-to-date information for your use in such an approach.

We hope that these comments are helpful to you as you complete the *Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components*. We look forward to continuing dialogue with your staff regarding this important project.

Sincerely,

Richard B. Holmes

RICHARD B. HOLMES
DIRECTOR

cc: Clark County Board of County Commissioners
J. Ley, Clark County Manager's Office
D. Bechtel, Nuclear Waste Division

11pantex.eis

Leonard Nussbaum
Chief Executive Officer
P. O. Box 9158 806/373-2895 FAX 806/373-6504 Amarillo, TX 79105-9138

April 1, 1996

U.S Department of Energy
Office of Reconfiguration
P.O Box 3417
Alexandria, Virginia 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, DC 20026

RE: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile materials Draft Programmatic Environmental Impact Statements (PEISs).

Thank you for the opportunity to comment on the U.S. Departments of Energy's (DOE) Programmatic Environmental Impact Statements (PEISs) on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials. Please also consider this my comment on the Pantex Site-Wide Draft Environmental Impact Statement, since most of the issues addressed in these documents are identical.

First and foremost, I am adamant that any current and future functions at Pantex will be conducted in a safe and environmentally sound manner. Our first priority is to ensure any expansion at Pantex be implemented in a way that does not impair the health or safety of area residents or have an adverse affect on the environment. These goals serve as a prerequisite to any current or future activities at Pantex, including expansion.

I. Generally. I am pleased that DOE selected Pantex as the preferred alternative for assembly/disassembly, thereby abandoning earlier plans to transfer those functions to the Nevada Test Site (NTS) which would have been cost prohibitive and never been adequate to meet future needs. However, by failing to recognize Pantex as the preferred candidate site for new and/or consolidated stockpile management facilities, the DOE overlooks the best site for maintaining the integrity of the U.S. nuclear stockpile and attaining maximum efficiencies and cost savings.

II. SSM PEIS:

1. Pantex is the best place to site new construction/stewardship activities. Pantex is perhaps the most cost-effective alternative for any new construction of SSM facilities. First, the labor costs, utility rates, and water and land availability at Pantex, as well as public and political support, are more amenable than those at any other Complex site. It is appropriate to consider Pantex as an alternative site for all future defense-related facilities to complement activities at the national labs (such as the planned Atlas Facility and plutonium pit fabrication site at Los Alamos National Laboratory [LANL]). DOE makes no mention of a strategic plutonium reserve that is necessary to meet future national security needs, even though the PEIS mentions that strategic storage should be co-located with disassembly. Pantex should be the preferred site for such a mission in coordination with its management functions. The location of additional defense-related activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost to the American people. In its deliberations, *DOE should insist that budgetary comparisons between Pantex and the other sites are accurate, and include capital, transportation, training, remediation, and other costs.*

2. Pantex is the best site to continue High Explosives fabrication. Consistent with the strengths identified above for increased stewardship and management duties, the high explosives (HE) functions should also remain at Pantex. Because the production assembly/disassembly functions remain at Pantex, the HE fabrications duties should be present at the corresponding site. After all, the SSM Draft admits that Pantex must retain HE capabilities to process the inventories already on site from dismantling. Therefore, the least expensive alternative is to maintain HE functions at Pantex. I adamantly disagree with the statement in the draft PEIS that there are no advantages to siting high explosives at Pantex as opposed to the national labs. The capital outlay alone necessary for transfer is cost prohibitive. When all costs are considered, transfer of HE functions from Pantex would cost taxpayers from $40 million to $50 million. In addition, should future need arise for new weapons production, it will be critical to have the HE facilities at the weapons production/assembly site.

III. Fissile Materials (Plutonium) Storage and Disposition PEIS. As the sole DOE-authorized facility for assembly and disassembly of nuclear weapons, Pantex has historically handled these functions in a safe and efficient manner for more than 40 years. One of the challenges faced after dismantling a significant portion of the nuclear stockpile is processing or disposal of the materials that remain. The DOE is considering several options. Once again, acknowledging cost savings considerations, Pantex could continue to store plutonium which is already at the site and upgrade facilities for any and all storage options being considered by DOE with minimal cost and difficulty. Pantex currently safely stores more than 8,000 surplus pits and plans are being made to ship additional pits from Rocky Flats to Pantex. It makes little sense to re-create storage facilities at another site and then unnecessarily transport large amounts of plutonium across the country from Pantex. The budgetary and political costs for such a decision would be enormous. Because of these costs,

Pantex also should be designated the preferred site for any disposition options and related functions. It makes budgetary and policy sense to site disposition where storage already exists. Furthermore, it makes no sense from any perspective, budget or otherwise, to site strategic storage at one site and surplus at another. Pantex should be selected for both storage functions. Pantex has the necessary safety, security, and surveillance capabilities to accommodate an expanded role with minimal costs and it is the production site closest to Los Alamos, the planned pit fabrication site.

IV. Conclusion. Based upon these reasons, I respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management and stewardship functions as well as consolidation of all plutonium storage and disposition and any related functions. Thank you for the opportunity to comment on these documents.

Yours truly,

L.J. Nussbaum

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CO-002
COMPANIES/ORGANIZATIONS

Amarillo Economic Development Corporation

June 5, 1996

U.S. Department of Energy
c/o Tetra Tech
One Town Center
6121 Indian School Road, N.E.
Suite 205
Albuquerque, NM 87110

By facsimile to 505/881-3283

Dear Sir or Madame:

Thank you for the chance to comment on the Pantex Site-Wide EIS, a document that is of great importance to the Pantex Plant, and consequently to the economic vitality of Amarillo and the Texas Panhandle.

In addition to my gratitude at the opportunity to comment on the PEIS, I appreciate DOE's commitment to operating in an environmentally sound fashion at Pantex. The continuation of environmentally sound operating and management principles at Pantex is essential to the continued operation of the plant and paramount to all further comments about current or contemplated missions being performed at Pantex.

I am pleased that the DOE has named Pantex as the preferred alternative for the assembly/disassembly mission, and I encourage DOE to name Pantex as the preferred site for continuation of the high explosive mission (in the SSM PEIS). Further, I encourage the DOE to continue the safe storage of surplus plutonium on an interim basis at Pantex.

After having studied the Draft Pantex Site Wide EIS documents, I offer the following comments(-) and questions(o) for inclusion in the comment summary document:

CO-002/1 11.022

- In the draft SWEIS (p.S-17) it is stated that at the 500 weapon activity level Pantex "would support 2,400 direct jobs and 3,949 secondary job," and that "personal income additions to the economy would be reduced to $365 million annually."
  - o Please explain why this degree of economic loss would have not only an Adverse, but a Significant Adverse, Impact on the community.
  - o At the 500 weapon activity employment level, what would be the impact on revenues for the governing bodies within the Pantex region of

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CO-002
COMPANIES/ORGANIZATIONS

CO-002/1 11.022 continued

influence compared to the current revenues present in Table 4.11.1.6-1 (p.4-165)?

- In Section 4.11.5 "Cumulative Impacts," referring to socioeconomic resources (p.4-170), it is stated,

  "This section describes the cumulative impacts on Pantex Plant. Cumulative impacts include the impacts of continued operations at Pantex Plant combined with impacts associated with the activities described in the Waste Management Draft PEIS, the Stockpile Stewardship and Management Draft PEIS, or the Storage and Disposition of Weapons-Usable Fissile Materials Draft PEIS."

The Council on Environmental Quality Guidelines published in 40 CFR §1500-1508 define cumulative impact as follows (§1508.7)

CO-002/2 11.023

"Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor by collectively significant actions taking place over a period of time." (Emphasis added.)

- Why is there no socioeconomic analysis of the incremental impact of this action on the Pantex socioeconomic region of influence (ROI) when added to other past and present actions, such as the cancellation and shutdown in 1988 of the DOE's high-level nuclear waste repository in Deaf Smith County, and the more recent announcement of closure of the U.S. Department of the Interior's Bureau of Mines Helium Operations in Amarillo?

CO-002/3 11.024

- The socioeconomic analyses of the three EISs are not consistent. The SWEIS (p.S-17) assumes 1.65 indirect jobs n the region for every job at Pantex. The SSMPEIS (p.S-32) assumes 1.16, and the S&DPEIS (p 4-205) assume 3.51.
  - o Please explain these differences.

CO-002/4 11.025

- The Amarillo Economic Development Commission (AEDC) analysis, based on local knowledge of the area and a regional impact study performed by Dr. Ray Perryman of Southern Methodist University, gives a ratio of 2.77 additional jobs in the region to every 1 Pantex job (for a total job multiplier of 3.77).
  - o Why didn't the DOE use the AEDC analysis?

CO-002/5 17.012

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and President Clinton's February 11, 1994, Memorandum for the Heads of all Departments and

CO-002/5
17.012
continued

Agencies requires an analysis of environmental effects on low-income and minority populations to include human health, social, and economic effects.

- Why do the draft SWEIS, SSM PEIS, and S&D PEISs analyze only human health effects of the proposed actions and not the social and economic effects, as required?

Thank you for your attention to these comments and questions.

Sincerely,

Bob Juba
Pantex Retention and Expansion Coordinator

cc: Hon. Mac Thornberry
Hon. Kel Seliger

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HANFORD ADVISORY BOARD

2. Any plutonium program assigned to Hanford must be fully funded from new funding sources. This funding should include appropriate site infrastructure and overhead costs. Funding should fully cover the cost of treatment, storage and disposal of any new waste streams.

CO-003/1 13.009

3. The acceptance of plutonium at Hanford should not delay, defer, or negatively impact Hanford cleanup.

CO-003/2 22.013

4. Appropriate local and regional public information and involvement programs must be conducted by the agencies to ensure that the public is fully informed of the risks, hazards and impacts of such a program. This would be part of the national dialogue on all nuclear materials (noted above) prior to assignment of nuclear materials to a specific site.

CO-003/3 14.080

5. Any permit or plan approval for new Hanford programs/activities must be fully integrated and must comply with all State of Washington public health and safety rules and regulations.

CO-003/4 23.035

6. Equity impacts must be addressed in the assignment of new nuclear materials (including plutonium) to Hanford.

CO-003/5 16.026

7. The transportation of plutonium and special nuclear materials to Hanford storage will require careful planning of routes and consideration of weather emergencies to minimize the likelihood of an accident. Emergency preparedness for minimizing the impacts from an accident will require financial support from DOE for state, tribal, and local involvement, including adequate equipment and training. When materials are shipped, timely notification should be provided to transportation agencies.

8. The choice of disposal options re: Pu will be a determinant for sites such as Hanford. Prior to the choice of a disposal option, complete characterization of the material and the impacts of short and long-term disposition technologies must be reviewed by the public and regulatory agencies.

9. Acceptable processing techniques including waste processing must be developed as an integrated part of any new Hanford storage and disposal program. Permanent disposal of waste plutonium at Hanford is not acceptable.

10. A "systems" analysis approach should be utilized to select the most effective method for processing and interim storage. This analysis should adequately address public and worker health and safety and environmental issues.

11. If a plutonium disposition mission is assigned to Hanford, every effort should be made to use existing workforce, facilities, technologies, and other resources.

Finally, we note that this PEIS does not address cumulative impacts of nuclear material movement and disposition as required by NEPA.

The Health, Safety and Waste Management Committee of the HAB looks forward to further discussions and working with you on this issue. The Board looks forward to your written response, as called for in our charter.

Very truly yours,

Merilyn B. Reeves, Chair
Hanford Advisory Board

attachments: Board Advice #13, 34 and 38

cc: Thomas Grumbly, DOE
John Wagoner, DOE
Alice Murphy, DOE
Chuck Clarke, EPA
Mary Riveland, Ecology
Cindy Kelly, Designated Federal Official
Linda Lingle, Site Representative
Jim Mecca, DOE (by fax)
The Oregon and Washington Congressional Delegations

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CO-004
COMPANIES/ORGANIZATIONS

Comment Form

These comments apply to the following documents:
Storage and Disposition Draft EIS
Stockpile Stewardship and Management Draft PEIS
Pantex Site-Wide Draft Tiered EIS

United States Department of Energy

NAME: (Optional) Robert Menard, ORISE
ADDRESS: P.O. Box 117; Oak Ridge, TN 37831
TELEPHONE: (423) 576-6676

Fact sheets for the all the EIS were well done, especially the Stockpile Stewardship & Management Draft PEIS fact sheets.

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PANAL Panhandle Area Neighbors and Landowners
HCR 2 BOX 20 PANHANDLE, TEXAS 79068 (806)335-1050

July 10, 1996

Ms. Nanette Founds
U. S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms.Founds:

On behalf of the Panhandle Area Neighbors and Landowners (PANAL), we submit the following comments for the *Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components*.

CO-005/1 11.050

We are greatly troubled by the fact that agriculture was totally discounted as the major economic stability of the entire area and the second-largest industry in the State. Providing a job for one in every five Texans and generating more than $40 billion annually for the State of Texas, agriculture cannot be slighted in this document. Beyond the economic consideration is something we must never forget - **AGRICULTURE PRODUCES THE ESSENTIALS OF LIFE.** As long as people need food, housing and clothes, they will need and depend on agribusiness. This factor was ignored in this environmental document, thus creating a document that is flawed in its most basic conjecture.

This High Plains Trade Area, which encompasses the northernmost 26 counties in Texas produces close to $6 billion annually in cereal crops and livestock, of which $3.25 billion annually is in value-added industry, and creates local economic activity in excess of $12.5 billion.

This region produces 96.8 percent of the state's sugar beets, 85 percent of its fed beef, 48.4 percent of its corn and 47.5 percent of its wheat. Over 100,000 jobs are generated by High Plains agriculture.

There are 14 million acres of agricultural land with 9 million acres in pasture and five million acres in crops. About 25 crops are produced commercially in this High Plains trade area. Primary crops include wheat, sorghum, corn, sugar beets, hay, soybeans, cotton and vegetables.

The area is known as the "cattle feeding capital of the world", with 6.16 million fed cattle in 1995 in 109 feedlots (17 more in neighboring Oklahoma and New Mexico). There are 13 packing plants with a total capacity of 5,291,000; fat cattle slaughtered in 1995 was 5,055,544.

People recognize the High Plains Trade Area as an agricultural region, but few realize the magnitude of the industry in terms of revenues, tax base, and employment for area residents. The wholesome quality of our agricultural products and the excellent reputation we have throughout the world must never be minimized. To have production agriculture in this area tainted by the suspicion of contamination from activities at Pantex could easily wipe out this critical section of our nation.

CO-005/2 04.017

In analyzing impacts in this document, the most important issue has to be the region in which the Pantex Plant is located. With the mission of Pantex and related activities being conducted in the heart of production agriculture and the beginning of the food chain, the presumption that these activities do not impact agriculture must be fully assessed.

CO-005/3 23.053

Provide us the data that proves DOE has not already contaminated our soil, air and water. Show us the documents where you have fully assessed the impact nuclear and high explosive activities have had and will have in the future on regional agriculture. Until agriculture is fully assessed the impacts from the range of alternatives cannot be adequately scrutinized.

To continue present operations at Pantex which includes storage of plutonium pits, fabrication of high explosives with the generation of more waste in all activities could not possibly be the environmentally perferred alternative if one consideres that Pantex is in the heart of production agriculture. It is like putting poison in your cereal bowl. It certainly does not make sense to have these missions being done where we are growing your steaks, hamburger, bacon, wheat, pasta and cereal products. There are other alternatives for the Pantex missions that are not in areas where our food is being produced.

A second major flaw in the document is the omission of the importance of the Ogallala aquifer to this area. As the single groundwater supply for 46 counties in the Texas Panhandle and the source of water for parts of seven midwestern states, it is paramount that nothing be done to damage this priceless resource.

CO-005/4 06.126

What could be more important in an environmental document than a detail analysis of the water source, the future supply and the impacts to this source from present activities at Pantex. To ignore the tremendous impact that Pantex has already induced on this finite water source is inadmissable. We ask that you provide detailed analysis on the effects of Pantex activities on the Ogallala (which includes the perched layer), the complete scope of contaminents, the combined effects of these contaminants and how different constituents react in varing soils and water.

CO-005/5 06.127

We ask that the studies from the Bureau of Economic Geology (BEG) be included as part of the Pantex EIS. Why were the results of the years of work done by BEG not included in the draft document. These are valuable studies with extremely telling results. Provide the reports, analysis and statements produced by BEG in their study at Pantex in the final document.

CO-005/6 14.179

The entire approach to human health in the drft EIS is flawed. We are being asked to comment on a document which seems to be driven by the goal of reassuring the public that there are no health risks associated with the Pantex plant. It uses only optimistic scenarios of exposure, statistical methods that obscure potential risks and problems, evidence used is one-sided, a very theoretic presentation which suggests more exactness in scientific knowledge than is supportable and seems designed to lend credibility where it is not necessarily due.

CO-005/7 14.180

Moreover, the theoretical approach is difficult to wade through--it obscures and hides assumptions and it is meaningless to public concerns because it is removed from everyday life experiences (e.g., pg. D-2, brief attempt to explain individual risk in terms of latent cancer fatalities).

We have many broad concerns with the approach, but we are forced here to comment on a very narrowly conceived document. We are in a compromised position because we are forced to play on the agencies ground, with no input into the design of a better draft EIS. We, again, are forced to be reactive rather than to confront these issues upfront in a collaborative pro-active manner.

CO-005/8 14.181

The data are one-sided. The use of prior studies and data in the draft EIS present only one side of a scientific debate about the effects of low level ionizing radiation. The presentationis very lopsided. Studies not cited suggest that health effects, including leukemia, thyroid cancer, and multiple myeloma, have been found in nuclear workers whose cumulative dose for their total working years was between 2.5 - 5 rem (Geiger et al 1992; Gilbert 1994; Kendall 1992; Kneale 1993; Wing 1991).

CO-005/9 14.182

On page 4-205 it is reported that the average ANNUAL dose to workers at Pantax is 111 mrem. If we take a worker who is at the plant for 25 years, then 111mrem * 25 years == a cumulative dose of approximately 2.8 (2.775) rem. This value is within the range for which health effects were observed in these studies. Moreover, if we take the Pantex control level of 500 mrem/year for most workers and 900 mrem/year of weapons operation workers we get cumulative doses over a 25 year working life of 12.5 rem and 22.5 rem, respectively. These values are all much higher than the levels at which health effects were observed in these studies.

3

CO-005/10 01.043

The Agency should re-evaluate the risks to workers from low level radiation exposures using the risk factors reported in these studies. Such a reanalysis would highlight the uncertainties associated with making predictions about the health effects of low level ionizing radiation. The issue of uncertainty in scientific theory is currently glossed by the misleading use of data from only one side of the debate.

CO-005/11 14.183

Moreover, as the scientific uncertainty highlights, the standards used by EPA, NRC, and DOE are not protective standards. They are politically negotiated standards that allow workers and communities in the vicinity of a nuclear facility to bear a higher cancer risk for the social benefits that are believed to come from the facility. These standards should not be used to suggest that there are safe doses of radiation--there are NO safe doses of radiation. This is a commonly agreed point at this time in the scientific community.

CO-005/12 14.184

The Aquavella 1985 study relies on a weak methodological approach and data sources (e.g., it compares workers to community at large). The critiques of this study are discussed in more detail in Dead Reckoning by Geiger et al 1992).

CO-005/13 14.185

More about one-sided data. Cancer registry data are not a credible source of data for detecting radiation effects in communities surrounding nuclear facilities (Sage 1994). This is a study that was done by Michael Sage, Director of CDC/ATSDR. Cancer registry data in Texas are discussed in the draft EIS on page 4-215.

CO-005/14 14.186

The draft EIS relies on inappropriate data to make risk estimates and comparisons in the communities surrounding the Pantex plant. Again, the most optimistic picture is painted with selective use of evidence and methods. More rigorous studies are needed to more effectively estimate risks--better exposure assessments, assessment of historical releases, and exposure pathways.

Without better data from these types of analyses, large uncertainties remain embedded in the draft EIS--and these are not mentioned or addressed. These are different kinds of uncertainties than what I mentioned above. Those were scientific uncertantiels. These are uncertanties in the data. A third kind of uncertainty occurs in measurements (because of lack of precision in instrumentation).

There are also inter-individual senstivity issues to the public. For example, studies (not reported in the draft EIS) have found that pre-natal x-rays, averaging between 20 mr - 400 mr have been found to double the risk of childhood cancer (Stewart and McMahon). Other studies have found effects from low level radiation exposure (e.g., Kerber 1993).

4

By the way, on page D-4 the Agency states that "since nondestructive examination using x-rays and gamma rays is a well established industrial practice, this contribution to worker risk is negligible." It may be a well established industrial practice, but there are newer studies that suggest the risks of low level exposure from x-rays may not be so benign-they clearly are not safe because, again, there is no safe level of radiation exposure.

CO-005/15 14.187

The draft EIS uses BEIR III and BEIR V reports (page D-1 - D-2). The risk factors derived from these reports are based on the hypothetical man. Thus, they do not adequately account for inter-individual sensitivity to exposures of radiation. There is no analysis of inter-individual senstivity in the draft EIS, except the insufficient claim that conservative numbers and scenarios are used. This is not an analysis of inter-individual senstivitly. It is a way of obscuring uncertainties--again. I would direct the Agency to a growing body of research literature on ways to address inter-individual sensitivity. The agency should recalculate risk factors using a more sophisticated analysis of inter-individual sensitivity. This is not just necessary for inter-individual sensitivity among workers and men, women, children--it is also an issue for environmental justice. For example, the composition of the workforce at Pantax is 20% minority.

The accident scenarios analysis presents the most optimistic view possible. All administrative control and safety programs are assumed to function properly at all times (e.g., air locks). Numerous examples of malfunctioning or improperly used safety and emergency response equipment and procedures, malfunctioning emergency back-up systems, human errors, etc. have led to accidents in a variety of industries--some of them highly regulated, such as the nuclear power industry, aircraft carriers, offshore oil drilling facilities, airlines, space travel (space shuttle), etc. In many cases, the failures were of the type that were anticipated but they occured in sequences or combinations that were not; or the failure rates turned out to be higher than anticipated. Many of the failures can be associated with "human reliability" issues.

In the draft EIS there is no way to know how much attention was given to human error/reliability analysis in the evaluation of accident rates or consequences. As I noted above, the document assumes that all emergency response and administrative safety programs/control function at 100% at all times. Can the DOE provide data to support this claim? Do you have data about the rates of incidents--human errors in different tasks that are relevant to this study? What is your definition of "recordable" (i.e.,reportable) incidents--what is include in Table 4.14.1.4-1. What are the data for events which did not result in a lost worker day?

CO-005/16 14.188

Describe in detail the safety and emergency response plans and training programs. For on-site employees and for off-site personnell (including those in the transportation system). What

CO-005/16 14.188 continued

analyses/evaluations been conducted on the reliablity and effectiveness of response? Can DOE supply data about the failure rates associated with the safety and emergency response elements (mechanical and human)?

CO-005/17 14.189

Have you completed task analyses of the high risk tasks--e.g., assembly and dissassembly of pits and explosive components? Generally, how has DOE studied and evaluated human error in the tasks done at Pantex?

In addition, the agency uses a baseline "activity level" of 2000 assemblies, disassemblies, testings, etc. per year. It states that the mix does not matter when calculating impacts-- does this mean risks from exposure from either incident free exposure or accident related exposure (page 3-2). There must be a failure rate. It might be small but it is not zero. They may be initiating events for accidental exposures, or higher than normal "incident free" exposures.

My question is whether there is any reason to believe that failure rates (human errors) in these tasks may be different? Is it "harder" to take a weapon apart than to put it together? I think of my bike or car, where bolts are stripped, pieces stick together, get old, etc. Can this happen? The mix of "activities" will probably change as dismantlement occurs.

Does the Agency have disaggregted failure rate data for the different "activities" included in the operations done at Pantex? Provide analysis showing that there are no differences in the failure rates associated with the different activities?

CO-005/18 14.190

The accident scenarios are all optimistic scenarios in the sense that no (or no significant) exposures result. Go through the exercise and show us what might be the effects of accidents that are not controlled perfectly--what might be exposure pathways, exposure levels, and health effects of such a scenario? Even if the possibility is small, we would like to see what the consequences are. In your words risk is the product of probability of occurrence and magnitude of consequences. What if worker exposure occurred because contamination did escape from air locks? What accidents have occurred at the plant? What were these accidents as shown in Table 4.14.1.4-1? Provide us with descriptions and any results of post-accident evaluations (including the methods of evaluation)? What worked well in containing them--and what did not? In other words, what features of the accident were not anticipated to occur together or with high frequency?

We would like a system of community monitoring for contamination off-site? With monitoring only done by plant personnel there is an implicit assumption that releases will only occur in controlled areas or that detection devices will observe every possible release. This does not seem to be a valid assumption.

CO-005/19 14.191 There is no analysis of synergistic effects among radiation exposures and chemical exposures and among chemical exposures with different types of contaminants. We ask that this issue be included in the EIS, citing and evaluating studies that address synergistic effects of chemical exposures of different types. What analysis have been done to justify a claim that this is not a significant issue?

CO-005/20 14.192 The agency only addresses inhalation exposure. But this is a bit confusing. "Inhalation is the only pathway acounted for in the assessment of chemical and radiological AIRBORNE hazards from normal operations" (pg. 4-205). Does this mean that there are exposure pathways of non-airborne hazards? For example, through groundwater contamination? Are these included in the analysis anywhere? Likewise, are there other pathways in accidents (non-normal operations)? Are these included in the accident analyses? How? Provide the data to support the claim that airborne hazards and inhalation exposure is the only significant pathway?

Environmental Justice

CO-005/21 17.024 The document is designed, again, to reassure. 20% minorities in the workforce is presented as a benefit of good hiring practices, minority populations are assumed to live to far away (17 miles) to have any risk associated with them.

CO-005/22 17.025 How was inter-individual senstivity to the worker population assessed in the study? It does not look like it was.
Do the training programs and safgety/information materials to workers and the community account for different literacy rates, primary languages. In the communities, how and who provides the information? Provide any data about the extent to which information about the Plant is known or understood, or the effects of radiation exposure are known/understood in the communities (minority and not)?

CO-005/23 17.026 The document did not address the issue of radiation exposure to laundry workers, etc. offsite or onsite. Often these kinds of exposures are predominantley to minority populations.

Thank you for the opportunity to comment onthis document. We look forward to a much more thorough and more improved document with the final draft.

Sincerely,

Doris & Phillip Smith
Co-chairs

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PANHANDLE 2000
PO Box 9420 Amarillo, Texas 79105 (806)373-7525

May 2, 1996

U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, VA 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, DC 20026

Re: Public Comment on the Department of Energy's Stockpile Stewardship and Management (SSM), Storage and Disposition (S&D) of Weapons-Usable Fissile Materials, and the Pantex Site-Wide Draft Programmatic Environmental Impact Statements (PEISs).

Dear Sirs:

Thank you for the opportunity to comment on the U.S. Department of Energy's (DOE) Draft Programmatic Environmental Impact Statements (PEISs) on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials, as well as the Pantex SWEIS. Also, please consider this our comments on the Pantex Site-Wide Environmental Impact Statement (SWEIS).

As we explained in our communication on these subjects during the past few years, we were appointed by the City Commission of the City of Amarillo, Texas, on February 8, 1991 to co-chair Panhandle 2000, a group of Amarillo-area citizens interested in the environmentally sound retention and expansion of Pantex. We were also requested to organize community support for Pantex. Ours is a broadly representative organization of individuals and entities who reflect the strong support of the vast majority of area residents for DOE's work in the Texas Panhandle at Pantex.

The issues addressed in the three Drafts are of paramount concern to the people sharing the Texas Panhandle with the Pantex Plant and the DOE. The dramatic employment reductions forecasted in the Draft SSM PEIS will severely impact the Panhandle economy. While Pantex is willing to participate, if necessary, in efficient downsizing of the nuclear weapons complex, any reductions at Pantex should come only after intensive cost and technical analyses to assure that national security needs are still being met in a cost-effective manner.

Ensuring confidence in the United States' nuclear stockpile and the safety and reliability of the nation's nuclear deterrent are vital issues that have been addressed by activities at the Pantex Plant for over forty years. As neighbors to the plant, we are very aware, and proud, of the critical role that Pantex plays in fulfilling our nation's goals for defense and energy needs. We look forward to maintaining a vital role in meeting our present and future national security needs.

The Administration's proposals to disseminate current Pantex functions to other sites seems certain to adversely affect the nation's ability to produce nuclear weapons in the future, and to dangerously weaken national security. This is reflected in the SSM PEIS's workload assumptions of 1,000 warheads in the future stockpile, a number far lower than even the 3,500 set in still-unratified START 2 treaty. We urge you to recognize the importance of DOE's production complex, and avoid surrendering the victory we gained in the Cold War through the planned obsolescence of our production capability, which can only be rebuilt at great cost in later years.

As DOE presses toward its Record of Decision regarding SSM and S&D functions, we find it necessary to begin with a summary of the existing facilities Pantex possesses which would require minimal upgrading to meet many of the needs presented in the Drafts. The following table presents the list of existing facilities that are available for particular stockpile management and plutonium storage missions:

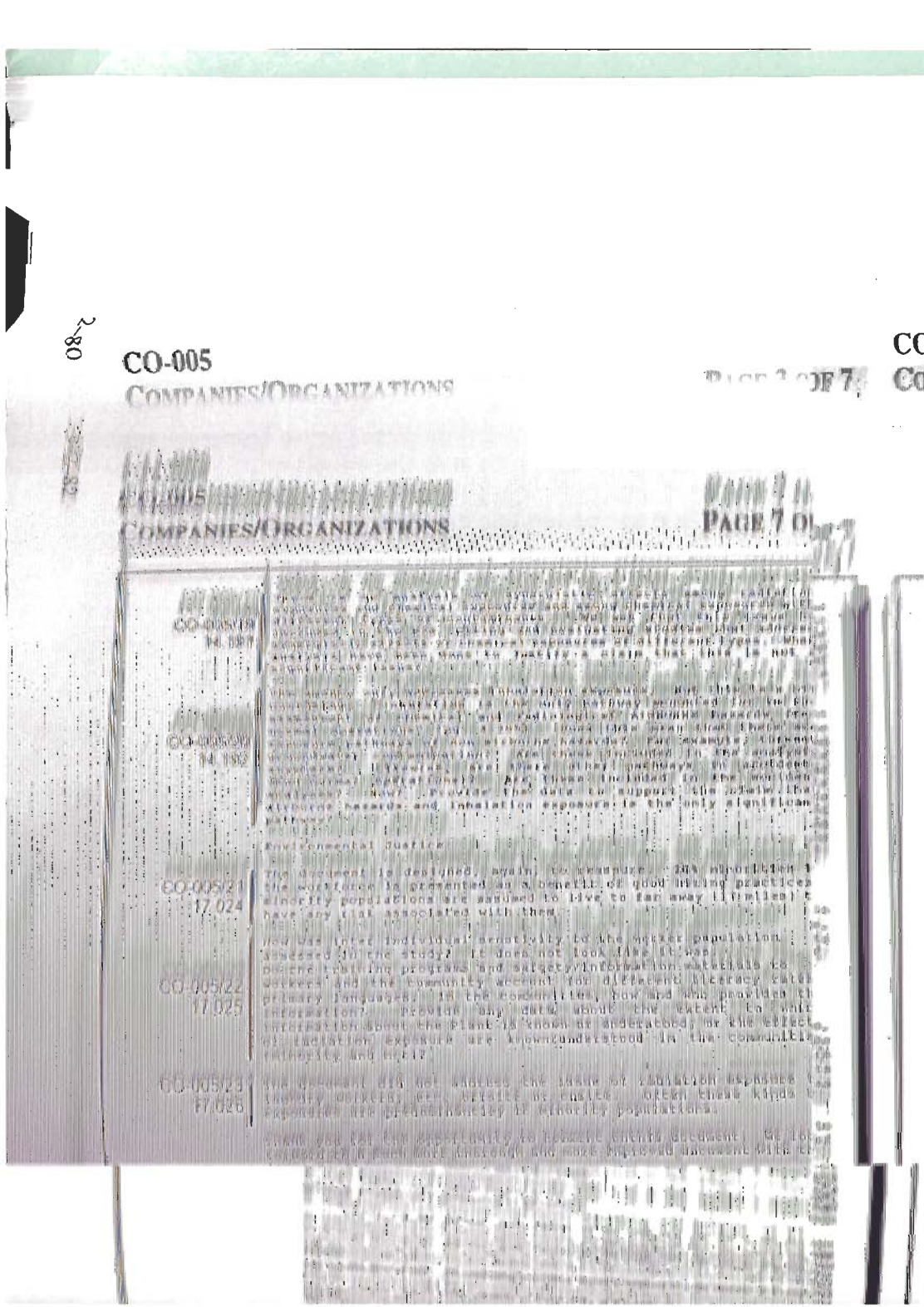
Capability	Facilities
1. Weapons assembly/disassembly	Existing facilities in Pantex Zone 12
2. Nonnuclear components	Existing facilities with modifications
3. Nuclear components:	
a. Pit storage	Existing facilities with modifications
b. Pit reuse (minor)	Existing facilities in Pantex Zone 12
c. Replacement pit fabrication and reuse (major)	Existing facilities with modifications
d. Secondaries and cases	Existing facilities in Pantex Zone 12 with modifications
4. High explosives components	Existing facilities in Pantex Zones 11 and 12

Keeping this in mind, please consider the following comments on plans for the Complex as DOE prepares its final drafts on upgrading and/or downsizing facilities at the sites where Stockpile Management capabilities are located, and where Stockpile Storage and Disposition missions are contemplated.

I. SSM PEIS.

A. Assembly/Disassembly Functions at Pantex, and Strategic Reserve Storage.

We are pleased DOE selected Pantex as the preferred alternative for assembly/disassembly (A/D) functions, abandoning earlier, cost-prohibitive plans to



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The obvious advantage of Pantex is, by utilizing the facilities already in place, DOE could eliminate the capital cost for establishing the same capabilities elsewhere. The cost of unnecessarily duplicating facilities (*currently in place at Pantex*) at another site would cost the DOE tens of millions of dollars in infrastructure alone, notwithstanding the additional expense of related transportation, environmental remediation, start-up and training costs required at a redundant site which would cost taxpayers additional millions of dollars.

Another fact that should not be overlooked is that Pantex is the candidate site located nearest to the LANL, the preferred site for the Atlas facility, and the planned site for plutonium pit fabrication. This facility is key to DOE's ability to address stockpile reliability and safety issues by means other than nuclear testing due to the indefinite extension of the nuclear testing moratorium in July 1993. The conclusion to be drawn is that the location of SSM Program functions at Pantex would not only take advantage of current storage and dismantlement capabilities, but would also capitalize on the geographical proximity of Pantex and LANL that would be conducive to the exchange of technological information necessary for effective management of a smaller nuclear weapons complex.

In addition to Pantex, the Texas Panhandle also boasts of the Amarillo National Resource Center for Plutonium (ANRCP) which is taking a lead role in environmental and nuclear research. The ANRCP is operated by the Higher Education Consortium, comprised of three of the nation's preeminent university systems (The Texas A&M University System, Texas Tech University System, and The University of Texas System). Consistent with the SSM Program non-proliferation objectives, the Consortium is coordinating the U.S.-Russian Summit Working Group on the Disposition and Accumulation of Fissile Materials in order to ensure that the nation's arms-control objectives are met. The involvement of the Consortium adds an academic dimension of research excellence and third party monitoring that ensures continued competency of the people who must make the scientific and technical judgments related to the safety and reliability of nuclear weapons. We want to stress that we view the role of the ANRCP as complimentary to the labs, and supplementing, not supplanting, their functions.

The Consortium and the development of the ANRCP are logical extensions of the current allocation of functions within the U.S. nuclear weapons complex. In light of continuing changes in the national security picture for the U.S., and given the importance of resolving dismantling issues and issues related to the future stewardship of the nuclear stockpile, the *siting of research and technical functions at Pantex for the SSM Program is highly appropriate.*

The significant nuclear stockpile still present in the former Soviet Union under sometimes suspect surveillance makes our continued cooperation with Russia regarding management of the nuclear stockpile critical to international security. The key role the

Amarillo National Resource Center for Plutonium is playing for DOE in SSM and fissile materials activities with Russia argue for an expanded role for Pantex

Accordingly, it is appropriate to consider Pantex as an alternative site for future defense missions. The location of new activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost to the American taxpayers.

II. S&D PEIS.

A. Fissile Materials/Plutonium Storage and Disposition at Pantex.

In addition to DOE's hesitation to name a preferred site for HE, we are also concerned that the Draft S&D PEIS did not list a preferred site for plutonium storage and disposition. Whether the decision reached is for "No Action" or "Consolidate," plutonium will continue to be present at Pantex through assembly/disassembly operations. President Clinton last year announced that he was declassifying 38.2 metric tons of weapon-grade plutonium as excess to national security needs. Of that amount, 21.3 metric tons are located at Pantex. For this reason alone, Pantex should be the preferred site for storage, disposition, and utilization. Doing so would avoid the economic and other attendant costs of transporting plutonium to a new site as well as the massive infrastructure costs of unnecessarily recreating a Pantex-like facility at another site.

1. Storage.

As aforementioned, Pantex is already safely storing most of the weapons-usable surplus plutonium from the dismantled stockpile. Pantex presently has more than 8,500 plutonium pits stored on site and can easily be expanded to hold more than 20,000. We fully support the proposed action in the SWEIS to expand Pantex's storage capabilities to 20,000 pits. The plant is also scheduled to be upgraded to prepare the storage bunkers for receipt of plutonium pits relocated from Rocky Flats. This will increase further the plutonium stockpile present at Pantex.

One major concern is, as it is currently drafted, the S&D PEIS does not emphasize a continuation of the Strategic Plutonium Reserve necessary to meet continued national security needs. Once again, storage of the strategic reserve is a logical mission at Pantex as an extension of its assembly/disassembly functions and long-term plutonium storage consideration. Neither the SSM PEIS nor the S&D PEIS takes the logical next step by naming Pantex as the site for storage of strategic and surplus plutonium. At the hearing, Earl Whiteman of DOE said at the hearing "it made sense" to collocate strategic storage and assembly/ disassembly to minimize transportation, and to collocate strategic storage with surplus storage, since the strategic stockpile may be declared surplus at some point. Mr. Whiteman said that Pantex has a facility which is "exactly the right size" for strategic storage, and that there was sufficient space at Pantex for all functions. DOE should not

only recognize that storage should follow disassembly, but also that certain disposition options should follow storage to minimize transportation and other costs. It is important that a stockpile of strategic reserve remain a stated objective of S&D functions included in either plutonium storage or pit fabrication duties. Since Pantex also is in close proximity to LANL, the preferred site for pit fabrication, designating Pantex as the alternative site for a strategic reserve would be the most cost-effective choice.

With regard to storage, the focus should be squarely on the issue of storing the pits safely, and we fully support storage of plutonium and other fissile materials at Pantex under both the "no action" and "long-term" alternatives, given adequate assurances that such storage is safe and environmentally sound In addition to extensive environmental safety protections already in place, Pantex has built an elaborate security system to protect stored plutonium from potential theft. Safe storage is critical for maintaining the integrity of the stockpile and our commitment to international safety. Pantex is the only site currently capable of this level of protection to prevent possible proliferation of stolen weapons-grade plutonium.

Ensuring safety and accountability of our surplus plutonium stockpile can best be accomplished through the construction of a new consolidated storage and staging facility at Pantex Such a facility would:

- Strengthen national and international arms control efforts by fostering continued and enhanced cooperation with Russia on transparency issues, and bilateral agreements to monitor dismantlement and maximize options for the disposition of surplus weapons-usable fissile materials;
- Ensure that storage and disposition of weapons-usable fissile materials is carried out in compliance with environment, safety, and health (ES&H) standards.
- Consolidate all nuclear materials which would provide significant cost savings for surveillance, storage, and disposition.

Siting a new consolidated storage facility at Pantex also would further the "stored weapons standard" which envisions the same high standards of security and accounting applied to storage of nuclear weapons being maintained for weapons-usable fissile materials throughout the process of dismantlement, storage and disposition. Pantex has put in place, and is accustomed to maintaining, the high security and accounting standards for nuclear weapons storage for decades as the Complex' sole site of disassembly.

Siting long-term storage at Pantex also will help us achieve the Administration's nonproliferation goals No current treaty requires us to disassemble nuclear warheads, but only to disable the delivery vehicle; the warheads can remain intact under treaty, and the U.S. is disassembling voluntarily and unilaterally. If the U.S. is to strive for reciprocity, and encourage Russia and other countries to "go the extra mile" and disassemble nuclear arms as opposed to merely "dismantling" them, Pantex, being the sole U.S. site for disassembly, would be the consummate site for storage of fissile materials

We disagree with DOE's findings that under either the "No Action Alternative," or the "Long-Term Storage and Disposition Alternatives," that Pantex has the greatest potential to experience adverse cumulative impacts. This conclusion is almost wholly based on what DOE terms as the "small, compact area" in which Pantex is sited. This conclusion fails to take into consideration the fact that DOE already owns the 10,000 acres on which Pantex is located, and that more land is available for any new or upgraded facilities, at no cost to the federal government. Further, Pantex is located 14 miles from a central city; the finding that cultural, socioeconomic (such as level of road service in the event of construction), and public and occupational health and safety impacts would be greater at Pantex is incorrect. For example, to imply that intersite transportation impacts would be greater at Pantex is absurd, since (1) Pantex currently houses the vast majority of plutonium pits, thus avoiding the lion's share of any transport (and the appurtenant budgetary, environmental, and political costs related thereto) if it was selected as the preferred alternative for S&D, and (2) is the site closest to LANL, the proposed site for pit fabrication. Even if one were to accept such a finding regarding Pantex, the differences between candidate sites would be so small to demand that they not be seriously considered as an accurate or meaningful criterion on which to base selection.

If DOE chose not to construct a new consolidated storage facility, we would support the upgrade of Pantex storage capability necessary to comply with current design and environment, safety, and health requirements.

2. Disposition Alternatives.

DOE has not yet decided on the preferred alternative for disposition or the sight for disposition, but whatever decision is reached, Pantex should be the preferred site since it is already the current storage site for plutonium removed from dismantled weapons and the site of strategic plutonium reserve.

While the *implementation* of any disposition option must be environmentally sound, the *ultimate decision* of which options will be chosen will be *based largely on national security considerations*, especially the success or failure to reach accord with Russia on these issues.

While the U.S. should take any unilateral actions it deems appropriate if its national security interests are maintained, the volatility of the former Soviet republics and the changing world scene dictate that *reciprocity* guide our actions. The Draft S&D PEIS identifies three major alternatives as reasonable for plutonium disposition: immobilization in glass or ceramic form; burning in reactors as MOX fuel; or deep burial in boreholes either directly or in immobilized form.

How do these options fit into reciprocity? The White House Fact Sheet on Nonproliferation contains the policy statement that the U.S. should "seek to eliminate...the accumulation of stockpiles of...uranium and plutonium," including those from civil nuclear

programs. It is unrealistic to believe that any disposition decision by the U.S. which does not contemplate the use of plutonium as fuel will cause other countries - either with or without nuclear weapons - to abandon the use of plutonium in reactors. For example, Russia, with its large investment in its nuclear infrastructure, and its lack of financial means to convert to other forms of energy, is highly unlikely to forego the use of nuclear power, including the use of plutonium. Also, European nations like France, which lack the vast natural resources of oil, gas, and coal which the U.S. enjoys, have little incentive to give up their reliance on nuclear power. If that is the case, and in full recognition that reactor-grade plutonium can easily be used in weapons, the U.S. will be compelled for "reciprocity" and national security reasons to maintain plutonium in pits for some period of time and plan to utilize it through the mixed oxide fuel option. The U.S. cannot lead by positing unacceptable or unfeasible options; it must recognize the circumstances which it and other nations face, and pursue a course which will benefit its national security goals, and possibly other goals as well.

We are not convinced that plutonium is more of a liability than an asset. Why can't we make swords into plowshares, and utilize these resources - which took so much time, effort, and money to develop - and examine the peaceful uses of these materials? Examination of possible beneficial uses is one of the primary purposes of the research being conducted at DOE research facilities across the country. We strongly support, as part of this research, the review of long-term options for plutonium disposition, including environmental considerations. This review can involve research and policy study on the best forms of plutonium for storage, disposition, and utilization, storage options, security and safeguards and other issues.

Further, we believe that this option, with its emphasis on education and research, will help reverse the "brain drain" which could adversely affect the Nuclear Weapons Complex as its primary function changes. The Defense Nuclear Facility Safety Board has said that the government is losing most of its veteran experts. While DOE has attempted to address this problem through instituting a program to attract new young scientists to the Complex, we believe that more young scientists will have the incentive to develop and maintain expertise in these disciplines if the types of serious research which the "beneficial use" option offers is available through DOE.

The questionable efficacy of the "irreversibility" of vitrification or boreholes argues for use in reactors, at least for pits and other "MOX-able" plutonium. While we recognize that some plutonium "scrap" can only be disposed through avenues other than MOX, the extraordinary advances in science, especially in this important area, render naive the notion that sometime in the near future the technology to "reverse" vitrification, boreholes, or any other such "waste generating" process will be readily available to those who desire it.

Accordingly, we support a course which will provide a tangible demonstration to the affected citizens that there exist long-term disposition options which both fit our national security interests as well as a common sense desire to reap a beneficial use from these materials. The Administration should consider a joint program between Russia and

the U.S. (and perhaps other countries) which actually would take a plutonium pit apart, make plutonium oxide, fabricate mixed oxide fuel, and burn the fuel in a commercial light water reactor.

Such a policy would meet the "spent fuel standard" by making the plutonium as inaccessible for weapons use as the plutonium in spent nuclear fuel from commercial power reactors. It also recognizes the fact that the only course to safe disposition is to separate the atom through fission. It also looks beyond the spent fuel standard by maximizing the options available to DOE and the Administration with regard to disposition.

3. Environmental Safety and Health Criteria.

a. Airplane Crash Risk Analysis:

CO-006/1 15.044

The 1994 "Finding of No Significant Impact" arising from the Environmental Assessment found an airplane crash/accident occurring at Pantex to be an "incredible event" not justifying the preclusion of additional storage at Pantex. Even so, the plant subsequently worked with the Department of Defense and the FAA to reduce flights paths over Pantex, and took other steps to ameliorate the situation. However, the Draft SWEIS does not account for the reduced flights thereby exaggerating the probability for airplane accidents at Pantex and their resulting impacts, and, incredibly, *increases* the probability of a crash from the 1994 "FONSI." In the recent hearings, Nan Founds responded to this concern by saying that DOE is formulating its own analysis not dependent on FAA data, but also stated there were serious problems with DOE's analysis, which would be addressed. In its initial analysis, DOE is ignoring not only credible work already completed, but also the obvious reduction in accident potential for use in determining the ES&H of siting new functions at Pantex. This undermines the perceptions for fair and equal criteria for use in accurately comparing the various sites under consideration. We urge DOE to correct the analysis and avoid the wrongful preclusion of Pantex for consideration of additional functions.

b. Environmental Impacts of Potential Increased S&D Functions:

CO-006/2 02.018

In the Draft S&D PEIS, DOE characterizes Pantex as having the "greatest potential" to experience adverse cumulative impacts from an increased role in plutonium storage and disposition. However, this characterization is way beyond the means of DOE's cursory analysis. NEPA regulations require that environmental impact statements discuss "significant" impacts and support these with evidence. DOE has taken license to ignore these regulations by discussing potentiality and susceptibility without basing these in fact. We object to this type of characterization which unfairly and inaccurately misrepresents Pantex's ability to handle an increased role in S&D. These conclusions also totally contradict those contained in the SWEIS which characterize the impacts as "minimal" and "negligible." It is imperative that DOE correct the inaccurate mischaracterizations before making its final decisions for plutonium storage and disposition missions.

CO-006/2 02.018 continued

4. Cost savings due to avoidance of transport of special nuclear materials.

Regardless of the final decision for storage and disposition, DOE must make accurate budgetary comparisons a primary consideration in its analysis of where to site these functions. *DOE should insist that budgetary comparisons between Pantex and other sites are accurate, and include capital and transportation costs, and also take into consideration the political consequences of transfers from Pantex.* We also urge DOE to compare on a "side-by-side" basis all six candidate sites for: (1) Conduct of operations; (2) Implementation thereof; (3) Security; (4) Relationship between management, unions, community; (5) Quality system programs; (6) OSHA/ ES&H envelope; (7) Engineering systems; (8) Radiation safety; (9) Applied technology; (10) Training programs; (11) Explosive and nuclear safety programs; and (12) Employee involvement in daily operations.

CO-006/3
16.028

Accurate comparisons between all sites under consideration should once again make Pantex the preferred site. Maintaining and expanding the interim storage facilities at Pantex would all but eliminate the significant transport costs, and the attendant environmental and political risks involved with moving these functions to another site. Eliminating the unnecessary transportation of radioactive materials, will translate into less cost and greater public safety and protection. Ignoring or miscalculating the risks and costs associated with weapons materials would be a serious omission.

We are confident that any fair comparison of economic and political costs will favor Pantex over the other sites included in consideration, since recreating this infrastructure at another site would be cost-prohibitive.

5. Economic factors.

Pantex is perhaps the most cost-effective alternative for any new construction of SSM and S&D facilities if DOE pursues that course. First, labor costs are low. The existing work force in the Amarillo area has the skills necessary to meet the construction and operation requirements for any new functions and to do so at highly competitive wage rates. With a civilian labor force of 110,200, the Amarillo Metro Area can provide the project with a large, well-educated, and comparatively inexpensive labor pool. Average wage costs for manufacturing employment in Amarillo are 18% below the national average. Second, utility costs are highly competitive. According to the Utility Data Institute, the SPS industrial rate currently ranks in the lowest 11 percent among U.S. investor-owned utilities. SPS has a long history of low rates and presently offers the lowest rates among investor-owned utilities in Texas. If new facilities were operational now, SPS's standard rate for this class of firm service at 80 percent load factor would average 3.2 cents per kWh. Also, land to house new construction is readily available. The Department of Energy presently owns the 10,000 acres on which the Pantex plant is located. More land is available for any new facility, at no cost to the federal government.

Finally, the City of Amarillo has excess water capacity to an extent enjoyed by no other candidate site, without depleting the Ogallala Aquifer.

6. Public and political support.

In addition to the economic factors listed above, local support for the Pantex Plant, and its expansion, is extraordinarily strong. A Shipley and Associates poll of the four county area surrounding the plant (Armstrong, Carson, Potter, and Randall) found that 99% of the respondents believe that Pantex is important to the local economy, 88% said that Pantex is a facility that they can be proud of, 79% favored Pantex expansion, and 88% agreed that Pantex is safe. In May 1991, a Lance Tarrance poll showed that 85% of area residents supported an expanded Pantex. Also, a July 1991, poll conducted by the Amarillo Globe-News showed that almost 75% of the respondents favored expansion of Pantex. Consideration of the results of the 1991 Tarrance poll (Republican) and the Shipley poll (Democratic) reveals that regardless of party affiliation of the pollster or time the poll is conducted, Pantex enjoys the overwhelming support of Panhandle residents, at a level perhaps unsurpassed by any other Complex site.

Area and state elected public officials are virtually unanimous in support of current and expanded plant operations. Essentially the entire 32-member Texas Congressional Delegation has pledged support for expansion and will be active in the effort in the future, as well as the Governor, Lieutenant Governor, area legislators, and other public officials. Thus, the message is clear from the nation's elected representatives that the role that Pantex plays in the future of the weapons complex is vital to the nation's nuclear deterrent and the safety and reliability of nuclear weapons.

III. Conclusion.

On all accounts, Pantex clearly is the best and most cost-effective alternative to DOE for stewardship and management, storage and disposition, and other defense-related missions. We respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new functions in DOE's Final PEISs and Records of Decision. Thank you for the opportunity to share our thoughts and concerns with you.

Yours truly,

Jerry Johnson
Co-Chair, Panhandle 2000

Wales Madden, Jr.
Co-Chair, Panhandle 2000

peace action Texas

formerly Texas Campaign for Global Security

Jan Sanders, Chair
7326 Malabar Lane
Dallas, TX 75230

July 11, 1996

To: Nanette Founds
U.S. Department of Energy
P.O.Box 5400
Albuquerque, NM 87185-5400

Please find enclosed Comments on the Pantex PEIS related to that facility's role in the "Stewardship and Maintenance" proposals for the U.S. nuclear weapons complex. If you should have any questions, do not hesitate to to call me (214)369-9388. Or call the national office of Peace Action at (202)862-9740 and speak with Carina Wood.

Additional enclosures include a New York Times article pertinent to my comments and a brochure about the organization.

I have just learned there is to be a hearing in Austin,TX in 10 days. I will be representing my group, if I'm able to make arrangements with this short notice.

Jan Sanders

cc Carina Wood

Comments re the PEIS for the Pantex Nuclear Weapons Facility

Submitted by Jan Sanders, Chair Peace Action Texas

July 1996

Peace Action Texas opposes the proposals now being put forward by the Department of Energy for the Pantex nuclear weapons facility. There are many reasons for our opposition. Our reasons include 1) the negative impact on the integrity of our foreign relations and our adherence to our international agreements related to non-proliferation, 2) the enormous drain on our national treasury, and 3) the drain of human and natural resources that could be devoted to life affirming endeavors such as education, health care, renewing our cities, etc. These comments, however, will address our concerns related to the programmatic impact on the environment.

Each and every step of nuclear bomb making involves long term damage or threat to the environment due to its use of radio-active materials. It is difficult to use ordinary words that are attempting to describe extra-ordinary conditions. Thus, "long term" is woefully inadequate in communicating the dangerous half life of, say, plutonium which physicist put at 200,000 years !

It is very irresponsible of the Department of Energy, who has learned throughout the Cold War era the environmental costs of bomb making, to put forward the proposals now under consideration. The names of the DOE facilities are like names on environmental tombstones--Hanford, Rocky Flats and more. Pantex has already been designated a Superfund site, don't add a tombstone for Pantex. Therefore, the processing of plutonium at Pantex is unacceptable, period.

The movement of dangerous meterials has a level of risk due to the possibility of accident. Therefore, the movement of plutonium from other locations is a risk not worth taking. And the notion that more is better or even O.K. when it concerns making Pantex, located over the Ogallala Aquifer, a plutonium storage facility flies in the face of environmental protection !

CO-007/1
06.124

More about the aquifer. Two very important negative impacts--the draw down from the already dropping water reserves and the contamination into it. The proposal gives inadequate information and inadequate protection of the crop-feeding resource in the agriculturally rich eight state region where the Ogallala is located--not to mention the water supply for Amarillo.

As an antinuclear peace organization we celebrate the gradual dismantlement that is underway at Pantex under the START II agreement. But disassembly posses a whole new set of questions like-- "What's next?"

page 2 of 2

CO-007/2
01.042

With all of the research, development, manufacturing and deployment poured into bomb-making we are very short on environmentally sound methods for storage and disposition. Instead of the euphemistically named and costly program that is before us, we should be considering a "green" Manhattan II.

The requirements for dismantlement should be to:

1. . . dispose of the components in such a way that they are not and could not be used in a bomb again.
2. ....minimize, rather than contribute to, or perpetuate the waste stream of radio-active materials.

Until more research proves up the preferred option of radio-active waste disposal, I would suggest the vitrification process linked to observable and monitored storage. A totally unacceptable option is to dispose of the plutonium as MOX fuel to the discredited nuclear energy. I say discredited, because they, too have not been able to deal safely with their radio-active waste and continue to gobble up tax-payer's funds. The taxpayer and environmental concerns are highlighted in the attached New York Times article.

Passing on the plutonium to the nuclear industry and thinking it has been disposed of is like playing hot potato with an environmental time bomb.

One last environmental concern. Pantex is located near a regional airport with the runways feeding flights overhead. This poses yet another environmental risk. Since Pantex was built the airport has grown as has the amount of plutonium on site.

The risks are unacceptable.

One of the forces that perpetuates this country's weapons appropriations is the protection of jobs, not national security needs. Surely, we have enough imagination to create a jobs program that does not risk destruction or even injury to the environment. If that fails us, it would be cheaper to pension workers until they found other work. The costs would be a bargain !

In case the concerns related to the environment are not enough, I would like to repeat my first paragraph. "Peace Action Texas opposes the proposals now being put forward by the Department of Energy for the Pantex nuclear weapons facility. There are many reasons for our opposition. Our reasons include 1) the negative impact on the integrity of our foreign relations and our adherence to our international agreements related to non-proliferation, 2) the enormous drain on our national treasury, and 3) the drain of human and natural resources that could be devoted to life affirming endeavors such as education, health care, renewing our cities, etc."

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TASK FORCE REPORT

PANTEX SITE-WIDE EIS

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AIRCRAFT ACCIDENTS

CO-008/1 15.025

1. Draft EIS, Volume II-Appendixes, Page E-3, E.2.1

a. What is the relationship between the "j" value and the probability of the aircraft penetrating the magazine?

CO-008/2 15.026

b. Why is the term "scabbing" used on page E-3, Paragraph 1, when the term "spalling" is used on Page 4-249 to describe the same phenomenon? Explain the different terms.

CO-008/3 15.027

2. Page 4-241, Paragraph 3

a. What is the monitoring procedure and what is the maximum time frame the magazines remain open?

CO-008/4 15.028

b. Do pilots flying at night use the Pantex lights as a landmark, instead of using the VORTAC?

CO-008/5 15.029

3. Page E-5, E-2.2

Why is the 15° impact angle used in the analysis and the possibility of higher angle impacts ignored. The Value Jet DC9 that went down in the Everglades had an impact angle of about 75°. Please include a table of all the various impact angles, hit possibilities and release probabilities.

CO-008/6 15.030

4. Page E-8, E-3.1, Paragraph 1 and Page E-11, E-3.1.2

Add the statement, "The 4800 ft. Mean Sea Level ceiling over the Pantex Plant equals to only 1200 ft. above ground level."

CO-008/7 15.031

5. Page E-11, E.3.1.2

a. Why state that helicopters are "omitted" as a hazard because they do not fly over the plant? Neighbors observe them flying over the plant regularly. Helicopters often operate at high weights and high speeds.

CO-008/8 15.032

b. Are aircraft on post maintenance operation test flights from modification and maintenance facilities at the Amarillo Airport included in the report? These planes tend to circle over the plant repeatedly.

CO-008/9 15.033

6. Page E-15, 3.1.3, Paragraph 1

a. Why were only twenty-five days in May, 1995, used? To give a more accurate picture of over-flights, why not use thirty days, sixty days, six months?

CO-008/10 15.034

b. Do the distances of federal airways vary?

CO-008/11 15.035 e. Are distances measured from the centerline or from the edge of the VORTAC? How far from the centerline do they extend?

CO-008/12 15.036 7. Page E-15, E.3.1.3
a. It is a false assumption that all commercial operations from runway 04 are always bound for Dallas on the 105° airway.

CO-008/13 15.037 b. How many test flights for the modification and maintenance facilities at the airport use runway 04?

CO-008/14 15.038 8. Page E-30, Figure E.2.2-1
General aviation turbojet wingspans of up to 90 feet are common now, particularly among newer aircraft. Why are they not included?

CO-008/15 15.039 9. Page E-33, Table E.3.1.4-2
The skid distance of airliners and turbojets are comparable. Airliners use 1860 feet, but 37 ft. is used for general aviation turbojets. That being the case, a higher angle impact would be expected. The 37 feet at a 15° angle is unrealistic and misleading. Re-evaluate and define the aircraft categories and the skid distances of general aviation turbojets. Also, be consistent within the correlating tables, i.e. E.2.2-1 and E.3.1.4-2.

CO-008/16 15.040 10. Page E-22, E.3.1.6, Paragraph 2
Is the crash scenario in SWEIS different from that in Storage and Disposition PEIS? If it is, explain. Why?

CO-008/17 15.085 11. Pages E-5 and E-16, E.2.1 and E.3.1.4
a. Why is the value of "y" for military aircraft lower than that for commercial aircraft?

CO-008/18 15.086 b. The proximity of Amarillo to the major east-west routes, and the availability of an extremely long runway, makes for an attractive option in the event of an in-flight emergency for both military and commercial over-flights. In such an event, an aircraft is permitted to waive all regulations in the attempt to perform a safe landing. With the prevailing southerly winds, and the location of the Pantex plant, the chances of an aircraft making an over-flight of the hazardous facilities, while already in a degraded state, are extremely high. Will the facilities at Pantex be prepared for such an emergency?

BIOTIC RESOURCES

CO-008/19 09.001 1. Page 4-135, Paragraph 3
"Radiological surveys of beef cattle raised..." Clarify this statement and provide the citation. What type of studies were done, when were they conducted, and by whom?

CO-008/20 09.002 2. Page 4-139, Paragraph 1
Clarify whether the type of "stock tank" is an earthen structure on one of the drainage-ways to the playa or is a galvanized or metal structure.

CO-008/21 09.003 3. Page 4-139, Paragraph 2
"There are five playa wetlands in the vicinity of Pantex Plant Site: ...". Do you mean 5 playas designated as wetlands? There are many more than 5 playas in the vicinity of Pantex.

CO-008/22 09.004 4. Page 4-140, Paragraph 2
Correct typo "*P. amphibum.*"

CO-008/23 09.005 5. Page 4-142, Paragraph 1
How do you explain the significant decline from the 1993 to the 1995 floristic survey in the *Echinocereus viridiflorus* population?

CO-008/24 09.006 6. Page 4-142, Paragraph 2
In the statement, " wetland resources would benefit from continued operations since officials are taking steps to ...", what specific steps have been agreed upon?

CO-008/25 09.007 7. Page 4-142, Paragraph 5
Correct typo, last sentence. ".. but these impacts would not (insert "be") considered significant."

CO-008/26 09.008 8. Page 4-143, Paragraph 4
In the statement, "Environmental protection activities currently ongoing at the plant meet all regulatory requirements of FWS," please cite the letter from FWS.

CULTURAL RESOURCES

CO-008/27 10.001

1. Why were the agricultural based lifestyle and the community of Panhandle, as a cultural impact, not evaluated? Most people in the neighboring communities are only one generation removed from the farm or their grandparents were farmers. Also, the supportive business and families are involved in this culture. The culture in general, and the resources associated with it, were not mentioned.

ENVIRONMENTAL JUSTICE

CO-008/28 17.004

1. The current definitions/criteria of environmental justice do not take into account the people in rural areas who are politically handicapped in comparison with a large urban center. The weight of the population in the urban area impacts elected representation to such a degree that the minority rural voters, in effect, have little voice, even when they are most highly impacted by decisions. Definitions that are based on race/ethnicity or income alone do not address this problem. This is the situation that exists around Pantex, where neighbors, no matter how well organized, cannot "outweigh" the numbers and interests of urban Amarillo.

CO-008/29 17.005

2. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and President Clinton's February 11, 1994 Memorandum for the Heads of all Departments and Agencies, requires an analysis of environmental effects on low-income and minority populations to include human health, social, and economic effects.

3. Why does the draft SWEIS analyze only human health effects of the proposed actions and not the social and economic effects, as required?

CO-008/30 17.016

4. How are individual minority sensitivities in the worker population assessed in the study? Do the training programs and safety information, materials to workers, and the community account for different literacy rates and/or primary languages? Does DOE have any data about the extent to which information about the Plant is known or understood, or the effects of radiation exposure are known/understood in the minority community? If so, provide the data.

CO-008/31 17.017

5. Was exposure to contaminated clothing, for example by minority laundry workers, considered? If so, how?

GEOLOGY AND SOILS

CO-008/32 05.001

1. Pages 4-38 and 4-39
These pages show that soil quality in many sites has been affected. How much soil has been affected? For example, Table 4.5.1.3.-1., page 4-38, lists 37 sites that have been affected by "burning ground." What is the size of each of these sites?

CO-008/33 05.002

2. Page 4-41, Paragraph 2
a. This paragraph states that the soil has been contaminated to a depth of 20 feet. It would be very useful for the report to indicate how the amounts of contamination are changing with time. For example, the amount at 20 feet may be increasing if downward movement from the surface is occurring, or it may be decreasing if degradation is occurring. What are the trends?

CO-008/34 05.003

b. There was no mention of soil remediation processes. Describe the number of processes that have been undertaken, or planned, for soil remediation that could be used to enhance the natural degradation processes of the contaminants present in the soil. Although extensive monitoring has occurred, there seems to be a minimum number of restoration studies.

CO-008/35 05.004

3. Page 4-29, Paragraph 1
Provide a citation for "Caprock Caliche."

CO-008/36 04.002

4. Page 4-40, Paragraph 1
"By virtue of 30 TAC 335.557 (3), the future land use designated at Pantex Plant is nonresidential." How are current agricultural activities on DOE owned land classified?

General

CO-008/37 04.013

Agricultural activities are one aspect of operations of the Pantex Plant. These agricultural operations impact Pantex Plant's natural resources considerably and yet have received only cursory mention in various sections in the SWEIS. Because agricultural activities have not been detailed in the document as a continuing operation of Pantex, are agricultural activities not to continue on the public's federal land, or has the public subtly been denied the opportunity to comment on this use?

HUMAN HEALTH RISKS

CO-008/38 14.011
1. Page 4-205, Paragraph 4
a. Exposure from inhalation is the only pathway assessed in Pantex SWEIS. Discuss exposure through other pathways such as water, soil, and vegetation.

CO-008/39 14.012
2. Page 4-208, Paragraph 2
Internal exposures, received when radioactive materials are deposited through inhalation, ingestion, or absorption, are considered minor contributors to worker doses; therefore, are not considered in this document. Define "minor."

CO-008/40 14.013
3. Page 4-207, Paragraph 2
a. List improvements/changes in work practices and scope that have been implemented to significantly reduce worker external exposure.

CO-008/41 14.014
b. Discuss the cumulative effects from radiological exposure, hazardous chemical, toxic releases and emissions on individual workers and the public population.

CO-008/42 14.015
4. Page 4-208, Paragraph 6
"Effects Screening Levels (ESLs) may be unrealistic, to state that none of the chemical concentrations exceed ESLs, therefore they are not expected to have adverse health effects to members of the public." What is the basis for this statement, when synergistic effects have not been evaluated?

CO-008/43 14.016
5. Page 4-209, Table 4.14.1.2-1
Why are there no standards for 5 pollutants resulting from Plant sources in Table 4.14.1.2-1?

CO-008/44 14.017
6. Page 4-210, Table 4.14.1.2-1
a. The table lists significantly higher ESLs for several contaminates, i.e., MIK, and MEK. Correct the inconsistencies from the table on page 4-209.

CO-008/45 14.018
b. Address latent cancer probability resulting from releases and/or daily operations emissions. Describe cancers not linked to radiological exposures.

CO-008/46 14.019
7. Page 4-215, Paragraph 2
The June 1994 study by the Texas Cancer Registry, TDH, focused only on cancers of the breast, prostate, brain, thyroid, and leukemia. Other radiation-associated cancers, such as bone and lung were not included. Why? What about other types of cancers? Include, or justify, other types not included.

CO-008/47 14.020
8. Page 4-215, Paragraphs 3 & 5
a. The epidemiologic study (Acquavella 1985) and the follow-up study conducted by

CO-008/47 14.020 continued
NIOSH only looks at mortality ratios. Is there an on-going health surveillance, either mortality or incidence, for ex-workers of Pantex?

CO-008/48 14.021
b. Cancer is the only health issue addressed. What about all other health problems associated with nuclear and HE materials processes? Explain.

CO-008/49 14.022
9. Page 4-216, Paragraph 2
The yearly incidence rates (refer to work place injuries) measuring Pantex safety programs compares Pantex to national industries. Is this a likely scenario? Why?

CO-008/50 14.023
10. Pg. 4-217, Paragraph 2
This paragraph states that a fire limited to the interior of a facility would only cause internal releases in the room of the fire. Where would those internal releases eventually go? Wouldn't they have to go external? Explain.

CO-008/51 14.024
11. Page 4-218, Paragraphs 1 and 3
a. When and how will OSHA regulation of worker health and safety be implemented?

b. What will the reporting mechanisms be?

CO-008/52 14.025
c. "DOE contractor operations at Pantex expose workers to hazardous constituents." Are workers fully aware of these exposures and of the combined effects to human health? Discuss in detail how workers are prepared for these exposures, consequences, and effects.

CO-008/53 14.026
d. Daily routine emissions are not reported to the public. Shouldn't workers and the public be made aware of these routine emissions for human health reasons and environmental consequences?

CO-008/54 14.027
12. Page 4-219, 4.14.2.1
"The continuation of weapons-related operations at Pantex would result in the continuation of radiological exposure to plant workers." Have these workers been made aware of these health hazards? Do their families know the consequences of these health effects to themselves, also?

CO-008/55 14.028
13. Page 4-220, Table 4.14.2.1-1
a. The cumulative radiological doses and expected latent cancers to the public from normal operations have not been assessed. Why are these exposures not evaluated?

CO-008/56 14.029
b. The combined toxic chemical, radiological releases and emissions are not evaluated for workers or off-site populations. Why? Give exposure rates for both groups.

CO-008/57 14.030
14. Page 4-221-Paragraph 4

CO-008/57 14.030 continued | Not all accident scenarios are evaluated. Only a subset that contribute a large fraction of the total risk from Pantex operations are analyzed. Give reasons why all potential scenarios are not evaluated.

CO-008/58 14.031 | 15. Page 4-222, Paragraph 3
"For the risk significant scenarios for Pantex, the frequency and consequence assessments are performed on a site-wide rather than a facility-specific basis." What would the outcome be if assessment were facility-specific?

CO-008/59 14.032 | 16. Pages 4-223 & 4-224, Figure 4.14.2.1-1
a. On the evaluation of risk, does DOE look at all types of cancers or only those noted in the workers study of 1985? If so, why?

CO-008/60 14.033 | b. What chemical and radiologic exposures are "non-involved workers" subject to? What steps are being taken to prepare these workers for unexpected health effects?

CO-008/61 14.034 | c. The document only analyzes accidents. Include routine emissions from normal operations.

CO-008/62 06.008 | 17. Pg. 4-234, Paragraph 4
In light of the BEG study, define the statement, "hypothetical plutonium dispersal accident does not pose a significant threat to the Ogallala aquifer."

CO-008/63 14.035 | 18. Page 4-237 - 239
The combined cumulative impacts resulting from adding the bounding alternatives in the other three documents to the Pantex EIS do not fully address all health effects. Give the complete combined cumulative health impacts of all four documents.

CO-008/64 14.036 | 19. Page 4-239, Paragraph 6
Provide a schedule for additional evaluations mentioned in this paragraph.

SOCIOECONOMIC RESOURCES

CO-008/65 11.013 | 1. Page 4-172
a. It is stated that the work force could reach 10,220. This is based on all Weapons and Disposition activities being done at Pantex. Discuss in a manner that shows the time frame and overlap of the break down between construction, weapons and disposition work, and the possibility that everything will not be done at Pantex.

CO-008/66 11.014 | b. Provide a work force break down by year and activity. If downsizing is required, and exceeds attrition, provide a downsizing plan.

CO-008/67 11.015 | c. Knowing that all of the above activities are likely to be limited to 10 to 30 years, if there is an adverse impact from Pantex downsizing, is there money available to the Pantex ROI for long term community assessment and planning?

CO-008/68 11.016 | d. The socioeconomic analysis of the three EIS's are not consistent. The SWEIS Summary (page S-17) assumes 1.65 indirect jobs in the region for every job at Pantex. The SSM PEIS (page S-32) assumes 1.16 and the S&D PEIS (page 4-205) assumes 3.51. Explain these differences. Why didn't the DOE use the analysis of the Amarillo Economic Development Commission (AEDC) which is based on local knowledge of the area? Their analysis gives a ratio of 2.87 to 1 (REF. Chamber Quarterly, 2nd Quarter, 1996, Amarillo Chamber of Commerce.)

CO-008/69 11.017 | e. In the draft SWEIS Summary (page S-17, Table S-1), it is stated that at the 500 weapon activity level, Pantex "would support 2,400 direct jobs and 3,949 secondary jobs" and that "personal income additions to the economy would be reduced to $356 million annually." Explain why this degree of economic loss would not only be an adverse but a Significant Adverse Impact to the community.

CO-008/70 11.018 | 2. Page 4-165
At the 500 weapon activity employment level, what would be the impact to the revenues for the governing bodies within the Pantex ROI, compared with the current revenues presented in Table 4.11.1.6-1 (page 4-165)?

2. Nuclear weapons operations used 163 million gallons (71%).

b. City of Amarillo consumed 16 billion gallons of water in fiscal year 1995.

c. Pantex Plant including Texas Tech Farms used 1.4% as much as the City of Amarillo and 1% of water use went for nuclear weapons.

CO-008/99 06.022 continued

d. Considering the water also used for irrigation, the plant withdrew 0.6% of the regional withdrawal from the Ogallala aquifer. Nuclear weapons operations consumed 0.43% of the regional withdrawal.

Pantex 1995 Water Usage. Reference: Draft EIS for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components, March 1996, page S-15.

CO-008/100 06.023

6. Page 4-63, Figure 4.6.1.2-1
Why are drinking water sampling locations (at the tap) provided on a figure titled to depict monitoring wells?

CO-008/101 06.024

7. Page 4-65, Paragraph 2
"The complete lateral and vertical extent of perched aquifers are being defined." Clarify.

CO-008/102 06.025

8. Page 4-69, Paragraph 2
Correct typo. "The conclusion drawn from this (these) data..."

CO-008/103 06.026

9. Page 4-69, Paragraph 6
Concerning the depth to groundwater calculations, were calculations made on the leased and owned land or just owned land?

CO-008/104 06.027

10. Page 4-69, Paragraph 4
"Although the effectiveness of the fine-grained zone to act as a barrier to vertical groundwater movement is not fully understood, ..." The word "barrier" should be changed to "retardant," to more correctly describe movement.

CO-008/105 06.028

11. Page 4-71, Paragraph 1
What does the statement, "In 1990, the recoverable volume of water in storage and available for use in the Ogallala aquifer was estimated at approximately ..." refer to? Does it refer to that volume beneath Pantex, contained in the High Plains Aquifer, or the entire multi-state regional "Ogallala" aquifer? Clarify.

CO-008/106 06.029

12. Page 4-75, Paragraph 1
"It is highly likely that this and other earlier releases contributed to the high concentrations of chromium..." (1976-1986) Are further investigations to be done to identify the source, or is it to be accepted as is? 1976-1986 seems rather recent to be the major contributor to the perched aquifer contamination problem. Verify dates and any other sources of chromium.

CO-008/107 06.030

13. Page 4-77, Paragraph 2
"Investigations to determine the potential for contaminant migration to the Ogallala aquifer from Pantex Plant are ongoing." Provide more specific information as to what investigations are ongoing or planned.

CO-008/108 06.031

14. Page 4-77, Table 4.6.1.2-3

a. Under "Source", the Carson County Well Fields should be clearly identified as "City of Amarillo's Carson County Well Fields."

b. Does Carson County irrigation use (1989) include gallons used by TTU for irrigation at Pantex?

CO-008/109 06.032

15. Pages 4-78, 79, Paragraph 5
Because the TNRCC and EPA requirements in the new permits will be quite different from the requirements of the permit complied with in 1994, it seems that the logic in this paragraph may be faulty. A statement that all parameters in the proposed draft permit have been met for x-number of years would be more persuasive. Update with current permit information.

CO-008/110 06.033

16. Page 4-79, Paragraph 4
The statement "Groundwater contamination has occurred in the perched aquifer as a result of past site-related activities, primarily through spills and unintentional releases," is not consistent with information provided by Pantex Plant. Past practices were past practices. Rather than try to explain them as spills and accidents, a more positive statement would be to provide some of the great strides that Pantex Plant has made in the past 7 years to correct these practices and investigate and begin to correct the extent of problems created by past practices.

CO-008/111 06.034

17. Page 4-80, Paragraph 6
Specify the "current activities" of UT Austin, TBEG, and TTU Water Resources Center.

CO-008/112 06.035

18. Page 4-82, Paragraph 7
Is the effluent volume a condition of the proposed draft permits?

CO-008/113 06.036

19. Page 4-83, Paragraph 1
"Since about 82% of the groundwater withdrawal in Carson County is for irrigation, conversion to dryland farming could have a major beneficial effect on the current rate of aquifer drawdown." Under Texas Law, groundwater is private property. This statement refers to property owned by others and is inappropriate and irrelevant to the SWEIS. Withdraw this statement.

WATER RESOURCES

CO-008/114 06.088

VOLUME II - Appendixes

1. C-6, Table C.1.2-3

Results from sampling and analyses from Bushland are provided as "background". Because some concentrations of analytes from Bushland samples exceed those measured in Pantex samples, how do you justify presenting these data as "background"?

CO-008/115 06.089

2. C-11, Table C.1.2-3

Provide a table that cross-references location descriptions for surface water. This would allow readers to recognize the locations at which samples reportedly exceeded or lacked water quality criteria (this table). (Table C.2.1-1 on page C-21 provides similar cross-reference information for the water wells). Some of these locations appear to be playas, waters of the U.S., but it is difficult to tell from the descriptions.

CO-008/116 06.090

3. C-13, Table C.1.2-3

Hexavalent chromium is shown to exceed the "standard" for 12-17 N, OW-WR-34, and Z-12 S. What was the total chromium for these same samples? (i.e., did the concentrations of hexavalent chromium in these samples exceed the measured concentrations of total chromium in the same samples? [in which chase the reported concentrations of hexavalent chromium may be exaggerated].)

CO-008/117 06.091

4. C-28, Table C.2.2-1

On the third line up from the bottom, the line reads "Parameter Units STD RRS". Is this an error?

TRANSPORTATION

CO-008/118 16.043

1. Page F-8

a. How will the Texas Department of Public Safety and local emergency medical services be handled in the Intersite Transportation Impact Assessment?

b. Will the safety analysis developed by DOE be acceptable to the Texas Department of Transportation?

CO-008/119 16.044

2. Page. 4-262, Paragraph 3

a. Paragraph states, "These shipments are made in full compliance with all applicable DOT regulations." This is stated for hazardous material shipments on pg. 4-264, Paragraph 2, as well. As a general comment, the draft EIS makes assumptions about the equivalence of design requirements and operations. They assume that the design requirements for vehicles, packaging, etc. are met at all times. How do they know this? Numerous studies on compliance with regulations in the transportation industry show that there can be a significant difference between what is supposed to be and what actually is. More-over, many of the databases that are used to assess the safety of hazardous materials transportation do not contain reliable and adequate data to make this assumption.

CO-008/120 16.045

b. Provide data about the operational reliability of the equipment, tasks, etc. and about the reliability of the inspection and monitoring systems upon which safety relies. Are there data about inspection and monitoring reliability? Has DOE assessed the completeness and reliability of the databases upon which they base their claims? Show with data that there is no significant difference between design and operations in this system. What are the data?

CO-008/121 16.046

3. Page. F-26, paragraph 2 on the left side of the page.

a. It is fallacy to say that "Because of the stringent regulations....there has never been..." The stringent regulations contribute to the result of no documented deaths of significant injuries, but they are not the only reason. Luck, the smart response of personnel, and other intervening factors not related to the quality of training and inspection plays a role.

CO-008/122 16.047

b. Did DOE assess how different combinations of "initiating events" may lead to accidents that could result in releases of hazardous/radioactive materials? What combinations of factors were used? Was there any attempt in the study to look at this issue?

CO-008/123 16.048

4. Appendix F, Tables and Figures R.5.1 - F.5.3

In the event of a large increase in actives how will the current system of transportation (including inspections, loading, packaging--in short, all the activities associated with moving an object from one site to another) react? Will more inspections occur? Will more people

CO-008/123 16.048 continued

be hired? Will more equipment be used? Or will the same number of inspections, equipment, and people be used to do more? How will this affect reliability in the system? (The research on human workload shows that increases in workload can increase failures/errors and that this may not occur in a linear fashion. Appendix F (tables and figures in F.5.1 - F. 5.3) are based on 100 observations. 100 observations over how many years (i.e., what frequency of shipments)? Generally, there is good reason to suspect that as frequency of activities increase, one might observe more errors or more frequent errors.) Please provide clarification for exposure, i.e. what activity provides the most exposure. Clarify exposure incurred by the repackaging of pits.

CO-008/124 16.049

5. Page 4-262, Table 4.16.1.1-3

Data from radioactive waste shipments are limited for the years 1992-94 only. Thus, one might expect that the "annual exceedence probability" (Figures in F5.1 - F.5.3) would increase in the event the rates of shipping increase. What data were used to make the assumption that failure rates would increase in a linear fashion? How would the probabilities of accidents and the risks change if a non-linear relationship were assumed (increasing failures with increasing workloads and shipments)? Can DOE do this analysis? Why are data presented based on only 100 observations? Are there more data than these?

CO-008/125 16.050

6. Page 4-269, Table 4.16.2.1-1.

a. Do the +/- factors around the base rate cover the extra shipments that would occur to send the materials to other sites? The description of action plans state that 2000 weapons assemblies/disassemblies per year is the current activity level. Is this the "base shipment schedule"?

CO-008/126 16.051

b. When assessing the risks in a transportation system, was the entire system--from design of components, regulatory context, inspections and monitoring, to preparing material for transportation, to loading, to shipping, etc., considered. If not, explain.

(The reason this is important has to do with how failures/errors at one time in the system operation can affect subsequent events. For example, if someone drives off the road when transporting one load the consequences only affect that single load of material. However, if there is an incorrectly designed or tested package (e.g. shipping container), it would affect all shipments using that package. This has occurred in the high level radioactive waste transportation system.

CO-008/127 16.052

c. Was a risk assessment completed for the total transportation system for improperly maintained equipment? Provide the data sources and the methodology used in this assessment. (It is not reasonable to assume that there will never be inspection failures.) How would such scenarios affect risk estimates?

CO-008/128 16.053

7 Page 4-256, Paragraph 1

a. There have been mistakes (errors) made in the design requirements and testing protocol of the DOT and NRC for packaging and testing, and thus in reported results.

CO-008/128 16.053 continued

There are errors and failures in monitoring and inspections so that malfunctioning/corrupted packaging continue to be used although they do not satisfy the testing requirements. Has DOE addressed such scenarios in their analyses? If not, explain..

CO-008/129 16.054

b. Regarding the adequacy of databases on pages F-18 and F-22, prior studies suggest that they may not contain complete or reliable data in all cases. (Ref. Does DOE account for such inadequacies in their assessments? For example, what is the uncertainty of these databases? Making assumptions that reflect the uncertainties, in the data resulting from their incompleteness and lack of reliability. Please reassess the risk.

CO-008/130 16.055

8. Page F-19, Figure F.6.3.1-1

a. Safety analyses that do not directly address the role of human error in contributing to risks are weak. Human error is often found to be the single largest contributor to failure frequencies. This EIS seems to focus on mechanical failures. Is human error included in the failure rates that are used in event trees? How are they incorporated? How are assumptions made about human error rates in a greatly expanded transportation system (under scenarios of shipping pits to other sites and increased rate of dismantlement)?

CO-008/131 16.056

b. How many more shipments would there be each year (approximately) if the pits are shipped to SRS, NTS, etc? How much larger/smaller are these rates than current rates? Are these different rates used to estimate different failure rates in the assessment?

c. Would risk estimates change at all, if times of shipments were changed (e.g., night time vs. day time vs. afternoon only vs. weekends, etc)?

CO-008/132 16.057

9. Page F-8,

a. How many shipments are actually anticipated per year? If pits are shipped elsewhere, how would shipment rates differ from FY 1997?

CO-008/133 16.058

b. What are the estimates for subsequent years? How much change will there be in the system rate of shipments over the assessed period of time? If they are being shipped to another location for storage, this would increase the number of shipments per year.

CUMULATIVE IMPACTS

CO-008/134 21.010 | 1. The combined cumulative impacts resulting from adding the bounding alternatives in the other three PEIS documents to the Pantex EIS do not fully address all the combined effects. Give the combined cumulative impacts of all four documents in each individual category of the document.

CO-008/135 21.008 | 2. Ref. p. 3-4; Would the six referenced upgrades require new, or additional, environmental documentation, if the proposed action is implemented?

AIR QUALITY

CO-008/136 07.042 | 1. Are TNRCC air monitoring results included in the air quality calculations? If so, please cite.

CO-008/137 07.021 | 2. Include a list of all air emissions on site.

CO-008/138 07.022 | 3. Have all available emissions been used in the mode?

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1

Comments of

SOUTHWESTERN PUBLIC SERVICE COMPANY

Amarillo, Texas

to

UNITED STATES DEPARTMENT OF ENERGY

Re: Drafts

Programmatic Environmental Impact Statement

for Stockpile Stewardship and Management, February 1996

Environmental Impact Statement

for Continued Operation of the Pantex Plant

and Associated Storage of Nuclear Weapon Components, March 1996

and

Storage and Disposition

of Weapons-Useble Fissile Materials, February 1996

May 7, 1996

002 05/07/96 16:54 806 378 2113

2

Southwestern Public Service Company is the investor-owned electric energy provider to the Pantex Plant, near Amarillo, Texas, and to approximately 367,500 other customers (about one million persons) in the Panhandle and South Plains of Texas, eastern and southeastern New Mexico, the Oklahoma Panhandle, and southwestern Kansas. SPS through the past several years has been an attentive and active participant in United States Department of Energy public information/ participation activities related to DOE nuclear complex planning.

1. SPS actively supports the interests of Pantex and Pantex employees -- so long as those interests are coincident with protection and improvement of environmental conditions in the Pantex region of influence and with prudent and rational national defense policies and strategies.

CO-009/1
22.014

2. At this juncture in the proposed and appropriate downsizing of the nuclear complex, we again strongly encourage the Department and Administration to predicate all actions related to the nuclear complex on the conservative assumption that at least rogue-state or terroristic nuclear aggression against the United States is probable.

U.S. vigilance and nuclear preparedness are key to coexistence with mad nations and persons.

In turn, the Pantex Plant is, uniquely, a key to economically efficient continuing nuclear preparedness.

SPS's further comments today on the three major draft environmental impact statements under review intentionally are brief. We forego repetition of comments filed with the Department in the past, and concentrate on issues of particular relevance to appropriate future missions for Pantex:

003 05/07/96 16:54 806 378 2113

3

3. Fundamental to DOE's further consideration of the roles Pantex should play relative to the changing missions of the nuclear complex is the unequivocal recognition that even accumulatively, there would be NO significant adverse environmental impacts from retention and potential expansion of the variety of missions possible for Pantex.

CO-009/2
21.004

The summaries of the relevant draft EISs do not report this fundamental conclusion explicitly; rather, in some instances, the summaries misrepresent that conclusion, reporting, instead, affectively minuscule environmental potentialities that are characterized as "adverse" only because they do not equate to measurable "benefits." We suggest the rote language of EISs should be expanded to recognize effectively neutral outcomes (not merely "beneficial" or "adverse" consequences).

However, the underlying draft statements themselves are conclusive in regards to the actual insignificance of "adverse" potential impacts of expanded missions at Pantex. Moreover, DOE and consultant representatives in public meetings in Amarillo publicly and explicitly acknowledged that fundamental conclusion (see, especially, transcript of April 23, 1996, morning discussions).

Because the Department, through its representatives in Amarillo on April 23, committed to highlighting, in the subject Final Environmental Impact Statements, this fundamental and irrefutable conclusion about the actual insignificance of any adverse environmental impacts of increased missions at Pantex, Southwestern will not enumerate and rebut the litany of potential environmental concerns reflected in the EISs.

CO-009/3
23.036

5. (However, we do request that the Department include in the record "dockets" for these EISs the comments by SPS relative to listed potential environmental concerns recited in the draft Tritium Production-related EIS of 1995.

004 05/07/96 16:55 806 378 2113

4

CO-009/3
23.036
continued

In those comments, SPS rebutted the overly sensitive, generally not really site-specific but knee-jerk and ill-informed, and frequently inaccurate characterizations of environmental "concerns" about expanded missions at Pantex. Clearly, those earlier characterizations of possibly "adverse" impacts, especially those related to uses of ground water, now are rejected by DOE. Nonetheless, a replete record supportive of the Department's April 23, 1996, publicly articulated conclusion that NO significant adverse impacts would result, is appropriate.)

6. Southwestern endorses the Department's "preferred alternative" for continuing assembly, disassembly, and pit reuse functions at Pantex. This "preferred alternative" is environmentally sound, and economically appropriate. Transferring these functions to the Nevada Test Site would be highly questionable in both regards.

7. We strongly encourage the Department to retain high explosives functions at Pantex (rather than relocating those functions to Los Alamos and Lawrence Livermore labs). There would be negative environmental impacts, of course, associated with transfer of those functions to the labs -- impacts related to construction and expansion of the labs' facilities, for instance. Those impacts would not occur at Pantex, where facilities already are available and in use for these very purposes. Additionally, there would be economic waste associated with such transfers; simply put, it would be more expensive -- by DOE's estimate, $50 million more expensive -- to move the functions than to retain them where they presently are performed.

Too, high explosives functions should be retained at Pantex because under the assembly/disassembly preferred alternative, Pantex would be required to continue to have high explosives capabilities sufficient to handle disposition and disposal of current inventories and those anticipated from near-term dismantling --

005 05/07/96 16:56 806 378 2113

again, retaining the high explosives functions at the present site would eliminate the necessity of duplicating them elsewhere.

Finally, high explosives functions should be retained at Pantex because, should future need arise for new weapons production, it will be critical to have the high explosives facilities at the weapons production/assembly site -- which site, demonstrably, should be the Pantex site.

8. The environmental and related socio-economic impacts of new storage and disposition functions at Pantex (as outlined in the Fissile Material programmatic EIS) certainly suggests Pantex in fact is the prime candidate for those functions -- especially the storage functions (both those related to reserve weapons grade plutonium and "excess" materials, for which Pantex already has facilities and demonstrated expertise).

Clearly, the facilities and expertise for storage are existent at Pantex: the site provides storage for over 8,500 pits, and has FONSI (Finding of No Significant Impact) authority to house 12,000 pits. With slight modifications, the site likely could "FONSI-out," following an environmental assessment for 20,000 pits. Equally clearly, Pantex is well prepared to store some 21.3 metric tons of the 38.2 tons of the nation's "excess" plutonium -- the 21.3 tons are in place at Pantex now. Apparently, only slight expansion would be necessary to securely store the remainder.

Fundamental to this conclusion, too, are the obvious synergies of collocation of assembly/disassembly activities with necessarily attendant, on-site storage.

In fact, as a result of the (altogether appropriate) decision to continue assembly *and disassembly* at Pantex, all plutonium functions, including storage and

disposition, logically flow to Pantex. Incurring extraneous and unnecessary, and high, costs for redundant activities at separate sites would be imprudent.

9. Pantex is the nation's premier nuclear complex production facility; it is imperative that the "production core competencies" presently at the site not be lost or diluted by transfer of management (or production) functions to the labs.

The Department indicates that "stewardship core competencies" must be preserved, perhaps at the laboratories -- and the Department seems to indicate that may mean sacrificing "core production competencies" existent at Pantex. It would make better sense to maintain the stewardship competencies by visits or residency at Pantex, than to lose the production competencies that have evolved there.

Transferring assembly and disassembly functions to any site inexperienced in weapons production and, likely, incapable of significant weapons production, could prove disastrous should the need for an augmented nuclear arsenal arise (or *when* such need arises). Please, do not eliminate or significantly diminish our nation's most effective weapons production facility's competencies.

Relative to disposition alternatives, Southwestern Public Service Company notes that electric power and energy that could be used in immobilization and vitrification, or in processing for oxide fuel, would be priced very competitively at Pantex. (We refer the Department again to our comments, relative to electric supply and costs, in the Tritium Production EIS inquiry.) We are confident that Southwestern's position as a low-cost producer will encourage the Department to choose Pantex as the most cost-effective site for disposition activities.

10. DOE always should seek the most cost-efficient alternatives for the nuclear complex's operations. Generally, the most cost-efficient alternatives, rather

7

related to capital investments, transportation, training, security, energy utilities, etc., will be those available to the nation at Pantex.

CO-009/4 23.037

We request -- we are tempted to demand -- that fair and open cost comparisons among the alternative sites for each function be used in analyzing sites, and that such accountings be shared with the publics that have demonstrated interest in the nuclear complex.

11. Southwestern must specifically reject the conclusion in the Storage and Disposition draft EIS, under Phaseout, page S-21 (emphasis supplied), as it would apply to the Pantex region of influence: "All of the regional economic areas surrounding the DOE sites would experience a loss in employment with phaseout. However, *compared to total employment in these areas, the loss of jobs would have no or negligible impacts* at all the DOE sites."

CO-009/5 11.026

In fact, the impact of Pantex employment in the region of influence is highly significant to the region. Measured in terms of total payroll, Pantex is by far the area's largest employer. The reasonable job multiplier developed by Dr. Ray Perryman at Southern Methodist University, a multiplier of 3.87, applied to the some 3,500 employees at Pantex, suggests the site is responsible for a total of over 13,500 jobs. *Employment related to Pantex represents over 12% of the jobs in the Amarillo metropolitan area.*

Incidentally, the three subject EISs inconsistently analyze the indirect jobs created in the region by Pantex employment: The site EIS assumes 1.65 indirect jobs for each job at Pantex; the stewardship and management EIS assumes 1.16; the storage and disposition EIS, 3.51 (by far, the most consistant with Dr. Perryman's, which is the same, regional-experience-based multiplier employed by the Amarillo Economic Development Commission).

8

CO-009/5 11.026 continued

Certainly, we consider a potential 10% to 12% reduction in metro-area employment a major loss, and by no means a "negligible" concern. We strongly urge the Department to correct the socio-economic impact portions of all three EIS documents to accurately reflect the impact of Pantex employment in its region of influence.

12. Unlike other nuclear complex sites, for instance the notorious Rocky Flats, Hanford, and Savannah River sites, and yes, Los Alamos, Pantex has not had radioactive materials contamination problems. The nuclear complex-related operations at Pantex, in fact, apparently are the best-managed, relative to protection of the environment, in the nuclear complex. Partially to reward the superior, environmentally benign, history of the site, and certainly to capitalize on superior environmental performance, the Department should retain and expand the technically competent operations at Pantex.

Public support for retention and expansion of the Pantex operations has been nurtured by the facility's performance over many decades. Just as the public here has respected that performance, so should the Department.

Moreover, the Department must surely recognize in the resounding public support Pantex enjoys still further advantages to retention and expansion of the missions at Pantex.

In summary, the criteria for evaluating the alternatives and arriving at the most suitable Record of Decision -- the criteria of environmental impact, cost, and technical feasibility -- support retention and expansion of nuclear complex missions at the nation's premier production site, Pantex Plant.

9

Southwestern appreciates the opportunity to participate in this important decision making process, and welcomes questions and dialogue, directed to:

William T. Crenshaw
Environmental Issues Analyst
Southwestern Public Service Company
(806) 378-2120

05/07/86 16:26 ☎806 378 2133 ☑010

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TRIDEC
TRI-CITY INDUSTRIAL DEVELOPMENT COUNCIL
901 N. Colorado • Kennewick, WA 99336-7885 U.S.A. • (509) 735-1000 • FAX (509) 735-6609 • 1-800-TRI-CITY

June 14, 1996

Ms. Nanette Founds
U.S. Department of Energy
Albuquerque Operations Office
PO Box 5400
Albuquerque, NM 87185-5400

Draft Environmental Impact Statement
for the Continued Operation of the Pantex
Plant and Associated Storage of Nuclear
Weapons Components

Dear Ms. Founds:

The Tri-City Industrial Development Council (TRIDEC) is pleased to submit our views on the subject Draft Environmental Statement for your consideration. TRIDEC has been designated by the Department of Energy as the "one voice" spokesman for the Tri-Cities business community. Our membership is composed of over 550 separate business organizations and individuals having an interest in the economic viability of this area and the Hanford site. We request that you include our views in the evaluation of the issues associated with this draft EIS.

We are pleased to note that Hanford is considered as a potential site for the storage of a portion or all of the surplus weapons plutonium materials described in the draft.

Hanford has the technology and physical security capabilities to effectively and safely store these excess materials. At present, the site has both under and unutilized facilities which could be used for this purpose with comparatively limited modifications or additions. We consider the storage of this material to be easily accommodated; however, we do not believe that the community and stakeholders would support such an action by the Department unless the site were also to be utilized for the processing of the plutonium to a stable form for safe interim storage. Hanford would also be an ideal site for the processing of the excess plutonium either for vitrification or fabrication into reactor fuel for irradiation prior to disposal.

CO-010/1
02.013

The site has the capability by operation of either or both the Fast Flux Text Facility (FFTF) and the WNP-2 Nuclear Power Plant on mixed oxide cores to dispose of a substantial portion of the excess plutonium within the foreseeable future. This capability when coupled with the available mixed oxide fuel fabrication capabilities of the Fuel and Materials Examination Facility (FMEF)

Ms. Nanette D. Founds
June 14, 1996
Page two

offers a single site processing and irradiation for disposal capability not found at other potential storage sites. We believe that the Draft EIS should be revised to objectively evaluate this option in conjunction with the excess weapons disposal Draft EIS.

CO-010/1
02.013
continued

This area would be expected to be supportive of an excess plutonium storage and disposal mission provided that the related processing and fabrication tasks were also assigned here. Submitted herewith for the record is a position statement recently adopted by the Hanford Advisory Board which relates to the disposal of excess weapons materials by irradiation in the FFTF. The Hanford Advisory Board is a DOE sponsored stakeholder group representing various interests in the states of Oregon and Washington. This statement is consistent with the position we have stated above on this subject.

Although the storage of excess weapons plutonium at Hanford in available facilities without further processing or utilization is probably significantly more economical than the construction of new facilities at other sites, we do not feel that this is in the best interests of the community unless a concurrent processing mission was assigned to the site. A single purpose storage mission would be opposed due to the potential conflict of other diversification initiatives.

CO-010/2
16.027

An additional area of concern would be the "major issue" of transportation of the excess plutonium materials to the Hanford site. We believe that the Draft EIS needs to more fully evaluate the hazards and mitigation measures which would need to be implemented in support of the transportation of significant amounts of these materials to the Hanford site.

CO-010/3
21.003

We are pleased to note that the Draft EIS has not identified any significant environmental impacts from the use of existing Hanford facilities for this potential mission.

Thank you for the opportunity to present our views on this subject.

Very truly yours,

Sam Volpentest

Sam Volpentest
Executive Vice President

PC-001
PRIVATE CITIZENS

Comment Form

These comments apply to the following documents:
Disposition Draft PEIS
Stockpile Stewardship and Management Draft PEIS
Pantex Site-Wide Draft EIS

United States Department of Energy

NAME: (Optional) RICHARD S. GOODELL
ADDRESS: 7417 IMPERIAL DR. AMARILLO TX 79124
TELEPHONE: (806) 358 2059

I AM A CERTIFIED SAFETY PROFESSIONAL, AND I HAVE WORKED AT FOUR DOE FACILITIES, LOS ALAMOS NATIONAL LABORATORY, LIVERMORE NATIONAL LABORATORY, SANDIA NATIONAL LABORATORY, AND PANTEX. IN MY PROFESSIONAL OPINION, PANTEX IS THE SAFEST AND MOST ENVIRONMENTALLY CONSCIOUS OF THESE FACILITIES.

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Comment Form

These comments apply to the following documents:

- ✓ Storage and Disposition Draft PEIS
- ✓ Stockpile Stewardship and Management Draft PEIS
- ✓ Pantex Site-Wide Draft EIS

United States Department of Energy

NAME: (Optional) ROBERT L. BASS
ADDRESS: 2608 So. PARKER AMARILLO, TX 79109
TELEPHONE: (806) 372-3390

I strongly support the continuation of the high explosive function at the Pantex facility. I oppose any effort to move these functions to the national labs. Pantex is the most cost effective DOE facility and has an excellent track record in doing the high explosive functions.

- I believe that Pantex should be chosen as the location for fissile materials storage and disposition functions. Pantex already stores surplus plutonium and has a safety and security record that is unmatched in the DOE complex. When given fair budget consideration, strong local support and national security interest, Pantex is the ideal choice for this function of fissile materials storage and disposition.

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PC-003
PRIVATE CITIZENS

PAGE 1 OF 1

PLEASE PRINT OR TYPE

Name DAVID L. MICHAELS

Address 6401 CLAREMONT DR

City AMARILLO State TX Zip Code 77109

MY COMMENT(S) ON THE PANTEX PLANT DRAFT ENVIRONMENTAL IMPACT STATEMENT IS/ARE:

GIVEN THE PAST EXPERIENCE WITH DOWNSIZING THE DOE BY RELOCATING MISSION ASSIGNMENTS FROM MOUND, PINELLAS AND ROCKY FLATS TO DESIGN LABS, I'M CONCERNED ABOUT THE POTENTIAL REASSIGNMENT OF THE HIGH EXPLOSIVES MISSION TO THE LABS FROM PANTEX. PAST DONOR/RECEIVER SITE TRANSFERS HAVE YET TO PRODUCE ONE WR QUALITY PART AT THE LABS. THIS "LESSONS LEARNED" DOESN'T APPEAR TO BE CARRYING APPROPRIATE WEIGHT IN THE DECISION TO SITE HE OPERATIONS. H.E. MANUFACTURING MUST REMAIN AT PANTEX TO MAINTAIN QUALITY PROCESSES FOR WR USE AND PROPERLY MAINTAIN PRODUCTION SITE CORE COMPETENCY.

(USE BACK OF PAGE IF NECESARY)

Comments can be faxed to the SWEIS Faxline (1-800-822-5499), telephoned in on the SWEIS Hotline (1-800-788-0306), mailed in to DOE care of: Ms. Nanette D. Founds, US Department of Energy, Albuquerque Operations Office, PO Box 5400, Albuquerque, NM 87185-5400; or sent via the Internet to tetratec@indirect.com. Dealine is July 12, 1996.

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PLEASE PRINT OR TYPE

Name ELIZABETH SPROUL

Address 3319 ARLINGTON ST.

City AMARILLO State TX Zip Code 79106

MY COMMENT(S) ON THE PANTEX PLANT DRAFT ENVIRONMENTAL IMPACT STATEMENT IS/ARE:

I WANT PANTEX TO STAY IN OPERATION. I REALIZE AT A LOWER CAPACITY WITH DOWNSIZING. I BELIEVE IT IS A SAFE PLACE FOR STORAGE OF [illegible] AND ASSOCIATED COMPONENTS. I SUPPORT PANTEX AS A SAFE AND NECESSARY INDUSTRIAL NEIGHBOR.

Elizabeth A Sproul

(USE BACK OF PAGE IF NECESARY)

Comments can be faxed to the SWEIS Faxline (1-800-822-5499), telephoned in on the SWEIS Hotline (1-800-788-0306), mailed in to DOE care of: Ms. Nanette D. Founds, US Department of Energy, Albuquerque Operations Office, PO Box 5400, Albuquerque, NM 87185-5400; or sent via the Internet to: tetratec@indirect.com. Deadline is July 12, 1996.

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PC-005
PRIVATE CITIZENS

Comment Form

United States Department of Energy

NAME: (Optional) RODNEY C. WILCOX
ADDRESS: 40 CADENCE CT., AIKEN, SC 29803-7710
TELEPHONE: (803) 648-1456

SRS SHOULD RECEIVE A MAJOR PORTION/ROLE IN EACH OF THE RESULTING DECIDED PROGRAMS AS DETERMINED IN THE RECORDS OF DECISION. SRS HAS THE PEOPLE, FACILITIES, INFRASTRUCTURE, AND EXPERIENCE THAT IS NEEDED FOR SAFE, SECURE, COST EFFECTIVE AND INSPECTABLE OPERATIONS, MANAGEMENT, AND SATISFACTORY DISPOSITION OF WEAPONS-USABLE FISSILE MATERIALS. IN GENERAL THE SUPPORT FROM ADJACENT COMMUNITIES IS VERY FAVORABLE AND THIS NEEDED SUPPORT WILL GREATLY ASSIST DOE IN ACCOMPLISHING THE DESIRED MISSIONS.

FOR BETTER REASONS, THE EXCESS WEAPONS GRADE PLUTONIUM SHOULD BE UTILIZED TO MAKE MIX FUEL. SMALL REASONS SHOULD BE ELIMINATED AND RESOLVED TO ALLOW SUCCESSFUL USE OF MIX FUEL.

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Comments - PANTEX EIS

R.L. Geddes

- Continued storage at PANTEX fails to advance the program of demilitarizing surplus pits or readying pits for recycle into the future stockpile. The pits should be moved to a disposition and manufacturing site and disassembly should progress. SRS is the only functional Pu site in the country and the only logical site to consolidate Pu.

PC-006/1 01.019

- Pits at Pantex are managed in facilities and operations which do not meet any of the DOE's standards for design and operation of nuclear facilities. Doubling the storage of pits under substandard conditions should not be considered a reasonable alternative. SRS is equipped to accept the pit storage mission, apply DOE's nuclear facilities and operations standards, and cost effectively integrate the storage function with the Department's other Pu mission

PC-006/2 14.082

- Storage of pits at Pantex should not be increased until the findings of the Pu Vulnerability Assessment are resolved.

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PC-003

PC-007
PRIVATE CITIZENS

PAGE 1 OF 1

Comment Form

These comments apply to the following documents:
- Storage and Disposition Draft PEIS
- Stockpile Stewardship and Management Draft PEIS
- Pantex Site-Wide Draft EIS

United States Department of Energy

NAME: (Optional) HORACE T. BRIGHT
ADDRESS: 484 Carolyn Dr. Spartanburg S.C
TELEPHONE: (864 - 585 - 5569

The DOE. Should NOT Consider The Savannah River Site For Continued Operation Of The Pantex Storage Or Component Work.

The Contractor For Sav-River Has No Concern Or Value For Environmental, Its Personnel + The Public -

This Past Month A Shipment To Oak Ridge Tenn - Shows How Concerned They Are.

The State Of Tenn Will Not Let Sav-River Ship To Oak Ridge

The Pantex Storage & Disposition Of Weapons - Usable Fissile Material Should Stay In, Carson County Texas. Conversion To (MOX) Fuel For Reactors. That Could Be Sold To The 109 Commercial Light Water Reactors

Horace T Bright

5-3-96

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PC-008
PRIVATE CITIZENS
PAGE 1 OF 5

Comment Form

These comments apply to the following documents:

- Storage and Disposition Draft PEIS
- Stockpile Stewardship and Management Draft PEIS
- Pantex Site-Wide Draft EIS

United States Department of Energy

NAME: (Optional) CLYDE ALLEY
ADDRESS: 8 CAMBRIDGE ROAD AMARILLO TX 79124
TELEPHONE: (806) 353-8273

SOCIOECONOMIC QUESTIONS (ATTACHED)
PANTEX PLANT WATER USAGE (ATTACHED)

SSM PEIS and S&D PEIS
SOCIOECONOMIC QUESTIONS

MAY 0 [illegible] 1999
M0125A

* Please explain why LLNL and LANL Stockpile Management budgets show projected increases from 1996 to 2004 since the US has terminated the development of new nuclear weapons ?
  Ref. SSM PEIS Preferred Alternatives Report, pp 26,30.

* Are these projected increases in Stockpile Management at the two labs based on transferring missions to them which have previously been done at the production plants ?

* Please elaborate on a statement made on page 34 of the SSM PEIS Preferred Alternatives Report that " personnel from the laboratories could perform assembly / disassembly for some weapon surveillance operations to improve the programmatic tie between Stockpile Stewardship and Stockpile Management ".
  - Would laboratory personnel replace Pantex personnel for this work ? If not, explain.
  - Would this add to the projected layoffs at Pantex ? If not, explain.
  - Would the laboratory personnel be trained and certified to perform this work ?
  - What organization(s) would be responsible for safety, safeguards, and conduct of operations associated with this work ?
  - Explain how this would improve Stockpile Stewardship and Management ?

* Under Phaseout (page S-21) of the S&D PEIS the statement is made " All of the regional economic areas surrounding the DOE sites would experience a loss in employment with

phaseout. However, compared to total employment in these areas, the loss of jobs would have no or negligible impacts at all the DOE sites."
- For which sites would the impact be negligible ?
- For which sites would the impact be significant ?
- What is the basis for determining the significance of the impacts ?
- How does the DOE plan to use this significance in their selection process ?

PC-008/1 11.048

* The socioeconomic analyses of the three EIS's are not consistent. The SWEIS (p. S-17) assumes 1.65 indirect jobs in the region for every job at Pantex. The SSM PEIS (p. S-32) assumes 1.16 and the S&D PEIS (p. 4-205) assumes 3.51.
  - Please explain these differences ?
  - Why didn't the DOE use the analysis of the Amarillo Economic Development Commission (AEDC) which is based on local knowledge of the area ? Their analysis gives a ratio of 2.87 to 1 (REF. Chamber Quarterly, 2nd Quarter, 1996, Amarillo Chamber of Commerce).

PC-008/2 17.018

* Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and President Clinton's February 11, 1994 Memorandum for the Heads of all Departments and Agencies requires an analysis of environmental effects on low-income and minority populations to include human health, social, and economic effects.
Why do the draft SWEIS, SSM PEIS, and S&D PEIS analyze only human health effects of the proposed actions and not the social and economic effects as required ?

* In the draft SWEIS (p. S-17) it is stated that at the 500 weapon activity level Pantex " would support 2,400 direct jobs and 3,949 secondary jobs" and that " personal income additions to the economy would be reduced to $365 million annually ?
  -Please explain why this degree of economic loss would not only be an adverse but a Significant Adverse Impact to the community.
  - At the 500 weapon activity employment level what would be the impact to the revenues for the governing bodies within the Pantex ROI compared with the current revenues presented in Table 4.11.1.6-1 (p.4-165) ?

* In the draft SSM PEIS (I-4-450) please explain the statement
  " The downsizing A/D and HE fabrication alternative would result in the addition of 280 workers at Pantex "
  - If the statement is incorrect what would be the result ?

WATER USAGE : PANTEX PLANT

MAY 06 1996

PC-008/3
06.128

* Plant used 230 million gallons in 1995.

  - Texas Tech Farms used 66 million gallons (29%) of the total plant water usage.

  - Nuclear weapons operations used 163 million gallons (71%).

* Amarillo Water District consumed 16 billion gallons in FY 1995.

* Pantex Plant including Texas Tech Farms used 1.4% as much water as Amarillo District.

* Nuclear weapons operations used 1% of the water used by Amarillo.

* Considering the water also used for irrigation, the Plant withdrew 0.6% of the regional withdrawal from the Ogellala aquifer.* Nuclear weapons operations consumed 0.43% of the regional withdrawal.

* Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components, March 1996, page S-15.

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PC-003

PC-009
PRIVATE CITIZENS

PAGE 1 OF 1

Bergman, Donna A.

From: Matt Kennedy
To: UN91T41
Subject: DOE/EIS-0225D
Date: Thursday, May 02, 1996 4:56AM

Good evening,

I was told I could e-mail this address with questions regarding DOE/EIS-0225D. My question relates to DOE/EIS-0225D, page 5-12, second column, second paragraph, line 6. The document states starting at line 5: "With an additional 0.11 LCF from pit handling, the total risk of *latent cancers among workers at the P-Tunnel would increase by 1.8 percent."

PC-009/1
14.002

All references to latent cancers in that section titled "Impacts of Storing 20,000 Pits", refer to LCFs, latent cancer fatalities, except line 6 as indicated above by a "*". Does the increase of 1.8 percent refer to "latent cancers" as it states, or to "latent cancer fatalities" as the rest of the section would seem to imply.

Your response is appreciated.
Sincerely,

Matt Kennedy
E-mail address: At.Chew@worldnet.att.net

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PC-010/1
17.027

"If pits in 55T's travel through Hispanic neighborhoods, residents would perceive that a threat to their health and safety."

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PC-011
PRIVATE CITIZENS

April 22, 1996

My name is Addis Charless, Jr. I own, live on, and operate a ranch ten miles north of the Pantex facility.

Although I am somewhat comfortable with the current mission at Pantex, I have marked reservations about an expanded role at Pantex that would include permanent storage of plutonium pits, other plutonium scrap, uranium, etc., as well as processing/reprocessing of same, and the possiblity that a nuclear reactor of whatever type might be built there to accommodate any burning of mixed oxide fuel (MOX), or to produce tritium.

PC-011/1 06.040

To expand Pantex's role to accommodate any or all of the above is to me grossly irresponsible in view of the fact that the plant lies above the largest fresh water aquifer in the U. S., and that said aquifer is the lifeblood of this area's agriculture industry. Why the Ogallala aquifer has not been classified as a Class 1 water source is a puzzlement to me.

PC-011/2 14.081

None of the draft PEIS's have adequately addressed what would happen to this area's farm and ranch economy if a significant accident releasing substantial quantities of radionuclides were to occur regardless of how well it were to be cleaned up. I think the public's perception of the contamination would be such that it would make our products unmerchantable not just for the immediately affected area, but for the entire Panhandle's products.

PC-011
PRIVATE CITIZENS

PC-011/3 06.041

It is a further contention by Pantex boosters that no substantial water pollution has occurred except for the perched water above the Ogallala aquifer. On June 27, 1995, a water sample was taken from one of my windmill wells and submitted for analysis. The results yielded the following information:

> For 16 high explosives tested for, results were BQL.
> For gross alpha, gross beta, Pu 239/240, Ra 226/228, Sr-90, tritium,
> U 234/238--detected, but below Safe Drinking Water Act maximums.

How much will these levels rise if Pantex's role is expanded? Is it something we are willing to risk? Is it truly necessary for the viability of Amarillo's or the Panhandle's economy? Is short term economic prosperity worth eternal contamination?

PANTEX DRAFT SWEIS COMMENT AND QUESTION

Section 4.11.5 on page 4-170 in Volume I, Main Report is titled "Cumulative Impacts" and is referring to Socioeconomic Resources. It states that "This section describes the cumulative impacts on Pantex Plant. Cumulative impacts include the impacts of continued operations at Pantex Plant combined with impacts associated with the activities described in the *Waste Management Draft PEIS, the Stockpile Stewardship and Management Draft PEIS, or the Storage and Disposition of Weapons-Usable Fissile Materials Draft PEIS.*"

The Council on Environmental Quality Guidelines published in 40 CFR §1500 - 1508 define Cumulative impact in §1508.7 as follows:

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11.021

> "*Cumulative impact* is the impact on the environment (emphasis added) which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

QUESTION:

Why is there no analysis of the incremental socioeconomic impact of this action, on the Pantex socioeconomic region of influence, when added to other past and present actions such as the cancellation, in 1988, of the DOE program of a mined geologic repository for spent nuclear fuel and high-level radioactive waste in Deaf Smith County, and the more recent announcement of closure of the U. S. Department of the Interior's Bureau of Mines Helium Operations?

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PC-003

PC-013
PRIVATE CITIZENS

PAGE 1 OF 1

1. Go slow on disposal

2. With our present President we do not know from one day to the next what he is going to do!

France is testing
China is testing etc.

It is foolish to be thinking of reducing the stockpile as it seem to be proposed.

3. The environment damage that you may seem will affect this area. No consideration is given to all the chemicals that is poisoning the human body by allowing the chemical companies to put all their chemicals into our food supply which will harm all humanity in the U.S.

a. which is worse "the pollutants" put out by Pantex that affects the local population. or

b. all the chemicals that go into our food which affects the whole nation

4. It will hurt the economy of this city to have another "pay roll" eliminated. the main 4 plans under plans to dispose of, and those already gone are - The Air Base. Bell Helicopter.

PC-013/1
11.020

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DOE Public Meeting on
Draft Environmental Impact Statements
April 30,1996

There are three draft environmental impact statements on which the DOE is soliciting public comments. These three documents cover plutonium storage and management:

* The Pantex EIS considers SRS as an alternative for storage of up to 20,000 plutonium pits, most of which are currently stored at Pantex.
* The Stockpile Stewardship and Management EIS evaluates SRS as an alternative for plutonium recovery and remanufacturing of plutonium pits to maintain the nuclear stockpile.
* The Disposition of Weapons Usable Fissile Materials EIS considers alternatives for consolidating plutonium storage and technologies for disposing of surplus plutonium.

SRS is under consideration for a major role in each of these programs. Following are some points that relate to these issues:

(1) A key part of any decision concerning these programs is the attitude of the neighboring communities.

SRS's neighbors in Georgia and South Carolina have supported SRS operations since the location was named 46 years ago as a weapons material production plant. Over these years, operators of SRS have been prudent, responsible, and world-class in technical ability. This community naturally welcomes additional missions of this type and jobs and money coming in, especially after so much has left the last few years. We also know and trust the people at SRS. Because of the support SRS enjoys, we urge DOE to choose SRS as the site for the future needs discussed in these EIS's.

(2) In many cases SRS has the facilities and capability already in place for certain of the EIS alternatives, and additions needed could be installed very cost-effectively by DOE.

Storage of nuclear materials, for example, is commonplace activity at SRS, and SRS officials report that they are already planning a modular storage facility, which could be easily modified for additional capacity. The storage unit is budgeted at $150 million, and additional storage capacity would roughly double that number.

(3) If it is determined that the national interest requires a large scale effort to reconstitute the plutonium pits now in the stockpile, a large percentage of which are decades old and potentially unreliable, SRS has the expertise and many of the facilities to perform that job

cost-effectively.

The capital investment of that option is about $350 million, much of which would return to he community in the form of purchases and construction wages.

(4) Excess plutonium must be managed properly. Storage is an option, but there is also the possibility of obtaining energy benefit from plutonium by making mixed oxide fuels for use in nuclear reactors. SRS is a logical place for fuel manufacture because of the existing plutonium handling facilities and expertise onsite. This would represent construction and related expenditures of about $350,000.

At the same time, SRS is essentially the center of applied vitrification technology in this country, and would be the ideal location for vitrifying plutonium as an anti-proliferation action. Capital costs would be about $500 million.

(5) It must be remembered that SRS has the only active large-scale plutonium processing facility in the nation.

(6) SRS not only has the capability to perform each of these missions safely and effectively, but in fact, is the only site that which can perform all of the missions.

SRS has the technology, infrastructure support, and facilities to immediately implement the NEPA decisions. Only SRS retains large-scale functioning plutonium capability. Only SRS has experience at startup and operation of nuclear facilities with today's standards of operation. Only SRS can provide the Department the capability to merge all of its plutonium functions at a single site with billions of dollars of savings which will result from this approach.

W. Penland Mayson, Jr.
3028 Bransford Rd.
Augusta, Ga. 30909

Plutonium Disposition EIS. General Comments

by W.F. Lawless

The disposition of plutonium is a complex decision for all Americans because of the uncertainties derived from plutonium's very long 24,000 year half-life. Other factors add to this complexity:

1. The uncertain threat of global warming from the burning of hydrocarbon fuels (e.g., coal, natural gas, gasoline, fuel oil, etc.).

2. The uncertainty of environmental effects from wind, solar, and hydroelectric power.

3. The uncertainty of the proliferation of weapons material from commercial reactors that generate electricity with plutonium fuels in Russia, Japan, and Europe.

To moderate the threats from proliferation, the U.S. has decided to dispose of its approximately 50 MT of excess weapons grade plutonium in one of three forms: in deep bore holes, contaminating it with fission products, and burning it up in reactors. The first option is an unattractive safeguard against proliferation, the second option recovers no energy, and the last option recovers a minor amount of energy as it passes once-through commercial reactors. The last two options comply with the spent fuel standard, i.e., they are as resistant to proliferation as the 1000 MT of spent fuel now scheduled for disposal at Yucca Mountain. But there are uncertainties with the spent fuel standard.

4. The uncertainty of safeguarding the plutonium after the fission products have decayed; the uncertainty of heat damage to Yucca Mountain during the first few hundred years; and the

uncertainty from the radiotoxicity of plutonium and from the possibility of criticality events during the next 1,000,000 years at Yucca Mountain .

In contrast to the spent fuel standard, however, the SRS vitrified high level waste will be dangerous only during the time required for the decay of its fission products.

Mindful of the above facts, the options in the EIS overlook an environmentally better option. Before U-235 is used to produce electricity in the U.S., it is diluted with U-238, but U-238 exposed to U-235 creates plutonium. Thus, plutonium is a key ingredient of spent fuel. Even in the plutonium-disposition option three noted above, plutonium will be diluted with U-238 to create more plutonium as it burns up (NAS, p. 143n). Because of the uncertainties, DOE should include a fourth option.

5. The fourth option is to demonstrate the recovery and extraction of plutonium from excess weapons material and from spent mox fuel made from the excess weapons plutonium, to dilute it with non-fertile material instead of U-238 (e.g., Th-232 would generate fissile U-233; an aluminum or silicone mixture would not generate a fissile end-product), and to burn the plutonium in commercial reactors. The end result would be an environmentally safer standard for disposal at Yucca Mountain that could become known as the vitrified high-level waste standard. It would not only remove the threat of plutonium from the biosphere, but it would also reduce environmental threats (e.g., global warming, the mining of uranium, or the heat stresses at Yucca Mountain), recover the maximum amount of energy available from plutonium, and not generate new plutonium.

DRAFT: 4/30/96: 3

Specific Comments

1. Even if free, plutonium fuel relative to uranium fuel in a LWR is expensive (NAS, 1994, p. 24-5) and will require a subsidy (p. 164). Pu fuels are more economic for new advanced reactor concepts (for LMR's, see pp. 182, 186; for ALMR's, see p. 185). Fuel costs will be offset by the recovery of energy, utility repository subsidies, and the reduction of safeguard concerns (in WSRC, 1996).

2. A. Makhijani: "The United States is the only leading country that has wisely rejected the use of civilian plutonium because of its proliferation dangers and its high costs. It is therefore the only country that is in a position to exercise the leadership to persuade other countries to forgo civilian plutonium production, at least for the time being, and to put all separated plutonium into non-weapons-usable form." (Report, 1995, p. 15)

M. Lawrence: "Plutonium can be made into power reactor fuel and burned up in a reactor. Ample experience exists in the fabrication and use of mixed oxide fuels containing plutoinum. While the economics of using mixed fuels are not considered favorable, at least by the U.S. and especially in the near term, several countries use or plan to recycle plutonium as a matter of strategic national policy." (Report, 1995, p. 31)

N. Egorov, Russia Federation on Atomic Energy: "I would say that we, in both countries, have paid too high a price sometime ago to generate and create that material and that is why we must choose the most efficient way of disposition of this material. That is why the general position of the Russian Federation in terms of plutonium disposition is that we should use, in the longer-term, that material as a component of the mixed oxide fuel for commercial power plants." (Report, 1995)

DRAFT: 4/30/96: 4

Currently, seventeen European and two Japanese commercial reactors burn plutonium MOX fuels (NAS, 1994, p. 186). By the year 2000, more are planned for Europe, Japan, and Russia.

3. U-235/U-233 plus U-238 produces plutonium (NAS, 1994, p. 205). Non-fertile fuels do not contain U-238 (NAS, p. 156).

4. Plutonium stocks, from the burning of U-235/U-238 in commercial reactor fuels, are increasing at about 60-70 MT per year (NAS, 1994, p. 28).

5. Low quality weapons grade (WG) plutonium and reactor grade (RG) plutonium are both explosive (NAS, 1994, p. 32-33).

6. Plutonium is difficult to handle because it is radioactive and toxic (NAS, 1994, p. 68).

7. Americium content is higher in RG rather than WG plutonium (NAS, 1994, p. 121-2).

8. Spent fuel rods destined for the repository are contaminated with fission products and plutonium. This spent fuel standard is safe from proliferation for the first few hundred years, however, as the fission products decay, proliferation risks increase proportionately (NAS, 1994, p. 151; p. 191; the spent fuel standard is described on p. 143).

9. "Options for near-total elimination of plutonium may have a role to play in the longer-term effort to reduce the risks posed by global plutonium stocks." (NAS, 1994, p. 143)

CONSIDERATIONS CONCERNING THE

"FAULT IDENTIFICATION STUDY AT THE PANTEX PLANT"

by Marcia A. Keevan

June 1996

This report continues the work started by
Charlene Barnard-Wants-to-Know

A very special thanks to Trish Neusch for requesting documents and assisting with editing. My deepest appreciation to Beverly Gattis of STAND and Boyd Deaver of the TNRCC for allowing me to use the research materials in their office libraries. Conversations with Mavis Belisle of the Peace Farm were invaluable in preparing this report.

-"too smart for their own good. Know too much"-

I don't believe anybody can "know" too much for their own good, but I have seen people who "know" alot of stuff become so involved in one activity that they become blind to the needs of others and generally blind to the world around them. They miss the obvious.

So, we should all be simple minded? Yes, and no. Truly, do you want a simple minded person to attempt open-heart surgery on yourself? Yes and no? A well-informed, open mind is more then just an attitude to be adopted or discarded according to the latest fad...

A well-informed, open mind is a requirement for survival. Such a mind sees the obvious as well as the obscured, and thus is better able to steer clear of harm's way-

Marcia Keevan

GENERAL OUTLINE OF CONTENTS

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Section B)	Specific Deficiencies of the Pantex Fault Study	B pages 1, 2
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Attachment 1, parts 1 & 2	Regional Tectonic Map
Attachment 2	Whittenburg Trough (Isolith map)
Attachment 3	Structure-contour map showing faults, map based on well control and on seismic lines.
Attachment 4	Structure-contour map, top of basement Amarillo Uplift, showing wells and faults.
Attachment 5	South-north cross section, Amarillo Uplift, showing Potter County Fault extending over 2,000 ft. below sea level.
Attachment 6	Regional cross-section through Texas Panhandle near Pantex Plant showing Whittenburg Trough fault beneath Pantex.
Attachment 7	Local news story depicting locations of area earthquakes
Attachment 8	A picture of a sink spot that developed in a matter of days, 90 feet deep, 175 feet in diameter

Fault Identification at Pantex Plant
Section A, page 1

CONSIDERATIONS CONCERNING THE

"FAULT IDENTIFICATION STUDY AT THE PANTEX PLANT"

by Marcia A. Keevan

June 1996

PC-016/1 05.032

In April of 1995, a study concerning fault identification at the Pantex Plant was sponsored by Mason & Hanger-Silas Mason Co., Inc. (M & HSM), a contractor for the Department of Energy (DOE), in order to satisfy a 'Note of Deficiency' pertaining to a hazardous waste permit application for the Pantex Plant located near Amarillo, Texas.

To the DOE's credit, there are numerous legitimate geological studies and documents used as references in this study, and an enormous amount of manpower appears to have been harnessed to discover more about the geological conditions that are found in the Pantex Plant area.

PC-016/1 05.032 continued

Unfortunately, because this study was under an important deadline to satisfy a requirement of a vital permit for continuing operations, it lacks the benefit of having undergone critical peer review. The data is interpreted and a conclusion is drawn using the opinion of only one expert: Daniel McGrath. The other experts mentioned in reference are not on record as sharing the conclusion he reaches. In fact, one of the geologists mentioned in reference has gone on public record supporting a totally opposite conclusion from the one reached in this study.* The DOE "Fault Study" is also: incomplete, poorly argued, erroneously formatted, concluded in haste, and thus; invalid.

Although the "Fault Study" is now over a year old, the existence of this study only became known to me a few weeks ago. Obtaining a copy for my research and review has been difficult. The officials at Mason and Hanger were not willing to release it, and my request for a copy of this report from them still has not been honored. The copy I am using was obtained from the files at the Texas Natural Resource Conservation Commission (TRNCC) office in Amarillo. It is available for public review according to the Texas Open Records Act.

PC-016/1 05.032 continued

The "Fault Study" contains multiple references to an investigation carried out by a team from the Argonne National Lab. The use of references attempts to support the conclusion that Pantex does not sit on top of a fault. Yet, in an apparent contradiction, the "Draft RCRA Zone 12 Groundwater Assessment", dated November 1995, and prepared by Argonne, clearly addresses the existence of a major fault beneath the Pantex Plant. The Argonne report includes a powerful visual aide* that depicts a deep, substantial fault they identify as the "Whittenburg Trough". It would seem to be obvious even to the most uninformed person that the experts from Argonne wished to draw attention to this feature.

* Greg Wilson, Petroleum Geologist, Southern High Plains Water Conference, January 8, 1994
* Argonne "RCRA Zone 12 Groundwater Assessment", Figure 2.2-Regional Cross Section through the Texas Panhandle near the Pantex Plant (Source: Dutton et.al. 1982)

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05.032
continued

The expert for the DOE correctly states that hydrogeological characterization studies conducted by the Texas Bureau of Economic Geology (TBEG) have focused on mechanisms that would allow for rapid transport of contamination to the Ogallala aquifer. He also includes the fact the faults would provide such a mechanism for the rapid transport of water. But the TBEG reports are oddly silent concerning the word "faults", and do not directly address any argument for or against the existence of a fault at Pantex.

On the following pages I shall address some of the specific facts concerning fault identification at the Pantex Plant, as well as make suggestions regarding substantial deficiencies.

Yours truly — June 17, 1996

On June 13, 1996 the D.O.E. delivered a more complete copy of this study to the Stand office, which I am still reviewing

PROOF OF A CAPABLE FAULT

On page two of the "Fault Indentification Study at the Pantex Plant", Daniel McGrath correctly asserts the characteristics of a capable fault, (c.f. CFR 100 Part A):

" A capable fault has one or more of the following characteristics:

- Any movement in the Holocene time in the last 10,000 years
- More than one movement in the last 500,000 years
- Demonstrably associated seismicity
- Structural relation to another structure shown to be capable. "

This being the case to prove, let us now ask the questions...

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05.032
continued

1.) Do we have movement in the Holocene time in the last 10,000 years?

Answer: Yes. " Holocene faulting has occurred on one portion of the Amarillo Uplift-Wichita Uplift structure and may have occurred on another part of the same structure in Potter County." *

and:

" URS/Blume (1976) cite a Holocene (last 10,000 years) fault scarp 4 miles long, 20 miles northwest of Pantex Plant, on the Amarillo Uplift. Where the Amarillo Uplift extends into Oklahoma, about 150 miles from Pantex Plant, the Meers Fault also has a Holocene scarp. These two examples of Holocene faulting along the Amarillo Uplift structure show the presence of some level, although clearly not intense, of the tectonism along this Paleozoic uplift." **

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continued

2.) Do we have more than one movement in the last 500,000 years?

Answer: Yes. As stated above, "...a Holocene fault scarp 4 miles long, 20 miles northwest of the Pantex Plant, on the Amarillo Uplift... within the last 10,000 years..." **

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05.032
continued

3.) Do we have demonstrated associated seismicity?

Answer: Yes. "...recent 11-year span, from January 1, 1977 to March 31, 1988, more than two dozen quakes measuring 2 or higher on the Richter scale were detected in the Texas Panhandle and South Plains, Oklahoma Panhandle and far Western Oklahoma, and the southernmost strip of Kansas...quakes estimated to be 4 to 4.5 on the Richter scale occurred on March 27,1917; July 30,1925; July 20,1966; February 20, 1974;...and others during 1934,1948, and 1959.." ***

and:

"...Since local records began in 1882, there have been four earthquakes in the Plant area. These occurred on March 27, 1917; July 30, 1925; June 19, 1931; and July 20, 1966..." ****

* "Fault Indentification Study at the Pantex Plant" - April 1995- McGrath, page 1
** "Fault Indentification Study at the Pantex Plant" - April 1995- McGrath, page 7
*** Amarillo Globe News, Tom Allison, January 21, 1994, Amarillo, Texas
**** "Fault Indentification Study at the Pantex Plant"- April 1995-McGrath page 4

Section A
Page 4

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05.032
continued

4.) Do we have a structural relationship to another structure that has been shown to be capable?

Answer: Yes. "...Holocene faulting has occurred on one portion of the Amarillo Uplift... and may have occurred on another part of the same structure in Potter County" *
and:
" An assessment of natural hazards at Pantex Plant (Jacobs 1993) lists "three major subsurface faults and minor surficial fault" in the area of the Plant, as follows:
(1) 155 miles long, about 25 miles north of site
(2) 43 miles long, about 5 miles south of site
(3) 40 miles long, about 7 miles north of site
(4) 4 miles long, about 20 miles northwest of site, surficial

USR/Blume (1976) have suggested that faults (3) and (4) may connect. " **

PC-016/1
05.032
continued

If a capable fault must show one or more of the above characteristics, and we have just shown that all four characteristics are demonstrated, then it stands to reason that we have a capable fault.

Fortunately for all of us, recent seismic activities at and near Pantex have been light to moderate.

Pantex is currently classified as being in Earthquake Zone Number 1.

Ponder the very wise message contained within the following quote:

" Seismic hazards, most notably active faults, are considered unacceptable for nuclear facilities such as the Pantex Plant"- Daniel McGrath, Soil Scientist
April 1995 ***

* "Fault Indentification Study at the Pantex Plant" - April 1995 - McGrath, page 1
** "Fault Indentification Study at the Pantex Plant" - April 1995 - McGrath, page 6
*** "Fault Indentification Study at the Pantex Plant" - April 1995- McGrath, page 2

Section B, page 1

SPECIFIC DEFICIENCIES
Concerning the:
"Fault Identification Study for the Pantex Plant"-April 1995

1. Holocene displacement datings have not been performed.*

2. Studies that would determine fault transmissivity and stability for siting purposes have not been performed.*

3. Structural sub-surface maps fail to include regional cross-sections that include the Dockum Group relationship to the plant in a meaningful way, or show the Plant as it relates to the Amarillo-Uplift feature.

4. The final TBEG reports had not been completed at the time that this "Fault Study" was submitted, therefore they could not be included in this study. TBEG has not offered any input concerning the conclusion reached in this study, though the author implies that there is agreement. If this is so, then it should be clearly stated.*

5. The focus of the Argonne investigation was to characterize the hydro-geological conditions at the Plant and to help assess the fate and transport of contaminants. The focus was not to study "faults" at Pantex, and yet Argonne makes a point of including a cross-section map depicting a specific fault.** Argonne's input into the conclusion reached by McGrath is not evident. All of the points mentioned above (#4) apply to Argonne as well.

6. The expert for the DOE neglects to mention that the outcome of the previous regional studies conducted by the DOE met with negative results. The high-level waste repository that was proposed for Deaf Smith County was rejected due to geological hazards. Some of the same experts who supported that notion have been seen around town this year. Research indicates that incompetent experts may have been consulted, again.

7. Concerning the copy of the "Fault Identification Study for the Pantex Plant" I have obtained from the TNRCC, I have found numerous errors that cannot possibly all be dismissed as 'clerical' mistakes:
   a) Omitted pages: Section 2.6, Field Surveillance, Omitted
      Section 2.7, Seismic Studies, Omitted
   b) Identical pages: Pages 8 and 9 are identical in every way but page identification.
   c) Evidence of Altered Conclusion: There are two pages identified as page 12, and there is is not a page 11. The first 'page 12' is titled "3.0-Conclusions", and the text type is inconsistent with the type size used throughout the rest of the report. This indicates that the author may have been instructed to change his conclusions.
   d) Broken text: The text from the bottom of page 9 to the following page 10 does not correspond. A page seems to be missing...
   e) Inaccurate Table of Contents: Most of the Table of Contents does not correspond to the page numbers.

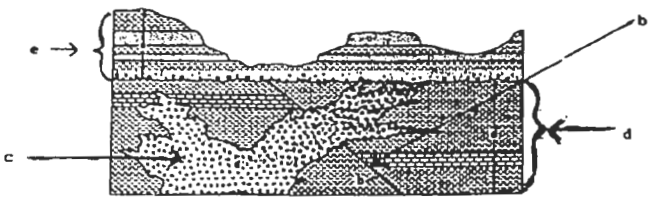
* New information uncovered by TBEG and others concerning geological hazards since last 1994 permit must be considered.
** Argonne, "Draft RCRA Zone 12 Groundwater Assessment" Nov 1995, Figure 2.2

Section B, page 2

SPECIFIC DEFICIENCIES-cont.
Concerning the :
"Fault Identification Study for the Pantex Plant"-April 1995

8. The expert for the DOE overlooks the fact that both 'subsidence caused by salt dissolution' and 'fault damage' can occur or be indicated together. These two types of geological events need not occur exclusive to each other, and do in fact often occur together. The premise he uses to support his argument is mistaken, and excludes a large body of related geological evidence.
For example:

A generalization known as the "Principle of Cross-cutting Relationships" This priciple applies not only to rocks, but also to geologic structures like faults and unconformities.



Above fault b is younger than stratigraphic sequence d
Igneous rock c is younger than fault b
Rock e is youngest of all, by superposition

(The above example is not a picture of the Panhandle geology, but is used as an example of cross-cutting relationships. Actual cross-sections depicting the Panhandle region are shown in the appendix of this report.)

Fault Identification at Pantex
Section C, page 1

SPECIFIC ACTIONS REQUIRED
TO ADDRESS DEFICIENCES:

1. Holocene displacement studies should be performed.

2. Siting for fault transmissivity and stability is indicated.

3. Structural sub-surface maps that include the Dockum Groups in a meaningful regional cross-section should be prepared and distributed for purposes of visual clarification. A regional cross-section, north to south, showing the picture all the way down to the Precambian basement, from Lubbock Co. to Roberts Co. should be presented as well.

4. Material that was obviously omitted from the report needs to be included. (Field Surveillance section, Seismic Studies section)

5. The affects created by human activity unto the surface and sub-surface near the Pantex Plant should be considered in any "Fault Study". (e.g.: bulldozing, excavations, backfilled sink-holes, explosives damage, farming... basically any human activity that has seriously altered the surface and sub-surface in such a way that would serve to mask geological features such as fractures, jointing, lineations, or subsidence)

6. TBEG and Argonne experts need to go on record in regard to their conclusions concerning seismic hazards such as faults that concern Pantex. Independent geologists should be consulted as well.

7. The following represents the most serious issue I have found concerning Pantex, and is a SERIOUS DEFICIENCY. "Lessons learned" from past projects proposed by the DOE concerning geology must be acknowledged Competent experts must be allowed to speak their opinions freely, without threat of coercion economically, academically, physically or morally. The DOE still has not gone far enough in this area, and the DOE must begin to fully recognize the moral obligation these experts, students, and workers have in issues concerning faults and contamination. DOE places too much burden on those it consults when the DOE requires silence concerning the hazards this dangerous industry brings with it wherever it goes. It is un-American to place good people in such a quandry about speaking freely. Keeping the exchange of information under such a heavy "lock-and-key" only serves to squelch the important exchange of ideas required to tackle these really BIG problems. Freedom to speak goes hand-and-hand with freedom to think. Thinking is a specific action required to address this deficiency.

8. The "Fault Identification Study for the Pantex Plant" needs to be rewritten. The above listed actions need to be taken and included in a new report.

9. Those activities at the Pantex Plant that are prohibited (by permit) to be conducted because of seismic hazards need to be relocated to a suitable site.

Fault Identification at the Pantex Plant
Section D, page 1

EVIDENCE SUPPORTING THE
EXISTENCE OF A FAULT AT PANTEX

In this section, I will try to use language that is clearly understood by the average reader.

"What are some of the types of features and activities that can tell us we have an active geological fault?"

1. Earthquakes (seismic activity)
2. Large cracks, fractures, sink spots (jointing, lineation, subsidence)
3. Certain types of water-flow movement beneath the surface soil (sub-surface hydraulic characteristics)
4. Core samples from wells can help to tell us about the way the layers of soils beneath the surface are "stacked".
5. Ground "radar type of equipment can help describe sub-surface layers, and is also helpful in detecting drastically contrasting layers of soil. Vertically tilted soil layers can be an example of historic faulting, as well as an example of underground erosion (subsidence) caused by moving groundwater. Eroison related subsidence can occur in conjuction with a fault, and subsidence can occur without a fault.
6. Ground movement is measured at various stations across America with special equipment that can detect vibrations. These vibration waves can be "followed" back to their strongest point (epi-center). The epi-center of an earthquake directs us to the FAULT responsible for the quake.
7. Photos taken from space can give us a picture that shows a larger view of the terrain. This viewpoint often discloses new clues concerning the structure of our planet.

* * *

EVIDENCE

1. "Do we have earthquakes here?"
ANSWER: Yes. (Page 3)

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05.033

2. "Do our core samples at the Pantex Plant show contrasting vertical and horizontal layers?"
ANSWER: Yes. (TBEG, Argonne, McGrath)

3. "Do we have evidence that the Pantex Plant is near an epi-center for earthquakes?"
ANSWER: Yes. The only local quake on record during this century that successfully damaged a man-made structure occurred in Panhandle, Texas. Panhandle is the closest town to Pantex. The strongest local quakes occurring during this century are said to have had epi-centers located about 10 to 20 miles from the Pantex Plant. (page 3)

Fault Identification at Pantex
Section D, page 2

cont.-EVIDENCE SUPPORTING THE
EXISTENCE OF A FAULT AT PANTEX

4. "Do we have groundwater samples showing differences that can sometimes indicate a fault?"
ANSWER: Yes. According to the DOE expert, water in the Dockom group beneath the Pantex Plant is significantly better than the water found in other area Dockom wells.* This fact indicates that the Ogallala Aquifer is not a confined aquifer. The Ogallala Aquifer may be contributing to a more rapid recharge to the Dockom waters beneath the plant due to a fracture or fault. The TBEG report of May 1995 describes a large "channel" that is allowing water to to flow faster near the top of the "middle Ogallala perching horizon.** Further studies would tell us more about the lower horizons.

PC-016/3
05.034

5. "Did the 'ground radar' type of studies confirm that we have sharply tilted vertical soil layers beneath the Pantex Plant?"
ANSWER: Yes. And further study would provide more description of these layers.

PC-016/4
05.035

6. "Do we have sink spots (subsidence) at the Pantex Plant?"
ANSWER: Yes. The playas at Pantex are "sinks". Subsidence has influenced the development of many of the larger playa basins at the Pantex Plant.**

PC-016/5
05.036

7. "Did the expert for the DOE overlook the fact that he proved the case demonstrating the characteristics of a capable fault?"
ANSWER: Yes. Unfortunately, when scientific papers are not shared with other experts, even a good scientist can make a big mistake. A process called "peer review" involves many experts getting together to see if somebody's idea is right or wrong. "Peer review" is pretty important to scientists, because they can look alittle silly if they go on record with bad information or wrong ideas. Because we cannot control earthquakes, experts try to look very hard to identify the safest places to build important buildings such as the ones at the Pantex Plant. Experts agree that geological faults are not the safest places to build important buildings on. Buildings that handle very dangerous nuclear materials and hazardous chemicals are not suppose to be built on a capable fault.

PC-016/6
05.037

8. "Do we have experts who have indicated that the Pantex Plant was built on a geological fault?"
ANSWER: Yes. On January 8,1994, a petroleum geologist named Greg Wilson talked about his studies into the High Plains area. He indicated that Pantex was on a fault, and thought more studies should be done to prove this. Other experts from the Argonne National Lab have included maps in their studies that show a picture of a deep fault beneath the Pantex Plant. An expert from TBEG has shown that subsidence has played a part in the formation of playas on the High Plains. Some experts use very clear language to explain their positions, and some do not. Sometimes experts like to use very big, difficult words if they don't want to answer a question. We need to be careful about becoming confused when experts talk, and learn to look more carefully at the facts.

PC-016/7
05.038

* "Fault Identification at the Pantex Plant" April, 1995, Mc Grath, page 5

** "Summary Hydrogeologic Assessment U.S. Department of Energy Pantex Plant, Carson Co. Texas" TBEG, May 1995

Fault Identification at the Pantex Plant
Section D, page 3

cont.-EVIDENCE SUPPORTING THE
EXISTENCE OF A FAULT AT PANTEX

In Section A, pages 3 and 4, I discuss the proofs of a capable fault as given in the "Fault Identification at Pantex Plant" report by Daniel McGrath. This page is designed to clarify some of the language used on those pages.

A fault is a break in the earth' crustal rocks along which there has been some movement.

A fault scarp has triangular faces on the ends of the divides (the spur ends). Such triangular faces indicate recent movement along the fault.

The word "Holocene" refers to our most recent period in geological time (within the past 11,000 to 12,000 years). Holocene displacement are considered to be very young, in geological time.

EXCERPT FROM "Design and Evalution Guidelines for Department of Energy facilities Subjectad to Natural Phenomena Hazards" of June 1990, under the auspices of Lawrence Livermore National Laboratory (UCRL-15910)

Page 3-1 "...Other earthquake effects that can be devastation to facilities include differential ground motion induce by fault displacement, liquefaction, and seismic-induced slope instability and ground settlement. If these latter earthquake effects cannot be avoided in facility siting, the hazard must be eliminated by site modification or foundation design. Existing facilities located on active fault traces, adjacent to potentially unstable slopes, or on saturated, poorly consolidated cohesionless soil or fill material pose serious questions as to their usage for critical missions or handling hazardous materials..."

EXCERPT FROM "Seismic Hazard and Building Structure Behavior at the Pantex Facility" April 1976- URS/Blume

Page 37 "...hazard calculations were performed...The reason for performing this calculation is that there appears to be a concentration of seismic activity in the neighborhood of the site.."

Fault Identification at the Pantex Plant
Section D, page 4

TYPES OF FAULTS

A MESSAGE TO ACADEMIA AND RESPONSIBLE AUTHORITIES

PC-016/8 05.039

A hard look at the facts concerning the sub-surface surface conditions at the Pantex Plant, in the present (here and now) time is in order. Nearly every branch of specialized investigation is required to do this. Capable engineers, physicists, geologists, hydrologists, chemists, biologists seismologists and historians all need to be consulted to clarify the the current situation.

PC-016/8 05.039 continued

If academia chooses to mismanage the vast body of information that has been generated in recent investigations into the Pantex Plant, and deliberately presents a false model of the circumstances beneath the Pantex Plant, then they will also predict a false outcome. Anticipating change and predicting outcomes was once solely the responsibility of "seers" and prophets. But science, of its own curiousity, evolution, and arrogance now shares a responsibility for predicting accurate outcomes. The genie cannot be put back into the bottle, but perhaps the genie can be better understood and better disciplined. If each branch of the sciences now met openly to discuss and review the current information generated by the investigations conducted recently at the Pantex Plant, a more useful "band-aid" might be applied to the wound.

Some of the mysteries of the Universe may continue to elude man, but certainly the mysteries now known can be put to more beneficial uses. The "time" has more than passed for putting many of our technological advances to uses that would promote the greatest good. The Cold War is over, but the affects of this war linger.

Terrorist incidents might continue to plague the world for many years to come, as we have cowards in every walk of life (including science). An informed population will be better able to handle the difficulties to come than an uninformed population will be. This is true because:

Ignorance is expensive.
Ignorance is dangerous.
Ignorance can threaten our survival.
Ignorance is a lack of understanding, and people fear what they do not understand.
Fear can create panic.
Fear can start wars.
Fear seperates people.
Fear cancels out vision.
And it is vision that drives hope.

While the actual facts may shatter some perceptions of reality, "the facts" need not dash all hope and vision. A changed reality simply requires a changed vision.

The new vision, as put forth in this paper, requires that academia and science keep the lines of communication open, and honest, and cautious not to formulate hasty conclusions. This new vision would ask government agencies to do the same. A new vision may stave off certain destructions only an ignorant, uninformed population would allow.

CLOSING

Neither the expert or the non-expert should become "lulled into complacency" just because the strength of local earthquakes during this century have been light to moderate. Geological fault-science has proven that the ground shakes hardest along fault lines. Although new or unknown faults can also surprise experts by suddenly becoming seismically active, known faults simply should not be ignored.

PC-016/8 05.039 continued

If the tectonic activity continues to increase substantially along the Pacific Rim, it could affect tectonic activity as far away as places like the Panhandle of Texas. Assessing geological sensitivity for the purpose of siting work with dangerous actinides is urgent and vital.

Earthquake activity both at and around the Pantex Plant has been fairly consistent since records started a century ago. Not a single decade has passed in the Panhandle that some amount of seismic activity has not occurred.

Above all, the contamination concerns may become secondary to criticality concerns, as a chain reaction in a geological setting would generate radiation and extreme heat in addition to releasing fission product contamination.* As some experts very well know, it only takes small amounts of certain actinides suspended in water to achieve criticality. Because of the instability of the Amarillo Uplift/Whittenburg Trough/Potter County Fault connection to the Pantex Plant, and the threat the surface and groundwater may present to certain actinides indicated to already be trapped in the soil**, appropriate actions need to be taken promptly.

"Seismic hazards, most notably active faults, are considered unacceptable for nuclear facilities such as the Pantex Plant"-
Daniel McGrath, Soil Scientist
April 1995

* " Considerations of Autocatalytic Criticality of Fissile Materials in Geological Repositories April 4, 1996, H.E. Kastenburg and Staff at University of California, under the contract with Los Alamos National Lab.

** 1961 Plutonium disperal accident indicated in Morrison Knudsen Corp. Data Visualization For Miscellaneous HE/Radiation Release Sites, Sept. 18-19, 1995, Bldg. 12-44E "SNMU Reference Guide" 1995-1996, Potentially contaminated water with Plutonium in the sub-surface leaching beds under building 12-44E following an accident in 1966.

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b) Geophysical Surveys
c) Aquiring research material
3-21-91 Core and Outcrop Descriptions (Gustavson)2pgs.
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9-1-92 BEG Drill Program 6pgs. text, 9 pages charts
9-28-92 Geostastisticals of Field Saturated Hydraulic Conductivity (Scalon) 5pgs.
3-31-93 Wastewater Disposal (Gustavson) 9pgs. tx, 6pgs. charts
4-15-93 Seismic Studies of Playa (Paine) 24pgs. tx, 13pgs. charts
6-1-93 Playa Basin Fills Near Pantex Plant (Hovorka) 9pgs text, 8pgs charts
7-21-93 #17 Preferential Flow 11pgs
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1980-1991
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8 8 8

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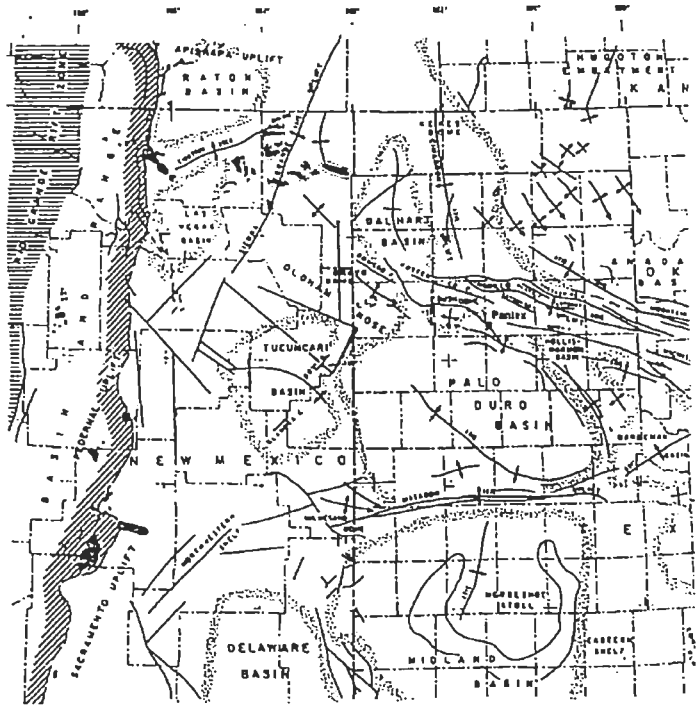
ATTACHMENT 1, Part 1



Attachment 1, part 2

Figure 2.2 Regional Tectonic Map

(Report of Investigation No. 187, Tectonic Structures of the Palo Duro Basin, Texas Panhandle–1989, by Roy T. Budnick, page 11)

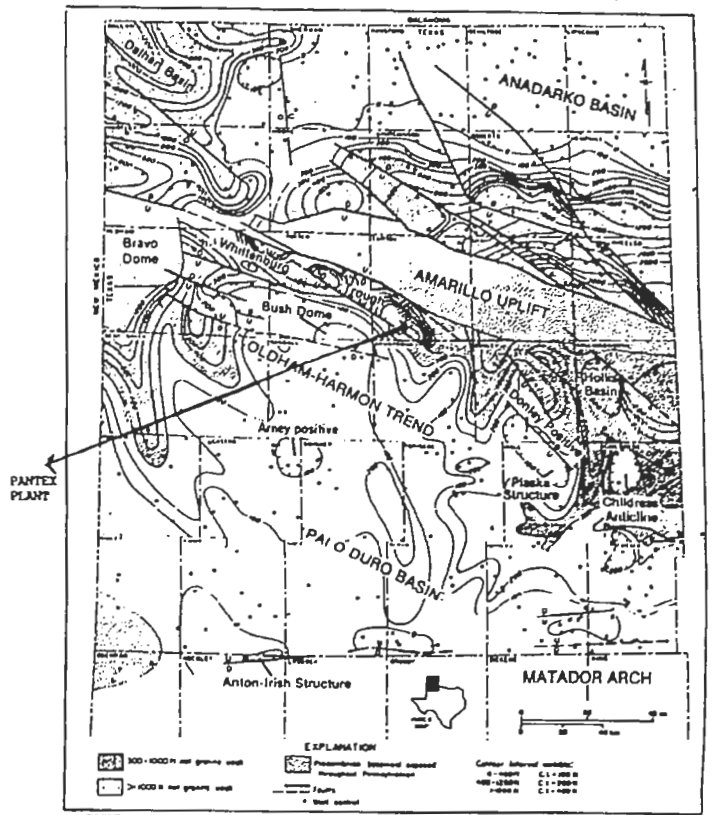


FIGURE 8. Isolith map of Pennsylvanian and Lower Permian (Wolfcampian) arkosic clastics (from Dutton, 1982). The clastics were derived primarily from the Amarillo Uplift and trapped in the Whitenburg Trough and other deep basins bordering the uplift. Some of the clastics reached the Palo Duro Basin through lows along the Oldham-Harmon trend.

11

ATTACHMENT 1, part 2

(Report of Investigation No. 187, Tectonic Structures of the Palo Duro Basin, Texas Panhandle-1989, by Roy T. Budnick, page 11)

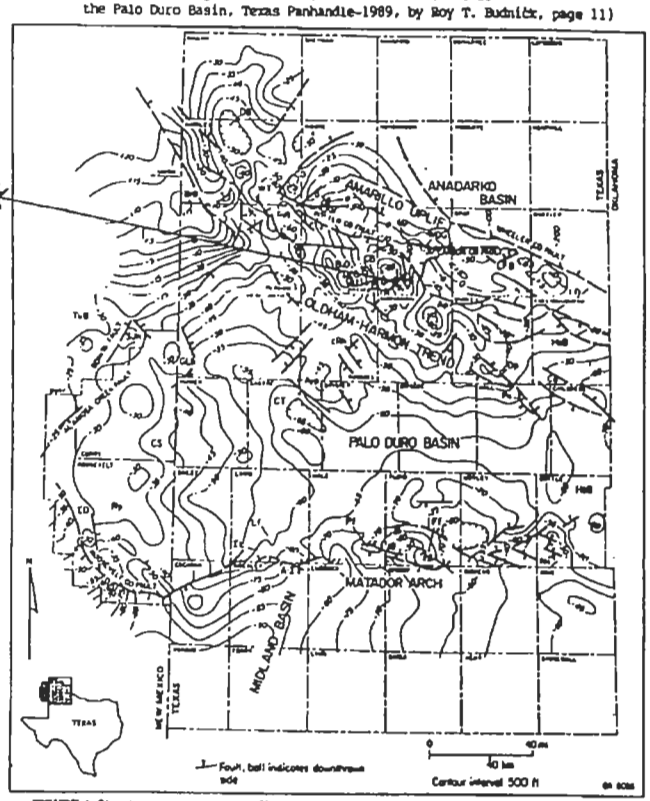


FIGURE 4. Structure-contour map, top of basement, southern Texas Panhandle. Based on well control and on seismic lines shown in figure 3. 6D=6666 Dome; Af=Arick field; A la=Aston-Irish structure; Ap=Armstrong positive; Ayp=Arney positive; BrD=Bravo Dome; BuD=Bush Dome; Ca=Childress anticline; CB=Carson Basin; CD=Channing Dome; CS=Clovis Sag; CT=Castro Trough; cRh=central Randall high; DB=Dalhart Basin; Dp=Donley positive; ED=Elida Dome; Ff=Floydada field; GLh=Garcia Lake high; HaB=Hardeman Basin; HaB=Hollis Basin; IL=Illusian Lake structure; JRD=John Ray Dome; LD=Lela Dome; Lf=Littlefield structure; LFB=LeFors Basin; Na=Narciso structure; Pf=Petersburg field; Pa=Plaska structure; Rp=Roosevelt positive; SJh=San Jon high; TaB=Tascosa Basin; TuB=Tucumcari Basin; WDG=White Deer graben; WT=Whitlenburg Trough; XL=Exell Dome.

7

ATTACHMENT 3

(Report of Investigation No. 187, Tectonic Structures of the Palo Duro Basin, Texas Panhandle-1989, by Roy T. Budnick, page 11)

ATTACHMENT 4

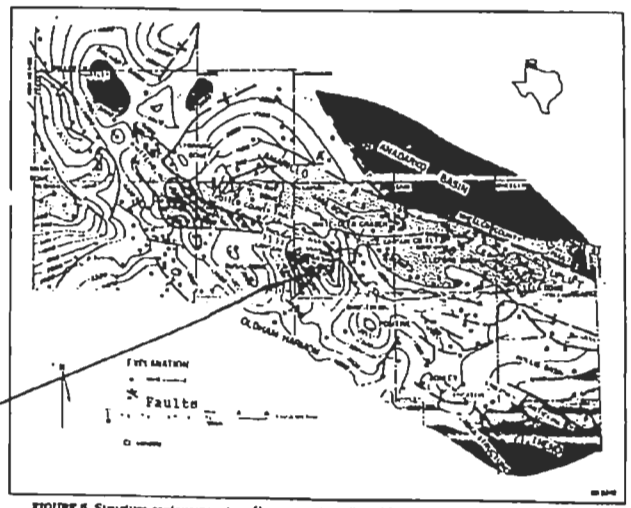
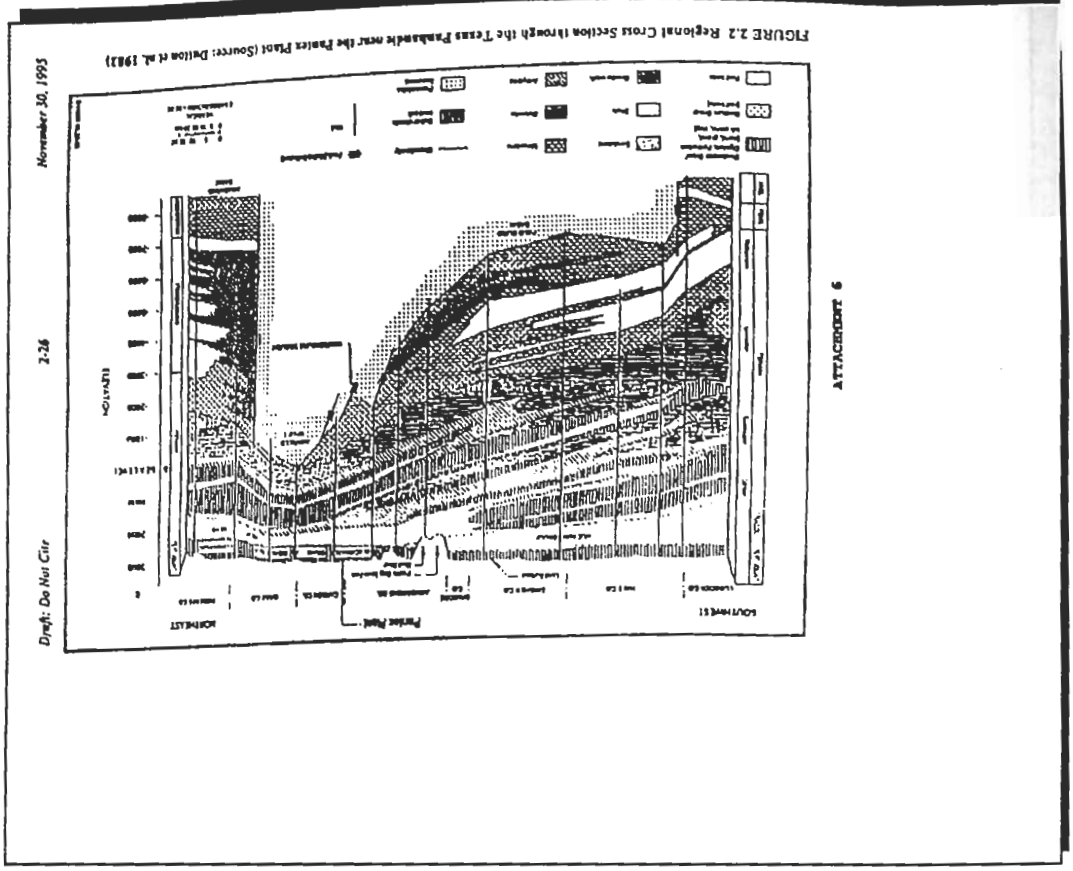


FIGURE 6. Structure-contour map, top of basement, Amarillo Uplift. Cross section A-A' shown in figure 10.

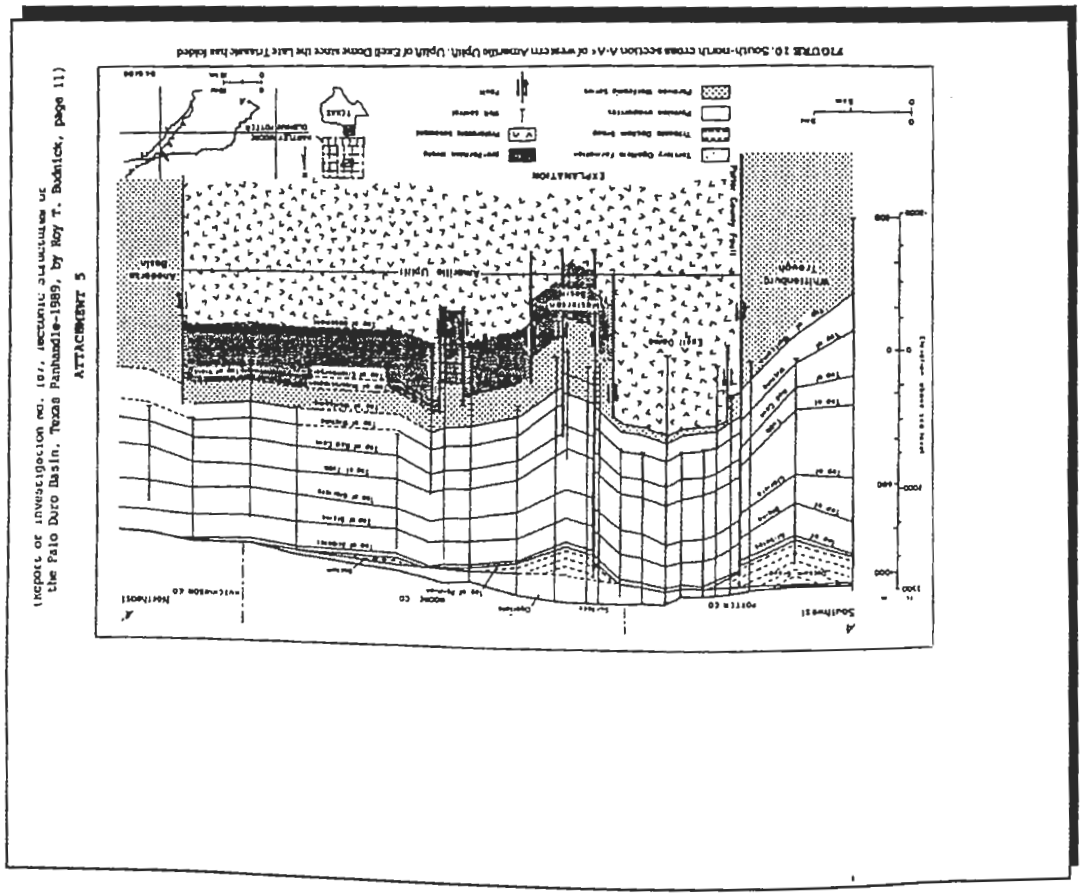
PC-016
PRIVATE CITIZENS

PAGE 26 OF 28



PC-016
PRIVATE CITIZENS

PAGE 25 OF 28



Amarillo Globe

69th Year, No. 332 ★ Amarillo, Texas Friday, January 21, 1994 4 Sections

Panhandle not immune to temblors

Aftermath:

Earthquake refugees spend chilly night outdoors UDA

Earthquakes in area Jan. 1, 1977 - March 31, 1986

ATTACHMENT 7

Area

Sightseers take gander at hole that used to be a cotton field

ATTACHMENT 8

DRAFT EIS FOR THE CONTINUED OPERATION OF THE PANTEX PLANT
AND ASSOCIATED STORAGE OF NUCLEAR WEAPON COMPONENTS
Amarillo, Texas June 25, 1996

PC-017/1 11.045

1. What kinds of studies (if any) have been conducted to learn the effects of the proposed actions -- storage of large amounts of plutonium, chemicals, nuclear waste, uranium and other toxic substance and/or the porcessing/reprocessing of those substances on agriculture production, sales, uses, etc?

2. What were the results of such studies if any have been made? Agriculture is mentioned very briefly in the EIS. Agriculture is the major industry in the Texas panhandle and the only industry near the Pantex Plant.

PC-017/2 23.049

3. How can you determine the safety and purity of our agricultural activities and products if no thorough studies have been done?

PC-017/3 11.046

4. What studies have been made on the long term effects of those activities being proposed or possibly being proposed on our agricultural products? When were such studies made? How were they done? What results were found? Where were they done? Were neighboring farmers and ranchers consulted? Who? Major plans for the future of Pantex cannot be made until such studies are made and found to be possitive.

PC-017/4 14.128

5. What studies have been made on the short term and the long term health and safety of those of us living near the plant, agricultural workers on and around the plant, and the workers at the plant? Have past Pantex workers' health been studied? Have there been follow up health studies been made on the workers? How were the health and safety studies done? When? What are the results? No decision of the future of Pantex can be made until answers to these questions are assessed. Answers can only be found after adequate studies have been made.

PC-017/5 14.129

6. We are told the activities at the plant have not and will not have any effect or at most limited effect on the Pantex workers and on the neighbors and agricultural workers; yet, studies have not been made for those conclusions. We are relatively certain that past activities have been a serious threat to both workers and neighbors. The DOE and the contractors seem very reluctant to admit to those health and safety concerns. They appear to get very upset when any instances of health and safety get out. Why? Should not the public be kept informed of such matters? If not, why not?

PG 2

PC-017/6 08.002

7. Last October 4, 1995, a very large explosive charge was set off for an emergency management drill. Our home received major damages. We would have been better off to have torn our home down and rebuilt from the ground up. We were originally told that the charge was 110 pounds of explosive. Later, plant officials have said only 80 pounds of explosive was used. This was set off about one-half mile southwest of our home. We are now learning of other neighbors who have damages that possibly resulted from that explosion. Throughout the many years of living next to Pantex, the testing of high explosives probably caused damages to our homes resulting in cracking, breakage, etc. The regular shaking and jarring could not possibly do our homes and property any good. Will the DOE repair and/or replace or pay damages for all these damages? Will the DOE pay for the months of inconvience and nerve wreaking experiences we have been through? Most of us cannot afford to spend anywhere near what the DOE can and does to keep from paying claims. Example: the John Bell compensation case in which Mr. Bell was made very ill because of uranium toxic fumes while he was drilling a uranium plug from a warhead. The DOE spent hundreds of thousands of dollars to keep from paying about a $85,000 claim.

PC-017/7 22.020

PC-017/8 14.130

PC-017/9 14.131

8. In the event of a disaster that causes damages to our agricultural products and/or land, and/or our inability to market our products because of possible contamination, will the DOE pay for those damages at a fair market value in a timely manner? Will they pay willingly without our having to take them to court? Will the DOE pay us for the lose of our top soil and clean the damaged soil?

PC-017/10 06.058

9. There are at least 7 playa lakes just off the Pantex site on all sides of the plant. Rainwater runs off the plant site into the barrow ditches around the plant and drain into those off site playas. This drainage is not addressed in the SEIS. The Pantex lake receives none of the runoff. Why were the other playas excluded? The watershed on the south of lake Meredith, a resevoir for 13 cities, begins on the northwestern corner of Pantex. Water from that section of the plant (where the various EIS's show a nuclear reactor or two may be constructed) runs into Lake Meredith.

PC-017/11 06.059

10. Page 4 - 79 use of water from perched aquifer and also the Ogalala aquifer is just not true as contamination in in the domestic wells of a neighbor to the east of the plant and a well to the south of the plant. Why are false statements being made? What measures are being taken to clean up the water off site? This contamination must be coming from the "PANTEX AQUIFER." Pantex aquifer is a result of the waste being run into on site playas. How will the contamination of the Ogalala be cleaned? How do you determine "insignificant" amounts? Does DOE define "insignificant" as anything or amount the DOE does not want the public to believe may be harmful? Can "insignificant" amounts become "significant" if ingested or exposed over long terms? What is the long term effect on health and safety?

pg 3

PC-017/12 02.025

11. Page 4 - 02 states that pit reuse is not a current activity at Pantex Plant. Can you assure us tht the reuse will never become an activity at Pantex? Is reprossing,MOX, or other potential pit activities ever to be an activity at Pantex? If so, should not those issues be considered and studies on their effects on health and safety for workers, neighbors, and agricultural workers, the potential contamination of our water, air, and agricultural activities and products be addressed before the future at Pantex is determined?

PC-017/13 16.030

12. If transportation of toxid materials and/or radiation materials to other sites poses a threat to peoples along the route of transportation and to other travelers along the roadways, why would the storage of those substances not pose a greater threat to the health and safety of residents and workers at or near Pantex? We will have long term, 24 hours per day exposure which will be much greater than the meeting of a fellow traveler along the interstate or the exposure of someone in a roadside park.

PC-017/14 14.132

13. Is there a greater risk to farmers who are plowing and working the soil and harvesting of crops near the site than to the general public? What studies have been done to determine the potenttial of greater exposure? Should not these studies be done? Is there a danger to our children playing in their sandboxs or their swimming pools? Page 4 - 104 discusses collective dose to surrounding population in a 50 mile radius. Would not peoples living next to the plant, especially those downwind be expected to receive a greater dose than someone who lives in Vega to the west, up wind, and about 40 miles away? Would not people downwind receive higher doses than those generally up wind? If not, we ask for your proof.

PC-017/15 14.133

Thank you for giving us this opportunity to express our concerns and to ask for further studies before any decisions are made for the future of Pantex Plant.

Jeri and Jim Osborne
Route 2, Box 11
Panhandle, TX 79068
806-335-2163

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05/09/96 15:21 ☎ +++ AL EISPS 003/005

4-9-96
Box 133
Kress Tx 790:

Dear Ms. O'Leary

I am a 65 year old family man who has lived in and around Amarillo, Tx. and the Pantex plant most of my life.

I understand from reading news papers that you would like to have people of this area express their opinions about the Pantex plant.

The most hazardous materials known to man, are being stored above ground in barrel like containers, This is insane in my opinion.

Pantex plant is located on the approach to Amarillo International Airport. This is just an accident waiting to happen in my opinion.

Pantex plant is located in the center of the nations bread basket. Appx. 3 million head of cattle are on feed lot slaters in this area. all kinds of vegetable and foods are produced in this area.

05/08/96 15:21 ☎ +++ AL EISPS 004/005

PC-018/1
14.001

There are over 1 million people living in this area.

all of the above would be in danger of contamination if an accident did occur at Pantex.

I vote to close the Pantex plant as soon as possible, a few jobs are not worth the risk, in my opinion.

Sincerely
Jim Dee Smith

5-25-94

Mr. Mantell Pounds

I am a 65 year old family man I have spent most of my life in and around amarillo TX, and the Pantex plant is close by.

I would like to see the Pantex plant closed and the mess cleaned up.

Texas attorney General Dan Morales recently accused the D.O.E of turning the Pantex plant into a nuclear dump. and I believe he is right.

PC-019/1
13.010

Included is another problem associated with the plant pointed out by amarillo globe news.

I feel like the people planners in Washington D.C. think there is nothing in the Texas panhandle but a few dirt farmers & prairie dogs, and maybe we are despicible.

Sincerely
Jim Dee Smith
Box 133
Groom TX 79052

City won't search for contaminated glove

By Jill Mansfield
Globe-News Staff Reporter

May 4 - 94

City officials decided Thursday not to search the Amarillo landfill for glove parts contaminated with low-level radioactive materials from Pantex Plant.

City Public Works Director Mike Kennedy said the city opted not to search the landfill after learning that the gloves could only contain low levels of radiation, a molecular form of uranium used in nuclear weapons, warfare and missile defense.

"The consensus here is currently low, it being a municipal landfill, you start digging it up searching for something, you're going to increase a potential for much more serious hazards than what this poses," he said.

Although trace amounts may be present on the gloves, Pantex officials said the material posed no safety or health threats.

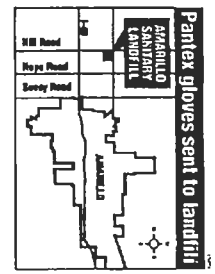
On Thursday, Pantex officials notified the city that up to 12 pairs of contaminated gloves may have been shipped to the landfill between January and March. City officials had offered to pay a contractor to search for the gloves.

Gary Walker, manager of Pantex's waste management and environmental restoration division, said officials discovered the problem Wednesday after a safety worker

groundwater changes to how waste materials are handled for the WSS decontainment program. The WSS or Technical Site is a former weapons assembly and disassembly area.

Pantex officials said the gloves, usually worn by workers handling radioactive materials, were shipped in the landfill, but the material could be in its bags that were shipped to the landfill.

He said the gloves could fall within the plant's safety guidelines for allowing low-level radioactive materials for disposal in municipal landfills. Pantex officials said the gloves fall within those guidelines. City officials and the Texas Health Department's Bureau of Radiation Control were notified of the situation.



PC-020
PRIVATE CITIZENS

David C. Losey
1628 Citation Drive
Aiken, South Carolina 29803-5224

May 7, 1996

Ms. Nanette Founds
U. S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

Dear Ms. Founds:

I'd like to offer this comment on the EIS for the *Continued Operation of the Pantex Plant*....

The EIS summary states that "Pantex Plant has sufficient storage capacity to safely accommodate 20,000 pits." It would be good to have an assessment of how thoroughly the proposed pit storage facilities meet the DOE security requirements. For whatever reasons, DOE requirements are sometimes applied inconsistently between the DOE sites. The plan set forth in the EIS needs to be based on full compliance with DOE requirements.

Thanks for the opportunity to comment on this program.

Sincerely,

David C. Losey

David Losey

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J.M. OSBORNE
1031 MURRAY ST.
WICHITA, KS 67212
(316)721-7873

29 May 1996

Nanette Founds
U.S. Department of Energy
P.O.Box 5400
Albuquerque, NM 87185-5400

To whom it may concern:

I am writing in regard to the Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components. In particular, I wish to discuss Appendix E - Aircraft Accident Analysis. Previously, I have commented on several aspects of the Aircraft Hazards Analyses that have been performed in support of the reconfiguration of the Pantex plant and was pleased to see that my some concerns have been addressed to varying degrees.

Restating my professional background, I am an aerospace engineer specializing in propulsion and aircraft performance. I earned my Bachelor of Science degree at Texas A&M University and have worked in the aerospace industry since 1983. More specifically, I have worked in the general aviation industry since 1985 and have participated in a number of aircraft certification programs. I am currently employed by an aircraft manufacturer, where I am involved in aircraft and propulsion system performance analysis and the interpretation of flight test data.

In order to make my comments easier to correlate to Appendix E, I have chosen to present them by paragraph number in the following table.

COMMENTARY ON DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONTINUED OPERATION OF THE PANTEX PLANT AND ASSOCIATED STORAGE OF NUCLEAR WEAPON COMPONENTS, APPENDIX E - AIRCRAFT ACCIDENT ANALYSIS

	SECTION	COMMENTS
	E.1	No comment
	E.2	First paragraph contains typographical errors.
PC-021/1 15.003	E.2	It is implied that the probability of an aircraft hitting a facility would be unacceptable if it exceeded 10^{-7}. DOT (FAA) Aircraft Systems Safety Analyses tend to place events with probabilities greater than 10^{-7} in the category of "improbable" and require that such an event not create any hazard. If the probability is the range, 10^{-9}, it is considered "highly improbable" and the event may result in a hazard but no loss of life. An event of probability, 10^{-13}, is considered "extremely improbable". No event that would be considered as "catastrophic" or resulting in the loss of life may exceed this order of magnitude in probability of occurrence. Since the perforation of or the scabbing of a structure containing nuclear weapons material is considered as having the potential for causing an explosion, this event must be considered as "catastrophic".
PC-021/2 15.004	E.2.1	The characterization of mode of operations is much improved over that in the original analysis, though I do have some question regarding the relative values of γ. I find it somewhat surprising that the value for military aircraft is lower than that for commercial aircraft. This is particularly troubling since fighter, attack and training aircraft tend to have a somewhat higher overall accident rate.

	SECTION	COMMENTS
PC-021/3 15.005	E.2.2	The impact angle used in the analysis is 15°. This approach ignores the possibility of higher angle impacts such as those demonstrated by the United Airlines Boeing 737 in Colorado Springs, the US Air Boeing 737 in Pennsylvania, the American Eagle ATR72 in Indiana and, more recently, the ValuJet DC-9 in Florida. (Incidentally, at least three of these accidents occurred during the "inflight" phase of flight.)
PC-021/4 15.006	Table E.2.2-1	General Aviation "Turbojets" have wingspans of up to 90 feet.
	E.2.3	No Comment
	E.2.3.1	No Comment
	E.2.3.2	No Comment
PC-021/5 15.007	E.2.3.3	I question the accuracy of the stated equation for the speed of sound in soil. This is stated as: $C_s = [(E_s \bullet g) + \rho]^{0.5}$ where C_s = the speed of sound in soil (ft/sec) E_s = the modulus of elasticity of soil = 470000 lb/ft^2 ρ = the density of soil = 130 lbs/ft^3 g = the acceleration due to gravity = 32 ft/sec^2 (actually, g = 32.174 ft/sec^2) Using these values, I calculate the speed of sound in soil to be 348 ft/sec. I find this to be quite low in light of the Sea Level, ISA value for the speed of sound in air (1116 ft/sec). Unfortunately, I do not have ready access to references regarding the values of E_s and ρ.
	E.3	No Comment
PC-021/6 15.008	E.3.1	It should be noted that the 4800 ft Mean Sea Level (MSL) ceiling for the prohibited airspace over the Pantex plant equates to approximately 1200 ft Above Ground Level (AGL).
	E.3.1.1	No Comment
PC-021/7 15.009	E.3.1.2	It is stated that helicopters have been omitted as a hazard "because they are forbidden from flying in the airspace over Pantex Plant and have little potential to penetrate facilities of interest." This is an incorrect statement. Helicopters are prohibited from operating over the Pantex Plant at altitudes of less than 4800 ft MSL. They are free to overfly the plant at higher altitudes. Further, some helicopters operate at extremely high weights and flight speeds. For example, let me submit the Sikorsky MH-53.
PC-021/8; 15.010	E.3.1.2	There is a typographical error in which the Saab SF340 is referred to as the SF34.
PC-021/9; 15.011	E.3.1.2	What category of operation do test flights by aircraft from the modification and maintenance facilities at Amarillo International Airport fall under?
PC-021/10 15.012	E.3.1.2	RAMS data from 25 days in May 1995 were used to determine the spectrum of overflights on each high-altitude jetway. Since this data is recorded by computer, why was the sample only 25 days? What was the reasoning behind the choice of May 1995? Was this period truly representative, or was this selection made as a means of weighting a particular result? Seasonal changes in both air traffic and preferred routings could result in different answers.
PC-021/11 15.013	E.3.1.2	Are stated distances to airways the distances to the airway centerline or to the edge of the airway. In general, federal airways extend 4 nautical miles to either side of the centerline. As they are defined by the VORTAC's, at some distances they may be somewhat wider than this minimum value.

PC-021
PRIVATE CITIZENS

	SECTION	COMMENTS
PC-021/12 15.014	E.3.1.3	All commercial operations from Runway 04 were assumed to be bound for Dallas on the 105° airway. What about test flights from the maintenance and modification facility located Amarillo International Airport?
PC-021/13 15.015	E.3.1.4	Again, I am surprised that the value of γ for military aircraft, particularly the small sub-category is lower than that for air carriers. Again, combat and training aircraft tend to have a higher accident rate than airliners.
PC-021/14 15.016	Table E.3.1.4-2	General Aviation Turbojet wingspan is too small. Examples of up to 90 feet are easily found - especially in the ranks of new products.
PC-021/15 15.017	Table E.3.1.4-2	Airliner landing skid distance is given as 1868 feet while general aviation turbojet landing skid distance is quoted as 37 feet. The landing speeds of both classes of aircraft are comparable so the skid distance must be treated as comparable. In fact, any general aviation aircraft that only skids 37 feet must have either been moving very slowly or impacted something very solid. With a 15° impact angle, this is unrealistic and misleading.
PC-021/16 15.018	Table E.3.1.4-7	Impact velocities stated in table are unrealistic. A general aviation turbojet moving as slowly as 152 ft/sec (90 knots) is indeed in serious trouble. These aircraft are fully as fast as airliners and many military aircraft. If an airliner can impact the facility at 422 ft/sec (250 knots), it must be assumed that general aviation turboprops and turbojets can as well. These aircraft are certified to the same regulations (FAR Part 25) as air transports and tend to operate in a similar manner.
	Table E.3.1.4-11	See comment on E.2
	Table E.3.1.4-12	See comment on E.2
PC-021/17 15.019	E.3.1.5	Similar comments to those in E.3.1.4.
	E.3.1.6	Stated probabilities for damage exceed guideline maximum by 2 orders of magnitude.
	E.3.2	No Comment
	E.3.2.1	No Comment
	E.3.2.2	No Comment
	E.3.2.3	No Comment
	E.3.2.4	No Comment
	E.3.2.5	No Comment
	E.3.3	No Comment
	E.3.4	No Comment
	E.3.5	No Comment

PC-021/18 15.020

As you can see, there are still a rather large number of inaccuracies in the analysis. I recognize that the Aircraft Accident Analysis has been performed in accordance with the guidelines presented in the Draft DOE Standard, "Accident Analysis for Aircraft Crash into Hazardous Facilities", however, it is my contention that this methodology itself is still lacking in a number of areas.

PC-021/19 15.021

I cannot dispute the contention that the likelihood of an aircraft crashing into a facility containing nuclear material is remote. My question for you now is "What if the unlikely happens?" If a light aircraft impacts an earth berm-protected igloo after sliding off most of its speed, the answer is most likely, "Nothing." Alternatively, if the aircraft is large and/or impacts the structure at a high velocity, the potential exists for a catastrophe of tremendous proportions.

PC-021/20 15.022

Moreover, the analysis only predicts the probability of and partial damage potential of an accident. No attention is given to the scenario of an intentional crash into the facility by a suicidal pilot. Where once this would have been unthinkable, the events of recent years have shown that the unthinkable can and does happen. After all, who would have anticipated the bombing of the World Trade Center, the bombing of a federal office building or the suicide of a distraught student pilot by crashing his airplane

PC-021
PRIVATE CITIZENS

PC-021/20 15.022 continued

into the White House. As I pointed out in my comments on the Aircraft Accident Analysis, the prohibited airspace over Pantex extends only up to approximately 1200 ft above ground level. Under these circumstances, even basic single-engine general aviation aircraft beginning at a cruising speed of 90 knots (152 ft/sec) can go from legal flight to being imbedded in a hazardous facility in less than 8 seconds. There is simply no way to stop such an attack without undue danger to all air traffic in the area.

PC-021/21 15.023

Further, the recent Valujet accident in Florida leads me to raise the question of emergency use of the runways at Amarillo International Airport. The proximity of Amarillo to the major East-West routes and the availability of an extremely long runway makes for an attractive option in the event of an inflight emergency. In such an event, an aircrew is permitted to waive all regulations in the attempt to perform a safe landing. With the prevailing southerly winds, and the location of the Pantex plant, the chances of an aircraft making an overflight of the hazardous facilities while already in a degraded state are extraordinarily high. Will the facilities at Pantex swallow and contain a crashing airliner as effectively as the Florida Everglades?

PC-021/22 15.024

The presentation of pages of probabilities does little to address the "What ifs" of the hazard presented by normal aircraft operations in the vicinity of hazardous facilities. Perhaps of more importance, these probabilities do nothing to address the possibility, though remote, of malicious intent. Further, normal aircraft safety analyses tend to address only the hazard to the aircraft and its occupants, with some consideration given to the event that injury might occur if the aircraft or its components strikes individuals on the ground. It is important to note that only limited damage to other than the aircraft itself is addressed. In the event that an aircraft hits and perforates a facility containing fissile material for nuclear weapons the potential for damage is not limited to the immediate vicinity. In this case, we are dealing with the potential for widespread impact, including regions far downwind of the accident site.

If I can be of any assistance, please do not hesitate to contact me at home or through my parents, Jim and Jeri Osborne.

Regards,

Mike Osborne

cc Jay Rose
Thomas F. Williams

PC-022/1
23.039

I would like to request you hold public hearings in Albuquerque on the Part of Storage of Nuclear Weapons components as our City is one of the possible cites.

I especially think it is foolish, unhealthy and a danger to place nuclear weapons or components in a large metropolitan area such as Albuquerque with 600,000 people.

Sincerely,
Bob Anderson

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P.O. Box 4734
Star City, WV 26504

June 20, 1998

Ms. Nanette Founds
U.S. Department of Energy
Albuquerque, NM 87185-5400

Dear Ms. Founds:

Having reviewed the Draft Environmental Impact Statement (EIS) for the Continued Operation of the Pantex Plant and Associated Nuclear Component Storage, I have a few comments. First of all, I appreciate that this report has addressed many concerns expressed by citizens groups with regard to previous reports. The writers and compilers of the report should be complimented on their efforts in this process. PC-023/1 23.038

With respect to water resources and water quality, I understand that groundwater and surface water contamination has been attributed to past activities at Pantex Plant. Heavy metals, solvents, etc. found in excessive concentrations in the perched groundwater can be linked to poor disposal practices in the past, and improved waste handling should limit future contamination. However, since soils in recharge areas (including playas and ditches) are contaminated, the contaminants can continue to move to the perched aquifers. I am concerned about the quality of water in some relatively shallow domestic wells in the vicinity. Your report states that at least two domestic wells draw water from perched groundwater. PC-023/2 06.046

Also, it is possible that the water in the perched sources can move to the Ogallala aquifer. The hydraulic gradient of the Ogallala in the vicinity of Pantex indicates well drawdown under Pantex Plant toward the City of Amarillo well fields in Carson County northeast of the plant. In other words, contaminants that leach to the Ogallala under Pantex will likely move toward the wells supplying water to the City of Amarillo. The City of Amarillo has pledged up to 1,460 million gallons per year to Pantex Plant, up from the 221 million gallons used in 1994. If pumping rates from these well fields increase, the well drawdown will increase, thereby increasing the hydraulic gradient and increasing the rate of movement of these contaminants toward the city's water supply. PC-023/3 06.047

The Ogallala aquifer is a mined aquifer, meaning that the rate of water removed by pumping exceeds the rate of discharge. While agricultural irrigation is the largest "user" of the groundwater in the area, it is distributed over the entire aquifer, rather than from a relative small "point sink", such as the Pantex and City of Amarillo well fields. Also, many farms have been converted to dryland operation, because of the dropping water table in the aquifer and high energy costs associated with pumping.

Many other farmers have adopted more efficient irrigation technologies which conserve water and reduce energy usage and the associated costs.

The EIS reported that risks to the public from acoustics and natural seismic activity are low. However, the report does not address structural damage to homes and buildings on and off site of the plant that have occurred due to explosions. One home off site of the plant suffered significant damage to its foundation, walls, roof supports, and plumbing as a direct result of a planned explosion at Pantex Plant. The "shock" energy from the explosion which caused the damage is similar to energy associated with acoustics and seismic activity. I hope that the Department of Energy has thoroughly inspected buildings on site which have been subjected to such energy from explosive testing over many years of Pantex Plant operations. Structural integrity of Pantex Plant facilities, especially storage locations for Plutonium pits, is extremely important to the safety of Pantex employees and area residents. PC-023/4 08.001 PC-023/5 03.006

I appreciate the opportunity to express my concerns with respect to continued operation of Pantex Plant and associated nuclear component storage.

Respectfully,

Dana Porter

Dana Porter, P.E.
Agricultural Engineer

June 20, 1996

Vernon J. Brechin
255 S. Rengstorff Ave. #49
Mountain View, CA 94040-1734
(415) 961-5123

Ms. Nanette D. Founds
Pantex EIS Project Office
U.S. Department of Energy
Albuquerque, New Mexico 87185-5400
(505)845-4212

Topic: Public Comments on the Pantex Draft EIS

Dear Ms. Founds:

Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components, located in Carson County, Texas (DOE/EIS-0225) (Pantex DEIS).

SUMMARY

PC-024/1 22.015 — p. S-4, right column, "Assembly of Nuclear Weapons," 11th line.
Remove the word "classified" since virtually all the components in the "physics package" are classified. Check the DOE book "Drawing Back the Curtain of Secrecy" "Restricted Data Declassification Decisions 1946 to the Present" (RDD-3) - January 1, 1996. Your description should also mention the D-T Tube neutron generators.

PC-024/2 22.016 — Throughout the EIS replace the word "staged" with the word "stored."

PC-024/3 01.020 — p. S-7, left column, "No Action Alternative," 2nd paragraph, 5th line.
The construction of the Hazardous Waste Treatment and Processing Facility should not be excluded under this alternative. Proposals, which make the No Action Alternative unreasonable under NEPA, should not be included.

p. S-7, left column, "Relocation of Interim Pit Storage Alternative"
I believe that this is the best Alternative, and I choose the option of storing 20,000 pits at the Manzano Weapons Storage Area, Kirtland Air Force Base. This area has an existing, large construction and security infrastructure along with a long history of safe weapons storage. This location would serve as a good final pit storage area as the Pantex operations wind down. Transportation to Albuquerque is quick and straightforward.

PC-024/4 14.088 — p. S-9, right column, top of 3rd paragraph.
I suggest that the release of chlorine gas, as the dominant accident scenario, may not be accurate. If the Pantex plant was targeted in a terrorist attack, that could prove to be much worse. Another point, is that the chlorine accident

PC-024/4 14.088 continued — may have been considered for a 10 year period, but the plutonium-239 will remain a hazard for over a quarter million years.

PC-024/5 02.014 — p. S-10, right column, "RELATED NATIONAL ENVIRONMENTAL POLICY ACT STUDIES"
The Pantex FEIS should reflect delays in other EIS such as the SS&M PEIS and the NTS EIS.

PC-024/6 02.015 — p. S-13, left column, boldface.
The title and the DOE control number for the NTS EIS should corrected to reflect changes that were made over six months ago.

PC-024/7 02.016 — p. S-13, right column last three lines.
This statement should indicate more than the existing waste connection. It should mention the proposals to store plutonium-239 pits there.

Main Pantex DEIS Volumes

Section 5.2 NEVADA TEST SITE

PC-024/8 04.006 — p. 5-3, left column, "The Nevada Test Site.," 3rd line.
Change the word "owns" to "operates."
Change 350,000-hectare to 322,195-hectare and change 864,000-acres to 796,160-acres. The later values are the legal values.

PC-024/9 03.004 — p. 5-3, left column, last line.
The Final Pantex EIS should clearly explain the real reasons for the existence of the DAF and the P-Tunnel complex. The $100 million Device Assembly Facility was designed and constructed in anticipation of an expanded nuclear explosive testing program at the NTS. It was intended to be the assembly point for the nuclear explosive devices. Since our nuclear test moratorium went into effect in 1992, its primary mission ended about 3.5 years before it was completed. It is now being used to assemble nuclear and non-nuclear devices which involve large amounts of high-explosives. The Pantex DEIS does not address any compatibility problems associated with pit storage and high-explosive assembly work at the DAF.

PC-024-10 03.005 — The P-Tunnel complex was constructed for the Defense Nuclear Agency's (DNA) nuclear explosive test program which also ended in 1992. The tunnel complex was an alternate, and often much more expensive, way of performing underground nuclear explosion tests. Cost per test were often in the range of many tens of millions of dollars. Several DNA nuclear explosives test were conducted in this tunnel complex. Page 5-7, Figure 5.2-3.--Layout of P-Tunnel at the Nevada Test Site., contains a drawing of the existing complex. This map drawing should point out the locations and names of the nuclear test waste cavities. This, or a updated version of this map, should indicate where, in the vast tunnel complex, the proposed pit storage would take place. The Pantex DEIS makes no mention of where, in

PC-024/10 03.005 continued — the many miles of tunnels, the pits might be stored. The NEPA FEIS should provide such information.

PC-024/11 02.017 — p. 5.6, left column, 3rd paragraph.
It mentions that "[t]he P-Tunnel is also being proposed for the long-term storage and disposition of weapons-usable fissile materials." The folks at the NTS are trying to sell the use of limited tunnel space for two different purposes at the same time. It is unlikely that it will be used for both purposes and therefore the competing EIS purposes need to be addressed.

PC-024/12 15.043 — p. 5-10, left column, Section 5.2.1.12 Aircraft Accidents, 1st paragraph.
Though the airspace is now highly restricted, due to the past nuclear testing program and the activities of the surrounding U.S. Air Force's Nellis Air Force Range (NAFR). this may not remain so if there are major changes in the operating status of these facilities which are now under review in respective EISs.

PC-024/13 14.089 — p. 5-11, Table 5.2.2.1-1.--Major Sources of Radiation Exposure in the Vicinity of the Nevada Test Site.
This table should be removed because it contains unnecessary information and is highly misleading in other respects. The term "Vicinity" can, and is likely to, refer to areas which are dozens of miles from the test site and up-wind of the test areas that are at the far side of the vast test site.
Under the heading "Other Sources," is "NTS - environmental radioactivity," which is shown to be at least 1,000 times less than any other source including global "Weapons test fallout," of which, the NTS was one of the primary sources.
This EIS was supposed to conform with all the requirements set forth in the "Code of Federal Regulations," Title 40, Chapter V, Part 1500.
"Agencies shall insure the professional integrity, including scientific integrity of the discussions and analysis in environmental impact statements" (40 CFR1502.24).

PC-024/14 06.045 — p. 5-12, left column, "Impacts of Facility Upgrades," last five lines.
No mention is made, in this report, concerning the radioactive trititated water that drains out of some of the tunnels and collects in ponds outside the tunnel entrances. Nor is there any mention of the possible collection of gaseous radionuclides, in the tunnels, that could originate from the waste in the expended test cavities.

PC-024/15 14.090 — p. 5-17, left column, 1st line.
Though such an incident may result "...in no significant short-term radionuclide releases to the exterior environment" the next quarter million years might tell a different tale. The miligation analysis, of such an event, should not be left to whatever kind of society follows us.

PC-024/16 04.007 — And finally, I should mention that all the maps of the Nevada Test Site, that are presented in this document, need to be corrected before the Final Pantex EIS is issued. The maps should show the block of land that was withdrawn under Public

PC-024/16 04.007 continued — Land Order 1662, that was to be used in connection with the NTS (23 FR 4700).
A proper map of the test site can be found on page 4-10 of the "Draft Environmental Impact Statement for the Nevada Test Site and Off-site Locations in the State of Nevada" - January 1996 (DOE/EIS 0243).

-END- of my comments.

Sincerely,

Vernon J. Brechin

Vernon J. Brechin

cc: Mike Jansky - EPA Region 9

Pantex EIS

To Whom it May Concern
(1-800-822-5499)

July 5, 1996

From L. B. Thomas LT
3409 Pickard Ave, NE
Albuquerque, NM 87110

Subject: Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Nuclear Component Storage Comments

Thank you for the opportunity to comment. I wish to present the following comments:

Thank you for the extra time to review the document. I would like to again request SSM and S & D add more time to their respective comment periods. Since the site wide was given three months, the PEISs should have at least 180 days to a year. They are far more complicated. Is DOE afraid?

Please respond as appropriate to my comments submitted to the SSM and S & D programs. Of particular importance are pit storage issues, non-proliferation issues, and future stockpile issues effecting Pantex operations.

Thank God one DOE site is not a National Environmental Research Park (NERP) or my personal favorite National Environmental Research Disaster Site (NERDS).

PC-025/1 23.051 In general, I do not understand how this EIS and its proposed action, no action, and alternatives meets the intent of NEPA. Please explain how this 2000, 1000, & 500 level analysis meets the intent of NEPA. I believe the levels are not different enough to analyze, please comment. Plus don't the impacts at 2000 cover 1000 and 500 levels, please comment on this issue. Please explain why an EA or supplemental EIS aren't more appropriate. Please provide a technical response including regulatory citations detailing why this EIS meets the purpose of NEPA when the alternatives are so similar? Should the analysis look at one level of activity and then limit detailing the what ifs at higher and lower levels if necessary. This would possibly reduce the size of the document by 50 percent.

PC-025/2 23.052 On Page 1-14 in the second column in the last paragraph. If the decision will be based on cost, technology, national security, and infrastructure considerations, which documents covering cost, technology, and national security will be used? This implies the decision maker will use the information to make the decision without public comment, does that meet the intent of NEPA? Will they be available to the public? Do the documents exist? When will these documents be completed? Why is infrastructure included in environmental impacts and as an additional consideration? Like my comments on SSM and S & D, if national security and nonproliferation so important why aren't the environmental impacts discussed in the infrastructure section as a capability, assets, problem, etc. in this document, please comment. SSM and S & D the environmental impacts of national security and nonproliferation, please comment. Does Pantex out perform its alternative sites on these issues? If so the decision maker needs to know to make a reasonably informed decision, please comment. Why isn't security capabilities addressed in Infrastructure Impact analysis so impacts can be reviewed and decide a true course of action? DOE should consider redoing Infrastructure analysis to include security related environmental impacts.

PC-025/3 03.008

PC-025/4 13.022 On Page 1-16 in column two in the first paragraph. What is the definition of abnormal? Is the chance of a similar accident greater than 1 in a million? If not, I would argue with DOE risk numbers that the incident is not abnormal. For consistency use risk assessment language for "abnormal." "Abnormal" means nothing. Use unlikely, extremely unlikely, etc. If this incident occurred, what calculations prove the event is abnormal? What number of similar operations were completed before the event occurred? How do you justify orders of magnitude difference between theoretical and actual experience, if one

Pantex EIS

PC-025/4 13.022 continued exists? Why does the WM PEIS identify Pantex as a TRU waste generator (see appendix) if Pantex is "Abnormal?"

PC-025/5 22.028 In section 1.8 on Page 1-19. The US Justice Department and EPA (as Agency Consultations) should be consulted under the *Resource Conservation and Recovery Act* on issues raised in my SSM and S & D comments. Of interest why stored Pu at Pantex are not considered solid waste as defined in 40 CFR 261.2 (a)(1), (a)(2), (a)(2)I, (a)(2)Ii, (a)(2)iii, (2)(b), (2)(b)1, (2)(b)2, (2)(b)3, (2)(c), (2)(c)(1), (2)(c)(2), 2(d), or 2(e). Why open burning of HE is not RCRA treatment? When does stored Pu meet the definition of land disposed (stored) as a solid waste? Why not if "accumulated speculatively", "inherently waste-like", scrap, dispositioned, recycled, studied, or burned? What would be the environmental impacts if stored plutonium meets the definition of a solid waste? I consider this a reasonable impact.

On page 3-2 in column one, in paragraph one. "The 500 weapons level represents the minimum level of activity required at Pantex Plant to maintain all of its mission capabilities" If this is true why does SSM look at a smaller number? Which EIS is accurate? The above statement is clear in stating both "500" as the minimum for "all" missions. Is the above statement an overstatement of the facts? This goes back to my other comment, that this EIS's alternatives and analyses are not real and do not meet the intent of NEPA. please comment in context of proving this EIS meets the intent of NEPA.

The Alternatives box on page 3-2. What are the possible management loop holes in the 12,000 number? See table 4.12.1.1-1 where shipments don't add up. Does this only count pits in Zone 4? Pits in partial disassembly stored as non-pits? Pits in Zone 12? Pits being dispositioned? Pits being staged? How hard is the 12,000 number?

PC-025/6 22.029 The sixth dash on Page 3-3. Why aren't HE components regulated by RCRA before burning? If I burn an experimental battery that contains lead and explosives but is a proprietary secret of my company is that RCRA treatment? Request consultation with EPA and the US Justice Dept on the response.

PC-025/7 01.033 The first two bullets in the second column on page 3-3. Where are security and nonproliferation activities? They are routine correct?

Page 3-5. Should the source appear right side up in the bottom right corner?

PC-025/8 01.034 On Page 3-7 in second column in the second paragraph. It appears a loop hole exists for DOE in dealing with the backlog of stored pits. If a container availability problem exists (like the FL container problem on F-2) DOE could store 20,000 pits without shipping one pit and not violate this EIS. What would be the hard number before DOE would stop dismantlement to put pressure on the transportation end? Lacking cans for shipment seems to make relocation alternatives unreasonable and thus not meeting the intent of NEPA, please provide technical justification. This EIS is flawed because the alternatives are not "technically mature" to use a DOE phrase found in SSM and S & D for rejecting analyses of alternatives. Lack of cans appears to be a reasonably foreseeable impact, please assess. The 12,000 alternative is not possible under this EIS.

PC-025/9; 01.035 On Page 3-8 last bullet of page. If shipping cans are lacking-why is 8,000 considered reasonable?

PC-025/10; 16.037 If weapons are shipped around the world without an AT-400A style container why does the Pu require a special container? Doesn't a weapon pose the greater risk potential?

PC-025/11 01.036 Three bullets in second column of page 3-8. The rational contains several fatal flaws. The ability which includes past performance in securing Pits, nonproliferation, and a safe and reliable stockpile should have been considered in qualifying the sites. Please reassess sites based on these new criteria. Please remember when addressing this comment DOE stated to great length how vital DOE's missions regarding nonproliferation, security, and a safe and reliable stockpile were. What is the National Academy of Sciences' position on plutonium storage?

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PC-025/12 03.009 | On Page 4-11. What level of security is the burning ground, zone 10, and firing sites under? The nonshaded area of DOE owned property is under what level of security? The DOE leased property shading is not found in the legend-what level of security is this?

PC-025/13; 03.010 | Page 4-16. Should it be waste management activities' utilities?

PC-025/14; 03.011 | Page 4-18. Why Pit Storage Activity? Section 4.4, 4.5, etc. use Activities. In Waste Management Activities. Why no discussion about RCRA Closures?

PC-025/15; 03.012 | Page 4.18. Why Environmental Management? Section 4.4, 4.5, etc call it Environmental Restoration?

PC-025/16; 03.013 | Page 4.16 uses Environmental Restoration. Should page 4-18 include closures page 4-16 does.

PC-025/17 03.014 | General comment in section 4.3. Question why isn't more presented about nonproliferation and sanitization and demilitarization in this section? Please include environmental impact analysis of these issues in the infrastructure section based on methodology definition on page 4-3 as a support requirement and S&M & S & D emphasis to the issues. How are nonproliferation and sanitization and demilitarization infrastructure effected by the varying levels of activities as required by methodology on page A-1? Is there a backlog? What are the environmental impacts?

PC-025/18 04.010 | General comment. Is Pantex zoned for agriculture, ranching, water utility, irrigation, treatment, disposal, industrial, residential...? Please analyze the above operations for zoning compatibility including this example: If the plant is not zoned for residential use does the fire department qualify as residential?

PC-025/19 04.011 | On page 4-22. Recommend detailing the location of schools and elderly meeting places including elderly care facilities. It seems to me children and elderly are sensitive areas. Also wetlands should be identified for the same reason. Like children and the elderly, aren't wetlands sensitive areas requiring analysis?

PC-025/20 14.193 | Since Pantex playas are points of recharge to groundwater, under an accident scenario would not 1000 playas in the ROI pose a significant pathway to the groundwater, please comment. If an accident occurred what is the maximum amount of Pu, risk to the public, and other impacts to the groundwater from the playa pathway? What is the impact if all groundwater in the ROI becomes contaminated with trace amounts of Pu? Where are the nearest dairy cows? Should that be discussed due to high risk pathway to small children?

PC-025/21 05.028 | On page 4-39. Drop figure and place more detailed maps in appendix. Recommend using an example map in its place and refer to the appendix. The figure is silly. Otherwise include the location of the ditches and groundwater for completeness. Where is a comprehensive list of titled SWMUs in this EIS?

PC-025/22 05.029 | On Page 4-51, Environmental Restoration Activities. Question, "completed by 2000" is not consistent with other statements in the document.

PC-025/23 05.030 | On Page 4-51, Waste Management Activities The burning ground is an open area where fumed materials including metals, radioactive elements, etc. are released to the atmosphere and settle to the ground in the form of dust, water vapor, etc. and you state you do not expect impacts to the soil. How can that be, please comment. What is the representative contaminant deposition rate to the playas and burning ground? Does HE explode while being burned and chunks of things get spread about? Is it possible pieces sit around for years? Further, you state on page 4-52 the material is typically nonhazardous, how did the burning ground get contaminated? Please state you do not know or what the facts are. Page 4-52 what is the source of the table?

PC-025/24 06.069 | On Page 4-56 Buildings listed do not appear to match diagram on page 4-243? Figure appears to be crowded with information. Recommend simplification.

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Pantex EIS

PC-025/25 06.070 | On Page 4-60. Please explain. If a playa is a wetland, then a wetland is considered waters of the United States then why is a playa not waters of the State?

PC-025/26 06.071 | In section 4.6 a general comment. Do the number of wells located on the Pantex site represent significant pathways to increased groundwater contamination? What measures are taken to control this pathway? In the event of a Pu accident what is the possibility that the well is open and Pu enters the groundwater through the monitoring system? Assuming the well was open during an accident what is the release to the groundwater. What is the impact if Pantex loses groundwater usage? Adjacent land owners.

PC-025/27 06.072 | On page 4-63 why was OW-WR-20 utilized in cross section when the cross section should go from 6-1003 to 6-1004 to 6-1005? Why was 6-1015 left out? What are the impacts if these wells are utilized? What is the quality of the hydrostatic cross section input data (i.e. well logs)?

On Page 4-64. Why is the source upside down?

PC-025/28 06.073 | On Pages 4-66 and 4-67. Why did you change nomenclature on PM-21 (4-66) and OW-WR-21 (4-67)?

PC-025/29 06.074 | On Pages 4-66 and 4-67. Why isn't well PXSP-01A, PXSP-03, PXSP-04, etc listed in appendix C, table C.2.1-1? What level of QA has been completed on this section? Please include QA/QC certification documentation in appendix including signatures of key QA/QC personnel. Please provide documentation assuring QA/QC measures were implemented, met established goals, and necessary certification exists.

PC-025/30; 06.075 | Page 4-67. Why are wells off the Pantex Plant lacking well numbers?

PC-025/31 06.076 | In Table 4.6.1.2-1 on page 4-68. What is the reason the realistic estimate is an order of magnitude larger than the most conservative?

PC-025/32 06.077 | See Page 4-69. What is the source of the statement "These perched zones are believed to be hydraulically separate from the perched aquifer in Zone 12 at Pantex Plant?"

PC-025/33; 06.078 | And Page 4-69 in Ogallala Aquifer section. Vicinity of ROI, more accurate?

PC-025/34 06.079 | Also Page 4-70. Why aren't wells OW-WR-23, & 28 listed in Table C.2.1-1? Does OW-WR-40 leak water to the perched from the contaminated Playa 1? Is OW-WR-40 above or below the floodplain? Are any of the well heads located in the Pantex plant or vicinity below any floodplain? What are impacts if there are?

PC-025/35 06.080 | Page 4-76. I'm confused, how can a zone be a source but a landfill is a location? What does 12-SW, etc mean? What is OSTP?

PC-025/36 06.081 | Appendix C is difficult to review in support of section 4.6 because, DOE flip flops the nomenclature for well numbers. As an example table C2.1-1 well ID as 15-20 but C.2.2-3 as PR-16, please standardize. Page 4-77 isn't it three wells for lead: PR-16, OM-39, and PR-41?

PC-025/37 06.082 | Page 4-78 What is the source of the 704 million liters? What is the source of the 760 irrigation wells? What is the source of the two private wells? Do you suspect more? What would be the impact of more perched wells?

PC-025/38 06.083 | Page 4-79 "the quality of the wastewater discharge is such that it will not degrade..." What is the source of the statement? Please explain position in greater detail. Doesn't the playa carry contaminants to the Ogallala? If (regionally) perched water is used to supply cattle with water, would WWTF water be used as cattle drinking water. If not, how can the above statement be true?

PC-025/39; 06.084 | Table 4.6.2-1, are margins included? Why is the liter conversion included?

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Pantex EIS

PC-025/40; 06.085 | Table 4.6.2.2-1 and Table 4.3.2.2-1 have different sources?

PC-025/41; 06.086 | In section 4.6.2.2 starting on page 4-81. What are sources of water use in each of the 6 projects?

PC-025/42; 07.014 | Page 4-94 The Target Range is were you explode nuclear devices?

PC-025/43; 07.015 | See Pages 4-96, 4-99. What are the Sources of the information in the tables?

PC-025/44 07.016 | General comment section 4.7. Poor QA/QC of data has occurred in Appendix B supporting section 4.7. Examples included below of showing incorrect data are as follows: page B-44, chromium, 45.4kg, 1000, 1hr; page B-44, chromium, 363kg, 1 hour; page B-45, cresol, 1000, annual, #11; page B-45, cresolic acid, annual, #11; page B-46, ethyl benzene; page B-48, HF, 363kg, 24 hour, #3; page B-49, ketone, 363kg, annual, #8, # 10; ketone 363kg, 1 hour, #2; Page B-50, methylene chloride, annual, #2; page B-50, naphthalene, 45.4kg, 1 hour, #5; page B-51, NO2, 45.4 annual, is totally incorrect; page B-51, NO2, 363kg, #1, #2, #5, #9, #11; page B-51, NO2 BGU, is totally incorrect. page B-52, toluene, 500, 1 hour, #10; page B-52, trichloroethylene, annual, #8, #9, #10, #11.

These are only examples determined by visual inspection of data presented in appendix B not actual calculations. What level of QA/QC was completed? What level is required? Please provide QA/QC documentation including signatures assuring certification of data quality. What proof does DOE give that the analysis is of good quality? I believe DOE will blow off my comments in SSM, S & D, and Pantex projects regarding QA/QC. I believe I am presenting evidence that the QA/QC is technically substandard- prove I'm incorrect.

PC-025/44; 07.016 continued | Virtually every page of the table is incorrect to some degree. Is SSM and S & D data flawed? Other EISs?

PC-025/44; 07.016 continued | Table B.4.1-1 has numerous concentrations reported with identical roots but orders of magnitude difference. This is highly unlikely and points to poor QA/QC. Cresol residence #1 is in error. HF exponents are in error. Ketone exponents are in error. Lead is incorrect in the 3rd quarter.

PC-025/45 07.017 | Request extra public review time due to poor quality.

I am concerned the input data to the modeling is questionable due to errors noted in tables above. What assurance does DOE provide to certify input data is accurate? What methods were used to qualify input data? What QA/QC documentation exists for input data? Specifically, what level of quality exists for estimated emissions rates?

PC-025/46; 07.018 | General comment for section 4.7. Tables lack sources.

PC-025/47; 07.019 | Page 4-112. Please explain why the paper incinerator listed on page B-17, the wastewater treatment facility's SOx, and landfill activities PM10 are not included?

PC-025/48; 08.003 | Page 4-125, what are the impacts to animals especially birds as a result of these detonations? aren't detonations generally used by construction industry to chase off nesting birds?

PC-025/49 09.012 | Table 4.8.1.3-1, what is the impact to a human without ear protection over a 1/4 mile range? A lifetime for residents?

PC-025/50 09.013 | Section 4.9. Given the semi-arid climate, what impacts have occurred as a result of fires in the recent past? If fires have occurred in the past why isn't it included in the affected environment? Does Pantex use controlled burns to control vegetation? What is the impact? Does the plant dredge the playa systems? What is the impact? Is there a need to dredge in the near future?

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Pantex EIS

PC-025/51 09.014 | Page 4-139. There appear to be more than five playa lakes in the vicinity of Pantex Plant see page 4-56 of this EIS. Pratt Lake, Pantex Lake, and several to the north and south of the site, please comment.
Page 4-142. Pit Storage Activities. Please describe non-adverse impacts to biotic resources.

PC-025/52; 09.015 | Page 4-142. ER activities. ."..would not considered significant." ?

PC-025/53 09.016 | Page 4-142. Waste Management. ."... will have a long-term beneficial impact on plant and animal species?" Landfills and an open burning activity that fumes metals and radioactivity are considered beneficial? Please provide documentation supporting statement. Any direct impacts to non-threatened, non-endangered species or non-wetlands? Please provide documentation supporting position.

PC-025/54 11.047 | Page 4-155. Given the fact that this is 1996 and the section uses 1990 data, has a significant change occurred in population since 1990 and the socioeconomic parameters to warrant estimating the affected environment closer to 1996 timeframe? How many visitors to Amarillo are there each year? Is that important? If I-40 closes due to Pantex accident, what are the impacts to East/West Interstates?

PC-025/55 12.022 | Page 4-174 According to table 4.12.1.1-1 Pantex is stockpiling nuclear explosives or pit components in Zone 12. Please comment since interzone transfers don't balance.

PC-025/56 12.023 | Page 4-174 In the magic numbers of 12,000 and 20,000, what is the maximum number of pit components that would not be included in the storage limits but would be managed in Zone 12 but not considered in storage under the definition of storage? Is this discrepancy accounted for in the analysis? Will these pits be in AT-400 containers? If a shortage of AT-400 containers exist would there be greater risk in Zone 12 management?

PC-025/57 12.024 | Page 4-174 Has the analysis accounted for the aging of pits and aging of containers? If Pantex has pits from the fifties, forty years of material fatigue from the radiation, thermal, handling, and other adverse environmental conditions must be enormous. Has DOE accounted for this?

PC-025/58 12.025 | In the Zone 4 West Activities section on page 4-181. DOE estimates 20-22 containers would be removed for surveillance activities. Should a problem become evident, what is the maximum number of surveys possible? What are the impacts? Was this considered?

PC-025/59; 12.026 | Page 4-182 What is a small number? Several magazines?

PC-025/60 12.027 | General comment in section 4.12. The tritium accident caused quantifiable radiological impacts to plant personnel, facilities, environment, and public. For comparison purposes, please compare tritium accident with intrasite transportation impacts. What is the maximum impact to plant personnel, facilities, environment, and public from tritium storage at Pantex? Has the explosive damage potential of stored tritium been evaluated?

PC-025/61; 12.028 | See Section 4.12.2. Since table 4.12.1.1-1 does not balance where are the impacts to storage activities in Zone 12 from pits, CSAs, and tritium?

PC-025/62; 12.029 | General question. What are the continuing impacts to transportation workers resulting from past tritium accident?

PC-025/63; 13.023 | See Section 4.13. Why only to 1994 for data? DOE reports annually correct? Status of permit modification? What impacts are expected? What is status of EPA CERCLA negotiations?

PC-025/64; 13.024 | Table 4.13.1.2-2 Why no margin for ER wastes? ER wastes are the most unpredictable!

PC-025/65; 13.025 | Table 4.13.1.1-2 In SSM and S & D the number of burning ground facilities is expected to be reduced to one. Are the 9 trays and 3 pans expected to be closed in the near future like the cages and pits?

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PRIVATE CITIZENS

Pantex EIS

PC-025/66; 22.030 | General question section 4.13. Are pits a solid waste?

PC-025/67 22.031 | On Page 4-193. Is demilitarization and sanitization of weapons components RCRA treatment? Are classified weapon components that cannot be demilitarized and sanitized sent to NTS a solid waste? What is meant by declassified versus demilitarized and sanitized?

PC-025/68; 13.026 | In sections mixed waste and hazardous waste on page 4-193. Where is all the explosive burning waste noted in section 4.7 and table 4.13.1.1-2?

PC-025/69; 13.027 | Page 4-199. How accurate is the 1.45 factor? Why doesn't table 4.13.2.2-1 contain a margin?

PC-025/70 13.028 | Page 4-202. 14,000 LLW shipments over 20 years? That's 700 a year, almost 3 shipments a week not including weekends. Is DOE hiding waste at Pantex, the numbers presented in tables 4.13.1.2-1 through 3 don't show this to be true? DOE is considering a landfill for at most 2,500 cubic meters over 10 years. That's stupid! Why don't you landfill the NHW around 13,000 cubic meters over 10 years. 18,000 shipments of HW over 20 years? That's 900 a year, almost one shipment every day not including weekends. Is DOE hiding explosive wastes? DOE should think about a hazardous waste landfill for the 2,000 cubic meters over ten years.

PC-025/71; 14.143 | Page 4-205, Isn't it more accurate that the majority of Pantex Plant workers receive no detectable (or observed) radiation exposures ...

PC-025/72 14.144 | Section 4-14. What's the big deal with the analysis? The death rate for us all is 100%. In the event of a serious accident resulting in deaths, shortened life spans, loss of the Ogallala, loss of agriculture, or other damages what are DOE's commitments to citizens of Amarillo (and others) for the damages. Is the answer "Nothing it was an act of god, war, the contractor was at fault?" I am serious when I ask this question-What are DOE and its contractors committed to should something go wrong? The people in Amarillo should know as well as the rest of us. Please don't answer the question with safety policy BS, legalese, etc. I want the answer to make the lawyers hurt a little bit from sticking their collective necks out. 100% restitution? What the country can bare? What the lawyers can squeeze out? What the politicians can get? We the People will do what is right, just, and in the finest tradition of America? What is the insurance?

PC-025/73 14.145 | Table 4.14.2.1-2's Frequency of Scenario uses carefully chosen words like Anticipated, Unlikely, etc. Please include the mathematical representation in the table (e.g. 10^{-2}) for the purpose of improved clarity. Please explain where the risk of a tornado is in table 4.14.2.1-2? Where is a lightening strike event? It is a well known fact that one is more likely to be hit by lightening than winning the lottery. Isn't a release of mercury likely? What about an accidental shooting? What is the risk of an employee being killed by an automobile on site? Where is electrocution of an employee or a construction worker? What about confined space entry problem?

PC-025/74 14.146 | Page 4-223. Should consider the Annual Risk to be calculated for the Texas Panhandle, I believe that is more representative of the Pantex area. Also consider showing the Annual Risks for Oklahoma, New Mexico, and Kansas.

PC-025/75 14.147 | In Scenario 7 on Page 4-231 How many reservoirs (or what percentage) fail during the scenario? Does the hydrogen released explode (like the Valujet oxygen problem) and propagate? What is the inventory of sympathetic explosive, flammable, and combustible material in the adjacent buildings to the vault. Any weapons in the adjacent buildings that could result in a scenario 9 event? What about stored/moving to being stored pits that would be near the vault and result in a scenario 8 event? Would the damaged reservoirs react like missiles? Would this result in further release from other reservoirs? If the vault is breached are others killed due to the hydrogen gas fire and reservoir missiles? How many people would be killed by the concussion blast of the aircraft impact and flammable material explosions resulting after the crash? How many people are likely to be in the area? What documentation is available to prove all

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PRIVATE CITIZENS

Pantex EIS

PC-025/75 14.147 continued | the tritium is not released in a massive explosion? The estimated number of tritium container breaches is consistent with plutonium container breaches resulting from an aircraft crash? Are the reservoirs designed stronger than the Pu cans? In the event of a total release of tritium in the vault, a scenario 8 event, and a scenario 9 event; what is the probability and the consequence (in curies and fatal cancer probability)?

PC-025/76; 14.148 | What is the concussion blast resulting from impact? What is the kill zone from the impact and the resulting fire? What is the number of plant causalities?

PC-025/77 14.149 | The eleven scenario analyses are flawed since it does not allow for multiple scenarios resulting from one initial event. As an example, many aircraft accidents involve two planes however this analysis looks at only one impact location. Further a plane could lose an engine, as it breaks apart, into a weapon magazine while the remainder slams into a pit storage facility. Aircraft impact into tritium vault resulting in damage to pit and or weapon being moved and in near vicinity of ground zero.

PC-025/78 15.079 | Doesn't Amarillo have an airshow with fly overs during high risk maneuvers? Was this accounted for? If the incident rate for an airshow is higher than the general aviation conditions set forth in section 4.16, how does DOE justify the current NEPA analysis meets the intent of NEPA. In the last ten years how many airshow (US and world wide) accidents have occurred relative to section 4.15 parameters in determining frequency of crashes? Assuming an airshow high velocity impact with at least two impact scenarios per year over the period of this EIS, what are the impacts to the public from releases?

PC-025/79; 15.080 | In Scenario 7 on Page 4-231 What is the maximum tritium release in curies? Why isn't a direct high velocity aircraft crash into the vault considered?

PC-025/80 15.081 | General comment section 4.15. The VORTAC serves no real purpose. A crippled plane goes where it wants to. What is FAA and DOE going to do if the only way to bring a crippled plane in is over the plant? Shoot the plane down?

PC-025/81 15.082 | I would argue the total number of yearly flight operations is incorrect. Because neither the number of satellites or the Space Shuttle operations are included. I believe satellites have a nearly 100% orbital failure rate. Thus, a high velocity satellite impact is reasonable.

PC-025/82 15.083 | Table 4.15.2-2 information seems impossible given the recent Valujet accident where the plane blasted through a limestone formation. If the impact forces of that plane were used in analyzing impacts at Pantex what would change? Was the maximum velocity used in determining damage? Velocity is squared in the force equation correct? The calculations on page E-19 are flawed by using slow moving aircraft. The LLNL report seems contrived to show the damage would be minimal by using the 70th percentile velocities turning takeoff or landing. NEPA requires you to assess reasonable situations. Since the probability of an aircraft crash is independent of the damage it causes. I would argue a high velocity impact of a massive plane is just as likely as a small plane at low speed, thus NEPA requires you to analyze the impact of the most damaging scenario, please comment.

PC-025/83; 15.084 | PC-025/84; 16.038 | General comment sections 4.15 and 4.16 please provide information on the level of QA/QC defending the analyses of these sections. I would like the same information as requested on water and air quality sections of this EIS.

PC-025/85 16.039 | If the FL container is the only certified container available for shipment purposes, would DOE use the FL container to ease the 12,000 limit on Pantex if the AT-400A is not available? Is this a reasonable alternative requiring DOE to analyze the use of the FL containers to prevent a shutdown at Pantex?

PC-025/86; 16.040 | If the FL container is certified why doesn't DOE order more FLs for storage purposes?

Pantex EIS

PC-025/87; 17.015	General comment for section 4.17. What are the Minority and Low-Income areas by US congressional districts in the ROI? Does this show greater impact potential? What about by Texas legislature districts? Page 5-55 Materiel vs. Material?
PC-025/88; 24.004	References general comment. How many Information Document versions are there (i.e. 1995a, d, and h)? Why so many PCs? What does PC stand for? What does nd stand for? Is N441.1 correct?
PC-025/89; 24.005	References general comment. Why only CDRs as source? Nothing better?
PC-025/90; 04.012	Appendix A The entire EIS is flawed since few of the methodologies presented in Appendix A are actually followed by the sections and most contain major flaws. The following examples are given by resource section: Land Resources assessment methodology is flawed because it does not assess decontamination and decommissioning programs, as stated. There is a flaw since no zoning analysis exists in the analysis to prove or disprove incompatibility. Were is an analysis of the Deed? Geology and soils methodology is flawed since it does not describe what the assessment process is for the assessment.
PC-025/91; 05.031	The section dictates what the impacts are. Thus DOE has prejudged the results. The assessment does not address the decontamination and decommissioning program, as stated. Water resources methodology is flawed since the analysis is based on examining permited discharges of the NPDES system for which Pantex does not have a permit (the permit is pending). Groundwater analysis is flawed since groundwater quality within the ROI but the analysis does not include other industrial, commercial, petroleum
PC-025/92 06.087	exploration (especially saltwater intrusion, and secondary recovery impacts), CERCLA and RCRA sites contaminating the groundwater. The analysis does not analyze the contamination of the groundwater by underground storage tanks or agriculture nitrates. This information is readily available through the State of Texas. Your methodology specifically calls for ROI analysis of readily available information. The analysis is further flawed because of the lack of analysis of playas within the ROI. Finally the analysis ignores the number of wells located in the ROI as potential contamination pathways to the Ogallala or whether any of these wells resident in a floodplain. The analysis does not include ROI damage from
PC-025/93; 07.020	farming and livestock (e.g. nitrogen, pesticides, herbicides, insecticides). Air does not assess methane
PC-025/94; 09.017	releases from activities (oil, gas, and livestock industries) in the ROI. Air does not include SO2 releases
PC-025/95; 14.150	in the ROI. Biotic resources does not analyze the number of playas within the ROI. Accident analysis is flawed because severe weather is not analyzed.
PC-025/96; 16.041	F-5, how many AT-400A containers are in existence? Does this pose a problem, please analyze?
PC-025/97; 16.042	F-19, Is it not reasonable that the most harmful event is a collision w/heavy truck resulting in a rollover and fire. It appears that the event tree is linear rather than dynamic. Thus the analysis overlooks the compounding effects and thus the maximum impacts

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Friday June 28/1996
FRANCES KELLER MATTHEWS
RT. 2 BOX 231 C6
LIBERTY, TEXAS
77575-9608

DEAR MS. FOWLER –

I AM GLAD TO HEAR THAT D.O.E. IS WORKING WITH UTILITY PHOTOVOLTAIC GROUP AND SOLAR ENERGY INDUSTRIES ASSOCIATION. BUT I DON'T THINK STAR → SAVE TEXAS AGRICULTURE + RESOURCES KNOWS ABOUT THAT.

D.O.E. IS CHANGING AND GAINING MORE THANKS TO S.T.A.R., STAND, FINAL, THE PEACE FARM, TX. NUCLEAR WASTE TASK FORCE.

PC-026/1
06.092

EVIDENTLY PANTEX CONTINUES TO USE OPEN, UNLINED DITCHES TO DISPOSE OF WASTE WATER + STORM WATER WHICH DISCHARGE INTO THE AIRS ON SITE + THEY ARE CONTAMINATED AND

PC-026/1
06.092
continued

THE OGALLALA AQUIFER CAN ALSO BECOME CONTAMINATED. THIS IS VERY SCARY.

THE INTERNATIONAL COMMUNITY KNOWS THAT DRINKING WATER IS MORE VALUABLE THAN OIL COULD EVER BE.

I APPRECIATE STAR AND THEIR FINE WORK.

I APPRECIATE THE D.O.E. BECAUSE YOU CARE NOW.

I APPRECIATE THE EDISON ELECTRIC INSTITUTE AND THE D.O.E.

PLUTONIUM IS TOO DANGEROUS BECAUSE OF TERRORISTS AND HATE GROUPS WORLD-WIDE

3/.

THE D.N.E. AND CONGRESS CANNOT ALLOW SPECIAL INTEREST GROUPS TO BEHAVE UNSEEMLY. THAT'S A TOUCH OFF. HAS IT BEEN POLITICAL? SPECIAL INTERESTS RUNNING CONGRESS WON'T WORK.

SINCERELY-

James Keller Mathews

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PO Box 90336
Albuquerque, NM 87199-0336
July 2, 1996

Ms Nanette Founds
U.S. Department of Energy
Albuquerque Operations Office
PO Box 5400
Albuquerque, NM 87185-5400

SUBJECT: Draft Environmental Impact Statement (EIS) for the Continued Operation of the Pantex Plant and Associated Nuclear Component Storage

You must know that cities and people are not standing in line to be your next "national sacrifice", a term that is heard often these days. The hearing and repeating of that term may toughen people to the horror of it. Occasionally, someone will volunteer his own city for something risky but it always struck me as strange and disloyal for people to do that. We can look at your history and see what you will probably do to us as a community should you choose to put your "pit storage" here--look at what DOE has left behind in other places.

PC-027/1 01.038 Your glossy presentation books don't actually offer much choice or many alternatives. In fact, the choices and alternatives are very limited.

PC-027/2 22.023 I don't understand the need to store 20,000 pits anywhere. If we are dismantling the nuclear weapons, then we should get rid of the pits, not store them. People who know about nuclear stuff should have the knowledge and imagination to come up with some use for the pits. Perhaps some nuclear function could use that material for some purpose. I can't see why we should need so many for "strategic reserve and surplus". What is the idea behind this storage, to snap them back into nuclear weapons should we decide to change the rules?

As far as national defense goes, I wouldn't think nukes would be the weapon of choice now. There have been many advances in technology during the last 50 years and I bet we have cleaner, cheaper, more versatile weapons now. And, hopefully, we have learned something from the problems encountered during 50 years with nuclear weapons. How many of these pits do we actually need? I should get copies of your other documents referenced in your Summary on page S-3.

PC-027/3 01.039 Regarding your proposal to use Kirtland Air Force Base/Albuquerque as a pit storage site. Albuquerque is the largest city in our state. It is close to Kirtland AFB—they are separated only by a a gate guard—a person can place one foot in Albuquerque and the other on Kirtland Air Force Base. It's like storing nukes in the middle of a city. The highways are busy and prone to accidents. The airport is busy too. One accident and you've lost a major population center. Your publication gives the impression that there is more separation than there actually is between the base and the city. It takes only a few minutes to drive from the city to the Manzano site on the base.

PC-027/3 01.039 continued Many people work on the base, it is a large local employer. The city and the base actually touch and the city grows every day. Albuquerque may have been a small town when the bomb was developed 50 years ago. It isn't small anymore.

PC-027/4 13.029 Reference page 6-17, Volume I Main Report, Column Potential Applicability/Permits: The word "permit" was omitted from this page on New Mexico while it appeared in the South Carolina page 6-14 and the Texas page 6-12. I know that water permits are required for businesses and individuals and would assume that a government entity should also comply with the permit requirements, especially since this state has severe water problems. The word "permit" should be added those New Mexico areas where a permit is required. I realize that laws differ from state to state, but there are some areas where permits are required here.

Reference page 4-77, Volume I, Main Report. Decline of the Ogallala aquifier water levels. Albuquerque also has aquifier problems, a shortage of water and contamination of the water with TCE. The city is trying to come to grips with water problems, population growth, politics, business, etc., but not able to get it together yet. I think, in the Albuquerque general area, we all use pretty much the same acquifier so that drilling and pumping groundwater in one place has impact on another. Just because somebody drills a well doesn't mean that they can have all the water they can pump. We don't have our individual aquifiers--we have to share the ground water. There is not as much water available in our aquifier as thought and the water isn't recharged as quickly as believed and the connectivity between ground pumping and river trade-off is not clear. The shortage of water should be a concern to everybody when additional demands are made on the limited supply that we have. I have attached a few newspaper articles to document the water shortage here. A study is being done on our aquifier to find out exactly how much water we have—local wisdom is that we have a big water problem.

PC-027/5 04.014 Before planning to use the Manzano area as a "pit storage" site, coordinate with the base tennants to include Phillips Laboratory. The Manzano area is used for some research and development which may or may not be compatible with the your proposed nuclear pit storage.

PC-027/6 10.010 Reference historic and prehistoric resources in the Summary (Page S-24) and in the Volume I - Main Report page 5-59, item 5.5.1.8: "Twenty-seven historic and prehistoric archaeological sites have been found in the Manzano WSA. Of these sites, 8 have been recommended for inclusion in the National Register of Historic Places and 14 others are considered to be potentially eligivle for inclusion." Noted that you said there would be no impact to cultural and paleontological resources, but they may be so locked up because of security requirements that nobody will be able to see them. I would think that inclusion in the National Register of Historic Places might involve the possibility of a visit or a look at the site. Will that be possible if strengent security requirements are in effect?

PC-027/7 07.023 Reference Volume I, Main Report, Page 5-73, Air Quality: Albuquerque managed to get off the the EPA air monitoring program--if we hadn't gotten off we would have been in trouble. All winter long, Albuquerque citizens are not free to build fires in their fireplaces or woodstoves any time they want to—we get fined for burning on a "no burn" day. We have many "no-burn" days. Our houses are checked to see if smoke is coming out of the chimney on "no

PC-027/7
07.023
continued

burn" days. There is a telephone number to call to get a recorded message about whether we can burn a fire or not. We have to buy special gasoline for our cars in the winter time and we are nagged constantly about car pooling, etc., to cut air pollution, encouraged to have "no drive" times in order to improve air quality. The information you present about the air in this area is not complete because it doesn't reflect the constraints we have to work at in order to achieve acceptable air--the city, county and citizens work hard to get to this point. You plan to drive 120 vehicles 365 days a year and 30 vehicles 255 days a year making 30 and 50 mile trips and say that your contribution to bad air would be negligable. I don't know--we're really borderline on meeting the clean air specs and have to work hard to hold the line.

The "pit storage" proposal won't do a thing for Albuquerque--it is all loss and no gain.

Attached are some newspaper articles in support of some areas of my letter. The articles provide information about the water shortage in the Albuquerque area, about safety issues at Pantex and whistle-blowers at Hanscom, and about the need for an environmental study at Kirtland Air Force Base that addresses the cumulative effects of all the programs and projects there. The total cumulative impact should be addressed and studied. The environment bears the total weight of all the ongoing projects, yet the issue is addressed only in pieces.

Sincerely

Priscilla Tracy

Attachments
Newspaper Clippings (9)

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PC–028
PRIVATE CITIZENS

David Tracy
P.O. Box 900
Albuquerque NM 87199-0336
July 3, 1998

Ms. Nannette Pounds
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque NM 87185-5400

Subject: Draft EIS on "PIT" Storage at Pantex and Alternative Sites

SUMMARY DOCUMENT

PC-028/1 01.041 — Page 5-7, 2nd column, 2nd para - It is not correct to state "and KAFB, near Albuquerque New Mexico" - Comment: KAFB is the southern boundary of Albuquerque, it is a joint use airport, (part of the city) - it's a part and adjecant to Albuquerque. Albuquerque is a major sized city, while the other candidate sites are located away from major cities. You should give major consideration to either keeping Pantex as the only site, or consider the other two choices.

PC-028/2 06.121 — Page 5-8, 2nd column, 3rd para - Comment: The water usage and wastewater production are of a major concern in New Mexico and Albuquerque. The state is experiencing a major drought along with Albuquerque. Any additional water usage by KAFB drains the already lowering aquifers in Albuquerque. Go elsewhere!

VOL 1 MAIN REPORT

Page 2-1, 2-2 & Figure 2.1-1 - Comment: You state that Pantex already customarily ships nuclear components to the Nevada test site and the Savannah River site. Both of these are proposed alternative sites. Recommend that you pick one of these since procedures, practices and distribution are already in place. Both are not in a major city like KAFB is Albuquerque.

PC-028/3 04.015 — Page 5-58, 2nd column, para 5.5.1.2 - The statement that Manzano WSA is currently being used, in part, of storage of furniture and documents is entirely misleading. Phillips Lab has a major R&D operation in the WSA. The addition of a Pit storage facility will have a major impact on access to R&D operations and dramatically change the security posture within Manzano WSA.

PC-028/4 06.122 — Page 5-58, para 5.5.1.4 - Any additional water usage, by any operation puts additional demands on a drought ridden state. Additionally, Albuquerque is experiencing dwindling water supplies in their aquifers to include KAFB. Any additional water usage, even for Pit operations, is not necessary since DOE can

PC–028
PRIVATE CITIZENS

PC-028/4 06.122 continued — select on the other alternatives and should.

PC-028/5 10.011 — Page 5-58, para 5.5.1.8 - Comment: By placing the Pit storage area within Manzano WSA, the increased security will certainly reduce, even prohibit scientific and public access to the 27 historic sites. Consider the other alternative sites which don't present this type of problem.

PC-028/6 17.019 — Page 5-69, para 5.5.2.2 - Comment: This section is listed as Environmental Justice. Of all the sites KAFB/Albuquerque has the highest, most diverse population, and putting the Pit storage activity in KAFB adds necessary risk to KAFB/Albuquerque.

PC-028/7 16.060 — Kirtland Air Force Base also serves as an International Airport. Major highways almost borders KAFB to the west and north. This places the transport of nuclear Pits on about, and above KAFB/Albuquerque. The air traffic is extremely high and the highways are busy with Albuquerque, New Mexico, and Intra/Inter state traffic. The other alternative sites don't have this problem-select one of them.

PC-028/8 09.020 — The Biotic Resources (para 5.5.1.7) and cultural resources (para 5.5.1.8) will be in higher risk category. The higher risk not only includes possible contamination, but even more probable, the damage caused by increase of related activities like facility preparation, transportation to and from, and even from the additional 150+ humans to be placed on or about the Manzano WSA full time. Select another site, not KAFB.

PC-028/9 10.012

PC-028/10 03.015 — Page 5-58, para 5.5.1.1 - The recommendation to utilize the Manzano WSA facilities ignores a very real condition. The Manzano WSA was built I the mid 40's to 50's. Much of the facilities have not been improved over the years. The major Plants have water leakage problems along with the storage magazines. The electrical system is outdated and has chronic problems, the fence security system and fence are in need of major repair and upgrade. The facilities infrastructure, except for the Phillips Lab R&D facility at Manzano have been economically neglected and this is why Manzano WSA is not being utilized at historical or design levels. There will be significant cost, overlooked in this Draft EIS, in putting a Pit storage area on KAFB. Additionally, per Vol II, page E-23, para E.3.2, there is not automatic fire detection capability nor prompt response from local firefighters. This is a serious problem even if the rock overburden would shield the Pit storage area from aircraft crashes. There is still the ground attendant problems of mix of ground vehicles and equipment and humans.

PC-028/11 15.115

General Comment: Strongly recommend the KAFB/Manzano WSA be dropped as an alternative site form Pit storage per comments above.

David S Tracy
David S. Tracy

Dennis Larson
916 Rocky Spring Rd.
Austin, TX
78753

6-30-96

Ms. Nanette Founds
US DOE-Albuquerque Operations Office
POB 5400
Albuquerque, N.M. 87185

Dear Ms. Founds:

I am writing regarding the Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components.

PC-029/1 06.093 It seems to me that storing radioactive substances over the Ogallala aquifer is not a good idea. Is it true that high explosives from Pantex have been found in the Ogallala? Have wells in the area been contaminated with plutonium?

PC-029/2 01.037 Taking nuclear weapons apart at Pantex may make sense, but surely a better site for storage can be found. What do you think? I look forward to the seeing the better alternatives in the final Environmental Impact Statement.

Thank you.
I look forward to hearing from you.

Sincerely,
Dennis Larson

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3805 Overlook Dr.
Amarillo, TX 79109
July 12, 1996

Ms. Nanette Founds
U. S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Founds:

In studying the Site-Wide EIS for Pantex, I want to make the same points that I have stated before in response to other documents; so I will confine myself to summarizing those without the accompanying arguments which are so familiar to us all.

Nothing should be sited at Pantex which would:

*Deplete or contaminate the Ogallala aquifer.

*Involve the processing or reprocessing of plutonium.

*Adversely affect the primary industry of agriculture.

*Bring waste from other sites to be treated or stored.

PC-030/1 02.032 While I am reasonably comfortable with interim storage of plutonium pits, I believe that facilities for long-term storage should not be constructed at Pantex or any other site when there is already an adequate facility at the Manzano Weapons Storage Facility at Kirtland AFB in Albuquerque.

PC-030/2 13.031 DOE should move with all possible speed to cease using the burning grounds for waste management at Pantex.

PC-030/3 06.125 No additional water should be channeled to the open ditches and playas at Pantex because it will accelerate the flushing of contaminants into the soil and eventually into the aquifer.

PC-030/4 05.060 The contaminated soil should be cleaned as soon as possible to mitigate flushing caused by storm run-off.

Thank you for this opportunity to comment.

Sincerely yours,

Louise Daniel

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June 17, 1996

Ms. Nanette Founds
U.S. Department of Energy, Albuquerque Operations Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

Dear Ms. Founds:

The *Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components* fails in its current form to provide the thorough or complete analysis necessary to evaluate the cumulative impact of many of the proposals being made for the plant. Sketchy detail in certain critical areas as well as overt omissions preclude the possibility of many decisions being taken based on substantive information.

PC-031/1 01.032

The promised analysis of alternative DOD storage sites looks only at the Manzano Weapons Storage Facility at Kirtland Air Force Base and seems to reject it since it is not included in the Storage & Disposition PEIS. As the facility is deemed technologically adequate, we may only conclude by inference from the very words of the document that the DOE takes a more cavalier attitude toward the safety of Panhandle residents than people who live in Albuquerque. The fact that more people would be threatened in the Albuquerque area in no way justifies placing that liability just 17 miles east of the city of Amarillo in the middle of such a highly productive agricultural area which is the beginning of a food chain reaching across the world. Those who assert otherwise are more persuaded by convenience or dollars than reality . Is DOE so awash in funds that it can afford building new facilities when Manzano Mountain is more than adequate? Taxpayers as well as local residents deserve a better explanation than exists in this document.

The analysis of water usage laid out under the bounding options in this document represent extraordinary increases in Carson County pumping. The reactor option, depending on the number of reactors constructed (between 1 and 4), would represent between a doubling and more than tripling of current use if no other mission changes were considered. The kind of water consumption envisioned in this document (and others) has no place in the Panhandle even if it were destined for clean, safe and publicly acceptable purposes. The water simply is not there. For DOE to assert that this does not represent a significant impact in terms of the amount of water available both for domestic and agricultural consumption gravely impeaches the credibility of this entire document. Storage of hazardous nuclear materials and the processing or storage of nuclear waste has no reasonable place on top of what should be designated a sole source aquifer.

PC-031/2 07.013

Some of the most glaring deficiencies and omissions include the continuing use of the burning grounds with no alternatives examined. This facility is not technically acceptable and this document ignores the agreement with our citizen groups to analyze alternatives. The air modeling is inadequate, by the words of the document itself. How could DOE expect credible results with no modeling for residences on the south side of the Plant? There are still no monitors either at the perimeter or outside the plant measuring emissions that are not radiological. DOE continues to expect the public to swallow more of the dubious conclusions that have dogged their aircraft overflight analysis from the beginning. There is certainly no community health study upon which DOE can even base the assertions they make.

PC-031/3 14.142

The public, Pantex workers and former workers deserve adequate health studies of the cumulative impact and adverse health affects resulting from combined exposures to radiological substances, hazardous chemicals, toxic releases and daily emissions. DOE can not expect to be credible and has no basis to assert "no significant impact" until proper studies have been done.

DOE owes the people who have to live with the risk, reality, and consequences of its decisions a better and more complete analysis of the Pantex Plant. The final version of this document must correct the deficiencies and omissions.

Sincerely,

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- ☑ *NO!* To plutonium processing in the Texas Panhandle.
- ☑ *NO!* To bringing plutonium to Pantex from other sites.
- ☑ *NO!* To long-term storage of plutonium over the Ogallala Aquifer.
- ☑ *NO!* To facilities that handle nuclear waste or to processes that generate it.

I support jobs and development in the Panhandle that don't endanger workers, my family, our natural resources, or the reputation of Texas agricultural products.

Signed _____

Name (Optional)

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Ms. Nanette Founds
U.S. Department of Energy
Albuquerque Operations Office
P.O.Box 5400
Albuquerque, New Mexico 87185-5400

July 19, 1996

Dear Ms. Founds,

The following are my comments concerning the Draft Environmental Impact Statement (EIS) for the Continued Operations of the Pantex Plant and Associated Nuclear Component Storage, otherwise known as the Pantex Plant Site Wide EIS (SW-EIS).

My husband Ronnie and I own and operate our family farm across the road from Pantex at the northwest corner of the plant site. We have raised our four children on our farm with all the normal hesitations of any parent when faced with the decision of whether or not you are doing what is best for your child. Living across the road from Pantex has not always been a concern of ours until 1991 when we were forced to pay attention by the city of Amarillo and DOE after our land was offered as available for expansion of Pantex if they located Complex 21 here in the Texas Panhandle.

The SW-EIS has several areas that are of concern to us and I will try to address those as briefly as possible and appreciate any answers you can give me to explain them.

1) Page S-5, col.2, par.4: How do we comment on a resource stewardship strategy if we cannot see one until the final EIS? This seems like a very important document that the public should be involved in, especially the neighbors and farmers. Could we please request a copy of this document as soon as it is available and ask that the comment period for this document be extended to a thirty day period after receipt of the document?

PC-033/1
13.032

2) Page S-6, col.1, par.1: It states that "Pantex also generates and manages recyclable materials." What are these materials and where are they recycled to? Do these include the various barrels of miscellaneous bolts and nuts that are sold at auction or to salvage that the general public can purchase? These barrels have been known to contain various parts that are far from nuts and bolts and are apparently parts of dissassembled weapons and other confidential materials. I have seen confidential tags and various seals included in these barrels of supposedly recycled materials that I have been told by plant employees are confidential makeup and design. How did these materials make it into a barrel of miscellaneous bolts and nuts at a salvage yard and what are the procedures for recycling these bolts and nuts? Can any individual purchase these, and if so what is to keep them from copying the design and makeup of these parts?

3) Page 4-26, col.1, par.1: It is stated that an evolutionary Light Water Reactor (LWR) is listed as the bounding disposition alternative in the Storage and Disposition of Weapons-Usable Fissile Materials Draft PEIS (S&D-PEIS). It is listed to include the disturbance of approximately 700 acres of land during construction, and take approximately 350 acres for operations. Please explain

exactly where this reactor(s) would be located, as the map in the document (S&D-PEIS-pg 2-80) places this reactor right across the road from my farm. Will the DOE still require no further land for a buffer if this option is chosen? If it does require a buffer of land in addition to the current plant site, how much will be required and in what direction? Has it been discussed as to the water usage of the LWR(s) and if so how much water is proposed by each reactor? If water has been discussed, with the limited water supply we have already, why has this option not been dropped from the list? The Ogallala Aquifer is the major source of water for the whole of the Texas Panhandle and several other midwestern states. It has already been proven that the past and present activities at Pantex have contaminated the Ogallala and the level of water in the Ogallala has dropped dramatically in the past several years. Why locate a LWR here with the limited resources we have already and the contamination that is already present?

PC-033/2
08.004

4) Page 4-122,map & page 4-126&7,table: (Noise measurement locations and major noise sources in the vicinity of the Pantex Plant) On page 4-122 the map shows a noise measurement location marked "B" that is fairly close to my farm and house and another measurement location marked "T" that is fairly close to the target range. The table on page 4-126&7 lists these locations as having been tested on 9-9,15,&16 respectively. Could you please tell me if these were the times when qualifying was taking place at the target range, or were these just normal practice days? If the qualifying was taking place I would like to see earlier and later times of day for the readings. It seems very loud at my house when they are qualifying and they generally start very early in the morning, approximately 5-6 a.m. and sometimes are firing late at night, approximately 10 p.m. Could you please let me know also where that measurement location "B" is for certain? If it is close to my house, where it is located and what it looks like?

PC-033/3
01.044

5) Page 5-55, Kirtland Air Force Base. Under the Pit Storage Relocation Alternative (section 3.13) the pit storage function currently carried out at Pantex Plant would be transferred to another site. The Manzano Weapons Storage Area (WSA) is the candidate storage site at the Kirtland Air Force Base. After reviewing pages 5-55 through 5-75, I believe that the Manzano WSA would be the ideal location for the storage of the plutonium pits. The Manzano Mountain facility has the structure in place (storing office furniture at present); security is available; aircraft seem not to fly in a direct pathway to the WSA; water, air, and soil should not be adversely affected; and the local population should be better protected from accidental releases in this type of facility with the 30ft coverage and better structure of the magazines. Some of the magazines at Pantex are 40 years old and have been proven to be unreliable for plutonium storage. I am referring to the heat build up in some of the magazines this past year and the installment of air conditioning units. Protection from aircraft intrusion is not as great at Pantex, or terrorist missiles and/or bombs. Security has been proven to be very lax at times at Pantex and the proximity of the plant to the Amarillo International Airport, (which is also used for military training flights), is also a concern. What are the reasons for not choosing the Manzano WSA over Pantex if that is a reality? If the DOD enters into a Memorandum of Understanding (MOU) with the DOE and Manzano is used for pit storage, would the employees in charge of the Manzano WSA be employees of DOE or DOD?

PC-033/4
05.061

6) In the Draft SW-EIS I did not find the impact on area farmers when they

PC-033/4 05.061 continued

are plowing, planting, or harvesting the crops on the possibly contaminated soils of the Pantex Plant property. If this information is available I would like a copy please, and if it is not I would like to have this included in the final SW-EIS.

PC-033/5 11.051

7) The agricultural industry and adverse impacts on this industry, as far as I could tell, have been included in only four paragraphs in the Draft SW-EIS. In this High Plains Trade Area agriculture plays a major role in the economic stability and I feel should warrant more in depth study as to the adverse impacts on such a valuable industry than are dedicated in this Draft SW-EIS.

PC-033/6 04.018

I would suggest that the DOE investigate this area further and include more in depth information in the final SW-EIS, (i.e., land devaluation in the immeditate vicinity of the Pantex Plant, comparing past land values to current values and then future approximate values if various facilities/functions are located here; land use or crop restrictions; monitoring information of the off-site vegetation and soils; and possible additional land use requirements/acquirements for various facilities if located here.) I have enclosed a DOE generated land use map of the Pantex Plant for your reference.

PC-033/7 10.013

8) I request a copy of the transcripts or notes taken from meetings with any of the affected tribes mentioned in the Draft SW-EIS. Gordon Yellowman commented at the recent hearing on June 25, 1996 and asked for a copy of the meeting notes. Nan Founds replied stating that they did not visit the individual tribes, but sent them a letter. She will send him a copy of the letter and comments received. I am requesting copies of this letter and the comments received.

Thank you for this opportunity to comment,

Sincerely,

Trish Neusch
HC 2 Box 19
Panhandle, TX 79068-9602
(806)335-9723

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Comment Form

These comments apply to the following documents:

- Storage and Disposition Draft PEIS
- Stockpile Stewardship and Management Draft PEIS
- Amoco Site-Wide Draft EIS

United States Department of Energy

NAME: (Optional)

ADDRESS:

TELEPHONE: ( )

COMMENT (and background information):

PC-034/1/2 12.010

In the Summary, Table S-1, under intrasite transportation, presents person-rem information (p. S-18). The table is supported by Section 4.12 in the main text. An underlying baseline person-rem appears to be incorporated into the estimates for the Proposed Action alternative. Neither the main text nor the table clearly states the assumptions used. The person-rem shown for the Pit Storage Relocation alternative adds the estimated person-rem for pit storage relocation and the person-rem from the 2,000, 1,000, and 500 weapons levels under the Proposed Action alternative. Thus, while implementing the Pit Storage Relocation alternative, Plant workers are assumed to receive the person-rem associated with the Proposed Action alternative. The radiation exposures for individual workers for the alternatives are within regulatory guidelines and do not have any public health significance.

QUESTION:

PC-034/3 12.011

a. In Table S-1 for the Proposed Action alternative, 50 workers receive 61 person-rem for 2,000 weapons. Next, 50 workers receive 48 person-rem for 1,000 weapons. Finally, 50 workers receive 41 person-rem for 500 weapons. How does one scale these numbers? The same type of calculations are made for the No Action alternative. Again, the numbers for person-rem do not follow the amount of work. Why don't the workers receive only one half the amount of person-rem for a one half decrease in the work? Is there a certain amount of radiation that they receive no matter what?

PC-034/4 12.012

b. In the Pit Storage Relocation alternative, the amount of person-rem from the Proposed Action alternative appears to be added to what happens for pit storage relocation. How can one add the person-rem for these two alternatives? Is the same person-rem used two different times?

DRAFT SWEIS

COMMENT (and background information):

PC-034/5 14.083

In Section 4.14.2.1 (p. 4-219) text and in Figure 4.14.2.1-1 (p. 2-224) a quite classic error is made in explaining potential latent cancer fatalities. The error is to use risk estimates for exposures to large populations and to assume that applying that risk estimate to a specific group of workers allows for definitive conclusions about that group. In this example, the figure provides the correct explanation. The text is misleading and might cause confusion in the community by indicating that the 330 plant workers would suffer a certain number of cancers.

QUESTION:

PC-034/6 14.084

Health effects are important to understand. The section on continued operations talks about health effects for workers. A statement is made that workers *would* experience additional cancers.

In the figure, a different explanation is used. The statement in the figure is that an average number of cancers could occur if many groups of workers were exposed. The final statement was that *the most likely outcome is zero cancers.*

a. What is the average community member to think?

b. What is the correct explanation?

DRAFT SWEIS

COMMENT (and background information):

PC-034/7 14.085

The Department of Energy's Office of Emergency Management (NN 60) and the Office of Emergency Response (DP 23) fund the DOE's Atmospheric Release Advisory Capability (ARAC) which is housed at the Lawrence Livermore National Laboratory. ARAC's computer models, which have world-wide acceptance, have been called into service in many real-time responses to both real and potential accidental releases of radioactive material. The Three-Mile Island nuclear power plant (NPP) accident in 1978, the 1986 Chernobyl NPP disaster in the former Soviet Union, and the US Air Force Titan II missile accident in Damascus, Arkansas are just a few examples. In addition, the ARAC models have been utilized in every nuclear weapons accident exercise (NUWAX), since NUWAX 79. Pantex Plant is an "ARAC Site" and is linked to the ARAC center in Livermore via a computer-to-computer connection. ARAC operators are familiar with Pantex operations and can respond in a matter of a few minutes with a computer model graphic output showing the trajectory of the plume of contamination in the event of an accident. When, and if, a real accident occurred at Pantex it would be the ARAC models and the ARAC capability that DOE would call upon to respond in real time.

QUESTION:

Since ARAC is funded by NN 60 and DP 23 and ready to respond to a radiological accident at Pantex, why did DOE choose to use a model like ERAD to assess consequences for this EIS?

DRAFT SWEIS

COMMENT (and background information):

PC-034/8 11.027

Table 4.11.1.6-1 presents revenues for the governing bodies within the Pantex ROI (p. 4-165).

QUESTION:

If Pantex is reduced to the 500 weapons activity level what would be the impact to these revenues?

DRAFT SWEIS

COMMENT (and background information):

PC-034/9 14.086

In Table 4.14.1.4-1, safety statistics for Pantex are compared to general industry, manufacturing industry and chemical industry (p. 4-217).

QUESTION:

Since the largest industry in the Panhandle is agriculture should not the agricultural statistics be included here?

DRAFT SWEIS

COMMENT (and background information):

PC-034/10 14.087

Appendix D, "Human Health," does very little to explain how the impact to human health are derived or calculated. This appendix is more of an explanation of the risk assessment methodology than human health.

DRAFT SWEIS

COMMENT (and background information):

PC-034/11 09.011

In Volume I, §4.2 "Impact Assessment Methodologies" (p. 4-4), under "Biotic Resources," it is stated that "**Impacts to wetlands are mostly related to the potential discharge of contaminants to the playas.**" (Emphasis added)

QUESTION:

How can impacts to wetlands be related to *potential* discharges of contaminants? Only actual discharges can have impacts!

DRAFT SWEIS

COMMENT (and background information):

PC-034/12 06.043

In Volume I, §4.6 "Water Resources" (p. 4-57) it is stated that "Playas have also been identified as possible sources of focused recharge to the groundwater flow system at Pantex Plant. Unlined ditches have been used to dispose of wastewater and stormwater in the past."

As written, the implication is that the Pantex playas recharge the total groundwater system which includes the Ogallala aquifer. This is not true. At Pantex Plant the playas have been identified as a possible source of focused recharge to the perched aquifer and unlined ditches have been used to convey wastewater and stormwater.

DRAFT SWEIS

COMMENT (and background information):

PC-034/13 06.044

In August 1995, EPA issued a draft NPDES permit for the Pantex Plant, yet in Volume I (pp. 4-61 and 4-62), very little information regarding the substance of this draft NPDES Permit is presented.

QUESTION:

Why? And why does this section on NPDES Permits contain superfluous information about three-year old TNRCC draft permits on surface water discharges?

DRAFT SWEIS

COMMENT (and background information):

PC-034/14 10.003

In Volume I, §4.10.1.2 "Native American Groups" (p. 4-150), it is stated that "An inventory of traditional Native American sites identifying features such as petroglyphs, ceremonial areas, or sacred sites has not been conducted nor have any such sites been identified at Pantex Plant (DOE 1995K:4-280)." **This statement is incorrect!** Numerous archaeological surveys have been conducted on both DOE-owned and DOE-leased land for the purpose of identifying and recording of all Native American sites including any petroglyphs, ceremonial, or sacred sites. That part of the sentence that states no such traditional sites have been identified is correct. It is worthy of note that the stated reference is incorrect both qualitatively and quantitatively! Page 4-280 of the given reference discusses Oak Ridge National Laboratory; however, when one turns to page 4-300 of that reference one finds: "Native American resources associated with these groups have not yet been identified at Pantex, but the remains of temporary campsites, hunting locations, ceremonial locations, or isolated burials are possible."

QUESTION:

How can these words be used as a reference for the statement in the Pantex SWEIS? And why doesn't DOE know that these surveys have been conducted?

PC-035
PRIVATE CITIZENS

PAGE 1 OF 1

Comment Form

These comments apply to the following documents:
- Storage and Disposition Draft PEIS
- Stockpile Stewardship and Management Draft PEIS
- Pantex Site Wide Draft EIS

United States Department of Energy

NAME: (Optional) David R. Boyle
ADDRESS: Rm 223 WERC, Texas A&M Univ, College Station, Tx 77845-3118
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The following is more of a "request" than a "comment."

I'm a professor in the Texas A&M nuclear engineering department. We have underway an effort to produce nuclear-trained graduates who will be better prepared to work in this new area of weapon material disposition. This fall I'll be teaching a new course entitled, "Nuclear Weapons Material Management & Disposition." Many of the unclassified reports that you and your contractors have produced on this topic represent excellent teaching or background material for this course.

Would it be possible for you to send me a collection of relevant tech reports that might be applicable for this course? I'm not adverse to receiving a large box or boxes. I'm also willing to review a list of titles to make a down-select if you think that would work better. If you can help me out in this fashion, you'll be making a significant contribution to educating the public and helping to produce the young talent that the nation will need in the future to deal with these issues.

Thank you.

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HT01-01

DOE PUBLIC HEARING ON
STOCKPILE STEWARDSHIP PEIS
STORAGE & DISPOSITION PEIS
PANTEX SIDE-WIDE EIS

OPENING SESSION
APRIL 22, 1996
6:00 P.M.

KAROLYN FARMER, CSR, RPR

SONDRA L. CARGLE & ASSOCIATES
Certified Shorthand Reporters
4103 W. 49th Street
Amarillo, Texas 79109
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Portions of the transcripts unrelated to this EIS have been omitte

MR. LAWSON: We will now ask for qualifying questions from the audience.

JAN SANDERS: I'm Jan Sanders from Dallas, Texas. I'd like to ask the first presenter the size of the stockpile, the stewardship stockpile. What is the size of the stockpile?

MR. LAWSON: Did everybody hear that? I'm not sure -- I'm going to ask you to speak as closely as you can into the microphone. The question from the woman is to Earl Whiteman on what the size of the stockpile currently is.

JAN SANDERS: No, I'm not interested in the current size. The size from which we're discussing the stewardship, stewardship stockpile, how many?

MR. WHITEMAN: I'm not going to be able to satisfy you totally with an answer on that, because some of that is classified. I can tell you some of where we're at. First of all, since the end of the Cold War we've dismantled here at Pantex close to 8,000 nuclear weapons. We've come down significantly in the quantity of nuclear weaons the United States has. The United States and Russia, the former Soviet Union, have both

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signed the so-called START I treaty and are proceeding to ratify those treaties. Those treaties deal with a number of missles and delivery systems each country has. They don't count specifically how many weapons they have. But generally, if you translate the number of allowable missles to the number of warheads that could be on those missles, you'll see a number of 6,000 associated with the START I nuclear weapons stockpile. That's the so-called accountable warheads in that stockpile. That's not all the nuclear weapons the United States has. We don't know how many the Russians might have. There are additional weapons both for spares and maintenance purposes and there are also weapons that don't get counted in that system. The START II that we're talking about as far as what the U.S. Congress has ratified recently and the Russians have not yet ratified still does not count the number of weapons either side has. It counts the number of missles that they have. If you translate the number of missles to numbers of warheads, you'll get a number of 3500 accountable weapons. You'll hear that term used relative to START II. Again, that's not all the nuclear weapons either country has. We don't know how many the Russians might have, but the United States would have additional above that quantity, and that number is

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classified and we can't talk about it here.

JAN SANDERS: So there's the stewardship of 3500 plus -- I'm clarifying that therefore our stewardship is up 3500 nuclear warheads plus secured -- national security secret, possibly more than that?

MR. WHITEHAN: That's correct.

MR. LAWSON: Is there anyone else that has a question they would like to ask on the presentations that have just been made? Must have been good. Okay. If there are none other, at this point I would like to invite elected officials from the Federal, State, and local level to give brief presentations. Before I do that, remember that before we break to go into our individual sessions I want to take a head count of those of you who would prefer to be in one group or another or perhaps share. So you might be giving some thought to that. At this point, I have been given a few names of people who might like to speak. I won't know all of the individuals. I would like to ask if there are any Federal officials who would like to make a presentation. Representative Thornberry.

CONGRESSMAN THORNBERRY: I might take advantage of the podium for a second. I appreciate a chance to make a few comments. I know that many of the others who will be offering comments over the course of

the next two days are going to talk about the outstanding record of Pantex and the level of community support and our willingness to look at and consider doing some additional missions.

I'm going to focus on some other kinds of questions, not because I don't think those issues are important or you ought to consider them, but as a member of the National Security Committee with responsibility to oversee the Department of Energy's weapons complex, I have tried to learn all I could about what we've got going and what we ought to be doing. And I'm not going to tell you that I know everything that these experts up here know, or that I know all of the answers, but I think I have learned enough to raise some issues of concern. And let me take a second to do this.

Of course, this is a great time of change brought about by the end of the Cold War. It was also brought about by the fact that the Department of Energy has not been as careful in the past as they should have been. And it's also been brought about by the fact that this administration has decided to stop nuclear testing. In my view, stockpile stewardship and stockpile management are important regardless of whether we resume some sort of low level nuclear testing. We ought to use a number of methods to make sure that our

nuclear weapons are as safe as they could be, and reliable. And in doing all that, we are going to make a very serious mistake if we neglect to factor in the importance of the highly skilled workers at the production plants. I tend to agree with those people who think that we need a lot of smart people in the labs. I may even agree that we may need enough smart people in two labs to compete against one another. But every bit as much as we need smart people at Livermore and Los Alamos and Sandia, we need experienced, knowledgeable people in production plants who know how to take a design or procedure and produce a product that meets those requirements safely and efficiently time after time so we have weapons that are safe and reliable. That's what the folks at Pantex do.

It's kind of like if you're building a house. You sure need an architect to draw up the designs and consult with. But there is no absolutely no substitute for the skilled carpenters and plumbers and painters who know how to actually do the work, who know what problems there may be in transplanting those blueprints and procedures into concise components, and who have a proven track record of doing it time after time. I'm afraid there's an undercurrent in the DOE today that sometimes even rises to the surface which is a lack of

appreciation for the importance of those workers on the assembly line at Pantex and the other places. If we lose them, we're a weaker country. And there ain't no numbers of Ph.D.'s at the labs that are going to replace what we've lost if that happens.

Frankly, I find it incredible that the Department of Energy would ask more and more of at least one of our production facilities and yet allocate less money for us to do that job. Yet that's what we're looking at in fiscal year 1997. If we can't keep the trained, experienced personnel at Pantex, this country simply won't meet the goals for stockpile stewardship and stockpile management, and we will begin to lose confidence in our nuclear deterrent and we will have been penny wise and pound foolish, in my judgment.

I'm also concerned that we're focusing just on dragging out the life of the current weapons without taking positive steps toward replacing them. And it will be all too soon before the end of their design life is upon us. I think we've got a real question whether we are able to build nuclear weapons again and how. There's a lot of improvements that need to be made now and others that could be made in the near future, and all the while we have to be prepared to deal with changes that may occur in Russia and China and lots of

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HT01-02 (CONTINUED)

rogue countries throughout the world. And I'm not sure we're ready. That's something that bothers me.

On the one issue of the PEIS for which there was no preferred alternative, that is, high explosives, let me just say this: When you compare apples and apples, no one seriously disputes that the most cost effective option is to retain the existing mission at Pantex. That is the reason every single Republican and Democrat in the House and Senate that represents Texas wrote a letter to the Secretary of Energy making that point. It has all boiled down to the sole justification for moving high explosives to the two labs. It ends up being that we need to keep knowledge and competence of high explosives at the labs. Well, maybe. But we need to keep it in the production facilities, as well. You can do all the research you want and have all the knowledge you can handle, but if you can't translate that into real production, I'm not sure you're left with anything. There's no reason in the world the labs can't continue to send people to Pantex to keep them up on what's happening. But to remove high explosives out of the production complex, in my opinion, would be a big mistake. On disposition and the issue of what we're going to do with the excess plutonium and uranium, that is of key concern here. As you know, we've got lots of

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pits out there and more being added every day. I'm I'm a little disappointed at this stage that we don't have guidance on where the DOE is going to come down what is to be recommended. I think we need to get making those key decisions. Two weeks ago when I visited Los Alamos, I was able to see firsthand some the projects they have going on out there. It's certainly interesting. We have some promising technologies. But the country also needs leadership and our area needs to have the confidence that DOE is what it's doing and is doing the right thing. As long as I'm in Congress, I'm going to be involved in making those decisions and will do everything I can to make area is protected and our nation is secure and our have a chance to grow up in a free and democratic society, which is part of what Pantex has contributed over the past four years.

MR. LAWSON: Thank you, very much, Congressman. I appreciate that. Is there anyone representing Federal Government who would like to speak? Yes, please, sir.

JIMMY CLARK: I'm Jimmy Clark, district representative for Congressman Larry Combest. As mentioned earlier, the Congressman had hoped to be here tonight, but was unable to catch a flight into here

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Thank you for allowing me the opportunity to make a few remarks.

Many of the others who will testify
will discuss the outstanding record of the Pantex plant,
the unparalleled level of community support which the plant enjoys,
and the willingness to consider other missions
as we sort out the nuclear weapons complex after the Cold War.

I'm going to focus on some broader questions
which certainly affect Pantex
but also the larger security needs of the country.

I do so not because I disagree with the other points
or because I don't think they are important.
Pantex's record, its people, its community support,
and its openness to other possibilities are its key strengths
and no one else can match them.

But during my tenure in Congress, on a much
I have attempted to make a serious study
of our nuclear weapons complex,
in part because I represent one of its crown jewels
and in part because I believe
that a modern, effective nuclear capability
is absolutely necessary to our national security.

I won't say that I have learned all I can or intend to,
and I won't represent to you that I know all the answers
during this time of change and turmoil.

But I am confident that I know enough to raise some serious questions
that relate to the subject today and to our children's security.

This is, of course, a time of great change
brought about by the end of the Cold War,
by the fact that the DOE was not as careful
in the past as it should have been,
and by this administration's decision to stop all nuclear testing

Stockpile Stewardship and Stockpile Management

In my view, stockpile stewardship and stockpile management
are important for the nation
regardless of whether we conduct nuclear tests or not.

We should use a number of methods to make as sure as we can
that our nuclear weapons are safe and reliable.
In doing so, we are making a serious mistake
if we neglect to factor in the importance
of highly skilled workers at production plants.

I tend to agree with those who argue that we need smart people in labs
and maybe even that we need smart people at two labs
to compete against one another.

But every bit as much as we need smart people in labs,
we need experienced, knowledgeable people in production plants
who know how to take a design or a procedure
and produce a product that meets the requirements
safely and efficiently
time after time
so that we have weapons that are safe and reliable
on which we can stake our children's freedom.

That's what people at plants like Pantex do.

HT01-02 (CONTINUED)

It's like if you're building a house, 3
you need architects to draw up the blueprints and to consult with,
but there is absolutely no substitute
for skilled carpenters, and plumbers and painters
who know how to get the work done,
who know what problems there may be
in translating the blueprints and procedures into precise components;
and who have a proven track record
of having done it -- time after time.

I am afraid that an undercurrent in DOE today,
that sometimes even rises to the surface,
is a lack of appreciation
for the importance of those workers on the assembly line
at Pantex and elsewhere.

If we lose them, we are a weaker nation
and no number of PhD's at the labs
will replace what we've lost.

I find it incredible that DOE would ask more and more
of at least one of our production plants
and yet allocate less money for it to fulfill its mission.

If we can't keep the trained, experienced personnel at Pantex,
the country won't reach its goals for Stockpile Stewardshp and Mgmt
We will begin to lose confidence in our nuclear deterrent,
and we will have been penny wise and pound foolish.

I am also concerned
that we are just focusing on dragging out the life
of current weapons
without taking positive steps
toward replacing our existing weapons 4
which will all too soon be at the end of their intended design life.

A real question is whether we will be able to build nuclear weapons again
and how.
There are many improvements which could be made now,
others which we will want to make in the near future,
and all the while we have to be prepared
to deal with changes in Russia, China and elsewhere.
I'm not sure we're ready.

<u>High Explosives</u>

Let me address the one issue in the PEIS
for which no preferred alternative was included,
that is high explosives.

When you compare apples to apples,
no one seriously disputes
that the most cost effective option
is retaining the existing mission at Pantex.

The sole justification to moving high explosives
to Los Alamos and Livermore
is that we need to keep knowledge and competence
of high explosives in the Labs.
OK - but we need to keep it at the production level too.

You can do all the research you want
and have all the knowledge you can handle,
but if you can't reliably and safely translate that knowledge
into real production,
you have nothing.

There is no reason in the world 5
that the Labs can't continue to send people to Pantex as needed
for the manufacture of high explosives,
but to remove high explosives
completely out of the production complex
would be a big mistake.

<u>Disposition -</u>

The issue of what we're going to do
with the excess plutonium and uranium is of key concern here.

As you know, we've got several thousand pits stored here
with more being added every day.
I am disappointed that the PEIS gives so little guidance
on what's to be done.

We need to get on with making these key decisions.
Two weeks ago at Los Alamos,
I was able to see firsthand some of the work involved in the Aries project.

We have some very promising technologies,
but the country needs leadership.
and our area needs confidence that DOE knows what it is doing
and is doing the right thing.

As long as I am in the Congress,
I will be involved in making these decisions
and I will do everything I can
to see that our area is protected,
to see that our nation is secure,
and to see that our children have the opportunity to live in freedom.

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HT01-03

pits out there and more being added every day. Frankly, I'm a little disappointed at this stage that we don't have guidance on where the DOE is going to come down on what is to be recommended. I think we need to get on in making those key decisions. Two weeks ago when I visited Los Alamos, I was able to see firsthand some of the projects they have going on out there. It's certainly interesting. We have some promising technologies. But the country also needs leadership, and our area needs to have the confidence that DOE knows what it's doing and is doing the right thing. As long as I'm in Congress, I'm going to be involved in making those decisions and will do everything I can to see our area is protected and our nation is secure and our kids have a chance to grow up in a free and democratic society, which is part of what Pantex has contributed over the past four years.

MR. LAWSON: Thank you, very much, Congressman. I appreciate that. Is there anyone else representing Federal Government who would like to speak? Yes, please, sir.

JIMMY CLARK: I'm Jimmy Clark, district representative for Congressman Larry Combest. As mentioned earlier, the Congressman had hoped to be here tonight, but was unable to catch a flight into here. He

asked that I make some comments here in his behalf. Congressman Combest would like to thank the Depart of Energy for holding these series of public hearings here in Amarillo so that our Panhandle neighbors can have an opportunity to share their views. Since the Plant's earliest origins in World War II as a site built the conventional bombs for the U.S. Army, countless numbers of indivlduals across the Panhandle have made instrumental contributions to the United States winning of the Cold War. In the post Cold War era Pantex workers have once again answered the call duty in peacetime and found a new role in dismantling nuclear weapons. Congressman Combest feels today that Pantex is not only ready but uniquely qualified to continue to enhance its role as a vital component of nation's nuclear weapons industrial base as we prepare for our national security needs for the 21st Century. Congressman Combest fully appreciates the DOE's responsibility to reconfigure the country's nuclear weapons production for the 21st Century. As the Chairman for the U.S. House of Representatives Permanent Select Committee on Intelligence, he currently conducts a year-long review of what is commonly referred to in the intelligence community, the classified government agencies that collect information to advise the

President and Congress on actions of foreign governments and terrorists. The legislative proposals he introduced as a result of the year-long review will ready the nation's secret intelligence gathering efforts for the -- bringing these agencies to end unnecessary duplication and work efficiently for better intelligence to keep America safe from nuclear proliferation. In the post Cold War era, many have called for a retreat of our resources and readiness regarding national security. The Congressman feels that the post Cold War era with nuclear proliferation leaves our nation more vulnerable than ever. Now that we no longer have the Soviet Union, we never know where the next threat is going to come from. We would like to urge DOE to reject these specious arguments and ensure that the nuclear weapons complex of the 21st Century maintains our nuclear deterrent for the foreseeable future. With nuclear weapons remaining a vital component of our national security into the 21st Century, Pantex is the only facility that can fulfill this mission. However, first and foremost the Congressman is adamant that any current and future functions at Pantex will be conducted in a safe and environmentally sound manner. The first priority for any expansion at Pantex is that it be implemented in a way that does not impair the health and

safety of the area residents and have an adverse effect on the environment. Congressman Combest points out adverse effect on the environment (sic) and they must as a prerequisite to any current or future activities Pantex. Forgive me, my bifocals are giving me fits here. Congressman Combest doesn't take these points lightly. He was born and raised in the Panhandle. He grew up not far from the Pantex Plant on the family farm. Congressman Combest would never support any proposal or effort that would endanger the lives or environment of this region. This is his home, and members of his family still reside here. Congressman Combest is proud of the Pantex Plant's reputation as one of the cleanest facilities in the DOE's nuclear weapons complex. They have been good stewards of the land. As -- today in Washington the DOE's Pantex Plant has been recognized as a model facility and will receive the White House Closing the Circle Award for its efforts in waste and recycling activities. Only 22 facilities have received this award. Clearly, Pantex takes its environmental safety responsibilities very seriously and the Congressman feels that this national award is highlighting their hard work. Pantex is perhaps the most cost effective alternative for any new construction of stockpile stewardship and management facilities.

HT01-03 (CONTINUED)

Among many of the reasons, labor, costs, utility rates and water and land availability at Pantex, as well as public and political support are more agreeable than those of any other site in the complex. Pantex should be considered as an alternative site for future defense related facilities to complement activities at the national labs. Location of additional defense-related activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost to American taxpayers. In deliberations DOE should insist that budgetary comparisons between Pantex and other sites are accurate and include capital, transportation, training, remediation, and other costs. With the production assembly and disassembly functions remaining at Pantex, the high explosive functions should be present at the corresponding sites. Even the DOE draft admits that Pantex must retain high explosive capabilities to process the inventories already on site from dismantling. Therefore, the least expensive alternative is to maintain high explosive functions at Pantex. Congressman Combest would also take issue with the draft PEIS statement there are no advantages to siting high explosives at Pantex as opposed to the national labs. The capital outlay alone necessary for transfer is cost

prohibitive. Also of importance, should future need arise for new weapons production, it will be critical to have high explosive facilities at the weapons production and assembly site. As DOE considers its options regarding dismantling of significant portions of the nuclear stockpile and searches for productive and environmentally sound uses for the dismantled components of the nuclear arsenal, Pantex and its functions are uniquely qualified for these new missions. Pantex has the necessary safety, security, and surveillance capabilities to accommodate and expand the role with minimal costs to the Federal Government. Once again, Congressman Combest would like to thank the Department of Energy for holding these hearings on the future of Pantex. He firmly believes that Pantex will continue to play a vital role in our nuclear weapons complex well into the 21st Century. Congressman Combest pledges to do what he can, working with Congressman Mac Thornberry in Congress, to ensure that Pantex is a vital component of our country's nuclear weapons industrial base. I appreciate the opportunity on behalf of Congressman Combest to be here at this public meeting and respectfully request the DOE to consider Congressman Combest's recommendations. Thank you.

MR. LAWSON: Thank you. Are there any other

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HT01-04

Federal representatives who would like to speak? Then I would move on to the State. I understand that State Senator Teel Bivins -- is he here?

SENATOR TEEL BIVINS: Thank you very much. I too would like to thank the Department of Energy for making these public forums available. I have to admit that stacking EIS on EIS on EIS has gotten a little bit confusing, at least for me and my staff. But we're trying to keep up with the rapidly changing developments that I know the agency has to face. First let me say generally that I'm pleased that the DOE has selected Pantex as the preferred alternative for assembly, disassembly, thereby abandoning their earlier thoughts of transferring those functions to the Nevada test site. I think that would have been cost prohibitive, and certainly that decision is based on common sense. However, I would add that by failing to recognize Pantex as the preferred candidate site for new and/or consolidated stockpile management facilities, that the DOE overlooks the best site for maintaining the integrity of U.S. nuclear stockpile and obtaining maximum efficiency for cost and savings. With regard to the stockpile stewardship and maintenance, the PEIS, a couple of thoughts. First of all, I think that Pantex is clearly the best place to site new construction for

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stewardship activities. Pantex is perhaps the most effective alternative to any of the new construction that is contemplated under this EIS. Secondly, I would echo what Congressman Combest stated with regard to high explosives. I too disagree with the PEIS statement that there are no advantages to siting the continuation of high explosive work at Pantex. That is in the face of common sense. Clearly we have a trained work force that has been conducting this function for many years now. And secondly, the cost of physically moving the infrastructure needed to conduct the activities is cost prohibitive and doesn't make economic sense. The EIS that deals with fissile materials, storage, and disposition is one that I have spent a good deal of time with. On the topic of storage, I feel like that we're seeing that Pantex in its current role is ideally suited for storage of plutonium pits. If it is anticipated that storage would be -- continue to be in that form, I don't think there's any question that Pantex, which is already contemplated to have, and I think the chart -- or will have 21,000 pits in storage of the -- I may be getting pits and tonnage mixed up. But certainly the vast majority of the pits in storage at Pantex, it makes sense to continue that function in that location. The issue of disposition and possibly the issue of storage

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depending on how or what form the storage will be in, is one that I have given the most amount of thought to. In all the years that we've been looking at the future of Pantex here in Amarillo and concerned about its future, I think that the support for this institution has been demonstrated over and over again. And I believe that we would have that support for new missions in Pantex, but I believe there have to be three criteria that would be met before we should go forward. First of all, and I think probably most importantly, when we're thinking about disposition, as I understand it, the mixed oxide fuel process is probably the only one that would apply to Pantex, from my discussions. Vitrification and some of the other deep bore hole might not have a place in the Pantex future. But with regard to mixed oxide fuel reduction, I think that we've got to demonstrate that the process that is envisioned, the dry process, is one that is technologically feasible and is demonstrably safe. As I understand the process today, it is experimental and it shows great promise. But I think before we launch into such an exercise, we've got to demonstrate beyond a shadow of a doubt that that procedure can be done safely and environmentally soundly. The second criteria is that we've got to have community support for future missions at Pantex. To

date, Pantex has enjoyed incredible community support not just the city of Amarillo but the whole 26-county area of this region of Texas. I believe that that community support will be forthcoming for future missions at Pantex if the first criteria is met. And finally, as I have said before, I would reiterate, and I believe the third criteria for this type of future mission at Pantex has to be coupled with independent regulatory oversight of the Department of Energy. As I understand today, nuclear materials at DOE are not subject to independent regulatory oversight. And I think because all politics is perceptional, we have got to give the perception and the reality to the people of this area that these missions will be conducted safely. I think when you think about the material we're dealing with, public policy demands that we have checks and balances to ensure that we won't make mistakes that quite frankly this agency has made in the past. With those three criteria in place, I believe that the support that this facility has had will continue well into the future, and the people that have worked here and have families here will be able to continue working and living in the best place in the United States. Thank you very much.

MR. LAWSON: Thank you, Senator. You will

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leave a copy. I would ask if there are other officials. I believe State Representative David Swinford is here.

REPRESENTATIVE DAVID SWINFORD: Thank you very much. I have a written testimony that I'll just hand in and I will not take very much of your time. I concur 100 percent with Senator Bivins and Congressmen Combest and Thornberry that our first obligation should be the -- of any current or future expansions or conducting anything at Pantex should be in a safe and environmentally sound manner, and that should be our first priority as we look at anything. Like I say, I do agree with what they've said. Some of the things that I'd like to say is more on a personal note. I've toured the facility and had the opportunity to go out there on several occasions, and I found that facility to be progressive and modern and very safety conscious. I've also talked to many of the employees at Pantex, and I found them to be very smart and very dedicated. And I've got total faith in them that if Pantex was not safe and if we could have any problem here, they wouldn't work there. They're not idiots. They're very smart. They know what they're doing. So I sleep very well at night knowing that those people are there and doing that work. Just as many of you, I was -- I intend to be here

a long time, and my grandchildren are going to occupy this area. And I certainly don't think that we would any of us want anything to happen to their rights and privileges to a safe environment. The so-called environmental problems that we hear about generally are old things that were not monitored years ago and that presently we are cleaning up trouble spots and making outstanding efforts to ensure the environmental safety for years to come. The people we have working at Pantex cannot be duplicated anywhere else in the world. That is reason enough for DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management and stewardship functions, as well as consolidation of plutonium storage and disposition of any related functions. Those people cannot be duplicated, and I think people are the most important thing whenever you start having a relationship with something as dangerous as nuclear weapons. I trust them. I would encourage you to consider them as you proceed with your investigation.

MR. LAWSON: Thank you, sir. Are there any other representatives at the State level we should acknowledge that would like to speak? I suspect there are a few folks at the local level. One I have on my list here is the mayor of Amarillo, Kel Seliger.

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DAVID SWINFORD
STATE REPRESENTATIVE

COMMITTEES
APPROPRIATIONS
AGRICULTURE AND LIVESTOCK
LOCAL AND CONSENT CALENDARS

April 15, 1996

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U.S. Department of Energy
Office of Reconfiguration
P.O. Box 3417
Alexandria, VA 22302

U.S. Department of Energy
Office of Fissile Materials
P.O. Box 23786
Washington, D.C. 20026

Re: Comment on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials Draft Programmatic Environmental Impact Statements (PEISs).

Thank you for the opportunity to comment on the U.S. Department of Energy's (DOE) Programmatic Environmental Impact Statements (PEISs) on Stockpile Stewardship and Management (SSM) and Storage and Disposition (S&D) of Weapons-Usable Fissile Materials. Please also consider this my comment on the Pantex Site-Wide Draft Environmental Impact Statement, since most of the issues addressed in these documents are identical.

First and foremost, I am adamant that any current and future functions at Pantex will be conducted in a safe and environmentally sound manner. Our first priority is to ensure any expansion at Pantex be implemented in a way that does not impair the health or safety of area residents or have an adverse effect on the environment. These goals serve as a prerequisite to any current or future activities at Pantex, including expansion.

I am pleased that DOE selected Pantex as the preferred alternative for assembly/disassembly, thereby abandoning earlier plans to transfer those functions to the Nevada Test Site (NTS) which would have been cost prohibitive and never been adequate to meet future needs). However, by failing to recognize Pantex as the preferred candidate site for new and/or consolidated stockpile management facilities, the DOE overlooks the best site for maintaining the integrity of the U.S. nuclear stockpile and ensuring maximum efficiencies and cost savings.

Pantex is perhaps the most cost-effective alternative for any new construction of SSM facilities. First, labor costs, utility rates, and water and land availability at Pantex, as well as public and political support, are more amenable than those at any other Complex sites. It is appropriate to consider Pantex as an alternative site for all future defense-related missions to complement activities at the national labs (such as the planned Atlas Facility and plutonium pit fabrication site at Los Alamos National Laboratory. Doe makes no mention of a strategic plutonium reserve that is necessary to meet future national security needs, even though the PEIS mentions that strategic storage should be co-located with disassembly. Pantex should be the preferred site for such a mission in coordination with its management functions. The location of additional defense-related activities at Pantex would ensure that core technical capabilities are preserved at a location that can secure them at the most efficient cost to the American people. In its deliberations, DOE should insist that budgetary comparisons between Pantex and other sites are accurate, and include capital, transportation, training, remediation and other costs.

Consistent with the strengths identified above for increased stewardship and management duties, the high explosives functions should also remain at Pantex. Because the production assembly/disassembly functions remain at Pantex, the high explosives fabrications duties should be present at the corresponding site. After all, the SSM Draft admits that Pantex must retain High explosives capabilities to process the inventories already on site from dismantling. Therefore, the least expensive alternative is to maintain these functions at Pantex. I adamantly disagree with the statement in the draft PEIS that there are no advantages to siting high explosives at Pantex as opposed to the national labs. The capital outlay alone necessary for transfer is cost prohibitive. In addition, should future need arise for new weapons production, it will be critical to have the high explosives facilities at the weapons production assembly/disassembly site.

As the sole DOE-authorized facility for assembly and disassembly of nuclear weapons, Pantex has historically handled these functions in a safe an efficient manner for over than 40 years. One of the challenges faced after dismantling a significant portion of the nuclear stockpile is processing or disposal with the materials that remain. The DOE is considering several options. Once again, acknowledging cost savings considerations, Pantex could continue to store plutonium which is already at the site and upgrade facilities for any and all storage options being considered by DOE with minimal cost and difficulty. Pantex currently safeguards more than 8,000 surplus pits and plans are being made to ship additional pits from Rocky Flats to Pantex. It makes little sense to re-create storage facilities at another site and then unnecessarily transport large amounts of plutonium across the country from Pantex. The budgetary and political costs for such a decision would be enormous. Because of these costs, Pantex also should be designated the preferred site for any disposition options and related functions. It makes budgetary and policy sense to site disposition where storage already exists. Furthermore, it makes no sense from any perspective, budget or otherwise, to site strategic storage at one site and surplus at another. Pantex should be selected for both storage functions. Pantex has the necessary safety, security, and surveillance capabilities to accommodate an expanded role with minimal costs and it is the production site closest to Los Alamos, the planned pit fabrication site.

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Based upon these reasons, I respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management and stewardship functions as well as consolidation of all plutonium storage and disposition and any related functions. Thank you for the opportunity to comment on these documents.

Sincerely,

COPY FOR YOUR INFORMATION

DISTRICT 87
POTTER AND MOORE COUNTIES

HT01-06

MAYOR KEL SELIGER: Thank you, Mr. Lawson. It is interesting as we listen to the comments made this afternoon by Mr. Swinford, Congressman Thornberry, Senator Bivins, and those made for Congressman Combest, that all of those are individuals who have earned their livelihood from the soil and the productivity of West Texas, every single one of them. It underscores a very important idea that environmentalists are truly people who eat and people who drink our water and people who raise their families in the proximity to the industrial processes that go on in this and any community. Several years ago, as the veil of secrecy began to be lifted from the atomic weapons complex and we looked at the problems that happened at Hanford and Rocky Flats, I think everybody realized, the people who live in the surrounding communities and the work forces who work in all of those plants, that a simple job is not worth risking one's life, one's ability to earn, and one's ability to live their life with their families. Indeed, everyone's environmental awareness has increased severalfold over the last few years. What we have seen over the last few years as we have been invited into these plants is there is a new emphasis in that complex, and that is on industrial safety and environmental responsibility. Indeed, as we provide livelihoods, that

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they must be lived in communities that are themselv
safe and livable. We acknowledge and we appreciate
DOE making these communities part of this
decision-making process. It is tremendously import
We found out some interesting things as we discuss
issues, particularly around storage and stockpile
maintenance. In the hearing held last summer that
Mr. Whiteman spoke about, an individual from the
Department of Energy said that the Department of En
would not duplicate any facility currently efficient
operating in the system, unless the Department of En
decided to duplicate it. Lights went on in a lot of
peoples's heads at that point as they began to
understand why we have an extraordinarily high defic
We assumed that the economic implications and the
implications in industrial efficiently will also be
adequately addressed in the Programmatic Environmen
Impact Statement. When we look at disposition subsy
it is also interesting and we anxiously await the fi
and feel it is important for people to realize that t
National Academy of Sciences has quite definitively
outlined the areas -- the feasible areas for
disposition. We are anxiously awaiting the
administration to pick the technical pathway to see t
it that just as the nuclear weapons complex made this

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country safe in the era of the Cold War, it will also move ahead expeditiously in making it safe as we disassemble these weapons and treat these materials in a safe and responsible fashion. One thing we are certain of, we are confident of and grateful for, is the people who live in this area will be a part of that decision making capability, and for that we appreciate it.

MR. LAWSON: Thank you very much. I do have the name of Diane Bosch who would like to make a statement. And then I'll take anyone else on the local level who would like to speak.

MS. BOSCH: Good evening. For any of you that are not from Amarillo, you find out very quickly why the mayor is a tough act to follow. He's wonderful. Thank you for the chance to address the Department of Energy in this interactive workshop format. As an Amarillo City Commissioner since 1989, I have witnessed countless DOE hearings on Pantex. The give and take between the audience and the DOE officials is very informative to everyone in attendance. The DOE is to be applauded for the use of an interactive format and should continue to use it in future hearings. The DOE is also to be applauded for the open manner with which it has and continues to address local environmental concerns. We are also thankful that good management at Pantex by the

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HT01-07

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DOE's contractors, Mason & Hanger and Batelle, have prevented Pantex from having environmental problems of the type and magnitude found at other DOE sites. As is evident by the large turnout tonight, this community strongly supports Pantex. This support comes in large measure from the DOE's commitment to our local environment. That continued commitment to the environment is critical for the community support of all continued or new missions at Pantex. Regarding the stockpile stewardship and management PEIS, I strongly support the choice of Pantex as the preferred alternative for the assembly and disassembly mission. This community is extremely proud that Pantex played an important part in winning the Cold War, and will continue to play a critical role in reducing the size of the nation's nuclear arsenal in the post Cold War period. Keeping this mission at Pantex is not only the right choice for Amarillo, it also makes makes sense from a national perspective because it maintains a contingent production capability and it saves more than 1.5 billion dollars when compared to the cost of transferring the work to the Nevada test site. As long as we are on the subject of cost savings and retention of production capability, the DOE must not let the high explosive fabrication mission be moved from Pantex.

Pantex employees have successfully performed this mission for more than 40 years, and there is absolutely no reason for this work to be moved. When the weapons complex was organized, it made logical sense to locate high explosive work with assembly and disassembly. It still makes sense. Furthermore, the DOE's own analysis indicates that the cost of transferring high explosive work to New Mexico labs would be fifty million dollars. It is inconceivable that the DOE might seek to justify spending fifty million dollars only to end up with less production capability in a location that has never performed this mission. In terms of storage and disposition activities, I would first like to note my previous comments about the need to protect the environment. I am encouraged by the previous comments about the need to protect the environment. I am encouraged by the outstanding environmental record that Pantex has regarding storage of plutonium over many years. I hope that the DOE will make the right choice and continue the safe storage of surplus plutonium at Pantex. I also hope that the DOE will keep in mind that plutonium from dismantled weapons represents a tremendous investment and may prove to be a valuable asset in civilian use. I urge the DOE to choose Pantex as the site for environmentally sound disposition

activities. Once again I thank you for the opportunity to comment on the DOE's plan for the future of Pantex. Pantex has been an important part of our regional economy for many years and we support the continuation of environmentally sound operations at the plant. I would also like to thank all the concerned citizens of our community who have made the effort to attend this meeting tonight. Thank you.

MR. LAWSON: Thank you, Ms. Bosch. Is there anyone else, a local official who would like to speak? Please.

MR. REED: I'm Vance Reed with the Amarillo Economic Development Corporation. Many of the things that I have in my statement have already been said, so I don't think it's necessary to reiterate those positions. The two things that naturally that we're concerned about anytime that we try to entice someone to come to Amarillo -- number one is our environment. And we're simply not going to be involved in a situation where things are not environmentally safe. And second of all is jobs. And there's not enough words to say how important Pantex is to our job situation in Amarillo. If you use a multiplier index in the total take on our economy, we're talking about 13,500 (sic) jobs out of the 3,500 job base that is at Pantex. Needless to say,

HT01-07 (CONTINUED)

HON. DIANNE BOSCH
CITY COMMISSIONER
CITY OF AMARILLO, TEXAS

COMMENTS ON THE STOCKPILE STEWARDSHIP AND MANAGEMENT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT, STORAGE AND DISPOSITION OF FISSILE MATERIALS PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT AND PANTEX SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT

THANK YOU FOR THE CHANCE TO ADDRESS THE DEPARTMENT OF ENERGY IN THIS INTERACTIVE WORKSHOP FORMAT. AS AN AMARILLO CITY COMMISSIONER SINCE 1989, I HAVE WITNESSED COUNTLESS D.O.E. HEARINGS ON PANTEX. THE GIVE-AND-TAKE BETWEEN THE AUDIENCE AND THE D.O.E. OFFICIALS IS VERY INFORMATIVE TO EVERYONE IN ATTENDANCE. THE D.O.E. IS TO BE APPLAUDED FOR THE USE OF AN INTERACTIVE FORMAT, AND SHOULD CONTINUE TO USE IT IN FUTURE HEARINGS.

THE D.O.E. IS ALSO TO BE APPLAUDED FOR THE OPEN MANNER WITH WHICH IT HAS, AND CONTINUES TO, ADDRESS LOCAL ENVIRONMENTAL CONCERNS. WE ARE ALSO THANKFUL THAT GOOD MANAGEMENT AT PANTEX BY THE D.O.E.'S CONTRACTORS, MASON & HANGER AND BATTELLE, HAS PREVENTED PANTEX FROM HAVING ENVIRONMENTAL PROBLEMS OF THE TYPE AND MAGNITUDE FOUND AT OTHER D.O.E. SITES. AS IS EVIDENT BY THE LARGE TURNOUT TONIGHT, THIS COMMUNITY STRONGLY SUPPORTS PANTEX, AND THIS

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SUPPORT COMES IN LARGE MEASURE FROM THE D.O.E.'S COMMITMENT TO OUR LOCAL ENVIRONMENT. THAT CONTINUED COMMITMENT TO THE ENVIRONMENT IS CRITICAL FOR COMMUN SUPPORT OF ALL CONTINUED OR NEW MISSIONS AT PANTEX.

REGARDING THE STOCKPILE STEWARD SHIP AND MANAGEMENT I STRONGLY SUPPORT THE CHOICE OF PANTEX AS THE PREFERRED ALTERNATIVE FOR THE ASSEMBLY AND DISASSEMBLY MISSION. T COMMUNITY IS EXTREMELY PROUD THAT PANTEX PLAYED AN IMPORTANT PART IN WINNING THE COLD WAR, AND WILL CONTIN TO PLAY A CRITICAL ROLE IN REDUCING THE SIZE OF THE NATIO NUCLEAR ARSENAL IN THE POST-COLD WAR PERIOD. KEEPING TH MISSION AT PANTEX IS NOT ONLY THE RIGHT CHOICE FOR AMARI IT ALSO MAKE SENSE FROM A NATIONAL PERSPECTIVE BECAUSE I MAINTAINS A CONTINGENT PRODUCTION CAPABILITY, AND IT SAV MORE THAT 1.5 BILLION DOLLARS WHEN COMPARED TO THE COST TRANSFERRING THE WORK TO THE NEVADA TEST SITE.

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IN TERMS OF STORAGE AND DISPOSITION ACTIVITIES, I WOULD FIRST LIKE TO NOTE MY PREVIOUS COMMENTS ABOUT THE NEED TO PROTECT THE ENVIRONMENT. I AM ENCOURAGED BY THE PREVIOUS COMMENTS ABOUT THE NEED TO PROTECT THE ENVIRONMENT. I AM ENCOURAGED BY THE OUTSTANDING ENVIRONMENTAL RECORD THAT PANTEX HAS REGARDING STORAGE OF PLUTONIUM OVER MANY YEARS. I HOPE THAT THE D.O.E. WILL MAKE THE RIGHT CHOICE AND CONTINUE THE SAFE STORAGE OF SURPLUS PLUTONIUM AT PANTEX. I ALSO HOPE THAT THE D.O.E. WILL KEEP IN MIND THAT PLUTONIUM FROM DISMANTLED WEAPONS REPRESENTS A TREMENDOUS INVESTMENT AND MAY PROVE TO BE A VALUABLE ASSET IN CIVILIAN

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USE. I URGE THE D.O.E. TO CHOOSE PANTEX AS THE SITE FOR ENVIRONMENTALLY SOUND DISPOSITION ACTIVITIES.

ONCE AGAIN, THANK YOU FOR THE OPPORTUNITY TO COMMENT ON THE D.O.E.'S PLAN FOR THE FUTURE OF PANTEX. PANTEX HAS BEEN AN IMPORTANT PART OF OUR REGIONAL ECONOMY FOR MANY YEARS AND WE SUPPORT THE CONTINUATION OF ENVIRONMENTALLY SOUND OPERATIONS AT THE PLANT. I WOULD ALSO LIKE TO THANK ALL THE CONCERNED CITIZENS OF OUR COMMUNITY WHO HAVE MADE THE EFFORT TO ATTEND THIS MEETING TONIGHT.

HT01-08

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HT01-08/1 11.010

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from our standpoint, what's truly important to this area from an economic standpoint, we strongly urge the DOE to do everything they possibly can at the Pantex site. Thank you.

HT01-08/1 11.010 continued

MR. LAWSON: Is there anyone else from a local level who would like to speak? I want to thank each of you for your presentations. I appreciate it and I appreciate your taking your time to come this evening and share your thoughts on this. I'm sure the Department appreciates it, as well. As I announced before, we will soon break to go into three groups. Again, to remind you, the Pantex people interested primarily in Pantex will be in this section. The people in the middle will be stockpile stewardship and management. And the far end will be materials disposition. I would like to ask all of you if you could please indicate how many of you are principally interested in only talking and being in a discussion about one of these topics, and let's say those who are interested in spending their time here talking about the Pantex sitewide; how many hands? I have about a dozen or more. How many for the stockpile stewardship and management? Material disposition? Okay. And how many people would like to split their time among two or more of these? That's the majority of those people. This is

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what I propose that we do. We will break into the three different groups. We will break for ten minutes, just enough time for us to assemble the walls and for you to pick up any materials that you need outside. When we reconvene we'll go through the process as I described. We'll our first break at 8:30, if those people -- if you want to move on to another section, please feel free to do so. We'll take a five-minute break at that time and then we'll break again at five minutes past 9:00. We will reconvene in ten minutes. Thank you very much for your attention.

(Recess.)

Mr Vance Reed
President, Amarillo Economic Development Corporation

Comments on the Stockpile Stewardship & Management PEIS,
the Storage & Disposition of Fissile Materials PEIS, and
the Pantex Site-Wide EIS

Thank you for this opportunity to provide input to the Department of Energy regarding the operation of the Pantex plant. I would like to address two primary issues tonight regarding Pantex's future: 1) the environment, and 2) jobs.

Starting with the environment, I would like to reiterate this community's adamant position that all work performed at Pantex continue to be done in a fashion that protects the environment. While the public has heard a great deal about "contamination" at Pantex, there has been little media attention given to the nature of pollution problems at Pantex. Most contaminants at Pantex are related to solvents and hydrocarbons that are very similar to those that would be found at practically any large manufacturing facility. This community is very reassured by the fact that Pantex has not had contamination problems from radioactive materials, such as occurred at Rocky Flats and Hanford.

The Amarillo Economic Development Corporation views Pantex in much the same manner as we view other large manufacturers in terms of presenting risks to the environment. For instance, if we were recruiting a computer chip manufacturer, we would realize that these plants have hazardous waste streams including arsenic and other heavy metals. The A.E.D.C. would only recruit a company that is committed to full compliance with E.P.A. and state environmental regulations. High tech businesses have created whole new industries and thousands of jobs, while working with very hazardous substances. This shows that protection of the environment and job creation can go hand-in-hand.

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Likewise, we believe that Pantex can be a site where good, high-paying jobs are created in a work environment that includes potentially dangerous materials. When

HT01-08 (CONTINUED)

HT01-08/2
11.009
continued

measured in terms of total payroll, Pantex is by far the area's largest employer. With 3,500 employees at the plant, a job multiplier of 3.87 shows that Pantex is responsible for a total of over 13,500 jobs in this region. This multiplier was established by Dr. Ray Perryman at Southern Methodist University. The multiplier reflects the fact that the money that Pantex brings into the local economy supports many retail, medical, educational, finance, insurance and real estate jobs. All told, employment related to Pantex represents over 12% of all jobs in the Amarillo metropolitan area. I urge the D.O.E. to correct the socio-economic impact portions of all three EIS documents to accurately reflect the impact of Pantex on our local economy.

Because of the importance of Pantex to our local economy, the A.E.D.C. is very pleased that Pantex has been chosen as the preferred site for continued assembly and disassembly functions. We also believe this decision is in the best economic interests of the nation, as it saves more than 1.5 billion dollars to American taxpayers. I also urge the D.O.E. to continue the high explosive fabrication mission that is currently performed at Pantex. Again, this not only protects jobs in our region, it saves American taxpayers 50 Million dollars compared with the cost of moving these operations to New Mexico.

For Pantex's future, the D.O.E. should locate storage and disposition missions at Pantex, as long as they can be done in an environmentally safe fashion. I urge the Department to make use of the expertise of the Amarillo National Resource Center for Plutonium. This resource center, which is operated by the University of Texas System, the Texas A&M University System, and the Texas Tech University System, can provide world-class evaluation of disposition options. I believe the Amarillo area will prove to be an outstanding operating environment for those storage and disposition functions that have been fully scientifically evaluated and safely implemented.

Once again, thank you for the opportunity to address you in this workshop tonight.

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HT02-01

DEPARTMENT OF ENERGY

PUBLIC HEARING ON

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STOCKPILE STEWARDSHIP & MANAGEMENT DRAFT PEIS

STORAGE & DISPOSITION DRAFT PEIS

PANTEX DRAFT SITE-WIDE EIS

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FORMAL COMMENT SESSION

APRIL 22, 1996

7:00 P.M.

SONDRA L. CARGLE, CSR, RPR

SONDRA L. CARGLE & ASSOCIATES
CERTIFIED SHORTHAND REPORTERS
4103 W. 49TH ST.
AMARILLO, TEXAS 79109
(806/355-8181)

format or anything that we hope to do during this public hearing session?

Hearing none, I believe that we'll begin, then. It's about 7:02, so we're almost starting on time. And Ms. Gattis, we'll ask you to come and give us your comments.

MS. GATTIS: Thank you all very much. It's been a long struggle working on this hearing.

My name is Beverly Gattis. I am President of STAND of Amarillo. I would like to preface my remarks with there has been some confusion and misunderstanding. It was never the intention of our particular citizens' groups that you all not be able to respond. That's a misunderstanding that I hope we can clarify, and perhaps a rereading of the letters will serve to do that, letters that have been exchanged between the Department and four of the local citizens' groups. That said, I will just go ahead and read a prepared statement.

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23.013

Representatives of the Department of Energy are here for the next two days to educate the public about its plans for the future. There are voluminous documents which Panhandle citizens

can read if they choose to do so, and some of us have at least started on that task.

I will confess to a growing sense of anger at how deficient those documents are. The Panhandle stands to be greatly affected by the choices the Department will make about plutonium storage, processing and disposition, yet citizens are given documents which talk only in generalities about operations which can change Pantex into a plutonium processing site not unlike Rocky Flats.

Pantex could become the site which blends plutonium and uranium together to make nuclear fuel. It could be -- it could even be the site for a new experimental nuclear reactor.

About none of this can we get sufficient information from the documents. Technical analyses will be available later. Costs analyses will be available later.

We do not have access to the information necessary to render an informed opinion, and the Department tells us that is how it will be.

For instance, the Department defends the absence of cost information by stating that

NEPA does not require a federal agency to supply cost analyses in a draft document. To that, I have to tell you, I say, so what. Such information is necessary to the discussion, and so it must be available.

The same applies to technical information. It is not possible that the Department has so little information that it cannot give a clearer description of what the operations for dismantling pits and processing plutonium will involve. And no citizen should be satisfied with being put in a position of guessing.

All in all, the Department is wasting the time and good efforts of Panhandle citizens who care about their region, whether they agree with the operations proposed or disagree.

It is putting on a show of gathering public comment, but it is withholding information which the public needs and deserves. DOE is managing the public, not empowering it.

The decisions which these documents address are far too important for us to allow the Department to go forward in this manner. Whether it is the case that the Department has the

HT02-01 (CONTINUED)

science for the sake not only of our own region, but for any other site in the nation. Thank you.

MR. MATNEY: Thank you, Ms. Gattis. We'll now move to our next speaker, Jeri Osborne. Jeri.

MS. OSBORNE: I'm Jeri Osborne. My husband, Jim, and I live and farm across Farm to Market 293 on the north side, downwind and downstream from the Pantex site. We raised our family of three children, one nephew, and kept another nephew and a niece a good part of their lives on the farm.

Jim and his brother and sisters were also raised there. His father bought the place in 1927. I've come to speak on health and safety issues, as well as the feasibility of having plutonium, other nuclear materials and other types of hazardous materials and chemicals in our front yard as well as over the area's major water supply and in this very productive and vital agricultural area, major food storage for the nation as well as the world, just for Amarillo's powers that be to possibly create a few more jobs and wealth for themselves.

At this time, there are no known

Statement of Beverly E.C. Gattis
President, STAND of Amarillo
April 22, 1996

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HT02-01/2 23.011

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HT02-01/3 23.012

The decisions which these documents address are too important for us to allow t Department to go forward in this manner. Whether it is the case that the Depart has the missing information yet is not revealing it, or whether the information is complete, in either instance these draft documents are fundamentally deficient. T public deserves better. The law expects better. And the future must be based o something better.

There is difficult, important work which must be done with plutonium and highly enriched uranium if we are to control the theft of nuclear weapons-useable mate

and stop the spread of nuclear weapons. Unfortunately, it is the kind of work which has left trouble and contamination every place it has ever been done.

It is clear that the Department could name Pantex to do some of this processing and disposal work. It is STAND's position that the Panhandle is too valuable to be turned into a plutonium processor, fuel fabricator, nuclear reactor and nuclear waste handling site. But even more, it is STAND's position that no matter where this work is done, this time it must be well planned and executed. STAND will not accept anything less than forthright, complete information and good science for the sake not only of our region, but for the rest of the nation.

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HT02-02

science for the sake not only of our own region, but for any other site in the nation. Thank you.

MR. MATNEY: Thank you, Ms. Gattis. We'll now move to our next speaker, Jeri Osborne. Jeri.

MS. OSBORNE: I'm Jeri Osborne. My husband, Jim, and I live and farm across Farm to Market 293 on the north side, downwind and downstream from the Pantex site. We raised our family of three children, one nephew, and kept another nephew and a niece a good part of their lives on the farm.

Jim and his brother and sisters were also raised there. His father bought the place in 1927. I've come to speak on health and safety issues, as well as the feasibility of having plutonium, other nuclear materials and other types of hazardous materials and chemicals in our front yard as well as over the area's major water supply and in this very productive and vital agricultural area, major food storage for the nation as well as the world, just for Amarillo's powers that be to possibly create a few more jobs and wealth for themselves.

At this time, there are no known

results of long-term health exposures to the effects of whatever is the present mission of Pantex, let alone future missions that may result from DOE's plan. The technology is just not available at this time to perform many of the proposed missions.

DOE does not know what to do with surplus and weapon-grade plutonium and other nuclear materials. How can they be so sure of the consequences of future missions that may be brought to the site?

Pantex is probably cleaner than other DOE sites, but it is on the Superfund list. It may be safer than other sites, but we can prove that accidents -- at least I hope the incidents that have affected us personally were accidents -- have happened that has endangered our property as well as our personal safety and others in our neighborhood -- in the neighborhood of Pantex.

There have been numerous major fires at the site, three or four within the last two years. We took cold drinks and ice to the firemen on various occasions.

We have had cast steel shrapnel

chunked at us. We have picked up some 300 to 400 pounds of a naval breech block, one piece weighing 59 pounds. Some of this shrapnel was found some one to -- and a half to two miles from where it was exploded.

We've had tractor tires ruined from it. Through the years, we've had windows broken, pictures knocked off the walls, et cetera.

On October the 4th, 1995, a very large charge of explosives was set off to signal the start of an emergency management drill. This drill broke our house, cracked the slab, rafters, walls, brick shower, plumbing, causing flooding of the basement and other damages resulting in some $30,000 in repairs and replacement of carpets and other floor covering, rebuilding the shower, cracks, et cetera, and these are the known problems. We also must have the house levelled.

This incident was not only very frightening and dangerous, but has caused us much anxiety and inconvenience. Trying to put up family for my mother's death and funeral and having family in for Christmas with a flooded basement, large holes drilled in the living room

floor and other areas of our house caused a great deal of stress, to say the least.

Too many questions are yet unanswered by the studies that have been conducted. Granted, it may be impossible to anticipate all potential problems that may arise, but there does seem to be a lack of scientific research used for the study.

It may appear that the conclusion has been drawn and figures to support that conclusion were used without any real scientific information. One must question the credibility of those responsible for the documents and the reliability of the studies when such glaring, inaccurate information can be found within the documents.

One example of this is found in Storage and Disposition of Weapons, Usable Fissile Materials Draft Programmatic Environmental Program Statement, Volume 2. Pages 4-796 and 797 clearly show that -- the town of Canyon outside the 80 kilometers radius and located within Deaf Smith County, just north of Castro County.

The population distribution map

HT02-02 (CONTINUED)

should show Canyon to be just south of Amarillo, in Randall County, perhaps some 40 kilometers from Pantex, at the very most.

We do not see the location of long-term storage of nuclear materials, the possibility of processing, reprocessing, modification of pits, the location of nuclear reactors at Pantex very good ideas, nor do we believe that moving of all the high explosive activities by the complex to Pantex to be in our best interest.

The DOE has sites that are much larger and much further away from population, agricultural areas and major sources of water for its future missions than is Pantex. Thank you.

MR. MATNEY: Thank you, Ms. Osborne.

Our court reporter has asked if you have proposed documents and could leave a copy with us, --

MS. OSBORNE: Yes, I do.

MR. MATNEY: -- she would like to have that. Could we get those now? Thank you.

We'll move to our third speaker. Mr. Jim Osborne.

MR. OSBORNE: I'm Jim Osborne. I

COMMENTS REGARDING PANTEX HEARINGS

AMARILLO, TEXAS; APRIL 22, 1996 by JERI OSBORN

I am Jeri Osborne. My husband Jim and I live and farm across FM 293 on the northside, downwind and downstream from the facility. We raised our family of three children, one nephew, and kept their nephew and spent a good part of their lives on the farm. Jim's two brother and sisters were also raised there. His father bought the place in 1927.

HT02-02/1
11.008

I have come to speak on health and safety issues as well as the feasibility of having plutonium, other nuclear materials, and other types of hazardous materials and chemicals in our front yard as well as over the areas major water supply and in this very productive and vital agricultural, and major food source -- for the nation as well as the world just for Amarillo's "powers that be" to possibly create a few more jobs and wealth for themselves.

At this time, there are no known results of long term health exposures to the effects of whatever in the present mission of Pantex --let alone future missions that may result from DOE's new plan. The technology is just not available at this time to perform any of the proposed missions. DOE does not now know what to do with surplus and weapon grade plutonium and other nuclear materials. How can they be so sure of the consequences of future missions that may be brought to the site?

page 2

HT02-02/2
14.007

Pantex is probably cleaner than other DOE sites, but it is on the superfund list. It may be safer than other sites, but we can prove that accidents -- at least I hope the incidents that have affected us personally were accidents --have happened that has endangered our property as well as our personal safety and others in the neighborhood of Pantex. There have been numerous major fires on the site, three or four within the past two years. We took cold drinks and ice to the firemen on various occasions. We have had cast steel shrapnel chunked at us. We have picked up some 300 to 400 pounds of a naval breech block -- one piece weighing 55 pounds. Some of this shrapnel was found some one and one-half to two miles from where it was exploded. We have had tractor tires ruined from it.

Through the years, we have had windows broken, pictures knocked off walls, etc. On October 4, 1995, a very large charge of explosive was set off to signal the start of an emergency management drill. This "test" broke our house, cracked the slab, rafters, walls, brick, shower, plumbing causing flooding of the basement, and other damages resulting in some $30,000 in repairs and replacement of carpets and other floor coverings, rebuilding the shower, cracks, etc. We also must have the house leveled. This incident was not only very frightening and dangerous, but has caused us much anxiety and inconvenience. Trying to put up family for my mother's death and funeral and having family in for Christmas with a flooded basement, large holes drilled through the living room floor and in other areas of the house causes a great deal of stress to say the least.

page 3

HT02-02/2
14.007
continued

Too many questions are yet unanswered by the studies that have been c d. Granted, it would be impossible to anticipate all potential problems that may arise, but there does seem to be a lack of scientific research used for the study. It would appear that a conclusion has been drawn and figures to support that conclusion were used without any real scientific information.

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We do not see the location of long term storage of nuclear materials, the possibility of processing /reprocessing, modification of pits, the location of nuclear reactors at Pantex very good ideas. Nor do we believe the moving of all the high explosive activities in our best interests. The DOE has sites that are much larger and much farther away from population, agricultural areas, and major sources of water for its future missions than is Pantex.

Thank you.

HT02-02 (CONTINUED)

Perhaps a site around the 3000 block of Harmony or the 2700 block of Teckla or in SW Amarillo would suffice. If the city fathers ~~would~~ would not want the activity in their neighborhood, why would they want it for those neighbors to the east of Amarillo where a great deal of those with in the trade area live and work to put food on their tables?

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HT02-03

should show Canyon to be just south of Amarillo, in Randall County, perhaps some 40 kilometers from Pantex, at the very most.

We do not see the location of long-term storage of nuclear materials, the possibility of processing, reprocessing, modification of pits, the location of nuclear reactors at Pantex very good ideas, nor do we believe that moving of all the high explosive activities by the complex to Pantex to be in our best interest.

The DOE has sites that are much larger and much further away from population, agricultural areas and major sources of water for its future missions than is Pantex. Thank you.

MR. MATNEY: Thank you, Ms. Osborne.

Our court reporter has asked if you have proposed documents and could leave a copy with us, --

MS. OSBORNE: Yes, I do.

MR. MATNEY: -- she would like to have that. Could we get those now? Thank you.

We'll move to our third speaker. Mr. Jim Osborne.

MR. OSBORNE: I'm Jim Osborne. I

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farm across the road north from Pantex. All I'd like to say is we don't have enough water. Amarillo dried up our domestic well ten days after they started pumping the well across the fence from us in 1965.

Since then, we have lost 125 feet of water from the static level. Most of Amarillo's wells, all located within five miles radius of Pantex, and two of which are within a half mile of the north boundary, won't pump but half as much water as they earlier did.

Pantex wells are pumping only half as much as they used to, and they've replaced four of the five wells since they started.

We don't have enough water for reprocessing. We don't have enough water for nuclear reactors.

According to an enclosure with the water bills from Amarillo a couple of years ago, Amarillo set a new one-day record for pumping water on July the 26th of 1994 for one day's pumping of 92 million gallons.

They have pumped one and a half times their allowable for at least the last six years. They have a variance from the Panhandle

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Groundwater Conservation District if they would develop other sources of water.

Amarillo, Southwestern Public Service Company and the Canadian River Water Authority have been swapping water rights to land they don't have enough water to justify development.

I hear that Amarillo has drilled ten test holes in northeastern Potter County, and the best test they had was 320 gallons a minute. So they didn't develop that field. I've heard ranchers up there say that they couldn't even get good livestock water.

Amarillo's not worried about contamination of the Ogallala aquifer. They're going to dry up their well field here in Carson County north of Pantex before it becomes contaminated.

I understand the City is refurbishing old wells in the field southwest of Amarillo that they'd already pumped almost dry and abandoned 25 years ago. They won't pump much water from those wells, but they are supplementing what they have. They're already talking for water use restrictions in the City this summer.

From where will Pantex import water

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and at what cost for plutonium reprocessing or for cooling nuclear generators?

I understand that a property owner may sue a government entity for devaluing the value of their land more than 25 percent. Our land has certainly been devalued more than that.

If it takes 10 to 15 years to get a reactor into production, and the expected life of that reactor is about 40 years, from where is the water coming and at what cost?

I find a tremendous discrepancy in the groundwater withdrawals stated in Volume II of Storage and Disposition. It's stated that the facility currently is using 836 million liters, which would be about 221 million gallons a year, when Amarillo set a new one-day record for 92 million gallons a year and -- or in one day, in June 26th of 1994.

We just don't have enough water for the DOE projects. Thank you.

MR. MATNEY: Thank you, sir. I believe our next speaker is Marcia Keevan. Miss Marcia Keevan.

MS. KEEVAN: This opportunity to comment on the future of the nuclear weapons

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HT02-003 (CONTINUED)

COMMENTS REGARDING PANTEX HEARINGS

AMARILLO, TEXAS, APRIL 22, 1996 by JIM OSBORNE

I am Jim Osborne and I farm across the road north from Pantex. We don't have enough water.

Amarillo dried up our domestic well ten days after they started pumping a well across the fence from us in 1965. Since then, we have lost 125 feet of water from static level. Most of Amarillo's, well's all located within a five mile radius of Pantex, two of which are within one-half mile of the north boundary, won't pump but one-half what they did earlier.

Pantex's wells are pumping only one-half the water they did at one time.

We don't have enough water for reprocessing. We don't have enough water for nuclear reactors.

According to an enclosure with the water bills a couple of years ago, Amarillo set a new one day record on June 26, 1994, for one day's pumping of 92 million gallons. They have pumped one and one-half times their allowable for at least the last six years. They have a variance from Panhandle Ground Water Conservation District if they would develope other sources of water. Amarillo, Southwestern Public Service and the Canadian River Water Authority have been swapping water rights to land that doesn't have enough water to justify development. I've heard that Amarillo drilled 10 test holes in

northwestern Potter County and the best test they had was 320 gallons per minute. So they didn't develope that field. I have heard a rancher say he couldn't even get good livestock water in places.

Amarillo is not worried about contamination of the Ogallala aquifer. They are going to dry up their well field here in Carson County north of Pantex before it becomes contaminated.

I understand the city is refurbishing old wells in the field southwest of Amarillo that they already pumped almost dry and abandoned 25 years ago. They won't pump much water from those wells. They are already talking water use restrictions for the city for this summer. They should practice good water conservation anyway.

From where will Pantex import water and at what cost for plutonium processing/reprocessing or for cooling nuclear generators?

I understand that a property owner may sue a government entity or entities for devaluating the land more that 25%. Our land has certainly been devaluated more than that.

If it takes 10 to 15 years to get a reactor into production and the expected life of that reactor is about 40 years, from where is the water coming at at what cost?

I find a tremendous descrepancy in the groundwater withdraval stated in Volume II of Storage and Disposition. It stated the facility currently use is 836 million liters (221 million galons per year) when Amarillo set a new record for one day's pumping of 92 million gallons in one day, June 26, 1994.

We just don't have enough water for any new DOE projects.

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HT02-04

and at what cost for plutonium reprocessing or for cooling nuclear generators?

I understand that a property owner may sue a government entity for devaluing the value of their land more than 25 percent. Our land has certainly been devalued more than that.

If it takes 10 to 15 years to get a reactor into production, and the expected life of that reactor is about 40 years, from where is the water coming and at what cost?

I find a tremendous discrepancy in the groundwater withdrawals stated in Volume II of Storage and Disposition. It's stated that the facility currently is using 836 million liters, which would be about 221 million gallons a year, when Amarillo set a new one-day record for 92 million gallons a year and -- or in one day, in June 25th of 1994.

We just don't have enough water for the DOE projects. Thank you.

MR. MATNEY: Thank you, sir. I believe our next speaker is Marcia Keevan. Miss Marcia Keevan.

MS. KEEVAN: This opportunity to comment on the future of the nuclear weapons

complex is a democratic process, and I like democracy. But do we, after four years of schi attempts to end the secrecy surrounding the contaminated facilities of the cold war effort, do we yet have enough information to give you of the DOE our informed consent?

HT02-04/1 23.023

Are all of the important damage reports in the public domain, or are many vital documents concerning soil, air and groundwate contamination still being suppressed?

We cannot fix a problem we are not permitted to face. I call on the DOE, Mason & Hanger, the unions, the DOD, the City of Amarill and the State of Texas to correct, once and fo

HT02-04/2 06.037

all, this unethical situation that prohibits documents such as the Zone 12 Groundwater Assessment proposed by Argonne National Lab fro being easily available to the general public as well as to our civic leaders.

How can you ask a community to look forward when we are not even permitted an honest peek back in time, when we cannot even view an accurate picture of the present situation?

The contamination history of the Pantex Plant, as well as its implications to our

present and our future well-being, is not the type of information that should be withheld and played with. We own this contamination. The citizens of America pay the DOE's bills. It is not un-American to expect the government to account for its actions; rather, it is exactly what a democratic government should expect of its citizens.

What a very sad day this is. This is a day when some of our leaders have demonstrated that we aren't civil enough to handle the truth.

Some identify the act of requiring government to account with the act of yelling fire in a crowded theater. Such a comparison is both untrue and un-American.

Are my fellow citizens to become an unruly, riotous lot if we discover that some of our -- in our leadership haven't had our best interests at heart? Are we too immature, after 200 years of democracy, to handle the truth about mistakes that we have allowed our government to make?

Will you, of the DOE, respect our comments and our opinions when you know that we

are only submitting these based on half-truths and half of the information?

This political infighting must stop. The facts need to see the light of the day and the public needs to hear them.

Some of the hidden information is depressing. Oh, well. Some of the hidden information involves deception. Unfortunate. And some of the hidden information shakes our fragile perceptions of reality, and that's life, folks.

Improving the condition of the human spirit is still a noble pursuit, and any contributions that we can make towards this is well worth the effort.

Do not underestimate our democracy. Our nation fought a long, bitter, cold war. And yet, have we honored the American casualties of that war, the sacrifices made by unknowing men, women and children, even children yet to come?

Failure to recognize such sacrifices made for a long, costly war is unpatriotic. The continuing attempts to try and diminish the damage done by cold war contamination serves only to dishonor the dead and still dying casualties

HT02-04 (CONTINUED)

in our nation.

Whether we are in or out of uniform, life is life, and lives sacrificed in war deserve recognition and not scorn.

Pantex is directly on a geological fault. This fault has been active during this century. Earthquakes strong enough to crack a farm building have occurred.

HT02-04/3 13.005

Pantex, the Superfund site, is currently operating under no permit with the State of Texas. Records show that Pantex is monitored for some 160 different contaminants. And why is it being monitored for these contaminants? Because they didn't know it, but they sent it into the groundwater. And I am addressing you as Pantex, but this forum also needs to address the fact that these discharges are only monitored, contaminant by contaminant.

HT02-04/4 06.021

I call on the DOE and the State to give us a broader spectrum. I really don't want a glass of drinking water with 10 to 100 teeny, tiny little contaminants in it that are all below levels and are considered safe. I do not consider that safe.

HT02-04/5 07.002

The use of strontium-90 to test

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containment at the firing sites is an unacceptable, unpleasant fact to me. Please tell me more about this, as well as the other open air experiments conducted at the site.

HT02-04/5 07.002 continued

I'm sorry, I'll hurry up.

DU particles from test explosions at the firing site spread into the air, land and water off site. DU is toxic and radioactive. While I thank you for starting to clean it up, once again, I must say, tell us more.

HT02-04/6 07.003

I closing, I regret that our local business leaders used your hearings to blast the United States President and the Honorable Secretary. I appreciate all efforts to make the very negligent, dangerous energy industry safer and more accountable. Thank you.

MR. MATNEY: Thank you, Ms. Keevan. Do you have a copy for us?

MS. KEEVAN: I'm finishing it.

MR. MATNEY: Okay. Thank you.

Our next speaker is Harriet Martin.

MS. MARTIN: My name is Harriet Martin. Is this working?

MR. MATNEY: That's just for the television.

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Marcia Keevan
Amarillo, Texas

This opportunity to comment on the future of the nuclear weapon's complex is a democratic process, and I like democracy. But, do we, after four years of solid attempts to end the secrecy surrounding the contaminated facilities of the Cold War effort, do we yet have enough information to give you of the D.O.E. our informed consent? Are all of the important damage reports in the public domain, or are many vital documents concerning soil, air, and groundwater contamination still being suppressed?

We can not fix a problem we are not permitted to face. I call on the D.O.E., Mason Planner, the unions, the D.O.D., the City of Amarillo and the State of Texas to correct, once and for all, the unethical situation that prohibits documents such as the Zone 12 Groundwater Assessment (which was prepared by Argonne Nat. Lab) from being easily available to the general public as well as to civic leaders.

How can you ask a community to look forward when we are not even permitted an honest peek back in time? Were we cannot even view an accurate picture of the present situation? The Contamination History of the Pantex Plant, as well as its implications to our present and future well-being, is not the type of information that should be withheld. We owe this contamination the citizens of America pay the D.O.E.'s bills. It is not "un-American" to expect the government to account for its actions. Rather, it is (accounting) exactly what a democratic government must do.

What a very sad day this is. This is a day in which some of our leaders have demonstrated that we aren't civil enough to handle the truth. Some identify the act of requiring government to to account with the act of yelling "fire" in a crowded theater. Such a comparison is both untrue and un-American.

Are my fellow citizens to become an unruly, riotous lot if we discover that some in our leadership have not had our best interests at heart? Are we too immature, after 200 years of democracy, to handle the truth about mistakes we have allowed the government to make? Will you, of the D.O.E., respect our comments and opinions knowing that we are submitting these based on only partial truths?

This political in-fighting must stop. The facts need to see the light of day, the public needs to hear them. Some of the hidden information is depressing - OH WELL! Some of the hidden information involves deception - UNFORTUNATE. Some of the hidden info shakes our fragile perceptions of reality - THAT'S LIFE, FOLKS!

Improving the condition of the human spirit is still a noble pursuit, and any contributions we can make towards such is worth it.

HT02-04 (CONTINUED)

Let us not underestimate our bravery. Our nation fought a long, bitter, Cold War, and yet, have we honored the American casualties of that war? The sacrifice made by unknowing men, women, children, and even children yet to come? Failure to recognize such sacrifice made for such a long, costly war is empathetic. The continuing attempts to try to diminish the damage done by Cold War contamination values only to dishonor the dead and and still dying casualties in our nation. Whether we are in or out of uniform, a life is a life, and lives sacrificed in war deserve recognition, not scorn.

Pantex is directly on a geological fault. This fault has been active during this century. Earthquakes strong enough to crack a farm building have occured.

Pantex, the Superfund site, is currently operating under no permit with the State of Texas. Records show that Pantex is monitored for some 160 different contaminants. Why?

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I call on the D.O.E and the State of Texas to establish a standard for multiple contaminati in water, rather than measuring contaminant by contaminant. I do not wish to have a glass of drinking water with 20-100 tiny wiery contaminants, all of which individually fall below "safe" drinking water standards.

Pantex did not know that such contamination would spread to the groundwater.

The use of Strontium-90 to test ~~containment~~ containment at the firing sites is an un-acceptable, unpleasant fact. Please tell us more about this, as well as the other open air experiments conducted at the site. DU particles from the test explosions at the firing sites spread into the air, land, and water on and off site. DU is toxic and radioactive. While I thank you for starting to clean it up, once again I must say, tell us more!

In closing, I regret that our local business leaders and you have come to blast our United States President and Honorable Sec of Energy. I appreciate all efforts to make a historically negligent, dangerous industry safe and more ~~accountable~~ accountable.

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HT02-05

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I closing, I regret that our local business leaders used your hearings to blast the United States President and the Honorable Secretary. I appreciate all efforts to make the very negligent; dangerous energy industry safer and more accountable. Thank you.

MR. MATNEY: Thank you, Ms. Keevan. Do you have a copy for us?

MS. KEEVAN: I'm finishing it.

MR. MATNEY: Okay. Thank you.

Our next speaker is Harriet Martin.

MS. MARTIN: My name is Harriet Martin. Is this working?

MR. MATNEY: That's just for the television.

MS. MARTIN: Okay. I don't have a prepared statement. I have made statements in the past, and -- but I would like to say that I am a native of Amarillo, and I was a long-time resident of Canyon, a place that I care very much about.

And I recently moved to Ohio, but this doesn't lessen my concern for this area, because I've come back for a visit now and I see, in the midst of this drought, how very fragile everything looks and much care it needs to remain viable and remain in such a condition that it will support people and it will be a pleasant place to live.

And I would like to address my remarks especially to the CEO of the Department of Energy, because I really can't deal with a lot of the details of the documents that are now under consideration.

But to address the big picture, it seems to me that the Pantex Plant, with good intentions, has evolved during the cold war into a place which essentially now is a candidate for processing a great deal of toxic substances in the midst of America's bread basket, America's

prime agricultural lands, and that this is an evolution which has gone on and has come to this point without a plan.

This was not thought of as a plan in the forties and the fifties, when Pantex originated, and that it has essentially developed into something that's quite inappropriate for our area.

It's quite inappropriate for our delicate soils, our delicate -- our insufficient, perhaps, in the future, water supply.

HT02-05/1 07.001

It's inappropriate for the reasons that winds here and storms here are very strong and tend to have much far -- more far-reaching effect than they do in other parts of the country, and also, because it happens to be located right adjacent to an international air field. And also, it happens to be close to a town of some hundred thousands of inhabitants, and it's -- which is the center for many other small towns which are dependent on it for medical and all sorts of other commercial things.

So, to me, Pantex has become something quite -- which was quite, perhaps, unintentional, but it has become something that

isn't -- it isn't appropriate any longer for massive processing of very toxic substances, because it's very dangerous now to this area.

And I don't feel that it would be appropriate to set up a lab in one's kitchen, where one concocted all sorts of pesticides or poisons. Any more, I don't feel it's appropriate to have a plant and to enlarge the function of a plant which is dealing with very toxic things which have proven that they can't be contained in the past in the midst of America's prime agricultural area, prime arable land.

This soil here is -- is very good by comparison to many areas of the world. Perhaps it ranks in the very small percentile of such soils.

And to have soils combined with an aquifer which supplies -- which supplies underground water, this is something very rare, very precious. This is something we cannot construct. We cannot make this. We cannot make these soils. We cannot make this underground water.

We can take this plutonium processing to some place where it will not be so

HT02-05 (CONTINUED)

inappropriate, and hopefully, preserve what is really good about the High Plains. Thank you.

MR. HATNEY: Thank you, Ms. Martin.

We've had some people come in. Let me reiterate the DOE officials that are here to listen to your comments, and then we'll resume with our speakers.

From the Albuquerque office, DOE office, is Patricia O'Guin. Sitting next to her is Bert Stevenson. He is from the Washington, D.C. DOE office, and Steve Chase is here also from Washington, D.C., DOE. Donna Cargle (sic) is our court reporter.

We'll continue, then, with our next speaker, and it is Mr. Jim Murphy.

MR. MURPHY: Before I begin my formal statement, which is actually quite brief, possibly the most brief you'll have this evening, I just want to tell you that I appreciate having this particular format -- this public comment format as a part of these public hearings.

I think there's been some movement away from that the last couple of meetings here, and I think that's regrettable. I think there's a number of people, citizens, for one reason or

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HT02-06

inappropriate, and hopefully, preserve what is really good about the High Plains. Thank you.

MR. MATNEY: Thank you, Ms. Martin.

We've had some people come in. Let me reiterate the DOE officials that are here to listen to your comments, and then we'll resume with our speakers.

From the Albuquerque office, DOE office, is Patricia O'Guln. Sitting next to her is Bert Stevenson. He is from the Washington, D.C. DOE office, and Steve Chase is here also from Washington, D.C., DOE. Donna Cargle (sic) is our court reporter.

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I think there's been some movement away from that the last couple of meetings here, and I think that's regrettable. I think there's a number of people, citizens, for one reason or

another, maybe comfortability, maybe lack of assertiveness, maybe time factors, that can't come and sit at a half day or an all-day workshop and express themselves comfortably in that kind of a setting, and I think having this as a component of these public hearings allows more individuals, more citizens to be able to come and express themselves on these very critical issues.

This is my rather brief statement. My name is Jim Murphy, and I'm a federal employee, like yourselves. I've been an Amarillo resident since 1977. I am active in a variety of community organizations and am on a number of community boards, including a local public school board.

I'm here tonight to respectfully express an emphatic no to any expansion or added roles at Pantex that include plutonium processing or nuclear waste storage.

Although such expansion or new missions may have some positive economic benefits for the area, there would be economic risks as well. And at any rate, it is apparently necessary to occasionally reiterate that there are some things that money can't buy and some

things in life that are more important than economic bottom lines.

I count amongst these things a safe and clean environment for our traditional agricultural and cattle-raising industries and ways of life, a clean aquifer, and a safe and healthy environment for our children and grandchildren.

Plutonium processing and/or nuclear waste storage are hostile and unfriendly to those environments and ways of life and not worth whatever the price may be. The tantalizing apple of prosperity beckons, but when it is the fruit of the plutonium tree, we'd best look elsewhere. I thank y'all.

MR. MATNEY: Thank you, Mr. Murphy.

MR. MURPHY: Thank you, Paul.

MR. MATNEY: Uh-huh. Our next speaker is Tamara Snodgrass.

MS. SNODGRASS: It's Tamara Snodgrass. And I really don't like speaking in public.

I came over today trying to have an open mind, but I realize that after listening to the City, the State, federal elected officials.

I am Jim Murphy and I have been an Amarillo resident since 1977. I am active in a variety of community organizations and am on a number of boards including a local public school board.

I am here tonight to respectfully express an emphatic "No!" to any expansion or added roles at Pantex that include plutonium processing nuclear waste storage. Although such expansion or new "miss may have some positive economic benefits for the area, the ld be economic risks as well.

At any rate, it is apparently necessary to occasionally reiterate that there are some things that money can't buy and some things in life that are more important than economic bottom lines.

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The tantalizing apple of prosperity beckons; but when it is the fruit of the plutonium trac, we best look elsewhere.

Jim Murphy
6711 Columbia Dr.
Amarillo, TX 79109

4-22-96

HT02-07

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I count amongst these things a safe and clean environment for our traditional agricultural and cattle-raising industries and ways of life, a clean aquifer, and a safe and healthy environment for our children and grandchildren.

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MR. MATNEY: Thank you, Mr. Murphy.

MR. MURPHY: Thank you, Paul.

MR. MATNEY: Uh-huh. Our next speaker is Tamara Snodgrass.

MS. SNODGRASS: It's Tamara Snodgrass. And I really don't like speaking in public.

HT02-07/1 23.003

I came over today trying to have an open mind, but I realize that after listening to the City, the State, federal elected officials,

HT02-07/1 23.003 continued

this is a done deal. The most we can hope for is a safe facility. Thank you.

MR. MATNEY: Okay. Thank you. Our next speaker is scheduled at 7:35. I believe that Mr. Seewald is here. We can begin or we can wait a little bit. Would you like to go ahead?

MR. SEEWALD: I defer to you. I'm willing to proceed.

MR. MATNEY: Let's do that. And we certainly don't want to prohibit anybody who's scheduled, but we can be a little ahead, I think. Mr. William Seewald.

MR. SEEWALD: I do have a copy for you.

MR. MATNEY: Okay, thank you.

MR. SEEWALD: Thank you. I really appreciate the opportunity to address you, and I appreciate the fact that you are willing to be here to receive our comments.

Given the time allotted and the amount of information to be covered in these workshops, remarks will certainly have to be brief and abridged.

However, notwithstanding the voluminous issues of great concern, some

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HT02-08

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MR. SEEWALD: I do have a copy for you.

MR. MATNEY: Okay, thank you.

MR. SEEWALD: Thank you. I really appreciate the opportunity to address you, and I appreciate the fact that you are willing to be here to receive our comments.

Given the time allotted and the amount of information to be covered in these workshops, remarks will certainly have to be brief and abridged.

However, notwithstanding the voluminous issues of great concern, some

reference must be made to the process.

Combining these three documents into a single opportunity for a public input, together with the very short amount of time that much of the material has been available does justice neither to the NEPA process itself, nor to the people and agencies that wish to make reasoned responses to these documents.

At least in the case of the Stockpile Stewardship, as well as the Storage and Disposition, the documents are substantive enough to require careful analysis. It is also an unavoidable conclusion that the hearing process envisioned by NEPA has been transformed into a format that can more effectively control the output, that being the workshops.

There is nothing wrong with workshops per se, but they do not meet the government's full responsibility to the public. That any of us are standing here to give testimony is only the result of citizen lobbying and the willingness of individuals to face down any obstacles to get their concerns into the public domain.

One overriding point must be made

regarding the Stockpile Stewardship & Management document, even though one hopes we look to the cumulative impact of all three.

It is clear that one of the premises compelling much of the decision-making process is the extraordinary attempt by the government to justify the continued operation of all three of its major weapons laboratories, Los Alamos, Sandia and Lawrence Livermore.

The redundant laboratory capacity built during the cold war to spur competition amongst the laboratories can now only be characterized as an obscene abuse of the taxpayer's pocketbook.

That such a political decision gets made in Washington is certain no surprise, but it is incumbent on all of us to demand accountability in these decisions and to refuse to acquiesce in expedient political decisions as well as those that are based on bad science or a disregard for the national resources of the Texas Panhandle.

The Storage and Disposition document, with its potentially momentous effect on our area, is tragically flawed in three areas.

Number one, it doesn't really live up to the second part of its title. If long-term storage decisions are to be made, it seems absolutely essential that they be informed by at least a fairly concrete sense of the method of disposal, as well as where that might happen, the time frame and a reasonable consideration of the processes themselves.

Secondly, this EIS, as with the others under consideration today, does not make a realistic distinction between strategic and surplus plutonium. The effort to maintain two-thirds of all the plutonium ever produced in the U.S. as strategic evidences a less than serious commitment to disarmament, as well as giving rise to the suspicion that some effort is afoot to generate commerce in plutonium is superseding the security need to immobilize this dangerous substance.

Thirdly, this document sets out options that would obligate plutonium processing, generating all kinds of new nuclear waste streams that have never existed at Pantex before. The document gives little or no consideration at all to the effects of this on Panhandle agriculture.

HT02-08 (CONTINUED)

Just the threat of contamination from these activities could devastate the marketability of our products.

It furthermore remains unconscionable that the -- that apparently, consideration other than the water needs of domestic and agricultural usage seem to preclude the realistic designation of the Ogallala aquifer as an aquifer eligible for the fullest protection of federal law and policy.

The Site-Wide EIS is an effort brought about by citizen lobbying of the Department of Energy, and it has not really been in the public domain long enough for detailed consideration.

Unfortunately, the substance of the document itself may require much less time than the gravity of the issues warrant. There is, again, no consideration of the most basic industry of the Panhandle, agriculture.

The agreement to evaluate alternative sites for pit storage, specifically, Department of Energy sites, seems to have been an insubstantial one, since the site is not included in the actual EIS for storage.

If, as implied in the analysis, Manzano mountain becomes ineligible because of the threat such a facility represents to Albuquerque, what are we to make of the government's concern for the residents of the Panhandle?

Sad to say, we hear more about jobs than grave issues relative to safety and the protection of our national re -- natural resources.

But the best way, absolutely, to protect jobs in the Panhandle, whether it's in agriculture or at the Pantex Plant itself, is to keep the plant from becoming the next Rocky Flats. When that happens, the only jobs will be for nuclear waste handlers and the State regulators who can only step in after the damage is actually done but who have no federally-mandated authority over many of the proposed functions being proposed.

On top of the Ogallala aquifer is the wrong place, the wrong place for plutonium storage, nuclear waste facilities or any kind of plutonium processing. Thank you.

MR. HATNEY: Thank you, Mr. Seevald.

PANTEX WORKSHOPS April 22, 1996
Statement by William H. Seevald

Given the time allotted and the amount of information to be covered in these "workshops," remarks will have to be brief and abridged. However, notwithstanding the voluminous issues of great concern, some reference must be made to the process. Combining these three documents into a single opportunity for public input together with the very short amount of time much of the material has been available does justice neither to the NEPA process itself, nor to the people and agencies that wish to make reasoned responses to these documents. At least in the case of the Stockpile Stewardship as well as the Storage and Disposition, the documents are substantive enough to require careful analysis. It is also an unavoidable conclusion that the hearing process envisioned by NEPA has been transformed by DOE into a format they feel they can more effectively control — that being the workshops. There is nothing wrong with workshops per se, but they do not meet the government's full responsibility to the public. That any of us at all are standing here to give testimony is only the result of citizen lobbying and the willingness of individuals to face down any obstacles to get their concerns into the public record.

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23.001

One overriding point must be made regarding the Stockpile Stewardship and Management document even though one also must look at the cumulative impact of all three. It is clear that one of the significant premises compelling much of the decision-making process is the extraordinary attempt by the government to justify the continued operation of all three of the major DOE weapons laboratories, Los Alamos, Sandia, and Lawrence Livermore. The redundant laboratory capacity built during the cold war to spur competition can now only be characterized as an obscene abuse of the tax-payers pocketbook. That such a political decision gets made in Washington is certainly no surprise, but it is incumbent on all of us to demand accountability in these decisions, to refuse to acquiesce in expedient political decisions as well as those that are based on bad science or a disregard for the natural resources of the Panhandle.

The Storage and Disposition document with its potentially momentous effect on our area is tragically flawed in three important areas. Number one, it doesn't really live up to the second part of its title. If long-term storage decisions are to be made, it seems absolutely essential that they be informed by a least a fairly concrete sense of the method of disposal as well as where that will happen, the time frame, and a reasonable consideration of the processes themselves. Secondly, this EIS, as with the others under consideration today, does not make a realistic distinction between strategic and surplus plutonium. The effort to maintain two thirds of all the plutonium ever produced in the U.S. as "strategic" evidences a less than serious commitment to disarmament as well as giving rise to the suspicion that some effort to generate commerce in plutonium is superseding the security need to immobilize this dangerous substance. Thirdly, this document sets out options that would obligate plutonium processing, generating all kinds of new nuclear waste streams that have never existed at Pantex before. The document gives little or no consideration to the effects on Panhandle agriculture. Just the threat of contamination from these activities could devastate the marketability of our products. It furthermore remains unconscionable that apparently considerations other than the water needs of domestic and agricultural usage seem to preclude the realistic designation of the Ogallala as an aquifer eligible for the fullest protection of federal law and policy.

HT02-08/2
23.002
HT02-08/3
04.001

The Site-Wide EIS, an effort brought about by citizen lobbying of the Department of Energy, has not really been in the public domain long enough for a detailed consideration. Unfortunately, the substance of the document itself may require much less time than the gravity of the issues warrants. There is again no consideration of the most basic industry of the Panhandle, agriculture. The agreement to evaluate alternative storage sites for pits, specifically Department of Defense sites seems to have been an insubstantial one since that site is not included in the actual storage EIS.

HT02-08/4
02.001

If, as implied in the analysis, Manzano mountain becomes ineligible because of the threat such a facility represents to Albuquerque, what are we to make of the government's concern for the residents of the Panhandle?

Sad to say we hear more about jobs than grave issues relative to safety and the protection of natural resources. But the best way absolutely to protect jobs in the Panhandle, whether in agriculture or at the Pantex Plant itself, is to keep the plant becoming the next Rocky Flats. When that happens the only jobs will be for nuclear waste handlers and the state regulators who can only step in after the damage is actually done but who have no federally mandated authority over many of the processing functions being proposed. On top of the Ogallala Aquifer is the wrong place for long-term storage of plutonium, nuclear waste facilities, or any kind of plutonium processing.

HT02-09

Our next speaker is Tracy Tucker. Is Tracy here? Do you have a substitute?

UNIDENTIFIED SPEAKER: She's not back yet. Doris said that she would take her place if you don't mind.

MR. MATNEY: All right. Is this Doris --

MS. SMITH: Smith.

MR. MATNEY: Okay. Doris.

MS. SMITH: Yes, sir. In a democracy, the voice of the people is important in any decision-making process, and especially now, with the decision regarding how our government will manage the surplus nuclear materials and what forms of disposition are being considered.

At this time, it is vital that all the right questions are asked to protect the natural resources of this area for the future generations of not only the Texas Panhandle and the State of Texas, but also, of the world.

Many issues come into play in this very overarching discussion, not the least among them, the cost to us, the taxpayer, to produce these documents, and then to find them flawed in

so many ways.

These documents are lacking important information in many areas that make it virtually impossible to even begin the discussion. The overall cost to us, the taxpayer, and my neighbors, for implementing the expensive options that have been characterized in these documents are not prudent or wise.

Why is the Department of Energy so intent on building new research, development and testing facilities, when the entire world is looking to the United States for leadership in the extension of the Nonproliferation Treaty and to a zero threshold for a comprehensive test ban? Instead, the intent seems to be to continue to build and to test.

In the SSM PEIS, the scenario for these options in the downsizing of the nuclear weapons complex alone is expected to exceed 30 billion dollars within a decade. These proposed new facilities are expensive.

In this time of tight budget constraints, we, the grass roots people, should be imploring our congressional leaders to stop all this massive spending on projects which lead

to a buildup in nuclear weapons. How many weapons do we need before we say, that's enough? How many warheads have we used?

It is time now, with the downsizing, to really actively pursue real downsizing. Do we want to continue to drag our country into further indebtedness by continuing nuclear weapons production?

What is the real reason behind pouring billions of dollars into defense? Are we trying to keep war and war games going in the pretense that this is the way to build peace and to achieve economic development in the rural communities across America?

This is a sunset industry. My friends and neighbors, we all understand this, and this needs to be managed as such.

What will the DOE and, for a matter of fact, all of us, do with the waste that will be generated for at least the next 20 years? There are no licensed facilities to accept the wastes that are now piled up in the facilities throughout the DOE complex. Why generate more than what needs to be generated?

We're now faced with storage and

disposition of surplus fissile materials. Every option considered has tremendous waste streams attached to it. Where will these wastes go?

It seems quite evident to us that the site that creates the waste keeps the waste. Will that saddle communities across this country with the economic and the environmental problems of hosting waste treatment, storage and processing facilities?

In the PEIS, where were the impacts to the present agricultural economy which has built and sustained this area? Why were the risks to this economic stronghold not assessed? What will happen when we no longer produce food for people? Where is our priority? Are bombs more important than people?

We, in the agriculture area, strive to produce quality, wholesome food for the world population. One farmer feeds in excess of 131 people, yet the industry across the road from us builds bombs to annihilate people. Where is our sense of morality and respect for life?

The rest of my comments, I will just turn in. I imagine that was the time.

MR. MATNEY: Yes, ma'am, 15 seconds.

HT02-09 (CONTINUED)

You may continue. Might as well finish.

MS. SMITH: The documents fail to address the issue of the location of Pantex over the Ogallala aquifer. Water and agriculture are the real wealth of the Texas Panhandle. Without them, there would be no Texas Panhandle. Food is the most important commodity we produce. It must be protected.

Please do not turn the Texas Panhandle, known for its beef and cereal grain production, into a plutonium waste site. You have created enough of these tragic land problems across the United States. There is no need to create another one.

It is very much like putting poison in your cereal bowl. When this area becomes contaminated, what have we gained? Thank you.

MR. MATNEY: Thank you, Ms. Smith.

Our next speaker is Trish Neusch.

And again, I'll be holding my hand up when you have 15 seconds left, but our intent is not to prohibit you from finishing, but rather, to just let you know that we're trying to hold to around five minutes.

MS. NEUSCH: Good evening. My name

Comments for PEIS Public Hearing on
Storage and Disposition of Weapons-Usable Fissile Materials
and
Stockpile Stewardship and Management
Amarillo, TX April 22, 1996
Cecil Ray Smith

In a Democracy the voice of the people is important in my decision-making policies regarding how our government will manage surplus nuclear materials and what forms of disposition are being considered. At this time it is vital that all the right questions are asked to protect the natural resources of this area for the future generations of not only the Texas Panhandle and the State of Texas, but of the world.

HT02-09/1 23.022

Many issues come into play in this very over-arching discussion. Not the least among them the cost to us the taxpayer to produce these documents and to find them flawed in many ways. These Documents are lacking important information in many areas that make it virtually impossible to even begin the discussion.

The over-all cost to you and me, neighbor, for implementing the expensive options characterized in these documents are not prudent or wise. Why is the Department of Energy so intent on building new Research, Development and Testing facilities when the entire world is looking to the U.S. for leadership in an extension of the Non-Proliferation Treaty, and a zero threshold for a Comprehensive Test Ban. Instead the intent seems to be continue to build and test.

In the SSM-PEIS the scenario for these options, in a downsizing of the nuclear weapons complex, alone is expected to exceed $2 Billion within a decade. These proposed new facilities are expensive! In this time of tight budget constraints, we the grassroots people should be imploring our Congressional leaders to stop all this massive spending on projects which lead to a build up in nuclear weapons. How many weapons do we need before we say, "That's enough?" How many nuclear warheads have we used?

It is time now, with the downsizing, to really actively pursue REAL DOWNSIZING. Do we want to continue to drag our country into further indebtedness by continuing nuclear weapons production? What is the real reason behind pouring dollars into Defense - are we trying to keep war and war games going in the pretense that this is the way to build peace and to achieve economic development in rural communities across America? This is a "sunset industry", our friends and neighbors, and needs to be managed as such.

HT02-09/2 13.004

What will the DOE and "We" do with all the waste that will be generated for at least the next 20 years? There are no licensed facilities to accept the wastes that are piled up on facilities throughout the DOE Complex at this time - why generate more that needs to be generated.

We are now faced with storage and disposition of surplus fissile materials, every option considered has tremendous waste stream attached to any option. Where will this waste go? It seems quite evident that the site that creates the waste, keeps the waste. Will that saddle communities across this country with the accumulated and environmental problems of hosting waste treatment, storage or processing facilities?

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In the PEIS's where were the impacts to the present agricultural economy which has built and sustained this area? Why were the risks to this economic stronghold not assessed? What will happen when we no longer produce food for people, where is our priority? Are bombs more important than food? We in agriculture strive to produce quality, wholesome food for the world population -one farmer feeds in excess of 131 people, yet the industry across the road from us builds bombs to annihilate people. Where is our sense of morality and respect for life?

The documents fail to address the issue of the location of Pantex over the Ogallala Aquifer. Water and agriculture are the real wealth of the Texas Panhandle, without them there would be no "Texas Panhandle". Food is the most important commodity we produce - it must be protected.

Not all alternatives for siting the processes for storage and disposition were analyzed - if Manzano Weapons Storage Site at Kirtland Air Force Base has facility that could store 20,00 pits, why was it not further characterized in the other documents?

We say to you DOE, we want no storage of surplus plutonium at Pantex because it is dangerous and will lead to plutonium processing which results in additional waste generation and storage.

No processing of plutonium at Pantex since every plutonium processing facility has created large amounts of contamination which has adversely affected the workers and the public.

No waste disposal facilities at Pantex because we must preserve and protect the Ogallala aquifer.

Historically the plutonium at Pantex has been in pit form, now with these documents all of a the nation's weapons-usable plutonium not in active warheads will be stored at Pantex - plutonium will come to Pantex from Rocky Flats, Colorado; Hanford, Washington; Los Alamos, New Mexico; Savannah River, South Carolina; Nevada Test Site; and the Idaho National Engineering Lab. We find this unacceptable to an agricultural productive area.

No nuclear power reactors at Pantex - there is no need to construct them and the use of MOX fuel in them will not destroy the plutonium - it only creates more plutonium.

Please do not turn the Texas Panhandle, known for its beef and cereal grain production, into a plutonium waste site. You have created enough of these tragic land problems across the United States - the is no need to create another one here. It is very much like putting poison in your cereal bowl! When this area becomes contaminated - what have we gained?

-30-

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HT02-010

You may continue. Might as well finish.

MS. SMITH: The documents fail to address the issue of the location of Pantex over the Ogallala aquifer. Water and agriculture are the real wealth of the Texas Panhandle. Without them, there would be no Texas Panhandle. Food is the most important commodity we produce. It must be protected.

Please do not turn the Texas Panhandle, known for its beef and cereal grain production, into a plutonium waste site. You have created enough of these tragic land problems across the United States. There is no need to create another one.

It is very much like putting poison in your cereal bowl. When this area becomes contaminated, what have we gained? Thank you.

MR. MATNEY: Thank you, Ms. Smith.

Our next speaker is Trish Neusch. And again, I'll be holding my hand up when you have 15 seconds left, but our intent is not to prohibit you from finishing, but rather, to just let you know that we're trying to hold to around five minutes.

MS. NEUSCH: Good evening. My name

is Trish Neusch, and I appreciate the chance to come before you as a concerned citizen and farmer and to be able to have my comments heard.

My husband, Ronnie, and myself have raised our four children on our family farm across from the Pantex Plant. We live directly across the road from the northwest corner of the plant.

I became very concerned recently, while reading the Storage and Disposition of Weapons-Usable Fissile Materials Draft PEIS. If you will notice, on page 2-80 of this document, a map displaying the conceptual facility location for the disposition of plutonium at Pantex. I inserted a map with my comments for that purpose.

If you will look in the northwest corner of the Pantex Plant site, there is a proposed site for an evolutionary light water reactor. I don't know what anyone else thinks, but I think -- I think it's a crying shame that any of these options are even being considered, much less actually built in the future in this rich, agricultural, productive area.

There are several of you who feel

agriculture is not that important or beneficial to this area. I want you to think about that when you sit down to dinner tonight. That light water reactor is a farce. There is not enough water to ever touch being able to run a reactor, much less the cooling or recycling baths necessary for cooling the spent fuel generated from such a facility.

And I don't know about you, but I don't look forward to a reactor in my front yard. The document states several different places that there would be no impact to the water in the area, and I have news for you. If they start these processes across the road from my farm, it has been proven that our wells will be sucked dry.

And on page 4-714 of the document, they mention the minimal site impact over the six-year construction period. Transmission lines would be constructed and upgraded.

And I beg your pardon, but we had a fight recently with Pantex and Southwestern Public Service over the construction of a regular power line in front of our farm and down our fence line. They finally moved it at a cost of

what they said was $8,000 to DOE and lots of headaches and sleepless nights on our part.

If they try to put these huge transmission lines in across from our house, you haven't seen anything yet. We haven't begun to fight.

My advice to the DOE is to think through these things well. This isn't near as friendly a site as you would be made to believe from listening to our so-called City leaders. Thank you.

MR. MATNEY: Thank you, Ms. Neusch.

We're still running quite a bit ahead of time now. Is Jan Sanders here? Jan Sanders?

Let's take a little stretch break, if we could, for about three or four minutes, and we'll wait for Mrs. Sanders. She is supposed to speak at 7:50.

(Recess.

MR. MATNEY: Jan, we're ready for you to speak.

MS. SANDERS: Okay. How do you do it? Do I look at you? Do I look at them?

MR. MATNEY: You can stand anywhere you'd like, if you'd like to stand at the podium.

HT02-010 CONTINUED)

My name is Trish Nelsch. I appreciate the chance as a concerned citizen and taxpayer to be able to give my comments today. My husband Kinnie and myself live at [illegible] on our family farm at Lyon and Dunlap Plant. We live directly across the road from the northwest corner of the Pantex Plant.

I believe very concerned recently while studying the Storage & Disposition of Weapons-Usable Fissile Materials Draft PEIS (S+D-PEIS). If you will notice on Page 2-80 of the document a map displaying the Conceptual Facility Location for the Disposition of Plutonium at Pantex. If you will look in the Northwest corner of the Pantex Plant site there is a proposed site for an Evolutionary Light Water Reactor (ELWR). I don't know what anyone else thinks, but I think it is very shortsighted that any of these plants are being considered, much less actually built in the future in the Texas Agricultural productive area. And, while all several of you who live will not have to worry about the ELWR being built in the area. I want you to think about that when you sit down to dinner tonight.

What ELWR is a plant that is not enough water to cool, even, using a cooling tower which has the cooling (recycling) water. We need

the cooling the spent fuel generated from such a plant. And I don't know about you, but I don't look forward to a [illegible] up, my [illegible] document states several different places that there would be no impact to the water in the area. I hope Kerr-McGee will be there to assess the [illegible] Pantex Plant, it has been proven that we will [illegible] day.

On page 4-114 of the document they mention the minimal [illegible] over the 6-year construction period. Transportation costs would be estimated [illegible]. I beg your pardon, but we had a [illegible] with Pantex and Southwestern Public Service over the construction of regular power lines in our area and down our road. They [illegible] over at a cost of $200K to DOE. It's a headache and [illegible] rights on our property to get these huge transmission lines across your huge, [illegible] the radars deeper to [illegible].

My advice to the DOE is to think things through well. This issue needs to [illegible] would be wise to decline from [illegible] so called City Leaders.

Thank You,
[illegible]

Storage and Disposition of Weapons-Usable Fissile Materials Draft PEIS

TRISH NELSCH

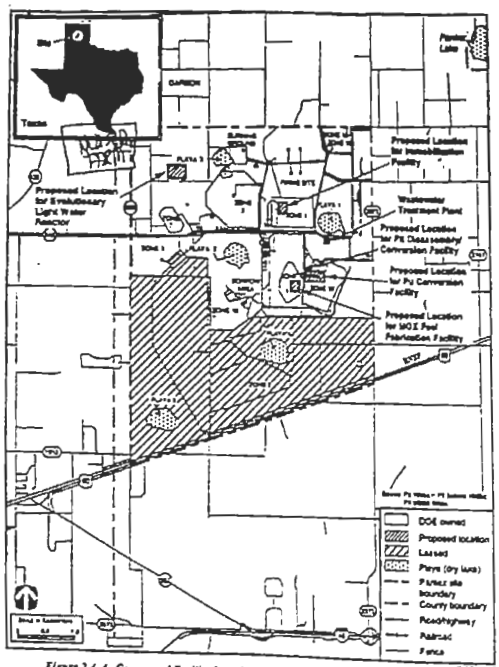

Figure 2.4-4. Conceptual Facility Location for the Disposition of Plutonium at Pantex Plant.

2-80

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HT02-11

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MR. MATNEY: Thank you, Ms. Neusch.

We're still running quite a bit ahead of time now. Is Jan Sanders here? Jan Sanders?

Let's take a little stretch break, if we could, for about three or four minutes, and we'll wait for Mrs. Sanders. She is supposed to speak at 7:50.

(Recess.

MR. MATNEY: Jan, we're ready for you to speak.

MS. SANDERS: Okay. How do you do it? Do I look at you? Do I look at them?

MR. MATNEY: You can stand anywhere you'd like, if you'd like to stand at the podium.

and our comments are lasting about five minutes. When you get to where you have 15 minutes -- or 15 seconds left, I'll just raise my hand.

MS. SANDERS: Okay. I probably won't use the whole time.

I'm Jan Sanders. I live in Dallas, Texas. I'm the Chair of Peace Action Texas. We are affiliated with the National Peace Action, which is the largest grass roots peace organization in the country.

We work with other peace organizations around the world. We are a NGO at the United Nations. I'm proud to be a part of the peace movement of the world, and it is that part of why I'm here.

I do not feel like the basic issue that underlies all of these complex issues has been addressed; and that is, what kind of country do we want to be? What kind of security do we want to provide for ourselves and future generations?

I think it is an issue of morals. And that's a favorite of today, is it not, to try to decide how we're going to conduct ourselves in an international environment. Do we want to have

the capability of destroying the planet?

I asked the question in the big room in there, what was the level of the stockpile of stewardship? And the answer was fuzzy, but it was 3,500 nuclear warheads plus some that were a matter of national secrecy. And I also understand that it takes about a hundred to bring about nuclear winter.

So, I think the fundamental question has not been asked about stockpile stewardship. And for what? For the destruction of the world?

I, recently, in this past year -- and I have, all of a sudden, a very splitting headache, and I might ask to speak later, to conclude my remarks, but I'll see how I do.

A young woman from Japan, a young peace activist, some 20 years old, who traveled with pictures of Nagasaki and Hiroshima around the world. Also, pictures of Japanese atrocities in Japan -- in China, going to areas where Japan brought their military machine of oppression down on others, building reconciliation, talking for peace. And it is that connection in the world that I think that this country, at some point, has got to address.

We're approaching it gingerly. We have a nuclear testing moratorium in place. We have signed and are a party to the extension of the Nonproliferation Treaty. And, indeed, the draft documents make a mockery of our signature to a Nonproliferation Treaty that mandates us to work toward total disarmament of nuclear weapons.

And I am -- how we expect ourselves, as a free democratic society, to not live up in -- to the spirit of that obligation, how could we expect others around the world if we're not willing to lead?

I feel like our plans that are under discussion undermine the Nonproliferation Treaty. I think they undermine our efforts to a comprehensive test ban.

We're discussing a comprehensive test ban involving the nations of the world. We're right on the brink of something very historic and exciting, but the U.S. is playing King's X, that we're going to have a subcritical testing. That's a euphemism for continued nuclear bomb development, even though we possess thousands of nuclear warheads, enough to destroy the world and any enemy that might come along.

HT02-11 (CONTINUED)

So the fundamental moral questions and issues that are at stake have not really been addressed.

And I made my trip up here -- and by the way, I'd like to conclude with the fact that to say that you wanted citizen input into this process and put forth pieces of documents that are 3500 pages long, telephone book size -- well, Dallas telephone book size, and then to combine them into three parallel, concurrent, overlapping discussions, is a mockerous -- a mockery of asking for citizen input.

I called the DOE and asked for advisement on making my plane reservations to come up here. And it was -- kind of got to be a joke by the time we were done, because even the staff cannot defend this.

I thought -- I was told that everything was going to be done by noon tomorrow, and now I get here and there's more in the afternoon. I might have made my arrangements in a different manner if I had known that possibility, and others in Dallas might have done also.

So thank you for this opportunity. I

plan to augment it with things in writing.

MR. HATNEY: Thank you, Ms. Sanders

We've had some new people come in i the last few minutes, and let me very quickly, before we get to our next speaker, reidentify c DOE officials who are here.

Patricia O'Guin is here from the Albuquerque office, Bert Stevenson is here fro the Washington office, and Steve Chase is al here from the Washington office.

Our next speaker is Anna Marie Harkey. Anna Marie Harkey. Is Ms. Harkey here?

UNIDENTIFIED SPEAKER: She was supposed to speak.

MS. SANDERS: I know her room number, so I'll go check. But you might want to go to the next one.

MR. HATNEY: All right. Is Jerry Stein here? Jerry Stein?

Okay. Is Tracy Tucker here?

Okay, no Tracy. Tracy was a scratch earlier, and we'll try to squeeze her in somewhere if she shows.

Well, I hate to get too far ahead, l let's wait and see if one of our speakers sho

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HT2-12

up.

Mavis Belisle is here? Mavis, would you like to speak now?

MS. BELISLE: Sure.

MR. MATNEY: Our speaker is Mavis Belisle.

MS. BELISLE: My name is Mavis Belisle, and I'm Director of the Peace Farm. I live directly across the highway from the southern boundary of the Pantex Plant.

It's my intent this evening to speak briefly to each of the Programmatic Environmental Impact Statements and to reserve comments on the Pantex Site-Wide EIS until a later meeting in June.

These documents are being addressed in this community as an economic and a jobs issue. While the local economy is undeniably important, both of these PEIS drafts deal with issues that have national and even international implications.

Those implications involve national and international security issues, they involve decisions about nuclear waste that we've been unable to make for more than 50 years, and they

involve incroducing new technologies with a wide range of health, safety and environmental risks, many of which are actually unknown. They deserve to be considered in that light, read thoughtfully and carefully, and addressed with more than pep rallies.

The Stockpile Stewardship & Management PEIS does not adequately make a case for development of more than 2.6 billion dollars in new capital costs and two billion dollars in development of a new super computer.

The reliability of the U.S. nuclear weapons arsenal has been tested over and over and over again.

The French just recently completed a series of tests designed, in their own explanation, to allow them to continue nuclear weapons development without underground testing by simulated tests and by computer models. No reasonable person -- and that means probably no third-world person -- country will look at the SSM PEIS proposals and believe that they have any purpose other than new nuclear weapons development.

The storage and disposition options

provide us no good choices; reasonably so, because there are none.

The emphasis on the spent fuel standard may leave us with a false sense of security. Virtually every country which has developed nuclear weapons has done so from spent nuclear fuel. It may provide some level of security from theft by terrorists, but the nuclear nations of the world themselves hold hostage each other and every nonnuclear nation.

We have, for more than 50 years, been unable to resolve the issue of what is to be done with spent nuclear fuel. Producing more of it, or materials equally as toxic, is more problem and not solution. Thank you.

MR. MATNEY: Thank you, Ms. Belisle.

Is Anna Marie Harkey here?

MS. HARKEY: Yes, I am. Sorry.

MR. MATNEY: Anna Marie.

MS. HARKEY: I'm Anna Marie Harkey from Dallas. I realize that I'm not of this community, but the issues being discussed are vital and of concern not only here, but in our whole state, our country and the whole world.

I wish to address what is, for me,

It is my intent this evening to speak briefly to each of the Programmatic Environmental Impact Statements, and reserve comments on the Pantex Site-Wide EIS until the June public meeting.

These documents are being addressed in this community as an economic and jobs issue. While the local economy is undeniably important, both of these PEIS drafts deal with issues that have national and international implications, ~~and they~~ ~~[illegible]~~ Those implications involve national and international security; the involve decisions about nuclear waste that we have been unable to make decisions about for more than 50 years; and they involve introducing new technologies with a wide range of health, safety and environmental risks. They deserve to be considered in that light, read thoughtfully and carefully, and addressed with more than pep rallies about jobs.

The Stockpile Stewardship and Management PEIS, does not adequately make a case for development of of more than $2.6 billion in new capital cost and $2 billion in development of a new super computer. The reliability of US nuclear weapons has been tested over and overagain. The French just recently completed a series of tests designed to allow them to continue nuclear weapons development by simulated tests and computer models. No reasonable person can look at

HT02-12 (CONTINUED)

the proposed new facilities and and believe they have any purpose other than continued weapons development.

The storage and disposition options provide us no good choices; reasonably so, because there are none. The emphasis on the spent fuel standard may leave us with a false sense of security — virtually every country which has developed nuclear weapons has done so from spent nuclear fuel. It may ~~prove~~ provide some level of security from Hull by terrorists, but the nuclear nations of the world themselves hold hostage each other and the non-nuclear nations.

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Marie Belisle
PCR 2 Box 75
Panhandle TX 79068
335-1715

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HT02-13

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The emphasis on the spent fuel standard may leave us with a false sense of security. Virtually every country which has developed nuclear weapons has done so from spent nuclear fuel. It may provide some level of security from theft by terrorists, but the nuclear nations of the world themselves hold hostage each other and every nonnuclear nation.

We have, for more than 50 years, been unable to resolve the issue of what is to be done with spent nuclear fuel. Producing more of it, or materials equally as toxic, is more problem and not solution. Thank you.

MR. MATNEY: Thank you, Ms. Belisle.

Is Anna Marie Harkey here?

MS. HARKEY: Yes, I am. Sorry.

MR. MATNEY: Anna Marie.

MS. HARKEY: I'm Anna Marie Harkey from Dallas. I realize that I'm not of this community, but the issues being discussed are vital and of concern not only here, but in our whole state, our country and the whole world.

I wish to address what is, for me, the basic issue underlying the Stockpile Stewardship & Management proposal. This issue which I'm going to address and which, for me, is basic, and I am not hearing addressed in these sessions, is a moral one. That is the possession, and therefore, the implied threat to use nuclear weapons of massive human and planetary destruction.

The DOE PEIS proposal for the stockpile makes a mockery of our national integrity: one, to be signers of the recent Nonproliferation Treaty; and second, as leaders in the Geneva discussions for a comprehensive test ban.

The costly expansion of nuclear weapons stockpiling in the proposal without any security justification is particularly alarming in light of the proposed cuts that will affect the lives of all children, including mine and my grandchildren, and the elderly of this country. Thank you.

MR. MATNEY: Thank you, Ms. Harkey. Would you like to leave your prepared text with us?

MS. HARKEY: Yeah. I'll have to make a copy of it.

MR. MATNEY: Okay. If you will do that and then get it back to us. You want to keep it?

MS. HARKEY: Okay. Maybe I should do that.

MR. STEVENSON: We have a copy machine right out there for that express purpose.

MR. MATNEY: There is a copy machine. It is located directly across from the registration desk in the lobby.

MS. HARKEY: Okay. I'll do that and I'll bring it back.

MR. MATNEY: Just go ask for some assistance.

MS. HARVEY: Thanks.

MR. MATNEY: Is Jerry Stein here? No Jerry Stein.

Is Tracy Tucker here? Okay. We're getting a little ahead of ourselves, but is Rita Calvert here? Rita, would you like to speak now?

MS. CALVERT: Thank you. I have a bit of a cough, but I'll try to -- my name is Rita Calvert. I'm the Director of the Dallas Peace Center.

Issues of vital interest & concern for our state, our country, our world

Introduction —

I wish to address what is for me, the basic issue underlying the Stockpile Stewardship and Management Proposal.

This issue - which is not being addressed in these sessions - is a moral one of the possession + therefore the threat - to use nuclear weapons of massive human and planetary destruction.

The DOE-PEIS proposal for the stockpile makes a mockery of our national integrity
1) To the signers of the recent non-proliferation treaty. and
2) As leaders in the Geneva discussions for a comprehensive test ban.

The costly expansion of nuclear weapons stockpiling in the proposal without any security justification, is particularly alarming in light of proposed cuts that will affect the lives of all children, including mine and my grandchildren and the elderly of this country.

Thankyou -

ANNA MARIE HARKEY
6335 Hillcrest Lane, Dallas, TX 75230
214/363-1402

HT02-14

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MR. MATNEY: Okay. If you will do that and then get it back to us. You want to keep it?

MS. HARKEY: Okay. Maybe I should do that.

MR. STEVENSON: We have a copy machine right out there for that express purpose.

MR. MATNEY: There is a copy machine. It is located directly across from the registration desk in the lobby.

MS. HARKEY: Okay. I'll do that and I'll bring it back.

MR. MATNEY: Just go ask for some assistance.

MS. HARVEY: Thanks.

MR. MATNEY: Is Jerry Stein here? No Jerry Stein.

Is Tracy Tucker here? Okay. We're getting a little ahead of ourselves, but is Rita Calvert here? Rita, would you like to speak now?

MS. CALVERT: Thank you. I have a bit of a cough, but I'll try to -- my name is Rita Calvert. I'm the Director of the Dallas Peace Center.

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I want to talk a little bit about the cost of the nuclear movement by reading some excerpts from an article that I had published in this magazine, Synthesis and Regeneration. And it's about my brother, Dr. Malcomb Stuart. This is kind of personal, but that's the way it is.

Mike was a quiet, sensitive older brother with a wacky sense of humor. He was a whiz at math and science, and he -- each year when we would ask him what he wanted for Christmas, he would reply with a wry smile, just a little peace and quiet.

He wasn't an egghead, though. He ran track, played terrific boogie-woogie and jazz piano, and he could -- he was also voted the best looking in his senior class. But he always had an underlying seriousness and a willingness to listen to his little sister.

He received his doctorate in nuclear physics in 1955 from the University of Iowa and then went to work directly for Westinghouse at the Atomic Division of Medicine in Pittsburgh.

We never really knew what he was working on because it was classified, but we

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found out later that he had been one of the senior scientists on the first atomic submarine, the USS Nautilus, and had worked with Admiral Rickover.

As the Vietnam war was ending, after he had worked there about 17 years, he decided he wanted to get out of the military use of nuclear power, and he went to work in Connecticut for Combustion Engineering, which was designing nuclear power plants at the time. He was in charge of the containment or safety of this operation.

After about five years, he became increasingly worried about the safety of the reactors, the construction and the fact that there could be a nuclear accident. So he asked to be loaned to the Electrical Research Institute in Palo Alto, California to be a consultant for a couple of years to work on alternate energy.

Well, he sold his house in Connecticut and moved. And about a month later, they diagnosed carcinoma of the lung. He continued to work for the eight months that he was there, and then on June the 2nd in 1979, he died.

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Since the time of writing this article, I've been asked by a lot of people as to whether my brother could have been exposed to excessive radiation in his work. Now that I know more about the issue, I'm sure of it.

He worked with atomic energy from 1951 to '79, and it was not exactly a time in history when we knew all of the dangers.

Three years after his death, his first wife, Sharon, developed leukemia and died within six months.

His youngest daughter, Holly, gave birth to a two and a half-pound child. His second daughter developed a fibroid tumor when she was pregnant, and the third daughter was childless for about 20 years, when she finally became pregnant at the age of 42.

But these events began to fit a pattern. Mack was a heavy smoker. He suffered from asthma and was probably very susceptible to lung irritation. But he was also exposed to who knows how much radiation for 20 years.

He made many trips to White Sands, New Mexico and doubtless many other nuclear installations. He suffered episodes of thyroid

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HT02-14 (CONTINUED)

and testicular inflammation, which destroyed those organs in the sixties.

But I have every reason to believe that he, and probably his whole family, have been exposed to the radiation and have had these as a combination of the tobacco and radiation.

In the last 17 years since he has been gone, I've tried to be there for his four children as well as mine, but I often wonder what he and his wife would have contributed to the world if they could have lived.

I know he was on his path from the military to the peaceful use, and finally, to the alternative use. He was one of the main people who worked in it, so I know that he knew the dangers, even though he didn't know it was to him.

So, when Fumiko Amano, who was a survivor of Hiroshima and a peace educator, came to my office at the Dallas Peace Center, we both mourned the loss of our brothers to the nuclear bombs.

And I just want to know, when will we listen to our scientists that are crying out and when will we destroy these weapons of destruction

and learn to rely on nonviolent means of conflict resolution?

I feel that President Eisenhower was prophetic when he said, the world in arms is not spending money alone: it's spending the sweat of its laborers, the genius of its scientists and the hopes of its children. And for me, the price is too high. Thank you.

MR. MATNEY: Thank you, Ms. Calvert.

Ms. Calvert, do you have any written comments you'd like to submit?

MS. CALVERT: Not really, but I can make a copy of this.

MR. MATNEY: If you'd like to. There is a copy machine out in the lobby. Thank you.

Is Jerry Stein here?

UNIDENTIFIED SPEAKER: I don't see him.

MR. MATNEY: Is Tracy Tucker here?

UNIDENTIFIED SPEAKER: I haven't seen her either.

MR. MATNEY: Okay. Mr. Hancock, would you like to speak now?

MR. HANCOCK: Sure.

MR. MATNEY: Our speaker is Don

"Just an Little Peace and Quiet" for Mac Stuart, All-American Physicist

by Rita Calvert, Director, Dallas Peace Center

Mac was a quiet, sensitive older brother, with a wacky sense of humor. He was four when I was born, and was so excited that early morning that he ran from door to door on our street, knocking and announcing "Our little 'boy' is here!" (I was struck with that nickname for a long time!) He was a whiz at math and science (helped me with my story problems) but couldn't spell worth a darn! Each year when we would ask him what he wanted for Christmas, he would reply with a wry smile, "Just a little peace and quiet..."

He was not an egghead, though (he ran track (in spite of his asthma), and played terrific boogie-woogie and jazz piano. He could also knock out a powerful Chopin's Polonaise. He was voted the "Best Looking" in his senior Class, and closely resembled a brown-eyed Robert Redford. But with all that, there was always an underlying seriousness, and a willingness to listen to his little sister's problems. His children told me that he was the same with them. He would put aside a speech he was preparing, to talk or go pick them up when they needed a ride, and then go back to his work until well into the morning hours.

Mac was greatly touched by cruelty and hatred violence, but he did love his Pittsburgh Pirates! I always dreaded when Dallas played Pittsburgh, because I knew one of us would lose. He had married a Chi Omega sister of mine, Sharon Meier, and they had a family of three girls and one boy.

He received his Doctorate in Nuclear Physics in 1935 from the University of Iowa, and went to work for Westinghouse right away. We never really knew what he was working on, since it was all classified. We eventually found out he had been one of the Senior Scientists on the first nuclear submarine, the U.S.S. Nautilus, working under Admiral Rickover for two years. He was responsible for the lead shield which protected the crew. The money from the new industry was good for a growing family, and they built a beautiful home in the suburbs of Pittsburgh.

As the Vietnam war was ending in 1973, he decided he did not want to work any longer on Vietnam projects, and went to work at Combustion Engineering in Stamford, Connecticut. This company designs nuclear power plants. Mac was in charge of the containment, or safety of the operation. After about five years, he became increasingly concerned about the possibility of a nuclear accident (i.e. Three Mile Island) and asked to be loaned for research into alternate energy sources. His ultimate goal was to return to Evansville, Indiana, (our home) to teach.

After reaching Palo Alto, California and trying out his first swimming pool, he contracted a cough, which led to the discovery of carcinoma of the lung. He had surgery, and chemotherapy, and went to the office every day he possibly could (working as a consultant to the Electrical Power Research Institute.) While he was there, the real Three Mile Island incident occurred, proving my dad right.

By January, he began to have severe headaches, and tests found the cancer had metastasized to his brain. He continued to work through the radiation treatments.

By April, he called me and said he was "home free," and not to worry; he wasn't "going anywhere."

He offered to send me a book he had been reading on the power of the mind over our circumstances, in response to my confiding problems with my own profession. We were planning to go to California after his hair grew back, for the wedding of his daughter, Holly.

On May 13 we called to wish him "The Big Five-O, and got no answer. The next day his minister called me to say he had entered the hospital that weekend, and exploratory surgery for fluid build-up had discovered the cancer had spread throughout his body, and he had maybe 10 days to live.

Mac Stuart (3 years) with Rita Calvert (1 year)

He died on June 2, after telling us to go to our hotel to rest, that we looked tired. At his memorial service his work associates told me that he had turned in his last project, as complete and collected as ever, and checked into the hospital for his final stay. His minister who went to comfort him, found himself comforted by the patient, who kept his sense of humor and had accepted his upcoming death with grace. At the memorial service when they played "I'll Walk Beside You" I knew that Mac had found his "Peace and quiet" at last.

Stuart Family, 1962—Front: Sharon, Holly, Mac, Middle Rob, Teresa, Back: Elaine

Postscript

Since the time of writing of the article above, I have been asked by people in the anti-nuclear movement if my brother could have been exposed to excessive radiation. Now that I know more about this issue, I am sure of it. His work with atomic energy from 1951 to 1979, not exactly a time in history when we were aware of the scope of its dangers.

Three years after his death, his first wife Sharon developed leukemia, and died within 6 months. His youngest daughter, Holly, was born to a 7 1/2 pound baby boy, who was hospitalized for three months. His second daughter, Teresa, developed a fibroid tumor when pregnant with her third child, and his oldest daughter, Elaine, was stillborn (at almost 20 years), and only recently became pregnant after extensive fertility treatments. These events began to fit a pattern.

Mac was a heavy smoker. He suffered from asthma as a teenage boy, and was probably very susceptible to lung irritations. But he was also exposed to who-knows-how-much radiation for 20 years. He WORKED many times in White Sands, NM, and doubtless many other nuclear installations. He suffered episodes of thyroid and testicular inflammation in the 1950's which destroyed the functions of those organs. I have every reason to believe that he, and probably his family, have been victims of radiation exposure as well as tobacco smoke.

This knowledge adds greatly to the pain of losing these two young vibrant human beings, who left four children alone to fend for themselves these last 16 years. I have tried to be Mom and Grandma to his Grandchildren, but they have missed their own parents greatly. Who knows what they could have contributed to the world at large, not to mention their family?

When Fumiko Amano, a survivor of Hiroshima and a peace educator, came to my office at the Dallas Peace Center to speak, we embraced and grieved for the loss of our two brothers to the nuclear bomb. When will the Nuclear Holocaust end? When will we listen to the scientists and other victims who cry out from their graves and warn us every day of the dual danger of smoking and exposure to nuclear by-products? When will we destroy these weapons of destruction and learn to rely on nonviolent means to solve conflict?

President Eisenhower was prophetic when he said "The world in arms is not spending money alone: It is spending the sweat of its laborers, the genius of its scientists, the hopes of its children." The price is too high.

Call your Congressperson and both Senators today to ask that they oppose the trucking of nuclear waste from Maine and Vermont to dump on Sierra Blanca, Texas upstream from Big Bend, 16 miles from the Rio Grande (or Bravo, as the Mexicans call it). Tell them to vote "No "on HR 558 and S. 419, the Texas Compact Bill, which we defeated in September, but which saw flurries of activity from proponents (including Texas Governor George Bush) in December and again in March. Also tell them to vote against the transfer of land in Ward Valley to California to build a nuclear dump near indigenous land, endangering non-human and human species. (H.R. 2334 and S. 1596) See back cover and inside back cover for more information.

HT02-15

Hancock.

MR. HANCOCK: Good evening. I'm Don Hancock from Southwest Research and Information Center in Albuquerque.

I'll reiterate what some other people have already told you, that trying to deal with three documents, actually in less than 30 days that people have had all three of them together to compare, is clearly not an adequate amount of time. And one must conclude either the Department of Energy is in a very big hurry, and therefore, they won't give an adequate time for public comment or that they don't understand the difficulty of dealing with three documents like this.

HT02-15/1 23.018

The second thing, a number of people had expected that this format would also include time for DOE officials to respond on the record, and I continue to believe that that should be the case. Even though I know that it isn't, my suggestion is when we go back into the bigger room at the end, when we've been told there will be summaries of things, that there be a time for questions.

HT02-15/2 23.019

And a specific question that I would

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like to have answered in the larger room is wh
is in the classified appendix for the Disposit
Programmatic Environmental Impact Statement i
referred to on pages 4-771, 4-777 and 4-781
regarding the -- a variety of transportation-
related information being in the classified
appendix.

The classified appendix is not included in the index to the document, so I'm sure there may be some other places it's mentioned, but we need to have more adequate information than what's in it.

I've asked Mr. Stevenson's colleague, Dave Nolton, several times about this already, but I still don't have an answer yet, so I'd lik it to be answered on the record tonight.

I'm going to confine my remarks tonight to the Disposition Programmatic Environmental Impact Statement because of the short amount of time. And there are several things that can be said quite quickly and directly about the document.

It is clearly an inadequate docume It doesn't meet the minimum requirements of the National Environmental Policy Act to discuss all

reasonable alternatives. It includes no Department of Defense facilities. It includes no discussion of immobilization under international inspection or control that are reasonable alternatives that should and, in fact, must be included in this kind of document.

Regarding Pantex, it's clearly a totally inadequate document, because it does not understand and discuss the fact that Pantex is really not a suitable site for, really, any of the missions -- any of the alternative missions that are discussed in the document.

It's a small site. It's the smallest of the sites. It's the one that has neighbors and productive agricultural neighbors in close proximity. You've already heard from several of those folks tonight. As far as this document is concerned, those folks don't exist, and that's ridiculous and inappropriate, even for a programmatic document.

The water resources of the site are not adequate. The impacts of discharges -- wastewater discharges, whether treated as the document says that they would be, or not, on the playas, the perched aquifer, which are already

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contaminated, and underlying aquifers are not discussed.

The facility has no ability, no facilities to handle the low-level waste, the transuranic waste, the high-level waste or spent fuel that would be associated with many of these activities -- proposed activities, including all of the disposition options. It has no trained personnel and facilities to deal with those wastes as well. In fact, it never has dealt with those kinds of impacts on facilities.

Even on the storage options, the document is totally deficient in analyzing the environmental impacts because, among many examples, one very obvious one is it clearly has decided -- DOE has clearly decided on the basis of this document that long-term pit storage in Zone 4 is unsafe, but the document doesn't -- it doesn't provide any information on what's -- what -- why that's the case.

Instead, it assumes there would need to be new plutonium -- both strategic and surplus plutonium storage facilities built in Zone 12. The document, in fact, needs to deal with those issues.

HT02-15 (CONTINUED)

It also assumes -- while it specifically states it is to discuss issues from 2005 on, it assumes that the existing environmental permits will be in effect in 2005. And as Betty Hollowell, who is here, the attorney for the Pantex Plant, and other people can testify, what sure things will be in permits ten years from now are not sure things.

So, again, for all these reasons and many more, this is a totally inadequate document dealing with the very serious issues of long-term storage and disposition of plutonium and highly enriched uranium. Thank you.

MR. MATNEY: Thank you, Mr. Hancock. And I would remind you, on your question on the classified appendix, there is a question and answer session scheduled tonight in the ballroom at 10:30.

MR. HANCOCK: I've already told the facilitator that I have about an hour's worth of questions, but I doubt there will be time for all of them.

MR. MATNEY: Mr. Hancock, do you have a written copy of your statements?

MR. HANCOCK: No, I certainly don't.

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Nobody else could probably read the notes either.

MR. MATNEY: Is Jerry Stein here? Still looking for Jerry Stein. Jerry's not here.

How about Tracy Tucker? Did she ever show? No Tracy.

Well, I'll tell you what. We have a little break built in. Is Paula Breeding here?

MS. BREEDING: Yes, I am.

MR. MATNEY: Ms. Breeding, are you ready to speak?

MS. BREEDING: That's fine.

MR. MATNEY: We'll take you, and then we'll check if our other speakers are here. If not, we'll take a little five-minute break. We've built a break into this session. So our speaker now is Paula Breeding.

MS. BREEDING: My name is Paula Breeding. I was born and raised in Amarillo. I am a convenor of the Board of Directors of the Peace Farm. I don't live by Pantex, but I do own land across from Pantex.

I am considered an environmentalist. Some people try to dismiss us as being tree-huggers. Well, I've never hugged a tree in my life. I am very concerned about the water in

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HT02-16

Nobody else could probably read the notes either.

MR. MATNEY: Is Jerry Stein here?

Still looking for Jerry Stein. Jerry's not here.

How about Tracy Tucker? Did she ever show? No Tracy.

Well, I'll tell you what. We have a little break built in. Is Paula Breeding here?

MS. BREEDING: Yes, I am.

MR. MATNEY: Ms. Breeding, are you ready to speak?

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I am considered an environmentalist. Some people try to dismiss us as being tree-huggers. Well, I've never hugged a tree in my life. I am very concerned about the water in

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our area. It looks like our City fathers would be, since they are pumping our water that we drink from underneath Pantex and it can hurt this as much as anyone. However, they bragged about drinking water at Rocky Flats, so I guess we can't expect much from them.

I don't want plutonium stored here. However, we are doing it now, and I expect Pantex to be the dumping ground for plutonium. I am not an NIMBE person. I don't want it here, but I don't think someone else should have the problem. It is too dangerous to transport as well.

HT02-16/1 16.016

We are asking for disaster if plutonium processing comes to Pantex. We will be another Rocky Flats, and probably worse.

There was an editorial in the paper today by a Pantex employee. He said, in part: In the event that Pantex is chosen to do new types of work and a different mission, the work force will decide whether to proceed or not. All the approval from DOE, the labs, Congress and the President himself will not persuade Pantexians to do something we think should not be done.

I guess that is one of the most naive statements I have ever heard. This might happen

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on private business, but I don't think an employee can tell DOE what to do. By the time he finds out how things are and how dangerous they are, it will be much too late. He will also find out that he can't make as much money as he does as Pantex.

I hope we can find some way to dispose of plutonium that is not hazardous to our land, water and air. If we do, then I guess miracles do happen. Thank you for your attention.

MR. MATNEY: Thank you, Ms. Breeding.

Before we take our break, is Jerry Stein now here? Still no Jerry.

How about Tracy? Any Tracy Tucker? No Tracy.

UNIDENTIFIED SPEAKER: What time period are you up to now?

MR. MATNEY: We are actually going to take a little break now. And when we resume, our 8:35 speaker is next up, unless one of the others shows.

Let me remind you, if any of you are in the room and would like to comment, if you would go out to the registration desk and

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HT02-17

closest to me is from the Washington, D.C. DOE office, as is Bert Stevenson, also DOE in Washington.

Let's see if we have any of our speakers who have arrived from earlier. Is Jerry Stein? No Jerry Stein.

How about Tracy Tucker?

Okay. That being the case, we're ready for Tom Patterson. Tom.

MR. PATTERSON: Here?

MR. MATNEY: Yes.

MR. PATTERSON: I'm Tom Patterson. I'm President of the Amarillo Chamber of Commerce. Let me read a statement, and then I will make a short comment.

First, regarding the Stockpile Stewardship Management PEIS, I support the selection of Pantex for weapons assembly and disassembly functions. I strongly favor the continuation of high explosive functions at Pantex and oppose any plan to move these functions to the national laboratories.

Since Pantex is the most cost efficient, cost effective DOE facility and enjoys the strongest local support, I can also support

other -- additional of other environmentally sound stewardship and management functions at Pantex.

And then my comments on the Fissile Material Storage and Disposition PEIS. I believe that Pantex should be chosen as the location for fissile material storage and disposition functions. Pantex already stores surplus plutonium and the needed safety and security capabilities of the cost effective -- cost-effectively accommodate an expanding role.

Fair budgetory -- budget -- fair budgetary comparisons, strong local support and national security concerns should lead DOE to choose Pantex for new fissile material storage and disposition functions that are conducted in a safe environmentally sound function.

We will forward some 6,000 plus of these signed statements to DOE in the mail tomorrow to address both of the -- addressed both of these PEIS's.

This community continues to be overwhelmingly supportive of the role that Pantex has played in the past, and we look forward to new missions, expanded missions that are

environmentally sound and environmentally secure -- safe and secure for Pantex.

I think that any reasonably-thinking person would come to this conclusion that we are looking for new missions, new employment at the Pantex Plant.

Certainly, these decisions must be made on a community-wide basis, community-involved basis, and not in the -- on scientifically sound documentation and not in the midst of a lot of hysteria and excited threats on either side.

We appreciate this ability -- chance to bring you this input. Thank you.

MR. MATNEY: Thank you, Mr. Patterson. Tom, do you have any prepared comments you'd like to --

MR. PATTERSON: I'll give you a copy.

MR. MATNEY: Okay. Thank you. We're -- we have a substitution speaker, Mr. Bill O'Brien. Bill.

MR. O'BRIEN: My name's Bill O'Brien, and if -- if I could, I'll just hand you a prepared statement and not -- I'll not bother to read it and then just make a comment.

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HT02-18

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MR. MATNEY: Thank you, Mr. Patterson. Tom, do you have any prepared comments you'd like to --

MR. PATTERSON: I'll give you a copy.

MR. MATNEY: Okay. Thank you. We're -- we have a substitution speaker, Mr. Bill O'Brien. Bill.

MR. O'BRIEN: My name's Bill O'Brien, and if -- if I could, I'll just hand you a prepared statement and not -- I'll not bother to read it and then just make a comment.

MR. MATNEY: Thank you.

MR. O'BRIEN: I send the DOE quite a bit of information, and so I think I'd just like to make a couple of statements. And what Tommy Patterson had to say just made me think of something, so I thought, well, I won't even mention my statement.

When I got involved in the Pantex controversy, which was in 1991, it seemed like the whole issue was characterized by people that were for Pantex and people that were against Pantex.

You just heard Tommy saying, in about five minutes, about seven or eight times, that there is wholehearted support for Pantex. And I think there probably is wholehearted support for Pantex, but in the five years that we've had the Pantex issue out there in front of the people, there has been a lot of education take place, and there are a lot of people today that know a lot more about Pantex and about the missions that are taking place out there.

What that's meant for the issue is that no longer do you have people that are for Pantex and against Pantex. Now you have people

that are more sophisticated that are breaking down the different missions and looking at the different jobs that are taking place out there, and they're supportive, for the most part, of most of the work that's done out there.

Some of the proposed work that we're hearing talk about now, they're opposed to. If they bring plutonium reprocessing to Pantex, there's going to be a big battle in this community. Popular support, business support is against it. The MOX fuel idea, if it involves plutonium reprocessing, is going to have a hard time going anywhere.

The reasons for that are fairly simple. It doesn't make sense to target a mission for a geographic area of the country where the mission doesn't meet the area. This is an agricultural area, and we don't want to threaten an agricultural area by doing something dumb.

Now, doing something dumb, we know that new technologies will be available. We know that whatever they do will be done better than it was done in the past. But all you have to do is look to examples that you see every day in cases

like the mad cow's disease.

Here's a scandal that has knocked the U.S. beef market by ten percent. Never been a case of mad cow's disease in the United States, yet, today, but the cattle market here in this country has gone down ten percent just on the perception that people think, well, maybe there's a mad cow's disease in this country and maybe the beef in this country's tainted.

In the same way that if you have a nasty job like plutonium reprocessing take place in this area, you're going to eventually run the risk, because it's high risk business, of having an accident.

And even though it's contained, it's going to scare people, it's going to run them off these agricultural products, and it's going to threaten the area. And for that reason, I think it would be a big mistake. Thank you very much.

MR. MATNEY: Thank you, Mr. O'Brien. Is Gene Huff here?

Jerry Stein? Still looking for Jerry.

UNIDENTIFIED SPEAKER: We promise he really does exist.

HT02-18 (CONTINUED)

Operation Commonsense

April 22, 1998
DOE Hearing

THE LESSONS OF HISTORY

Five years ago the business community rallied for an event that was to hail a revival for the business fortunes of the Texas Panhandle. Hundreds of supporters and advocates of an enlarged Pantex paraded to the Civic Center, where boosters promised the crowd an expanded Pantex plant and 10,000 to 15,000 new jobs.

Local newspapers heralded the event as a spearhead for an economic renaissance and noted the unqualified and total support from the community. As details of the expanded operations were disclosed, a more sober appraisal revealed that some of the missions might be less than desirable and others far too risky for reasonable people, concerned with the area's long term best interest, to consider. Now after five years we know that not only did 10,000 jobs never materialize, no new jobs materialized and in fact Pantex has announced a cut back in jobs beginning in 1998. Wisely, the community decided not to tie its future to Pantex and now our economy is reponding nicely and there is every reason to believe this economic progress will continue.

Today this community is a better more informed community. Despite hundred of thousands of dollars spent by the city on a public relations campaign intended to scare residents into unconditional support for Pantex, citizens have developed a more cautionary approach, recognizing the important differences and distinctions in various missions considered for the plant. The often repeated scare tactics warning that Pantex is closing and Amarillo will quickly be a ghost town fall are no longer working and reasonable people have decided that some work at Pantex is fine and other work, like plutonium reprocessing, is unacceptable.

The day is gone when issues surrounding Pantex fit neatly into simplistic categories of "for Pantex or against it". Most of us support Pantex. The issues today surrounding future missions at Pantex are multi-layered issues often requiring technical, scientific and public policy inputs. While generally the local community supports disassembly and interim storage, the public is more ambivalent towards longer term storage and high explosive burning, and a clear majority are flat against plutonium reprocessing.

Plutonium processing has a long and troubled history in this country. The Scientific American Magazine, in the current month's issue, reports that Hanford Washington, only one site where processing took place, has spent $9 billion dollars thus far on cleanup and will spend one billion dollars per year for the next 40 years on additional cleanup work. The job currently employs 14,000 workers and is the largest civilian project in our country's history with cleanup representing more than one third of the DOE budget. Whether it is Rocky Flats

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or Hansford the story is always the same – total contamination of the sites and surrounding areas including damage to people, water, air and land. DOE call these areas "national sacrifice areas". We don't want to become a national sacrifice area.

The message here is simple. People are not prepared to sign off on a "anything goes" mentality. We are certainly not ready to be the national guinea pig for untested plutonium reprocessing technologies that have contaminated every site in the country and now require billions of dollars a year to restore and will continue to do so over the next few decades. We are not ready to sacrifice our quality of life, our agricultural assets, and our safety for a short term economic boost.

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HT02-19

MR. MATNEY: How about Tracy? Is Tracy here? No Tracy. Okay.

How about Anne Reid? Anne is scheduled at 8:55, so I'm sure she'll be here.

Danny Detten? Danny, would you like to speak now or do you want to wait a little while?

MR. DETTEN: If you'll let me recopy it later, I'll do it.

MR. MATNEY: Sure. Will do.

Our speaker is Danny Detten.

MR. DETTEN: Good evening. As Paul said, my name is Danny Detten, and I'm a neighbor to Pantex, having lived all 52 years of my life there.

My wife, Bernice, and I have four children and nine grandchildren, three of whom chose to live and farm and ranch around the north and east side of Pantex.

We are all very opposed to the processing and storage of plutonium. Water is more important than oil or gold to the Texas Panhandle. Agriculture and the cattle industry are far more important than Pantex.

So why are we even considering

storage and processing plutonium? We are told if we support it, that it will protect some jobs and keep Pantex from being phased out completely.

In the real world, if a product is not needed, it normally isn't produced. Our water supply needs to be protected, and by -- storing and processing plutonium over the Ogallala aquifer is ridiculous.

We first supported Pantex out of patriotism, and to some extent, even the final assembly of nuclear warheads, because of patriotism. But people, patriotism works both ways. And Amarillo and DOE, you better wake up and start supporting us.

Our family has been here approximately 90 years at this location, and I assure you, it was not Pantex that made this area what it is today, but it sure may destroy its future. Thank you very much.

MR. MATNEY: Thank you, Mr. Detten.

Anne Reid? Gene Huff?

Okay. We'll be in a short recess, then, until our next speakers show up. Has anybody registered late to speak in the room? Okay. We'll just be in a short recess, then.

My Name is Danny Detten and I am a neighbor to Pantex having lived all 52 years of my life there. My wife Bernice and I have four children and 9 grandchildren three of our children chose to live, farm and ranch around the north and east side of Pantex. We are all very opposed to the processing & storage of plutonium.

Water is more important than oil or gold to the Texas Panhandle. Agriculture & the cattle industry are far more important than Pantex. So why are we even considering storage & processing plutonium? We are told if we support it, this will protect some jobs & keep Pantex from being phased out completely. In the real world if a product is not needed it normally isn't produced.

Our water supply needs to be protected and by storing & processing plutonium over the Ogallala aquifer is ridiculous.

We first supported Pantex out of patriotism, to some extent the final assembly of nuclear warheads because of patriotism but people patriotism works both ways. Amarillo & DOE, you better wake up and start supporting us.

Our family has been here approximately 90 years at this location, I assure you it was not Pantex that made this area what it is today but it sure may destroy its future.

Thank you
Danny Detten

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HT02-20

(Recess.

MR. MATNEY: Ladies and gentlemen, let's be back in session. We have two more speakers.

We'll be back in session now. And since our speakers were not here during the introduction, let me just once again reidentify our DOE officials who are here. They're here as hearing officers, not to engage in dialog, but to simply listen and take your statements.

Bert Stevenson, the gentleman in the middle, is from the Washington office of DOE. Patricia O'Guin, on the far right, is from the Albuquerque DOE office, and Steve Chase is from the Washington, D.C. office.

And our next speaker is Gene Huff. Mr. Huff.

MR. HUFF: Thank you, sir. I'd like to point out, first of all, that the risk associated with the sort of tasks that we're talking about here -- and I might add, parenthetically, those tasks have got to be accomplished somewhere -- but those risks boil down in the last analysis, I think, to being a function of the work ethic and the dedication and

the carefulness of the work force at the chosen site, the place you choose to do these things.

There's ample evidence that the work force in and around Pantex and in and around Amarillo has been very thoroughly and adequately tested and found to be outstanding in every respect. And I -- I give to you, as a source of that, some personal comments I have heard from the very highest levels at the Pentagon in the U.S. Army Aviation Logistics Offices in charge of procurement of helicopters.

When the Bell Helicopter plant here in Amarillo was closed because of internal corporate decisions on the part of Bell Helicopter, the Army was really dissatisfied and extremely unhappy, because they had found over the years that their very best product and the highest level of productivity was found right here at the Amarillo plant of Bell Helicopter. It exceeded that of any other production plant in the United States.

If you like, afterwards, I could give you the names of these individuals I was fortunate enough to know at that time. They found that this -- this plant's production was

consistently superior in quality. They had less -- a smaller number of rejects of helicopters here than at any other plant they had and less work stoppages or problems with the work force here. Their productivity was greater per worker here than at any other place.

Admittedly, these are general concerns, but as I said before, these things have got to be done somewhere, and it matters not to me whether I live in Amarillo or Houston or Washington or where. The decision ought to be made based on where can they best be done for the interests of this country.

I've got friends and associates all over the country, and I would feel better knowing that these activities were being conducted right here in my own backyard by people who live and work here in Amarillo than I would if they were conducted anywhere else in this country. And I think if you'll check with most of the people in Amarillo, they're going to feel the same way.

Now, a comment or two -- random comments about those who oppose the location of these activities at Amarillo.

It has been my observation that many,

if not most of those who oppose the location of these activities at Pantex, would just as vociferously oppose those very same activities if we were talking about locating them in Antarctica.

The opponents appear to have no factual basis upon which to support their fears of any of these particular catastrophes that they -- they continually call to our attention. To the contrary, it seems to me that they really oppose all things nuclear.

By and large, the fears expressed by these people are totally irrelevant to any activity I have ever heard proposed for the Pantex Plant.

An example, I think, would be this fear of permanent and irrevocable contamination of the Ogallala aquifer. I think that's absolutely absurd from any activity that has been proposed for Pantex, and I think it illustrates a difficulty on the part of these people that they're unable to distinguish the difference between a petroleum refinery and a retail hardware store that sells sewing machine oil in two-ounce tin cans. Thank you.

HT02-20 (CONTINUED)

PLEASE PRINT OR TYPE

JANET E. HOFF

2810 Teckla

City Plano State TX Zip Code 75146

MY COMMENT(S) ON THE PANTEX PLANT DRAFT ENVIRONMENTAL IMPACT STATEMENT IS/ARE:

The degree of risk associated with the [illegible] must be [illegible] — and this assertion can be seen at [illegible] — is ultimately a [illegible] of the work ethic and dedication of the workforce at the location selected.

[illegible] U.S. Army Air [illegible] [illegible] [illegible]

HT02-21

MR. MATNEY: Thank you, Mr. Huff. Our next speaker is Anne Reid.

Mr. Huff, do you have any comments you'd like to leave with us, a prepared statement? Thank you.

MS. REID: Thank you. Appreciate it.

MR. MATNEY: Anne Reid.

MS. REID: Thank you for the opportunity to express my opinion. My name is Anne Ansley Reid. I'm a life-long resident of Amarillo.

My Great-Grandfather Ansley chose to bring his family to this area over a hundred years ago, before Amarillo existed. My parents, Thad and Margaret Ansley, who are now 89 and 88, chose Amarillo as the place to live and raise their family.

As small business owners in Amarillo, my parents instilled very high, strong work ethics and community awareness and pride in my brother and I.

As a young housewife and mother, I chose to raise my family in Amarillo and instilled the same values in my three children. Each of my three children have married and chosen

to raise my seven grandchildren in the same manner and live in Amarillo.

Ever since the inception of Pantex, my parents and I have been constantly aware of the purpose and programs at Pantex. Never has there been a time when any one of these generations of my family have feared for their safety because of Pantex and its activity.

The overwhelming majority of Amarillo citizens have supported Pantex from the beginning until the present day. Pantex is great for our country. We need it through war and we need it to assure peace.

Amarillo is the best place for Pantex and its functions. Historically, as Mr. Huff said, the people of this area have very high work ethics, moral values, national and community pride.

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Everyone who works at Pantex is there by their own choice. Why, now, should the opinions of such a small group receive so much focus?

Having Pantex in Amarillo is good for the welfare of our families, friends and neighbors, locally, nationally and worldwide.

Thank you.

MR. MATNEY: Thank you, Ms. Reid. Would you like to leave your written comments with us?

MS. REID: I might rewrite them and leave them with you, if that's all right.

MR. MATNEY: Okay. That's fine. This might be a good time to remind everyone that there are other methods of entering your comments into the record for the DOE other than speaking at a public hearing.

If you have registered and you've been given materials with deadlines, you can fax your comments to the DOE. You can call toll free and record a message, which will be transcribed and entered into the record, or you can mail your comments.

The deadline for submission of comments regarding Stockpile Stewardship & Management is May the 7th. The deadline regarding the Storage and Disposition of Weapons is also May the 7th, and the deadline for comments regarding the Pantex Site issue is July the 12th. And all of those addresses and fax numbers -- you can even Internet them -- they are

located in the materials that you were given.

Let's see now if we have some of our other speakers. Is Jerry Stein here?

UNIDENTIFIED SPEAKER: We're going to tell you when he comes.

MR. MATNEY: I don't know who Jerry is. And Tracy, too, right?

UNIDENTIFIED SPEAKER: Yeah.

MR. MATNEY: We have heard from all of the speakers, other than those two speakers, who have signed up to speak, but our DOE officials will remain here. We will all stay here until 9:45, so if we get some latecomers in.

So we'll be in brief recess, but as soon as another speaker comes in, we'll reconvene. Okay.

(Recess.

MR. MATNEY: We need to reconvene for a speaker. We'll reconvene at this point. We have an additional speaker, Mr. L. O'Brien Thompson.

And Mr. Thompson, so that you'll know who you'll be speaking to, this is Patricia O'Guin from Albuquerque DOE. Sitting next to her is Bert Stevenson from Washington, D.C. DOE, and

HT02-22

next to him is Steve Chase from Washington, D.C. DOE.

And you'll have five minutes to deliver your remarks, and you may begin anytime you'd like. Mr. L. O'Brien Thompson.

MR. THOMPSON: Thank you, Dr. Matney.

I was on my way out the door and ran into Dr. Matney here, and I mentioned one little subject that I think is on my heart about all of our hearings.

And I've been to several of these over the past few years. I've heard all the talk about the economic impact and so forth, the environment, the damage to the Ogallala and so forth.

I spent 44 years with the petroleum industry. I was chief chemist at a refinery for 25 years. I was the environmentalist, I guess you would call, for 10 or 15 years, primarily concerned about the conservation of the quality of air and water, particularly the Ogallala.

And I don't want to get too much into that particular area of it, but I would say this, that so many of our concerns about the Ogallala does not quite sound -- we can pump out of the

Ogallala at a very -- rate that makes the table kind of like a saucer.

You have an inflow of the water, and the outflow of water is not going to be damaged at your other places. And those are real facts that have been determined.

I'd like to address my remaining moment to another area. When we think of Pantex as people, 3500 people, most of whom are very highly qualified, having a real appreciation for the quality of life for their families, here in Amarillo, we have excellent educational facilities from kindergarten all the way through to graduate level.

HT02-22/1 24.001

We have excellent cultural facilities, symphony, art, opera and so forth. We have excellent climate. We're just about the right size for people who want to really become an integral part of a good community to raise their families.

And of several different sessions that I have heard over the last few years, I don't recall having anybody express any concern about the fact that those 3500 people who work in Pantex, whomever they may be, need to have a

place to live and work in a place where they have a high quality of life.

And I think that is something that DOE needs to remember after they've considered all the technical aspects, all the hard, cold facts, that we've got to recognize that those 3500 people have an excellent place in which to live and do their work and raise their families. Thank you, Dr. Matney.

HT02-22/1 24.001 continued

MR. MATNEY: Thank you, Mr. Thompson.

I don't see any new speakers, so we've got about 15 more minutes. We'll stay here until then and we'll be in recess.

(Recess.

MR. MATNEY: We'll reconvene. And our speaker is Louise Daniel.

MS. DANIEL: My name's Louise Daniel, I live at 3805 Overlook in Amarillo. I will prepare a -- some written comments later.

I waited to speak because I don't have any written comments, and I would really prefer to have those before I do.

I guess I just want to say that the thing that concerns me most, and that's bringing any plutonium processing to Amarillo.

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HT02-23

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And I think that is something that DOE needs to remember after they've considered all the technical aspects, all the hard, cold facts, that we've got to recognize that those 3500 people have an excellent place in which to live and do their work and raise their families. Thank you, Dr. Matney.

MR. MATNEY: Thank you, Mr. Thompson.

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MS. DANIEL: My name's Louise Daniel. I live at 3805 Overlook in Amarillo. I will prepare a -- some written comments later.

I waited to speak because I don't have any written comments, and I would really prefer to have those before I do.

I guess I just want to say that the thing that concerns me most, and that's bringing any plutonium processing to Amarillo.

I understand about the importance of jobs at Pantex, the importance to our community. I've come to have more sympathy for that view than I did in the beginning, but I'm still extremely reluctant to see any kind of plutonium processing come.

I've understood that there are new processes which are safer than the old ones. I've heard some explanations of those things, but I still have some really vital questions about whether or not we need to take that risk.

And until we can be absolutely sure that the Department of Energy won't cause the kinds of environmental disasters that have happened at places like Rocky Flats and Hanford, I would be really opposed to seeing any mission of that type come to the plant. Thank you.

MR. MATNEY: Okay. Thank you, Ms. Daniel.

Anybody else that would like to speak? No. Okay. We'll be in a recess, then.

(Recess.

MR. MATNEY: We'll reconvene briefly only to adjourn. And we thank all of you for your interest and for your comments, and we thank

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HT03

DOE PUBLIC HEARING ON
STOCKPILE STEWARDSHIP PEIS
STORAGE & DISPOSITION PEIS
PANTEX SIDE-WIDE EIS

STOCKPILE STEWARDSHIP AND MANAGEMENT
BREAKOUT SESSION
APRIL 22, 1996
7:00 P.M.

KAROLYN FARMER, CSR, RPR

SONDRA L. CARGLE & ASSOCIATES
Certified Shorthand Reporters
4103 W. 49th Street
Amarillo, Texas 79109
806/355-8181

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Portions of the transcripts unrelated to this EIS have been omitted.

of the information I've heard. Any comments on that would be appreciated.

MR. WHITEMAN: Others could perhaps give better numbers than me. But the increase is due to the overall increased level of activity at the Pantex Plant during that time period, and also because some of the traditional functions at Pantex are taking a lot more people, you know, with the kind of safety board oversight and so on that goes on in operations there.

UNIDENTIFIED SPEAKER: Yes, there is one confusion factor, looking at all three PEIS's, and that is they use different multiplications for the number of direct jobs versus the impact in the community. HT03/11.001

MR. ROSE: I can speak on the programmatics versus the site-wides. And generally in a site-wide analysis you'll have a more detailed analysis because that's your only site. Again, we're looking at eight different sites. And when we do a multiplier effect between direct and indirect jobs, it's a very generic analysis in that, you know, we do high explosives fabrication. The Bureau of Economic Analysis has different multipliers for, say, a fabrication type mission. Now, the Pantex site-wide probably breaks down the fabrication mission by -- and we might have fifty people doing direct jobs and that may create a hundred

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indirects. That's what we did in the programmatic. The site-wide may break down fifty people by saying ten are press people, ten are secretarial support, and thirty people are actual fabricators. And then the Bureau of Economic Analysis actually has a different multiplier for the different craft or different job categories. So, you know, one person can create three jobs, but this one other person only creates one. Again, it's just a level of detail.

MR. LAWSON: Anyone else with a question of cumulative impacts, cost impacts to the region? Any comments you would like to make? It's now about five minutes past 9:00. What I would suggest before we take on some new agenda items, this is a good time for a break.

(Recess.)

MR. LAWSON: I see a few familiar faces. This session is on stockpile stewardship and management. For those of you who have not been here earlier this evening, we have covered five issues that were raised earlier in the evening by folks in this session. I'm going to open it up for other issues that you would like to address. The issues that we talked about earlier were the question of if the stockpile stewardship and management plan were implemented, what could be the

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HT03 (CONTINUED)

effect -- possibly the negative effect on the United States deterrent capability, should we be attacked, or some sort of a crisis. We also talked about if there is a transfer of facilities, particularly the high explosive facilities, what happens when -- at the end of the stockpile life. We were talking about the possible extension of that life through upgrades and so forth. A third major area was the question of the criteria that DOE used for selecting among the different options and coming up with its preferences, and particularly how they were identified in the PEIS and applied. And there were a whole range of those different criteria that were considered. One of them was costs, and we talked about costs in particular. Earl had introduced some graphs in the first session which talked about -- which addressed the question of the comparison of costs, the net present value of cumulative costs of having facilities stay at Pantex or move to Nevada or to move to the different facilities. We used that as a jumping-off point for talking about how the comparison of costs were addressed. And the final issue that we dealt with was the cumulative economic impact in trying to -- well, we discussed why the Pantex site-wide economic assumptions were done differently than from the programmatics, primary because of the question of scale. But we also

wanted to clarify questions about what would be the indirect effect on jobs in the region and what was the size of the region that was considered, so that we're not just talking about the direct employees, but also the indirect people, people who would be affected by -- indirectly by the number of jobs here at Pantex. So we can pick up on any of those issues, if you would like, if there's anyone here who is new or has been here before and has another issue that you would like to see addressed, I'd like to ask you to identify it so we can put it on the board and we can deal with it.

UNIDENTIFIED SPEAKER: Just continuing on the net present value cost comparison the high explosives were to the labs.

MR. LAWSON: We can continue. Okay. Yes, sir.

UNIDENTIFIED SPEAKER: I would like to find out when two plus two is not equal to four, like what is an overriding criteria that might trump all the criterias we've heard tonight? Maybe politics, political will of the administration, political will of someone in the agency. NEPA only requires the agency to give lip service or follow the procedures of NEPA. It does not bar the government from going forward with the project.

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HT05

DEPARTMENT OF ENERGY

PUBLIC HEARING ON

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STOCKPILE STEWARDSHIP & MANAGEMENT DRAFT PEIS

STORAGE & DISPOSITION DRAFT PEIS

PANTEX DRAFT SITE-WIDE EIS

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PANTEX DRAFT SITE-WIDE EIS

BREAKOUT SESSION

APRIL 22, 1996

8:00 P.M.

KARY A. WINGO, CSR, RPR

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Portions of the transcripts unrelated to this EIS have been omitted.

is also my understanding that recently there has been -- it's been very dry around here also. So there are many fields around Pantex, too, that also might contribute to that that wouldn't be in those models.

MR. PARHAM: Okay. Let me follow up on that one. Any other questions on ambient air quality or issues about nature, other comments? I was going to say, on the water issue, I could bring you plenty from Dallas today.

UNIDENTIFIED SPEAKER: I wanted to clarify what you said. The exceedances were in which category?

MR. PANKETH: PM10.

MR. PARHAM: Okay. So you had had a question as a follow-up, the exceedances. And you said?

MR. PANKETH: PM10.

MS. FOUNDS: Sir, is there any other feedback or that I could get also from you? Do you perceive that there's a problem with that?

MR. PANKETH: No. My perception of it also was that those exceedances happened because of the -- some construction activity or storage of dirt near the monitoring locations.

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But I wanted to make that clear to people who are reading this report. And they have seen the monitoring report and they'll say, well, how can this be true? You know, so I just wanted to make that issue.

UNIDENTIFIED SPEAKER: I wanted to follow up on the comment that was made. As you probably are aware, TNRCC has standardized the modeling year meteorological data which is to be used in environmental analysis. And the particular model year that was selected for meteorological data was the 1988 year. And that standardized all the environmental analysis in Texas.

And so the meteorology for that year does not necessarily correspond with meteorology of the monitoring stations, which are much more recent. And also it would not pick up PM10 dust blowing from off-site as well.

MR. PARHAM: Okay. Thank you. Any additional follow-up to that? Any further clarification questions on that? Okay. More questions or comments?

MR. JOE STANG: I'm Joe Stang. The 12,000 pits that are currently in existence

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HT05 (CONTINUED)

what would be the additional employees if you went to the 20,000 pits? Or would there be any additional employees?

MS. FOUNDS: At this time, you're not looking at a great deal of employment associated with those additional pits, because it's primarily security, and we already have that security for the Zone 4 where these pits are located at.

And the monitoring for that is not necessarily labor intensive. You go in, you monitor, based upon the criteria that the laboratories have established. And that's a sampling type of thing to make sure that you are maintaining the integrity of those storage containers, et cetera.

So we're not showing a great, you know, employment because of the additional 20,000 pits there, nor are we showing a lot of increased employment at an alternate site because of the pits, particularly if they already have their security forces in place.

MR. PARHAM: Okay. Thanks. Any other questions on employment related to pit storage? Additional questions on employment in

general?

UNIDENTIFIED SPEAKER: Just a comment. That would be different, would it not, for the stockpile -- or for the Storage and Disposition EIS, that is, if Pantex were selected as a site for the long-term storage as opposed to the interim storage and treatment center? Were you asking that question?

UNIDENTIFIED SPEAKER: Yes. That's the interest I had.

MS. FOUNDS: Right. That would be different as their alternatives of how they're going to come and store the plutonium and whether or not -- how they build the facility, et cetera, and do those other missions that are associated with that disposition activity.

I'm sorry. I'm speaking strictly for the site-wide and the 20,000 pits.

MR. PARHAM: Okay. Thanks. And that needs to be noted for the crosscutting issues too. Additional comments? If you're in the back room there, we sort of closed that off to you. There's plenty of seats down here if you want to come in too. Can you hear back there? Okay.

Any additional comments on those

questions, general comments or additional questions? A lot of people here. Nan is anxious.

MS. FOUNDS: You know, I studied for this, guys.

MR. PARHAM: I see a hand come up.

UNIDENTIFIED SPEAKER: I'd just like to follow up on the question about the cost associated with moving the 12,000 pits to another facility. My understanding is, with the controls that are out in Pantex and the way that the monitoring is occurring and the possible technologies that are being used to monitoring the pits, I think that would be a substantial cost if that would go to a different facility, yet you indicated that that would not be an increase in cost.

MS. FOUNDS: In terms of relocating it, I was talking to employments over here. We have not done an in-depth cost analysis of the transportation. I can only sort of talk to that generally.

But I'm assuming what you're referring to is, first of all, you have to transport those pits to the other sites. There may be some modification to those facilities in

order to assure that we take into account the safeguard and security requirements necessary to protect those components. You would have to do -- to factor that in to the overall cost. But, at this time, we have not done that detailed cost study.

And, as I will reiterate, Pantex is currently the preferred alternative to continue to look at those things. But the same criteria would be applicable to the pits at another site. They're applicable at Pantex. And that would have to be done.

MR. PARHAM: Thank you. Any additional questions on cost associated with transport? I just want to mention, I think, Donna, we have until July 12th; is that right?

MS. BERGMAN: Right. July 12th.

MR. PARHAM: Yeah, July 12th. I just want to mention the fact, since this is recently published, that you have an opportunity until July 12th to get your comments. And so I know there's a lot of people that probably haven't had a chance to see the material in detail. So we want to get a chance here to continue to discuss that and answer your questions now. Additional

HT05 (CONTINUED)

questions or comments, anyone?

UNIDENTIFIED SPEAKER: If you'll pardon my ignorance, you might explain some of your terminology. What is a preferred alternative? If we're an alternative, that implies to me we're in second place, even though we may be the highest second place.

MS. FOUNDS: Basically -- and this is my understanding to me -- but is the Department goes through and says that it needs to take an action and it develops a proposal to do that. At the time that it develops a preferred, it is basically saying is that there are no environmental impacts that would seriously prevent you from implementing that proposed action.

It doesn't mean that another one couldn't be selected. But, at this time, this is what we consider to be our preferred action. I will turn it over to some other NEPA experts for more clarification here too.

MR. PARHAM: State your name.

MR. JARMAN: I'm Cliff Jarman. I work with Tetra Tech in preparing the EIS. Basically, the law requires to look at alternatives to anything that the government is

proposing to do. The government, in this case, proposing to leave those pits, over the interim term, at Pantex until whatever decision is made the storage and disposition.

They might decide to -- whatever they -- a permanent solution. And this is to keep them here until that permanent solution. Whether that is to implement it at Pantex or not is the subject of that EIS.

The alternatives we looked at to keeping them here was the four other sites. So those are alternatives. But just the terminology as you mentioned, under the law, all the actions are alternatives. But the proposed action, in this case, leaving them here, is also DOE preferred action. That's the one that they are favoring. That's the one that they would like to do.

MS. FOUNDS: But we will consider any of the comments that are put forth at this time to update the document and to have a bearing on that decision.

MR. PARHAM: Thank you. Thanks for answering that. Additional questions or comments? Anyone want to make a comment for the

record? We've got notetakers and a court reporter here to do that.

MR. WILLIAMS: I'm C.E. Williams, General Manager of the Panhandle Groundwater District. And my two or three questions are on the groundwater. On Page 413 it's stated, and I quote, that the City of Amarillo has pledged 5,526 million liters of water, or 1.6 million gallons per year as a potential part of the Pantex expansion.

HT05/1 06.003

And my questions are are the disposition issues considered expansion missions and where is the City of Amarillo planning to withdraw that amount of water from. And, if it were to come from Carson County, where we already experience significant groundwater declines, it would mean that, if this total amount was used, would mean a 23 percent increase in groundwater withdrawals from that area.

HT05/2 06.004

I know the City has extensive groundwater rights. My main question is whether and what criteria and how long is the pledge good for and those kind of things.

HT05/3 06.005

MS. FOUNDS: What I'm going to do is answer, to the extent that I know. And then

I'm going to turn it over to one of our other technical experts.

The first is that, yes, I believe that what it is is we are looking at those disposition technologies as the expansion of that. And clarify for me, Cliff, if that also included the tritium, because we had been considering that at one time also.

MR. JARMAN: When this document was started and we were looking at other ongoing operations that could affect the plant, there was a decision that had not been made yet as to where to put the new tritium supply technology. That decision has been made by DOE, and it will go to at Savannah River.

As part of that looking at it, when they came to Pantex, one of the, say, risks against using the Pantex Plant was the availability of water. The City, at that time, made a proposal saying, if that was the only problem, that they could make available this water in the terms of treated waste water. Since it would only be used for cooling purposes for the reactor, it wouldn't have to be potable water. And that was worked into the analysis.

HT05 (CONTINUED)

When the decision was made to do the tritium supply at Savannah River, this wasn't taken out because it is still -- the offer is kind of still out there. If this became a critical issue for another mission coming to the Pantex Plant, the City wanted it known that they still might do this so that it wouldn't be the critical factor in the decision.

HT05/4 06.006

MR. WILLIAMS: So it's an ongoing offer?

MR. JARMAN: Until the City says no.

MR. PARHAM: That question again, so people can hear it? Ongoing -- sorry?

MR. WILLIAMS: Ongoing offer.

MR. PARHAM: So it's an ongoing offer?

HT05/4 06.006 continued

MR. WILLIAMS: So there's no time frames?

MR. JARMAN: It was just an -- it wasn't a solid technical offer, in terms of blueprints, time frames. If the City were to not be in favor of a particular issue, I'm sure they would withdraw the offer. We have not received word that they have yet.

If they receive that word through this comment period, then that particular part of assessing the impacts would be taken out and it wouldn't be in the final EIS.

MR. PARHAM: Did we get your questions answered?

MR. WILLIAMS: Well, I have one other one. And I think it's more possibly a typographical error or something. But, in reading on Page 478, it was going into the agricultural uses in Carson County. And they had stated in that that there was 8,550 acres of irrigated agriculture in Carson County.

HT05/5 06.007

And a check with the Farm Service Agency, which is a federal regulatory agency, on the amount of acres in 1995 was 63,500 acres. Your withdrawal figure seems to be somewhat within range, but your acres are quite a bit off.

It's not probably a cutting issue. It's just something that I happened to see.

MS. FOUNDS: Okay. If I could make sure that we get the reference that you're using. And we will check against the references that we were using as part of the census data, et cetera. And then we will look at both of those

things and have a clarification for you as part of the response to your question.

MR. PARHAM: Did we get it down there too?

MS. FOUNDS: I want to make sure that we've got it down there correctly.

MR. PARHAM: Right.

MS. FOUNDS: And it was the irrigated acres in Carson County?

MR. WILLIAMS: Yeah. They're substantially wrong.

MS. FOUNDS: And what was the reference that you were using?

MR. WILLIAMS: It's the Farm Service Agency, what used to be ASCS. It's the government's regulatory agency for the Federal Farm Program. And they keep it down to the 10th of acres, so I know that they're correct.

HT05/5 06.007 continued

MS. FOUNDS: Okay. So we will cross-reference with our data base.

MR. PARHAM: Okay. Thank you. Additional comments or questions? I know we're going to be running into another session here shortly. We'll be repeating two more.

MR. PANKETH: On the aircraft

accidents, in the 1993 environmental assessment, the aircraft accident was considered an incredible event, ten to the minus seven. In this EIS, it changed to ten to the minus four to ten to the minus five. What has changed?

MS. FOUNDS: There are several things that have changed, part of which is we have some data bases that are operating now. As part of this EIS, there is a RAMS, which is a radar aircraft monitoring station, that was implemented in the FAA tower that goes out and can literally -- it gets the flight pattern for the various types of aircraft that are out there. So there is additional data that we are getting and applying.

The second thing that changed was the model. It used to be a Solomon model that was used almost exclusively as part of the DOE standard that's being developed. What happened then is they took a look at that model and then went out and looked at National Transportation aircraft crash incidents throughout the whole country to come up with, if you're flying an airplane off the end of a runway, what is -- you know, where would you crash. And then also we went back through and looked at the crash rates.

HT05 (CONTINUED)

So those are the types of things that change that went into this EIS, as opposed to the EA that was done before. And we are working off of a draft aircraft crash standards the Department is developing. And it is still somewhat evolutionary at this time. So I wanted to point out those too. I also have a colleague who wishes to clarify a bit more too.

MR. JARMAN: Also, that can be -- models and data can -- I get lost in them too. A change between the EA and the EIS that we can all relate to is the EA was looking specifically at those magazine storing pits. The EIS looks at any place on the site where an accident could happen that would disperse plutonium. So there are a lot more facilities that are -- and so the odds are greater that it would get one of the greater number of facilities.

MR. PARHAM: Thanks. I'm going to ask the back room there. I keep looking back there. Okay. To keep on time and not get in trouble with the guy in the next room, I want to just repeat that we'll be repeating this session again momentarily, almost, with a five-minute break. And then we'll be doing it again once

after that, so you get a chance to come back in. But we know you'll also want to head to the side sessions.

I guess, Nan, one thing we want to check, as far as people picking up copies of the document, is that available here?

MS. FOUNDS: Yes. There are copies that are available here. There is also a 1-800 number that you can call in order to get copies if you would like. And you can call the hotline to leave further comments. And you can E-mail us too in order to give us comments. So with that, we can go.

MR. PARHAM: Another question?

MS. FOUNDS: I think a clarification.

UNIDENTIFIED SPEAKER: We also have copies of the briefing that Nan gave right here in the box if anybody wants to carry a copy of the briefing with them.

MR. PARHAM: Okay. Any additional comments, questions? Please join us again if you'd like to. We'll repeat here in a few moments. And I appreciate your involvement.

(Recess.

resource areas that we looked at. We looked at all of these areas in terms of assessing what the operations are and developing the impacts for the site in these various resource areas.

So, at this time, I'd like to turn it over to Jim and we can open it up for comments.

MR. PARHAM: Okay. Thanks, Nan. And I won't stand in front of you here. First off, I'd like to -- if there are any clarifying questions on the presentation or questions in general. Also, those of you who would like to make comments, we're more than happy to go ahead and get that started. And we have folks taking notes so we make sure to get it down.

So questions, comments? Got a lot of questions last group. Comments? None? Back room? I'm going to the back room now, back to the Bob Uecker seats. Any questions back there?

MS. FOUNDS: Please don't be shy. As I told the other group, I studied for this. So I can see whether I get an A, B or C out of this.

UNIDENTIFIED SPEAKER: Or a paycheck.

MS. FOUNDS: That's probably the most important one.

MR. PARHAM: Comments or questions?

MS. FOUNDS: Do I get a bonus?

MR. PARHAM: I wanted to mention -- while you're thinking about that, you may want to come up and look at these, you know, for a little bit here. We can also look at these and then come back with some questions if we needed to.

One thing I wanted to mention is that, Nan, the comment period closes on July 12th.

MS. FOUNDS: On July 12th. I believe that we have a -- did it go outside? I want to make sure the people know that there are various ways to comment. Of course, this is one of those ways.

We have a 1-800 number where you can call in and there will either be a person who will answer the phone or, off-hours, et cetera, there -- those conversations can be taped and your comments can be taken that way.

They will be transferred to us to include in a comment response document. We also have an E-mail address where comments can be received that way. Or you can also mail and fax

HT05 (CONTINUED)

And I believe all of those things, all of those different ways, are outlined in the poster that's outside this room.

MR. PARHAM: We have copies of that EIS here too.

MS. FOUNDS: Right. And there are copies of the EIS here also, if you need to pick one of those up. Sir?

UNIDENTIFIED SPEAKER: Let me ask one quick question on the airplane accident scenario. Was that scenario based on the flight paths now? Or did you take into effect that the flight paths could be changing when they get a new radar system out there at the Amarillo airport?

HT05/6 15.001

MS. FOUNDS: In the document -- okay. The current model that we used doesn't account for that shift. In the document, we do give a prospective that shifting that -- the runways over, or the approaches over -- excuse me -- would decrease the risk by up to 62 percent. And we are looking at the implementation of that DOE standard very specifically to the Pantex Plant and how that would change, given those changes in the approach patterns. That is not in the numbers that I gave you.

UNIDENTIFIED SPEAKER: Will that show up in the final analysis, the final draft?

HT05/6 15.001 continued

MS. FOUNDS: We are working with the Department's aircraft crash standards and giving them feedback on that. It will somewhat depend upon how that final DOE standard comes out.

UNIDENTIFIED SPEAKER: Thank you.

MR. PARHAM: Okay. Other questions? I think there's a sign-up sheet moving around too. It may be here. So, please, if you get a chance to sign up for this session, we'd appreciate it. Additional comments or questions?

UNIDENTIFIED SPEAKER: Just a further comment on the aircraft crash scenario. I've heard that Delta no longer flies into Amarillo and that American Airlines has down-sized the aircraft that they're using. Does this have an impact on the numbers that you have provided? Is it being considered in future iterations of the model or what?

HT05/7 15.002

MS. FOUNDS: Basically, what we are going to, there is part of the standard -- it has, essentially, two components of it. One is it analyzes the fact that Pantex is near the airport, so we call it a near-airport analysis. And part

of that standard says, okay, how many operations are coming in and going out of that airport. Those types of numbers would be reflected in the FAA data that we get back that then go into the model, those kinds of trends. Brett, did you have anything to clarify on that?

MR. SIMPKINS: No. My name is Brett Simpkins. I work with Tetra Tech. Cecil just called me into the room. He said someone asked a question regarding probabilities of the aircraft crash across the different documents. And I came in to answer that question. But I didn't hear it.

MS. FOUNDS: Right. Yes. I want to make sure. There are differences between the documents too. And, in the stockpile stewardship, they are showing a low probability number. That's because, right now, essentially, Pantex is using most of the facilities. They're using Zone 4; they're using Zone 12. In a stockpile stewardship one, they will not be using Zone 4. So that reduces the probabilities because the area contributes -- if you're using a larger area, there's more area to hit. So, therefore, if you're downsizing, those become less.

And, in our scenarios, we look at, you know, the accident and, say, plutonium dispersal that could happen in any one of those -- those buildings that use -- that contain plutonium in weapon form, pit form, those types of things.

MR. PARHAM: Okay. Did that take care of your question? Other comments or questions for Nan at this point?

MS. FOUNDS: Are there any other aspects of it that you would like to see in a response back to you that I haven't covered?

MR. PARHAM: We know that some folks have not had a chance to get through the material yet. And so it may not -- it may be a little premature for some. But here's your chance. So, at this point, if you do have some concerns up front that Nan and Donna will take those at this point. So any other comments or questions at this point?

UNIDENTIFIED SPEAKER: From an environmental standpoint, what changes when you go from 12,000 pits to 20,000 pits?

HT05/8 01.006

MS. FOUNDS: Not much. There may be a little bit of increase in some of the waste streams, et cetera, just because of the numbers

HT05 (CONTINUED)

that go along with that. I mean, I'm talking about just the storage and the continued storage.

There is always the fact that you're dismantling those weapons and you accumulate -- you're continuing to do those operations. So you have, you know, waste management that you continue to do. And so it's really given in the document as a per year type thing. And we also look at the 2,000, 1,000 and 500 level.

But, once you have those pits and they're in the container and you're storing them out, there isn't a lot of difference, in terms of environmental impact, to the site to continue that storage mission.

Is that what you're talking about, the storage mission?

UNIDENTIFIED SPEAKER: Yeah, I guess that's the question. You seem to have made a fairly substantial deal out of going from 12,000 to 20,000. And I wondered if there was anything more to it than what you've just said. What should those of us concerned about the environment worry about going up to 20,000 pits?

HT05/8 01.006 continued

MS. FOUNDS: Well, again, as I

said, there's the dismantlement aspect, continue those operations, which is, essentially, continuing what we're doing for a longer period time, because, you know, you're not going to stop at 12,000. Or, in the alternative case, you will continue that and ship those things off site.

But, in terms of the sheer storage aspect, once they're in there, you do the monitoring, you know, you pull them out for surveillance and things like that, but there is not a great deal of further environmental impact, so to speak, to continue to store those in those pits. But we did cap that at 12,000 to look at what the impacts were of that continued storage mission and then to assess and make sure that we were covering all aspects of the Pantex mission and present those impacts as part of the site-wide and look at cumulative aspects of it in this site-wide document, dismantlement and storage.

UNIDENTIFIED SPEAKER: With the first reconfiguration EIS proposal six or seven years ago, there was one EIS which covered the reconfiguration of the nuclear weapons complex. I'd like to know what the Department's rationale is for dividing among a number of EIS's what

HT05/9 23.016

essentially is one overall decision, which is what to do with the nuclear weapons complex as a whole.

Obviously, your Site-Wide EIS is a part only of the decision about what to do with pits now and in the future. Why is it that the Department has elected to split up the EIS process and to do fragmented segments?

HT05/9 23.016 continued

MS. FOUNDS: Well, I would give you one clarifying thing before I begin is that I was not around, per se, during reconfiguration. But what the Department does is it has different aspects too of how it manages programs. So they felt that, for instance, the nuclear weapons was sort of an entity unto itself with certain goals and certain proposed actions that could be sort of encased and put in a document, the Stockpile Stewardship and Management PEIS. Then it had more, you know, strategic milestones and things like that that were better documented and decided on in that program rather than taking the whole Department in sort of one shot.

They also have, you know, like I said, what they call the programmatic ones which make mission decisions for each site. And that is what stockpile stewardship does, mission sites

that -- mission citings at locations that are for the nuclear weapons.

Then you have the disposition and storage, which actually it is more the consistent package, in terms of being able to present that to the public and say, okay, once we have the excess and the surplus and things like that, we're trying to store these things and then dispose of it. That seems to be one more consistent package, that trying to group these things all together. There are programmatic.

Site-wides are there to help look at cumulative impacts, because you have a lot -- you might have several different things, such as our construction projects. And there may be part construction projects that were not under EA's or CX's. And so you look at that cumulative impact as part of the site-wide. And that's why -- I'm trying to explain the structure of programmatic site-wide -- and then you might have additional project EIS's if you think there is a significant impact posed by those things and you do an EIS on those things.

So that's sort of the structure that way. And I will also refer to my colleague

HT05 (CONTINUED)

HT05/10
23.017

over here, who is Gary Palmer, who works in EP as one of the -- NEPA --

MR. PARHAM: Gary, before -- do you have an additional question?

UNIDENTIFIED SPEAKER: But I'd like my comment to go to the fact that what you have really done is made it impossible for the public to comment upon the overall program. You have no real programmatic environmental impact statement about which the public is instructed, educated and about which they can comment. And I seriously question whether the law really has been complied with.

MR. PARHAM: We'll take that as a comment. Gary, you have a little bit of follow-up -- of clarification? We only have a couple of minutes left in this session.

MR. PALMER: My name is Gary Palmer. I'm with the program office, defensive programs, that sponsors, basically, the operation at Pantex and is conducting the stockpile stewardship and management programmatic EIS, which, of course, is being discussed in the next room.

You referred to historically,

basically, back to the reconfiguration process. Back at the time that reconfiguration was considered, the building of nuclear weapons was a very active process. And the reconfigured nuclear weapons complex was being built to construct weapons, not to disassemble them.

Then came the end of the Cold War. And, for we in the program office, it's been a constant change of what our mission is since then. And each of the restatements that we've gone through, basically, in the Federal Register notices that we put out about each of the environmental type statements, tried to present that logic of the moment, that snapshot that we took that says, here's why we're doing it.

But the problem was basically very slippery-sloped that took our mission from constructing nuclear weapons to simply disassembling them and storing them and storing the remnants. So we've seen a tremendous change programmatically in what our program is.

The best place you can look at this, incidentally, is in the testimony that was given by previous assistant secretaries and secretaries as to what the mission is. And then

the mission that the current secretary, Secretary O'Leary, the current assistant secretary, Dr. Reis, see is they started this programmatic EIS about a year ago in answer to the very claims that we don't know what our program is anymore. And so Dr. Reis set out a program plan, which is available, that stated what we think our mission is for the future now that things have, in a sense, stabilized.

So we're very sensitive to the argument that you've brought up, but we think it's logical. And the logic flow actually is in the introduction to the Stockpile Stewardship and Management EIS. So I don't disagree with you: you've made a good point, but the reason for it is basically what's happened in the history in the last 10 years.

We think it reflects realistically in the Stockpile Stewardship and Management what our current programmatic mission is and the evaluation of that program.

MR. PARHAM: Okay. Thank you. Any additional comments? We're going to have another session. We'll repeat this again here in a couple of minutes. Other comments or questions

for Nan?

Okay. We'd like to thank you for this session. And I appreciate it. You can come on back or the other two sessions will go. And, if I keep on schedule here, we should be starting in just a couple of minutes again. Thank you.

(Recess.

HT05 (CONTINUED)

get some questions of a similar nature. And I just wanted to point out if that helps wet your appetite for questions or clarifying questions or comments.

So, without further ado, I have the microphone up here and I'd like to bring it out to some of you who'd like to provide some comments or questions for us.

UNIDENTIFIED SPEAKER: Yes. Could you speak more toward the latent cancer fatality issue that you put up here and discuss what is the most likely outcome?

HT05/11 14.008

MS. FOUNDS: Well, essentially, what that is -- and maybe I can put that back up there -- is that, as part of the human health analysis, you do consequences of receiving this exposure. There is -- and I will turn this over to my experts in a few minutes -- but there is what is called the BEIR 5 reports that look at, if you get an exposure, what is the probability that you would develop a cancer from having received those exposures.

Now, remember that there is a 20 percent chance of that group, 50 years later, contracting cancer. So, of that 330, 60 of them

are expected to die of cancer. So what you're doing is comparing that .13. So, essentially, what you're looking at is 60.13 cancers in that group. When you start getting into decimals, that it really means is that if you had many events like this, only a very few would come up with an additional latent cancer. So you might say that the expected outcome is no additional fatal cancers.

UNIDENTIFIED SPEAKER: If that's the actual expected -- if that's the actual expected outcome, why isn't that put into your statement as the most important --

HT05/11 14.008 continued

MS. FOUNDS: Well, that is in terms of how we look at that .13 latent -- excuse latent cancers.

UNIDENTIFIED SPEAKER: But, in other parts of the document, you indicate that the most likely outcome is zero cancers.

HT05/11 14.008 continued

MS. FOUNDS: Well --

UNIDENTIFIED SPEAKER: And those statistics, if I might be permitted to make my statement --

MS. FOUNDS: Right. What I'm trying to do is -- you know, what it is is that,

if you repeated this event many, many, many times, you don't really get a .13, right? There very seldom is there 60.13 deaths. If you had that and did it many times, there might be one of those events that come up positive.

So when you average it over all of those events, then you get a .13. And, at this point, I will also turn it over to our health experts if you need an additional explanation on that.

MR. PARHAM: Did we have somebody over here?

UNIDENTIFIED SPEAKER: I was going to ask if the gentleman had finished his question.

MR. PARHAM: I don't -- that's why I wanted to get back to you. I think you have a statement to make, actually.

UNIDENTIFIED SPEAKER: Well, I'm saying is you explain this in two different ways in your document. In this shorter version that you've put here in the narrative summary, you appear to attach some greater certitude to potential cancer risks than you do in the other sections, especially in the appendix, where you indicate that the most likely outcome is zero

HT05/11 14.008 continued

cancers.

And I'm saying, for purposes of explaining this to the community, the more appropriate explanation would be to indicate that the most likely outcome is zero cancers.

HT05/11 14.008 continued

MS. FOUNDS: Okay. I'm sorry. Could I also get you maybe later to come up and point out those sections in the EIS also?

UNIDENTIFIED SPEAKER: Certainly. Yes.

MR. PARHAM: Okay. Thanks for the follow up. Did you want to add anything?

UNIDENTIFIED SPEAKER: I think that's been resolved.

MR. PARHAM: Other questions or comments?

UNIDENTIFIED SPEAKER: Under the statement he was referring to, it said shipment of pits to an alternative site would increase radioactive exposure of the Pantex Plant by !!! Why would it increase if the pits are shipped to an alternative site?

HT05/12 14.009

MS. FOUNDS: Because they are doing more handling of the containers that the pits are in. They have to take them out of

HT05 (CONTINUED)

storage and, essentially, put them on the SST's that will be transporting them off site. So you have to account for that additional exposure.

HT05/13 14.010

UNIDENTIFIED SPEAKER: In follow up to her question, what is the underlying base assumption of man-rem or person-rem exposure that you have ascribed to ongoing site work at the 500, 1,000 and 2,000 levels such that you would be able to extrapolate from these numbers exactly what is the base amount that you say they're going to get, irrespective of the number of weapons that they're working?

I moan, I've tried to deconvolute your calculations and I can't do it.

MS. FOUNDS: Okay. Well, one of the things was that we were looking at base line data and records that the Pantex Plant has for determining what individuals have. We are also looking at some of the limits and the profiles, how many weapons will be handled, those types of things, to come up to the 1,000 -- or the 2,000, 1,000 and 500 level.

HT05/13 14.010 continued

UNIDENTIFIED SPEAKER: As the person who supplied that data from the Pantex Plant, I'm not able to follow your calculations,

HT05/13 14.010 continued

nor do I see them stated anywhere in the documents.

MS. FOUNDS: Okay. One of the things I can do is to have you get together with our experts. Are you saying that we have this base line, the historical records from Pantex, and you do not know where the 330 person-rem?

UNIDENTIFIED SPEAKER: I cannot extrapolate where there's a base of what they used to build up on some of these numbers when they

HT05/13 14.010 continued

compared from site to site. There are some assumptions that were made that are not stated when they made the calculation on what might happen, especially when you start looking at making movements to alternative sites.

MS. FOUNDS: Okay. So that's what you're identifying is how that does correspond to what you're doing at the other sites and then you have that base line dose. So what we are doing is, essentially, saying that you have this process at the Pantex site for loading them. At the alternate site, you would have a converse process, so to speak, for unloading them. It's, essentially, the same for Pantex as it is for those alternate sites.

Jim, do you want to --

MR. JESSEN: Yeah. My name is Jim Jessen and I work with Tetra Tech. You know, if Gary wants to sit down with any of us, we can go step by step and explain the process to him.

MS. FOUNDS: Can you go through it in summary?

MR. JESSEN: Do you want to do the total thing?

MR. PARHAM: As I say, as far as timing goes here, the question -- do you feel comfortable -- would you like to get together after this and go through it in more detail or do you want to get it on the record here?

UNIDENTIFIED SPEAKER: No. My position is that it should be in the document, not that I should get a personal explanation, but it should be available for public review.

MS. FOUNDS: Okay. So you want to know the process that leads to --

HT05/13 14.010 continued

UNIDENTIFIED SPEAKER: I want some additional information on the assumptions that were made in reaching these calculations, such that someone reviewing it, not having the opportunity to speak to Jim, could also see if

HT05/13 14.010 continued

their pencil-whipping of the data would be the same as his.

MS. FOUNDS: Okay.

MR. PARHAM: Great. That's good. I think that was a nice, productive discuss-working through that one. I appreciate that. And thank you. Other questions or comments? We have several minutes left and we want to make sure that we get everybody covered in this session. Any other questions or comments?

Anyone -- I always ask this question. Anyone back in the back room there? No?

Just to reiterate again, as far as getting opportunities to comment, let's just go back over that one more time on where people can get copies of the -- we do have the EIS here; is that right?

MS. FOUNDS: Yes. We also -- we have the EIS here. And, if you wish to obtain copies and you don't pick one up tonight, there is a 1-800 number that can be called to request a document. The same number can be used to make comments. There will either be a person answering for the phone that can record your comments or an

HT05 (CONTINUED)

answering machine will pick up and you can just leave your comments. They will be forwarded to us. And you can be included as part of the comment response document.

You can fax us comments and you can also E-mail comments. And all of those methods, the numbers and E-mail addresses, are on the poster that is outside of this room. And I believe it's right back here. So there are various ways to comment, then, after you have a chance also to look at the document in greater detail.

MR. PARHAM: Okay. Thanks, Nan. One more chance to have questions or comments. What we're going to do, after this session, is we'll be reconvening in the room next door and maybe breaking up in a larger session, as far as the room size, if it's needed. And we'll be summarizing these three sessions and each of those parts of those sessions and then having a few summary comments at that point.

But, again, any additional comments or questions for Nan or Donna at this point?

MS. FOUNDS: And I would like to

point out that our comment period does close on the 12th. So we have that amount of time to get comments back.

MR. PARHAM: I'd like to thank you. And I look forward to seeing you in the next room in a few minutes. And if you have additional questions, you would like to have further dialogue, you guys will be here for a few minutes in this room before we move over? Thank you.

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HT06

DEPARTMENT OF ENERGY

PUBLIC HEARING ON

* * * * *

STOCKPILE STEWARDSHIP & MANAGEMENT DRAFT PEIS

STORAGE & DISPOSITION DRAFT PEIS

PANTEX DRAFT SITE-WIDE EIS

* * * * *

CLOSING SESSION

APRIL 22, 1996

10:00 P.M.

BRENDA ROHRS, CSR, RPR

SONDRA L. CARGLE & ASSOCIATES
CERTIFIED SHORTHAND REPORTERS
4103 W. 49th ST.
AMARILLO, TEXAS 79109
(806/355-8181)

Portions of the transcripts unrelated to this EIS have been omitted.

we go.

MR. HANCOCK: I've got several questions, but since some other people may have some as well, I'll just do a few right now.

The first question is for all of the DOE and DOE contractor folks in the room, how many of them have completely read all three of the EIS's? I see three, four, five, six, seven, eight hands, I think.

HT06/1 23.021

The point I would make is these folks, out of all the DOE and contractor folks in the room, these folks have had a lot longer to look at all three of these documents than the public have, and so you're putting the public in a very difficult position in terms of dealing with all these documents.

MR. LAWSON: Just a minute. We'll have a chance for other comments. We can only take them down one at a time, so if you have some other comments to make after he gets through, you'll have an opportunity.

Please continue.

MR. HANCOCK: Thank you. The point was made in this -- in the summary discussion that the cost data on the disposition PEIS is

going to be available in June or July. That was what I heard; is that correct?

MR. RUDY: Yes.

MR. HANCOCK: So, that's after the end of the public comment period ends on May the 7th. So, my question would be: How are the public -- how -- once the public gets that cost information, how are people supposed to comment on it and how will that be considered? How would those comments be considered outside of the comment period?

MR. LAWSON: Okay. Would someone like to answer that?

MR. RUDY: Yeah. Do you want me to do that now or a little bit later? It's up to you.

MR. LAWSON: No, why don't you do that now in answer to the question.

MR. RUDY: Okay. In the quickest answer, there are no preferred alternatives in the disposition document, and the record of decision will be the end of this year.

But under the National Environmental Policy Act, more particularly to the point, economic analyses, cost analyses, are not a

HT06 (CONTINUED)

MR. HANCOCK: And also input, throughputs, and outputs of those facillties?

MR. CYGELMAN: Yes. That's right. There will be some process we'll diagram in there.

MR. HANCOCK: I guess I'd only comment, going back to Greg's earlier comment, about how the cost information is not included.

It's very hard to analyze environmental impacts without the kind of more detailed information that seems to me would be helpful.

MR. LAWSON: The gentleman in the back of the room has something to add maybe to that point or to the point just prior, please.

MR. HUFF: This is really a bit more general than that. Over the many months of this affair, it's apparent to me perhaps that many of the people who oppose these activities would oppose them even if they were proposed for Antarctica.

Along those lines, I'd like to inquire, since this seems to have become sort of a debate, who is this gentleman and where is he from and what is his interest in this whole

affair, please.

MR. LAWSON: Well, I'd just like to make a comment that he's certainly welcome to say who he is and who he represents.

It is the department's policy that has been given to the facilitators that for some of the people, they prefer not to give their name or affiliation, and that is respected.

However, if other people would like to give their names and organizations, they're certainly welcome to do so.

But I don't feel it's in my power to force anybody to give that kind of information. So, it's up to you, if you'd like to say who you are, that's fine.

MR. HANCOCK: I did introduce myself on other occasions, but I didn't know in the question period that that was important, but I'm Don Hancock from Southwest Research & Information Center in Albuquerque.

And I'd also like to know the name and affiliation of the person who asked me the question.

MR. HUFF: My name is Gene Huff. I'm an attorney from Amarillo, Texas. And I'm not

aware of any interest at all that the Southwest Institute in Albuquerque could have in this matter. Thank you.

MR. LAWSON: Okay. I'd just make a point here that people have been tremendously respectful tonight, and I don't want to lose sight of that.

There's no need for us to make comments about why one person is here or is not here.

This is a national issue that we're dealing with, and people can come from wherever they want to come to make a presentation, and it's not up to individuals to identify whether it's in somebody else's interest to be here.

Is there anybody else who would like to make a comment or ask a question about issues? Yes, please, ma'am.

MS. SANDERS: I'm Jan Sanders. I'm from Dallas, Texas, and I do consider this a national and international issue.

My question has to do with the disposition of the plutonium surplus and whether the DOE, in the consideration of the options, considered the waste generated from the MOX fuel

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HT07

DEPARTMENT OF ENERGY

PUBLIC HEARING ON

* * * * *

STOCKPILE STEWARDSHIP & MANAGEMENT DRAFT PEIS

STORAGE & DISPOSITION DRAFT PEIS

PANTEX DRAFT SITE-WIDE EIS

* * * * *

APRIL 23, 1996

8:30 A.M.

SONDRA L. CARGLE, CSR, RPR
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Portions of the transcripts unrelated to this EIS have been omitted.

Rocky Flats material is in various forms. There are some pits at Rocky Flats, there are some plutonium metal at Rocky Flats, and there's also oxides at Rocky Flats. So, when I indicated that we were looking at moving Rocky Flats material, either all or part of it, if, in fact, all of it was proposed to be moved at Pantex, it would be pits, it would be metals and it would be oxides.

UNIDENTIFIED SPEAKER: Could I just follow up a little bit? I didn't understand -- or to understand. I just want to follow up and get the distinction, then, that the storage of up to 20,000 pits, those pits are what I'm going to call sealed, but you're talking about material that won't be sealed or will be packaged in some other fashion?

HT07/1
02.005

MR. CYGELMAN: Is this on?

With regard to the specific question, the Department currently is in the process of repackaging materials at Rocky Flats. In the process of repackaging material, those materials would be pulled into what we would consider to be sealed containers that would be equivalent to the form the pits are in right now.

There might be, in fact, two

containers, and that container would be put into what we call the equivalent of a pressure containment vessel for long-term storage. And those -- the materials from Rocky Flats would be appearing at a site, which could be Pantex, in a sealed, high-integrity container.

MS. WILDESEN: Okay, great. Other questions? Yes, ma'am.

UNIDENTIFIED SPEAKER: I would like to be directed to the presidential paper, Executive Order that relates to the allocation of strategic nuclear stockpile. In other words, the document that names the 5,000 that was referred to.

My first question was to get a handle on the size of the stockpile, and so the 3,500 plus security information. Now then, we're talking about 5,000 set asides here for stockpiling. And so I think maybe if I could actually see the Executive Order, I'd have more clarity. So if you'd refer me to that document.

MR. CYGELMAN: As I mentioned, the 5,000 is a nominal number.

UNIDENTIFIED SPEAKER: Is what?

MR. CYGELMAN: A nominal number.

HT07 (CONTINUED)

Comments omitted from intervening pages here do not concern this EIS.

to long-term storage don't kick in for some period of years, but you're right, there is an intermediate term in the next five years where a DOE office will need to take over ownership for storage of excess plutonium, and those that are pits at Pantex would be additive to the curve I showed there in terms of some additional employment associated with that.

MR. LAWSON: Now just to clarify, where do they show up? Do they show up in one or the other of the EIS's?

MR. WHITEMAN: That would be reflected in total in the programmatic documents, eventually, that you would see from Andre.

UNIDENTIFIED SPEAKER: So Andre's documents are going to reflect something starting now?

MR. WHITEMAN: No. One of the issues DOE is still working internally is as we begin to implement storage and disposition, then a program office will be established to actually manage that and take over the funding of that responsibility.

So, that would be -- I would assume Greg and Andre will be putting together that sort

hearts, and I want to make sure that you have plenty of time to ask questions and to understand how each of the three studies are dealing with this important issue of employment, what relationships there are between those studies with respect to this issue.

And at this point, I'd like to open it up to questions or comments that you have about employment. This gentleman over here, please. I would ask you to stand and we'll bring you a microphone.

UNIDENTIFIED SPEAKER: It appears that there's already excess pits at Pantex. We talked about 9,000, approximately. And it also appears that the Stockpile Stewardship & Management PEIS only talks about the storage of strategic materials. Also, Andre, I think, said his storage doesn't start until 2005. There seems to be a gap where we have excess materials stored and no one seeming to have ownership of them.

MR. LAWSON: Could either one of you clarify this? Earl?

MR. WHITEMAN: Who was asking? Okay. Yes. There -- Andre's storage options relative

of a program that shows them transitioning over the ownership of that. Greg, can you help me with that?

MR. RUDY: Yeah, let me just have ten seconds, I guess.

MR. ROSE: The Site-Wide owns this, the interim that he's talking about.

MR. RUDY: It's a question of employment. The bottom line is the inventory is going to be owned, controlled and safely and securely managed by the Department of Energy within -- you know, from today forward into the long term.

If a decision is made to build something new, a new consolidated storage facility, Andre's point is it takes a period of time to build that facility and physically transition into it, but a pit doesn't know if it's a surplus pit or a strategic reserve pit. And, in fact, a strategic reserve pit today may become a surplus pit tomorrow or years down the road.

So the Department has an integrated view of the continued safe and secure storage of that material and to be able to accommodate

HT07 (CONTINUED)

differences in characterization or classification of the material from surplus to strategic reserve.

UNIDENTIFIED SPEAKER: My question kind of related to the employment. In other words, if Earl has only talked about the number of people required to maintain safety surveillance on 3,500 or 5,000 units and there are actually 9,000 now, then there appears to be a gap in the number of people that are going to be required to provide that safe storage in the next five years.

MR. RUDY: The increase in the amount, it's not directly arithmetic, because if there's just, as an example, 5,000, eight or nine or 10,000 pits, the additional thousand or two, depending on the zone and the area it's stored, may not necessarily equate to that much additional employment. It can be, perhaps, accommodated within a given parameter, within the given, you know, work force that is managing it.

MR. LAWSON: Anyone else have a question?

MR. WHITEMAN: But let me comment again. The gentleman's comment is correct. That

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Comments omitted from intervening pages here do not concern this EIS.

testing. We've had experience in the past with high explosives, that they didn't perform in the full scale tests underground in Nevada the way we thought they would.

And so, that -- that's going to require an awful lot of assessment and analysis and testing of high explosives on the part of the laboratories to understand and certify, yes, those -- that will still perform as a replacement part. So, --

MR. LAWSON: Another question in the back, over here, please?

UNIDENTIFIED SPEAKER: One of the reasons that employment increased at Pantex by about a thousand people was not so much for the increased work in dismantlement, but to invoke a safety culture at Pantex. A lot of these safety infrastructure programs are independent of the number of units you're doing. Whether you have one weapon or a thousand, you still need your conduct of operations, you still need your safety analysis, you still need your safety question determination, et cetera. And none of the numbers I've seen seem to take that into account that you have a base line infrastructure that you

HT07/2 11.011

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HT07/2 11.011 continued

can't go below without losing the safety culture. I'd like you to respond to that.

MR. WHITEMAN: Well, they're your numbers in terms of what the Pantex Plant has said are required to meet all of the safety requirements of the future for the workload that we have for the future, so we didn't invent the numbers. These are the numbers that Pantex has determined are required for the level of work, doing it with the modern safety culture.

UNIDENTIFIED SPEAKER: My response to that is that it was looked at with -- without looking at the plant as a total. We were asked -- the way the questions were asked, for the specific operations, we gave the numbers, but no one asked the questions about what it would take to maintain your overall safety infrastructure. I believe that's true.

HT07/3 11.012

MR. WHITEMAN: That's not true. I mean, we're not going to keep a few safety people here at Pantex as we move the whole weapon operation to Nevada. I mean, it's obviously -- the numbers are what does it take to fully operate the plant, and that was the way it was characterized from Pantex. So those are in

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HT07 (CONTINUED)

there.

UNIDENTIFIED SPEAKER: I would disagree, but maybe we need to --

MR. WHITEMAN: Well, you need to talk to your own management, then, if you disagree, because they're the ones that provided the numbers.

MR. LAWSON: I think I saw a hand here, and there's another one here. Let's go here first, please.

UNIDENTIFIED SPEAKER: I am the management of Pantex, and I think there is -- clearly, there were a number of assumptions that were used to put together the numbers in the Stockpile Stewardship & Management PEIS, and the disagreement comes on those assumptions.

The numbers that we provided were, indeed, our numbers, and they were based on the assumptions that were given to us. Those assumptions do not necessarily represent the real world, as we see it, in terms of all of the requirements that are being imposed upon us, as well as those which represent what we need to do to maintain the infrastructure, and that's where the disagreement comes in.

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Comments omitted from intervening pages here do not concern this III.

Let me -- in terms of the other wastes, you have, currently, low-level wastes. Again, there would be a quantity of low-level wastes generated. Depending on the disposition option, probably a little bit more than what you're doing today.

In terms of hazardous wastes, as part of the processes, we would be using cleaning solutions, for example, and lubricants. In general, depending on the disposition option, the amount that would be generated by any one of the disposition options would be less than the amount of hazardous waste that's currently generated at Pantex.

MR. PARHAM: Thanks, Andre. We'd like to open it up to questions now. I apologize. We are going to go a little bit long, but specifically, people wanted to get some of these things addressed and we wanted to make sure we get to them. I think M.J.'s got a microphone there, so, Nan, you want to come up, too? We'll be ready to go. Do we have some questions? Yes, sir.

UNIDENTIFIED SPEAKER: Yes. I had a question about the radiological impacts. On

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storage, you indicated radiological impacts would be negligible. On disposition, you said they would be within standards. Could you explain to me in concrete terms how you made a judgment between what the difference was from negligible to within standards?

MR. CYGELMAN: Yes. The normal standard right now for workers is five rems per year. The Department has a goal of not exceeding 500 millirems per year. We're looking, in the area of storage, probably not exceeding something like -- to the workers, probably close to maybe a hundred millirems per year.

With regard to the disposition options, it's a little trickier. It's a question of how much you can actually reduce as part of the process. We are trying to automate it as much as possible, but it's quite possible, in some cases, we could be reaching the Department's goal of 500 millirems per year, but we would not be reaching the standard goal of five rems per year.

MR. PARHAM: Okay. Followup to this?

UNIDENTIFIED SPEAKER: From a radiation biology perspective, could not one

HT07 (CONTINUED)

conclude that exposures 500 millirem per year and less are also not put in the category of negligible?

MR. CYGELHAN: Could you repeat the question?

UNIDENTIFIED SPEAKER: I'm not aware of any radiobiological basis to reach the conclusion that if someone received 500 millirem or greater in a calendar year, that I would now move away from the term negligible, which is apparently the criteria that you have used.

MR. CYGELHAN: I'm not sure I used negligible in 500 millirem per year, but I would agree that 500 millirem -- I wouldn't consider 500 millirem per year negligible, okay? If that's your point. I said I would not -- I would say 500 millirem per year, I would not consider that to be negligible. I would consider negligible dose rates about several millirems per year.

MR. PARHAM: Do you have one?

UNIDENTIFIED SPEAKER: Can you reference a standard or other criteria that DOE has put out that allows you to reach such a judgment?

MR. CYGELMAN: I'm using a standard that, under the basis of normal background radiation, which people are getting normally, without doing any work, that the radiation level is, in fact, in the order of about 300, 400, 500 millirems per year, depending on your location.

So, the actual radiation exposure to a worker is a pretty small percentage of what you're normally getting.

MR. PARHAM: Okay. Thank you. We'll come back to you if we get a chance here. We had other questions, though, I think. Right here. Okay.

UNIDENTIFIED SPEAKER: Yes. I'd like to ask Nan if she could comment on the comparison of the result of the aircraft risk calculation for Pantex with, for example, the risk that's calculated at a nuclear reactor site proximate to an airport where there is dry storage of nuclear fuel, such as Cincinnati or Toledo, where the aircraft density is much higher.

MS. FOUNDS: I have not done a comparison, for instance, of how this risk compares to an aircraft crash. We haven't looked at what the NRC is reporting, for instance, for

any of the reactors that you were citing.

I can go out to some of my technical experts and see if they're willing to stand up, but since they're not, what I could do is provide that back. No one jumped up. But anyway, what we could do in the comment response is give you back that information.

I may be actually overstepping my bounds here, but we did prepare one slide that went to a -- it's in the very, very back, I believe -- that sort of did a risk comparison of, not what you were talking about, but in other risks that are used.

And I use this slide with some trepidation, but, for instance, this is a risk slide in terms of, you're looking over here at a scale that goes from, like, one chance in a hundred of -- that's the scale there -- of dying from a disease in an entire year in the United States.

And, for instance, if you look on this scale, there are motor vehicle accidents, et cetera, that are looked at in terms of the probability of an average individual dying, for instance, from these particular aircraft accident

scenarios, et cetera, and here is the aircraft crash scenario.

This is all radiological accidents at Pantex, summed together, and here is the aircraft crash release. And if you notice, those are -- tend to be orders of magnitude less than what is seen for these other types of accident scenarios.

MR. PARHAM: Okay. Thanks, Nan. Nan, are these available? I know it's hard for some people to see these. Are these available for people to look at after this session or available for people to look --

MS. FOUNDS: Yes, they are.

MR. PARHAM: Okay. That's good. Okay. Additional questions?

UNIDENTIFIED SPEAKER: Just a followup on that graph. I couldn't -- I've got really bad eyesight. I couldn't see the bottom number in terms of the actual probability that you're using for that graph concerning the aircraft crash scenario.

MS. FOUNDS: This one down here?

UNIDENTIFIED SPEAKER: Yeah. I just can't read it from here.

MS. FOUNDS: Okay. This number is

HT07 (CONTINUED)

1.8 times ten to the minus 11 in terms of the risk that combines the probability that the accident will happen with the probability of getting a latent cancer fatality for an average individual in the United States -- well, for an average individual in this region of influence.

UNIDENTIFIED SPEAKER: Getting back to Tom's question, were there other risk assessments done for not only nuclear reactor facilities, but maybe defense sites where --

MS. FOUNDS: No, we don't do a comparison to, like, what it is at a -- you know, how does this compare against a -- a reactor someplace -- as an aircraft crashed into a nuclear reactor. It's not in the document.

UNIDENTIFIED SPEAKER: The last followup is you cited a DOE crash analysis study that you'd gotten from -- or theoretical study. Did you not use -- why did you not use FAA studies on that, or are there FAA studies on those situations?

MS. FOUNDS: Well, what the Department has been doing is developing a -- a DOE aircraft crash standard for utilization within the Department, and it does go out and

look at National Transportation Safety Board accidents and look at those statistics and then say, okay, if, for instance, you have an aircraft and it did crash, where would it crash out.

And it uses those kinds of statistics for that near-airport analysis. And as part of this, we also do look, for instance, at what the crash rates are for different categories of aircraft and those types of things. And those -- that information is all developed from those data sources that I said, which were the FAA operations data, the RAHS data, et cetera. So that is the model that we're -- that we're using.

I'm not aware, and I couldn't tell you for sure -- and I do have experts that can tell us a little bit more about that standard -- but there isn't, you know, a model that can just be picked up and used from the industry, so to speak. Let me --

MR. PARHAM: Okay. We had a question over here. Question here?

UNIDENTIFIED SPEAKER: Yes. Nan, on the charts that you had, you listed increased impacts.

MS. FOUNDS: Uh-huh.

UNIDENTIFIED SPEAKER: NEPA requires us to look at significant impacts. Have you made an attempt to show what significant impacts are, and can you identify on that increased impacts which of those are really significant?

MS. FOUNDS: Well, in terms of that, when you do an EIS, you're kind of assuming that you have the probability of having significant impacts. What I was showing in this one is, for instance, if we had an impact over the base line -- okay? -- as part of the NEPA process, we're usually comparing this against standards, and we give numbers, for instance, that state what the impacts are.

For instance, in the air quality, we give concentration levels and compare those to the effects screening criteria. And I did try to highlight, you know, the results, but for the most part -- and I'm generalizing right at the moment -- we did not see impacts above those -- you know, the health standards that are established in -- you know, from the TNRCC and things like that for the State of Texas.

UNIDENTIFIED SPEAKER: So, in essence, you're saying that there are no

significant impacts.

MS. FOUNDS: In essence, that's what I'm saying. But I -- I want to be able to allow the public to look at what the impact values are and to look at what those comparison criteria also are.

HT07/4 23.015

UNIDENTIFIED SPEAKER: I'm -- I would just add that I think that because the CEQ guidelines say that you are to identify what the significant impacts are, that if there are no significant impacts, you should state that in the EIS.

MS. FOUNDS: We'll take that into consideration.

MR. PARHAM: Additional questions? Okay. Thanks.

UNIDENTIFIED SPEAKER: Thank you. It's my understanding that -- it's my understanding that the standard is a draft standard at this point in time and that there are some efforts underway to improve the aircraft -- the aircraft -- the airport -- airport facilities to reduce aircraft at Pantex. That's supposed to be --

MS. FOUNDS: Sir, I think I know what

HT07 (CONTINUED)

you're trying to say if I could go -- if you want me to --

UNIDENTIFIED SPEAKER: Yeah, that's supposed to be updated in the final EIS. Is there something you propose to present that information to the local citizens, the updates on that?

MS. FOUNDS: What is happening right now is that DOE standards is being evolved, and as it evolves, we you know, plug the data in and see what the results of that are, and we also comment back to headquarters as to what the impact of that stand -- of, you know, the changes to -- in that standard are against this particular document.

And we are going to come back for a technical discussion in June to outline in greater detail and to have the ability to respond to specific questions on the DOE standard, the data that was used and how that is -- how the impacts would either stay the same or change based upon the model changing.

And when you talk about -- there are efforts underway to shift those -- that back-course approach and to move it so that aircraft

would essentially be a moving-away from the picture that I showed at the beginning, where that back-course approach would actually bisect if you continue it on out.

There have been several steps taken by the FAA to route traffic around Pantex, to not have them overfly that area at all, and to shift those approaches, the back-course approach, away from the Pantex Plant.

And currently, we don't take credit for that in the numbers that I was citing, but we do sort of have a relative risk reduction cited in the EIS, that that risk would come down, like, 62 percent, but that's based more on an evaluation of what the Soloman model had been telling us before. And we need to use this new model in a valid approach as to how -- how this shifting will actually reduce that risk.

MR. PARHAM: Okay. And you'll be covering some of these same subjects in today's breakout sessions. You can talk about --

MS. FOUNDS: Yes. We can continue to talk about these subjects at that time.

MR. PARHAM: Aircraft safety crash came up yesterday quite a bit. Other questions

Comments omitted from intervening pages here do not concern this EIS.

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HT08

DOE PUBLIC HEARING ON

STOCKPILE STEWARDSHIP PEIS

STORAGE & DISPOSITION PEIS

PANTEX SIDE-WIDE EIS

STOCKPILE STEWARDSHIP AND MANAGEMENT

APRIL 23, 1996

1:00 P.M.

KAROLYN FARMER, CSR, RPR

SONDRA L. CARGLE & ASSOCIATES
Certified Shorthand Reporters
4103 W. 49th Street
Amarillo, Texas 79109
806/355-8181

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STOCKPILE STEWARDSHIP AND MANAGEMENT

MR. LAWSON: Are there any questions you have about information that was given out in just the last half hour? So you have an opportunity to ask questions, is there anybody who has a question they would like to ask? Yes, ma'am, if I could -- if we could get a microphone to you, it's important that we all use microphones so the court reporters can get accurately what your questions are.

UNIDENTIFIED SPEAKER: It's a statement I would like to make.

MR. LAWSON: Speak as loudly as you can.

UNIDENTIFIED SPEAKER: Go slow on the -- on your proposals. That's Number 1. With our present President, we will not know from one day to the next what he is going to do. France is testing, China is testing, and et cetera. It is foolish to be thinking of reducing the stockpile as it seems to be proposed. Number 3, the environmental damage that you may see will affect this area. No consideration is given to all the chemicals that is poisoning the human body by allowing the chemical companies to put all of their chemicals into food supplies which will harm all humanity in the United States. A, which is worse, quote, the pollutants

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that go out by Pantex that affect the local population, or, B, all the chemicals that go into our food supplies affecting the whole nation? Four, it will hurt the economy of this city to have another payroll eliminated. The main four plans under proposal are these. Already gone are the Air Force base, the helicopter plant, the helium plant, and Pantex. What next? Cutting the payroll of this city further, I am against wholeheartedly.

HT08/1
11.004

MR. LAWSON: Thank you very much for your comments. We appreciate it. I would like to focus on questions about this presentation. We'll have plenty of time to get into other issues and comments later on. Is there anyone else who has a question they would like to raise at this point? Okay. Why don't we take, at the most, a ten-minute break. A five-minute break would be great.

(Recess.)

MR. LAWSON: Let me go over the ground rules for this session. If it goes fairly quickly, we'll just run one right after the other with a small break in between the three sessions to change court reporter and to get the slides ready for the next presentation. We're going to take each of the three programs separately and in order, starting with stockpile

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stewardship and management. And each of the presenters who presented to you before will speak for, I suspect, three or four minutes, and give you some background material that wasn't presented before that will give you some more information.

(Presentation by Mr. Whiteman)

MR. LAWSON: Are there any questions regarding the stockpile stewardship management program? We have a question over on the far left.

UNIDENTIFIED SPEAKER: I guess my question is somewhat seeing if we could reach some sort of a summary statement. We heard before lunch one of the DOE responders say that it would appear that we could do the storage and disposition type work at Pantex Plant and be protective of the environment. My question is related to the area that is also of interest, which is public health. In your judgment, and based on the analysis that you've done, could you conclude that all of the work that is proposed for Pantex Plant could be done in a way to protect the public health?

MR. WHITEMAN: I can only speak today to the stockpile stewardship and management missions that we're talking about. And I can tell you that the missions we're planning for relative to public health and public safety, the mission anticipated for the Pantex Plant is

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HT08 (CONTINUED)

the mission that it has had for the last 40 years, other than it's one that's not nearly as large in the future because of the work load and stockpile we're being asked to support is much smaller. So certainly from an environment safety, health, public impact standpoint, whatever you perceive that to be today, it would be less in the future for the stockpile stewardship and management program.

MR. LAWSON: That's also a question that you may want to ask each of the individual programmers when they come up. Is there anyone else who has a question? Yes. Right up here, please.

MR. JUBA: Bob Juba with the Amarillo Economic Development Corporation. I want to preface my comment with a statement I made last night. Pantex is the area's largest basic employer, those being employers which derive their income or revenue from outside the Panhandle of Texas. AEC believes that all the jobs at the plant are very important, whether they're related to the security mission, the assembly and disassembly mission, the administrative positions, whatever, high explosives. The FY '97 budget as proposed by the administration calls for -- will lead to a reduction in force at the plant, an immediate reduction in force, if that budget is approved as it stands right now. The

Preferred Alternatives Report, a supplement to this PEIS, reveals that Pantex but not Y-12 or Kansas City, the other production plants, will undergo this immediate decrease in budget. If the work load hasn't decreased, as you've made that statement earlier, we're still taking apart and disassembling the same amount of weapons. If that work load is constant and the other production facilities which are also being downsized in place are not suffering budget cuts, why is Pantex suffering those budget cuts in FY '97? I guess the question is: Is the PEIS driving the budget policy, or are those independent of each other?

MR. WHITEMAN: Okay. First, I don't think -- you shouldn't assume anything relative to other plants at this point in time. However, as we try to -- as the Department of Energy tries to manage all of its facilities within the budgets that we have appropriated, our Number 1 priority is to accomplish the mission and the work that's assigned to us. And we try, to the best of our ability, to allocate budget resources to sure that we accomplish that work. Regardless of what the budget level is at Pantex for this coming year, whether it's greater or less than the current budget, you can feel confident it will be one that we judge to be adequate to perform the work that's necessary to be

performed. And if it's not adequate to perform the work, we will be working to make sure we fix that. But that is not something -- that's a near term programmatic management action that's not tied to any particular PEIS action. However, we are stewards of the taxpayers' money as we try to perform our overall mission. And as we perform our mission, we make sure we get the work done at the lowest possible price at all of our sites.

MR. LAWSON: Any other questions or comments regarding stockpile stewardship and management? Yes, sir, in the center aisle, please.

HT08/2
17.001

UNIDENTIFIED SPEAKER: Executive Order 12898, Federal actions to address environmental justice in minority populations and low income populations, President Clinton's February 11th, 1994 memorandum for the heads of all departments and agencies requires an analysis of environmental effects on low income and minority populations to include human health, social, and economic effects. Why does the draft of all three documents analyze only the human health effects of the proposed actions and not the social and the economic effects as required by the executive order?

MR. WHITEMAN: You will find in the PEIS for stewardship and management both an analysis of socioeconomic effects, but also an analysis of

environmental justice. So I'm not sure of the context of your point.

HT08/3
17.002

UNIDENTIFIED SPEAKER: The socioeconomic is a little bit different than the executive order covering what we just talked about, the environmental justice in minority populations. And an analysis of the social and the economic have to go along with the health effects in the environmental justice analysis, not just the health effects.

MR. WHITEMAN: Okay. We'll take your comment under consideration. I think we've done that, but we'll take your comment and look in and make sure that we have.

MR. LAWSON: Okay. Yes, sir, over here on the left.

UNIDENTIFIED SPEAKER: I guess, Earl, I'd like to follow up on Bob's question, which in particular was triggered by your comment not to make any assumptions about the other plants. The data in here on Pages 33, 36, and 39 are the projections of annual cost at Kansas City and Y-12, as well as Pantex, including the HE at Pantex. Yet for the succeeding four years at both Y-12 and Kansas City, the annual cost is flecked. For each of the succeeding four years at Pantex, there's a decrease. That seems to question logic. And it

HT08 (CONTINUED)

furthermore suggests that although the Pantex offering in terms of definition of costs against the stockpile management were designed within the assumptions, and those assumptions were laid forth to provide common basis of comparison across site to site, that those have now been translated into a budget planning document. And that's not what the NEPA process is.

MR. WHITEMAN: A couple of comments. First of all, the numbers in the charts there are reflective of the world and the work load as it existed about a year ago. And they're still valid for the comparison purposes at that time, but it is a dynamic situation. Work loads go up and down at various sites. But again, I would caution you all to not fall in the trap of comparing yourself one site to another. You need to focus on the Pantex Plant's mission. The reason I say that, for example, the Kansas City plant, in the same time period the Pantex Plant has grown in employment by 1,100 people, the Kansas City people has had layoffs of nearly 5,000 people. That's reflective of the government trying to put the money where the work was and not being tied to some historical precedent of level of funding. We have a job to perform. At various times some plants go up and some plants go down relative to that work level. But the people at Kansas City were not

real happy as they were laying off 5,000 people while Amarillo was hiring 1,100. But that was the right thing to do because that's where the work load was. That's why my comment earlier, you shouldn't fall in the trap of comparing one plant versus another, because the work load is very different at each plant. And I think we're doing the right job for the government in not just saying everybody gets cut the same amount or everybody increases the same amount, but instead trying to put the money where the work is.

MR. LAWSON: Thank you. The gentleman right in front.

MR. JUBA: Then if we do that, we just look at Pantex and don't look at Kansas City and Y-12, as I've mentioned, you've got declining budgets in each of the four successive years. Is there a declining amount of work? When you look at Kansas City and the work that they performed, it's obvious when you aren't building new weapons you don't need as many nonnuclear components. When you're disassembling weapons, you need more people at the disassembly site. Those things are very logical and orderly. But when you've got a steady demand placed upon employees and management to disassemble a certain amount of weapons and you look at declining budgets at the same time, that doesn't quite

fit in.

MR. WHITEMAN: I'm not going to stand here and try to defend day-to-day management decisions in managing our program. But I would remind you that the Kansas City plant's work load, that you don't know about, by the way, has increased 250 percent in the last two years. And the money is reflective. They're not growing a lot, but their work has gone up by 250 percent. The Pantex Plant's work load in that period is relatively flat.

MR. LAWSON: Follow-up point? Other questions or comments regarding stockpile stewardship and management? Yes, in the center here.

UNIDENTIFIED SPEAKER: The enduring stockpile was built from the late Seventies to the early Nineties. That's approximately a twelve-year period. Assuming that the stockpile has approximately 8400 weapons in it and that the life of a weapon is approximately 30 years, that means that sometime in the year 2008 we would have to replace the stockpile at a rate of about 700 units a year. Yet we're sizing the complex to handle approximately 300 units per year. What are we doing to bridge this apparent disconnect in stockpile maintenance in the future?

MR. WHITEMAN: Well, I don't think there's a

disconnect. I think we have -- you've made a set of assumptions that may not be true. But we've done the best we can with people from here, from all of the other sites, in forecasting what we think is the work load of the future, trying to understand how we would level that out in order to balance the work load to try to avoid large peaks and extreme valleys in the work load. And also I would remind you the 300 a year capacity, this is a single shift, so we do have more inherent capacity than that in our operations. I think they're consistent. We've done an awful lot of analysis on why is the right capacity, and we believe the 300 a year is about right.

MR. LAWSON: Anyone else have a comment or question to raise? Okay. Thank you. Of course, before we're through today, if you have another question for Earl, you can ask that. Let's just take a minute so that we can make switches in court reporter.

(Recess.)

HT10

DEPARTMENT OF ENERGY

PUBLIC HEARING ON

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STOCKPILE STEWARDSHIP & MANAGEMENT DRAFT PEIS

STORAGE & DISPOSITION DRAFT PEIS

PANTEX DRAFT SITE-WIDE EIS

* * * * *

CLOSING SESSION

APRIL 23, 1996

3:00 P.M.

KARY A. WINGO, CSR, RPR

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it and we plan to do something about it to correct it. That's all I can say. Fortunately, it's a draft. So that's one of the reasons we're meeting with the public. We understand your concern and we will correct it.

MR. LAWSON: We're on a roll. All you have to do is say recess and there you go.

UNIDENTIFIED SPEAKER: You didn't want to recess anyhow.

MR. LAWSON: No, I didn't, actually.

HT10/1 21.001

UNIDENTIFIED SPEAKER: My comment and question revolves around the term cumulative impact. As defined in the Council on Environmental Quality Guidelines, cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency, federal or nonfederal, or person undertakes such other action. Cumulative impacts can result from individually minor, but collectively significant actions, taking place over a period of time. That's the comment.

HT10/2 11.002

The question is why is there no

HT10/2 11.002 continued

cumulative impact analysis in the socioeconomic impact analysis of past actions, like the cancellation in 1988 of the DOE program of a mine geologic repository for spent nuclear fuel and high-level radioactive waste in Deaf Smith County? That particular action was an action that caused a great economic disaster here in the Panhandle region. And right now we are just barely coming out of that, or just towards the end of coming out of that particular recovery from that particular action.

HT10/3 11.003

And then the more recent announcement of closure of the US Department of Interior's Bureau of Mines Helium Operation. Those are not addressed anywhere under cumulative impacts.

MR. LAWSON: All right. Thank you for your comment. And the question -- is there one of the gentlemen who would like to respond?

MR. RUDY: That's just something we'll have to consider. I don't know where you stop drawing the circles under that definition of how far back you go, over to how many agencies. And past decisions in the socioeconomic area have not received the focus that environmental

decisions near-term, past and proposed have for air, water, et cetera. So that's an area we'll take a look at. And I appreciate the comment, but, again, it's an expanded consideration which hasn't come up before.

UNIDENTIFIED SPEAKER: It's a thorny issue. And I think perhaps you can address the question to the Council.

MR. RUDY: The CEQ?

UNIDENTIFIED SPEAKER: Yes.

MR. RUDY: Thank you. That's a tough one. Thank you.

MR. LAWSON: Okay. Anyone else? Okay. So why don't I announce a recess again and give you two more minutes and more questions will come. We will go into recess at this point. We will be staying around here for just a couple more hours. So, if you change your mind, want to have something to say, or somebody else is coming in, we'll make a general announcement in this area or around here that we're going back into session. So if you want to stick around, stay fairly close.

If you choose not to stay around, I want to tell you at this point that we really

HT11

U.S. DEPARTMENT OF ENERGY

PUBLIC MEETING

STATE OF NEVADA

In the Matter of Pantex Sites)
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REPORTER'S TRANSCRIPT OF PROCEEDINGS

Taken on Thursday, April 25, 1996

At 3:00 p.m. And 6:00 p.m. Sessions

At Community College, Cheyenne Campus

Room 1422

Las Vegas, Nevada

Reported by: Janie L. Olsen, RPR, CCR No. 406.

Albuquerque, the Savannah River site near Aiken or Augusta, Georgia --

UNIDENTIFIED SPEAKER: South Carolina --

DOE PANEL: But it's near Aiken, South Carolina, Augusta, Georgia. And then obviously the fourth one being here at home and Pantex being the preferred alternative.

UNIDENTIFIED SPEAKER: And Pantex is in Northern Texas.

DOE PANEL: Texas, Amarillo, Texas. It's about 17 miles east.

Yes. Do we have another question?

UNIDENTIFIED SPEAKER: On the comparative dose data up there, is there a reason why Hanford has 0 on the comparative dose data?

DOE PANEL: That was on the one for the 20,000. We're at -- Hanford cannot take all 20,000. The structure that we looked at out there was the PUF building, and it could house 8,000. So on the slide where there was 8,000 you saw --

UNIDENTIFIED SPEAKER: You didn't show any of that.

DOE PANEL: Didn't I?

UNIDENTIFIED SPEAKER: No. They all compared the data that I -- all I saw was Hanford was

NA.

DOE PANEL: I'm sorry. I thought that was in here either that or it got stuck together and that's why I didn't show it. I think it got stuck together, I'm sorry.

But you do have this one because for 8,000 pits you have those comparisons. It's just not considered for all 20,000 because it didn't have the capacity.

UNIDENTIFIED SPEAKER: I'm afraid I'm still a little ignorant on the stuff about plutonium. I was curious, I don't want to know what the half life is, radioactive half life, what I'd like to know is how many years is this considered to be actually hazardous waste?

HT11/1
14.003

DOE PANEL: It's not considered waste at this time. We're looking at --

UNIDENTIFIED SPEAKER: Hazardous product or whatever.

DOE PANEL: Right. So, I mean, in terms of this, I think I'm a little higher than half life, the half life is approximately 24,000 years. So -- but it is also sort of a toxic substance too. So throughout that entire time you would be considering it to be hazardous material.

UNIDENTIFIED SPEAKER: Well, if the half life is 24,000 years, wouldn't the actual hazard be a lot longer than that?

HT11/2
14.004

DOE PANEL: Yes. Because you're looking at those together.

UNIDENTIFIED SPEAKER: Right. And you don't have that number?

DOE PANEL: I don't have that number.

DOE PANEL: Ten half lives is the commonly accepted --

UNIDENTIFIED SPEAKER: Ten?

DOE PANEL: Right. Ten half lives is common, but I don't have the number off the top of my head for you.

Any other questions?

I will also -- as I said, we have a display over here, and it goes through the different, you know, radiation points, et cetera.

UNIDENTIFIED SPEAKER: What was the consideration of the maximally exposed individual at at point --

HT11/3
14.005

THE REPORTER: Can you speak up. I can hardly hear you.

UNIDENTIFIED SPEAKER: I'm sorry. Maximally exposed individual at 6.6 rem which I assume

HT11 (CONTINUED)

HT11/3 14.005 continued

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is the forklift driver or whoever punctures this thing, if you go all the way down -- we go all the way down completely from that to the public exposure, at what distance were we planning this --

DOE PANEL: Well --

UNIDENTIFIED SPEAKER: -- public exposure would not be safe 100 milligrams per year, and I was wondering how we went from one number to the other just like that?

DOE PANEL: Well, because the public is considered those people who are off-site and Nevada Test Site is 17 miles across, for instance. So what you're doing is looking at something that is -- you're not -- the ability is not there to disburse this high level plutonium mechanism other than just the puncture-type thing. We are also looking at a fairly conservative accident scenario in terms of it puncturing and then actually getting out and just, you know, contaminating the immediate area. So you don't have any mechanism by which you really want to disburse this up and take it off-site. So that's why that --

UNIDENTIFIED SPEAKER: 17 miles was the number I was looking for.

DOE PANEL: Yes.

UNIDENTIFIED SPEAKER: Also, I believe

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the 6 rem you're referring to was the worker; it wasn't a member of the public.

UNIDENTIFIED SPEAKER: Actually, that's what I said, 6.6 rem maximally exposed individual I assumed to be the forklift driver who punctured the --

UNIDENTIFIED SPEAKER: Correct.

DOE PANEL: And you also considered the maximum exposed off-site worker but that would be somebody at the Nevada Test Site.

HT11/4 14.006

UNIDENTIFIED SPEAKER: And that person is really the person hanging around for 24 hours a day?

DOE PANEL: Yes. That's right.

HT11/5 16.001

UNIDENTIFIED SPEAKER: What would be the route that you would transport this to the test site?

DOE PANEL: There would be several routes that the department uses to get material here, and right off the top of my head I don't have the specific route, but we did look at those. And obviously we wouldn't be telling people when we were shipping those --

UNIDENTIFIED SPEAKER: Correct.

DOE PANEL: But the one thing I do know they would be precluded from, as I said, driving over the dam. We did not analyze that when --

HT11/6 16.002

UNIDENTIFIED SPEAKER: What about -- what about the freeway system?

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DOE PANEL: Yes. We would be using the interstate transport.

UNIDENTIFIED SPEAKER: Are these the transport system routes --

DOE PANEL: I'm sorry --

UNIDENTIFIED SPEAKER: -- highway route control monitors. Would they be managed so that they would fall into that category?

DOE PANEL: The department --

HT11/7 16.003

UNIDENTIFIED SPEAKER: The amount that falls into a highway route control finding --

DOE PANEL: I'm not --

UNIDENTIFIED SPEAKER: -- they can be managed such that they do not fall into the highway route control formula. If they fall into that category we have lots of notifications for things like that. In fact, you have truck drivers in that situation that would not be allowed to leave their vehicles --

DOE PANEL: We would be shipping these with the -- with our SSTs. These are the vehicles that actually are used to transport weapons and things like that. The same mechanism would be used to transport these things. So you know you have drivers that are federal marshals and escort vehicles and all of those types of things in order to transport these things.

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UNIDENTIFIED SPEAKER: And then you would then be briefed on this if they were expecting to be highway routes. So my assumption is that they are not at this point expecting to load anything from highway routes in quantity. That doesn't have anything to do to federal marshals; that has to do with notification of states and --

HT11/8 16.004

DOE PANEL: But those are -- SSTs are the TSD, Transportation Safety Division, who manages those things have -- are working with states all the time in terms of what would happen if there was an accident, et cetera. So they would just simply do the same thing if we were going to ship the pits, and we have shipped pits in the past before between our -- and have an emergency system set up in cases of emergency to contact state, federal, and local officials.

UNIDENTIFIED SPEAKER: There would certainly be no notification though because the shipments' timing is classified --

DOE PANEL: Yes.

UNIDENTIFIED SPEAKER: -- within the state that it happened?

DOE PANEL: Yes.

UNIDENTIFIED SPEAKER: So the state -- to be in the state which means you have to have a specific

HT11 (CONTINUED)

route even if it is classified --

DOE PANEL: Yes.

UNIDENTIFIED SPEAKER: -- it still would have to be notified, the states have to be notified?

DOE PANEL: Right. And the Transportation Safety Division does that all the time.

UNIDENTIFIED SPEAKER: How many pits per SST?

DOE PANEL: How many pits per SST. Somewhere between 20 to 25 is what we're saying. So it would take a while to ship these things, approximately six years to ship all 20,000.

UNIDENTIFIED SPEAKER: At six years what's the approximate -- is that how many a week? How many a month?

DOE PANEL: Let's see if I can remember. We have different scenarios, but I think it was like one shipment a week.

Brett, do you remember what those are?

DOE PANEL: The schedules are classified.

DOE PANEL: I think we're --

UNIDENTIFIED SPEAKER: I would just want an idea of how long --

DOE PANEL: Plus if you figure the number of pits, 20,000 and six years it's easy --

UNIDENTIFIED SPEAKER: That's what --

DOE PANEL: And a convoy can have multiple trucks in it.

UNIDENTIFIED SPEAKER: Okay.

DOE PANEL: Do we have other questions?

We do have for those who came in late, w do have a display area next door that you might be interested in concerning the AS and the AT400A packages that we would encourage you to look at. We also have copies of the draft EIS here if you want a copy.

I do want to point out that our actual comment period closes July 12th, and if you will notice the posterboard out here there are various mechanisms by which you can give additional comments to us. We have a hot line. You can fax it to us, you can mail it to us, and you can E-mail it to us. So any one of those mechanisms. Please feel free to --

DOE PANEL: All comments have equal weight, whether they're made here or from one of these other mechanisms.

HT11/9 23.004 UNIDENTIFIED SPEAKER: You don't happen to have a Web site where we can access more information about --

DOE PANEL: Not a Web but an internet.

HT11/10 23.005 UNIDENTIFIED SPEAKER: You have an

HT11/10 23.005 continued internet address? Is that classified?

DOE PANEL: No. It's on the form.

UNIDENTIFIED SPEAKER: I didn't mean to be -- I'm new to all this.

DOE PANEL: Actually, Tracy, don't we have some form pages also.

DOE PANEL: There is generic information at the Department of Energy but I don't have that.

DOE PANEL: I know there is one at Pantex dot com that you can find for the plant, just general information about Pantex.

DOE PANEL: There is a published address book.

DOE PANEL: But more generic information.

HT11/11 23.006 UNIDENTIFIED SPEAKER: What I wonder is if I have any other questions is there an area I can tap in and find frequently asked questions?

DOE PANEL: The same way that you send in comments, and I'll give you that address after this.

DOE PANEL: And we have phone numbers where you can call our offices and ask questions.

Evening session of the public meeting. Start time 6:00.

DOE PANEL: We'd like to open up for questions and comments at this point. Does anyone have

any questions?

HT11/12 16.005 UNIDENTIFIED SPEAKER: How many shipments would come to the test site for the 8,000 versus the 20,000 container of pits?

DOE PANEL: I keep having to do this in my head; I can never remember. But there are about 20 to 25 pits to be shipped at a time, and so, therefore, it would be roughly a thousand shipments or, you know, so to speak.

HT11/13 16.006 UNIDENTIFIED SPEAKER: And that would be over how long, what time period is that?

DOE PANEL: Generally we're looking at a six-year time period.

UNIDENTIFIED SPEAKER: Where would the pits be coming from?

DOE PANEL: From the Pantex plant and that's near Amarillo, Texas.

UNIDENTIFIED SPEAKER: And do you -- before they get to Pantex how many places do they come from to transport?

DOE PANEL: Well, they come from the various DOD sites, from the depots and then from where they're staged at, et cetera.

HT11/14 16.007 UNIDENTIFIED SPEAKER: And if there were an accident along the route, do you -- are you looking

HT11 (CONTINUED)

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HT11/14 16.007 continued

at ways -- do you have any emergency response ideas, or are you looking at that as --

DOE PANEL: As part of that is an operational aspect and not as much an impact aspect, but they would be shipped in what are called the safe, secure transports, and that is managed by our transportation safety division or safeguard division. And they because they transport weapons and other materials, do have those emergency response plans in place with state and local governments and things like that and do actually carry out exercises as simulated, you know, accidents from -- as required to make sure that they can meet their emergency response objectives.

UNIDENTIFIED SPEAKER: I've got lots of questions if there's nobody else.

DOE PANEL: Please feel free.

UNIDENTIFIED SPEAKER: I haven't looked at the AIS yet, but have you looked at -- you've looked at specific transportation routes through Nevada?

DOE PANEL: They were evaluated, yes, specific routes because we needed to do that in order to look at what the exposures would be and what the accident analysis would tell us. And so we used the 1990 census data. The EIS does not give you what the -- absolutely the specific routes we'd be using. We have

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summarized that in the document.

HT11/15 16.008

UNIDENTIFIED SPEAKER: And you'd be using common carriers or contract carriers?

DOE PANEL: They're called safe, secure trailers, and they're run out of the Albuquerque office, and they are DOE employees that run that and then the drivers of the truck, et cetera, are actually federal marshals, et cetera, and they have escort vehicles, et cetera, that go with them. And they are set up normally to transport the nuclear weapons to DOD sites, et cetera, but we have used them to transport pits in the past.

UNIDENTIFIED SPEAKER: So currently at Pantex right now there's the maximum of 12,000 pits is already on-site.

DOE PANEL: No. There are currently about 9,000 pits. They are continuing the dismantlement process out there. And it was when we started the EIS, it was generally assumed that 2,000 dismantlements a year would take place, and so by 1997 we would have the 12,000 pits at Pantex. But nominally we're not getting to the 2,000 so they're -- right at the moment there's between 8- and 9,000 at the Pantax plant.

UNIDENTIFIED SPEAKER: So we're looking at another year and a half before you reach maximum

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capacity basically?

DOE PANEL: Nominally.

DOE PANEL: Not capacity, the authorized limit.

DOE PANEL: Right. It will take until about the year 2,000 to reach the 20,000 pits, 2004 nominally.

UNIDENTIFIED SPEAKER: Depends on how many they're dismantling?

DOE PANEL: Correct.

UNIDENTIFIED SPEAKER: I'm interested on how many pits can be held at the other sites. You said 8,000 at Hanford?

DOE PANEL: Yes.

UNIDENTIFIED SPEAKER: How about Kirtland?

DOE PANEL: All of the other ones can hold up to 20,000. At the Savannah River site we're looking at the K reactor. They had some assembly bays that are now empty, essentially, and are seismically qualified warehouses, if you will.

UNIDENTIFIED SPEAKER: And the Kirtland

HT11/16 01.001

Air Force Base that's in the Manzano Mountains where they already have how many stored?

DOE PANEL: At -- they don't have any

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pits stored.

UNIDENTIFIED SPEAKER: Plutonium pits --

DOE PANEL: Right. It was considered an excess area by the DOD not too long ago, but we do not have any pits stored there.

HT11/16 01.001 continued

UNIDENTIFIED SPEAKER: In the Manzano Mountains?

DOE PANEL: The DOE does not.

UNIDENTIFIED SPEAKER: Because I've been told otherwise that there was a lot of pits stored in the Manzano Mountains.

DOE PANEL: Okay. I'll have to check on that.

UNIDENTIFIED SPEAKER: Are the pits considered high level waste or low level waste?

DOE PANEL: They're not considered a waste. They are reserve material.

UNIDENTIFIED SPEAKER: Reserve for --

DOE PANEL: They're reserved -- excuse me?

UNIDENTIFIED SPEAKER: Reserve for?

DOE PANEL: Reserved for the nuclear weapons complex at this time.

UNIDENTIFIED SPEAKER: So they could be -- they're going to be stored completely so that they

HT11 (CONTINUED)

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can be reassembled if --

DOE PANEL: They are going to be stored right now in that form and could potentially, you know, go back into a weapon, but there's the storage and disposition PEIS, and there's also the stop pile search and management PEIS. Stop pile search and management is going to look at what they need for a strategic reserve, and then storage and disposition will look to see how much may be declared excess in the future.

UNIDENTIFIED SPEAKER: So all --

DOE PANEL: This is interim storage.

DOE PANEL: This is interim storage until those other decisions can be made.

UNIDENTIFIED SPEAKER: And what's the time, I guess -- well, the completion of those different EIS's would be --

DOE PANEL: Supposed to be August for the stockpile storage and then December for the other one, for the disposition of other one: that's what they're saying.

UNIDENTIFIED SPEAKER: So if we -- when we reach 20,000 pits dismantled -- or the pits, what is that in relationship to the treaty figures or what we're supposed to --

DOE PANEL: I believe that is enough so

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we would meet our start two goals. Now, remember the start two actually talks to delivery systems and things like -- but because we are bringing them back and disassembling that's roughly the equivalent.

UNIDENTIFIED SPEAKER: Has there been any looks at disassembling the weapons themselves on-site rather than transporting them to Pantex for disassembling?

DOE PANEL: Not in our document. Now, the stock pile search and management looked at where it might relocate those assembly and disassembly missions to, for instance, to Nevada Test Site, but right at the moment Pantex is the preferred alternative for that document. So it would continue assembly and disassembly at Pantex.

UNIDENTIFIED SPEAKER: So the technology is not currently available to dismantle the weapons at their various sites around the country --

DOE PANEL: Never has been.

DOE PANEL: I mean at DOD sites?

UNIDENTIFIED SPEAKER: Yeah.

DOE PANEL: No. The DOE has always been the organization agency which produced, if you will, the weapons for the DOD to use. There could be like on-site maintenance that they might do that was fairly simple,

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but DOD has never maintained the capability to really do the disassembling and assembling missions.

UNIDENTIFIED SPEAKER: How many tests have been done in the P tunnel at NTS?

DOE PANEL: That I'm going to have to refer to our site representatives here.

DOE PANEL: I really don't know the exact number, but those basically have been tested for the defense nuclear agency.

HT11/17 01.002

UNIDENTIFIED SPEAKER: So starting in the P tunnel would that mean that you'd be opening it up where those tests happened and taking the pits into the assembly --

DOE PANEL: Those main tunnels back in there are open so to speak, and so you could just take them down there. The -- it's where the test actually occurred are --

UNIDENTIFIED SPEAKER: Sealed,

DOE PANEL: -- sealed.

HT11/17 01.002 continued

UNIDENTIFIED SPEAKER: How far away from the actual tests are they stored from the sealed area?

DOE PANEL: I'd have to look -- I'd have to look at maps to see where they were actually placed.

DOE PANEL: I mean, sealed is enough that there's no radiation leak into the area.

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UNIDENTIFIED SPEAKER: And there's been studies done -- there's been studies about radiation leaking out of the seal?

DOE PANEL: The tunnels have been used and there's been workers in there. So there are many done.

HT11/18 01.003

UNIDENTIFIED SPEAKER: How about the device assembly facility, what kind of place is that where the other pits are?

DOE PANEL: It's basically a multi-structure facility. You have an assembly cell similar to what you have in Pantex. There are some what we call, assembly base, some of which are -- some of the assembly base that are Pantex. You've got some high base structures which are like an assembly bay and they're about twice the length. You've got some storage bunkers where you would stage material and administrative facilities plus there's other support facilities there, some spare generators and boilers.

HT11/19 11.005

UNIDENTIFIED SPEAKER: Well, one comment that I'd like to state is in your risk assessment basing that on 1990 census figures I think is pretty because Las Vegas itself has changed so much in the past six years. I think that -- I don't know what the -- what the growth rate has been, but I think that the 199

HT11 (CONTINUED)

HT11/19 11.005 continued

census figures probably aren't -- aren't the -- what?

DOE PANEL: The ones to use?

UNIDENTIFIED SPEAKER: Correct.

DOE PANEL: Well, almost every city can test their city's numbers, but basically that provides us a common basis for analysis throughout the EIS bearing in mind that what's true today is going to be different next year and so forth. So that's typically used to provide a common baseline.

UNIDENTIFIED SPEAKER: Well, again, I'd like to just state it as a concern.

DOE PANEL: Understand, and we'll take that under consideration.

HT11/20 16.009

UNIDENTIFIED SPEAKER: The other thing is during the risk assessment for transportation, was this the thousand shipments over a six year period, was there any cumulative studies done on how that might impact with other shipments of waste proposed and currently planned through Nevada in terms of a cumulative impact risk assessment?

DOE PANEL: Well, there wasn't, no, a cumulative because we don't know, for instance, all of the things coming to the Nevada Test Site. But let me turn this over to Ellen for just a moment.

DOE PANEL: In our final EIS we're

looking at that cumulative impact in our risk assessment because we at the site have a better feeling for what comes into the site not only in the way of waste or these potential materials but all the other programs out there that are proposing actions for the NTS as part of our expanded use alternative. We've looked at that whole picture to make sure that that analysis is done. So we have done that. That will be in our final EIS.

Right now in our draft we have noted as comments from the public as well as internal comments that we did not really provide enough information to the public on the movement of the defense materials. Everyone here was very focused on waste and so the defense materials kind of fell to the background, but the final we're going to be bringing that out more and explaining that a little better.

HT11/21 16.010

UNIDENTIFIED SPEAKER: What would you say are the amount of shipments at this time per week into the Nevada Test Site, the waste?

DOE PANEL: I'd have to look it up in the document right now.

HT11/21 16.010 continued

UNIDENTIFIED SPEAKER: Do you have an approximate?

DOE PANEL: No, I don't. I don't know that it's steady every week. We could probably come up

with an average and I'm sure that's what it would consist of is the average.

DOE PANEL: Last year the average was 19 a week, my understanding based on a figure of 960 shipments through Clark County at least.

DOE PANEL: Yeah. I've heard that it's gone down a bit since last year. That's -- it could go back up again. So 19 is probably a good number.

UNIDENTIFIED SPEAKER: And can you tell me where, or you might know this anyway, is where the shipments come from currently?

DOE PANEL: The shipments to the test site? Within our EIS we've identified all of the generators that are approved to ship waste to the Nevada Test Site. Those are already DOE facilities within the complex nationwide. Bernald right now, I think, is shipping some of their restoration waste and the majority of the waste that comes to the test site is exactly that. It's the resulting parts and pieces from decommissioning activities or restoration activities at other sites where they'll scoop up the dirt, box it up in DOT approved containers and ship it via common carrier.

UNIDENTIFIED SPEAKER: Do you have like a list or something of places where it's coming from?

DOE PANEL: Yes, I do. I can provide you with that. If I can get your name after the meeting --

DOE PANEL: She asked to get a list of where it's coming from?

UNIDENTIFIED SPEAKER: Because I know that some is coming from Rocky Flats.

DOE PANEL: We were receiving waste from Rocky Flats. I don't know if we're actually receiving any right now. Various facilities will come in with different waste streams through time. Maybe they're cleaning up some dirt over here. This year or next year they're decontaminating, decommissioning a facility. So every time a new waste treatment comes forward it has to be characterized, audited, and approved before they can actually consider shipping.

HT11/22 13.001

UNIDENTIFIED SPEAKER: Is there -- are currently any waste by-products involved that result from the disassembling process?

DOE PANEL: From the disassembling process, yes.

HT11/23 13.002

UNIDENTIFIED SPEAKER: Any nuclear waste by-products or radioactive waste?

DOE PANEL: Yes. There is low-level mixed waste and hazardous waste that are a result of the disassembly activities.

HT11 (CONTINUED)

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HT11/23 13.002 continued

UNIDENTIFIED SPEAKER: And is that waste studied in this EIS?

DOE PANEL: We have looked at that and have looked at it as part of the waste management activities at the Pantex site.

DOE PANEL: And the Pantex waste streams that are generated that come to the Nevada Test Site are discussed in our EIS. I think mostly you're sending us gloves and DEs and basic things that people in the lab or in the facilities are using in the handling or whatever you guys do; that's the waste that comes to us from Pantex, and we discuss that in EIS.

HT11/24 13.003

UNIDENTIFIED SPEAKER: So are most of the by-products stored on-site at Pantex?

DOE PANEL: Yes.

DOE PANEL: We do have a waste management system that does talk about our low-level mixed waste and, in fact, one of those facilities that I showed was a hazardous waste treatment processing facility so that we can meet the land disposable requirements -- restrictions. Thank you.

DOE PANEL: Does anyone else -- would anyone else like to ask any questions?

UNIDENTIFIED SPEAKER: So for the -- what is keeping -- right now what is keeping Pantex from

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going ahead and getting the okay to store the 20,000 pits?

DOE PANEL: What it was was in 1994 they did an environmental assessment, and as part of that assessment they looked at storing 20,000 pits there. What happened at the time is we got public feedback back that said we really want you to look at the storage of components in much greater detail than you do in the EA. So the secretary committed to the governor of the State of Texas that we would do that based upon a nominal 2,000 weapon dismantlement a year, and he said okay we can do an EIS in three years. They set a limit at 12,000 pits.

UNIDENTIFIED SPEAKER: And so that was based on the -- the 12,000 pits you decided not to go above that based upon the radiation level differences or?

DOE PANEL: No. It was a commitment to sort of the state holders in that area that we would look at this in greater detail than what you might do in an EA. One of the other sort of public feedback that we got from scoping is they wanted us to look at more sites, DOD sites, that might be capable of storing these pits. So because of that we set the limit at 12,000 based upon -- okay, we had about 6,000 pits already.

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Then 2,000 pits a year, takes three years to do an EIS, the limit was set at 12,000.

UNIDENTIFIED SPEAKER: Has there been any look at long-term storage, you know, if we decide to not use the material any more and to --

DOE PANEL: That is being looked at as part of the storage unit on disposition problematic EIS. So they're going to look at long-term storage and the disposition of both plutonium and highly enriched uranium. That's where it is. Ours was really an interim document until these other ones could make decisions on them, and at the time it was considered that we needed that interim decision. But now the rods for those will either be before ours or in conjunction with us so there's a coordinated decision-making process on the storage of this material.

UNIDENTIFIED SPEAKER: When -- what is the length of time people deciding on where they're going to go? I mean, like, are there pits being waited to be stored somewhere, or, you know, what's the time that this has to be figured out by?

DOE PANEL: Well, in general, essentially for the Pantex plant, it's before we reach 12,000 pits there, and sort of a time period otherwise we will have to shut down the dismantlement process at Pantex.

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HT11/25 22.001

UNIDENTIFIED SPEAKER: How many pits are ready to be stored right now that aren't -- that want to be decommissioned so that they can be stored somewhere? How many weapons are ready to be dismantled?

DOE PANEL: There's nothing waiting. They're automatically being stored at Pantex because they're still allowed to store 3,000 more before they'll be cut off. So nothing is waiting. It's all being automatically being put into bunkers at Pantex.

UNIDENTIFIED SPEAKER: Have there been any accidents from the transportation to Pantex from the DOD sites?

DOE PANEL: No. Actually, the TSD has a very good safety record. It's something like 75 million miles without any disbursal accidents.

UNIDENTIFIED SPEAKER: Can I ask specifically about the outreach to Las Vegas. I just found out about this this morning in the newspaper so I had no prior knowledge that this was going to happen. What kind of outreach has gone on in Las Vegas?

DOE PANEL: Well, we have a mailing list from the Nevada Test Site that we used primarily to mail out to elected officials, local state holders, interest groups, things like that. Are you involved in any of those?

HT11 (CONTINUED)

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DOE PANEL: We also had the federal register notice that went out. We did place ad copies in, I believe, the Sunday paper, and we also had a press release that went out too and was distributed to the community. So those are the type of outreaches that we have done.

UNIDENTIFIED SPEAKER: I think I'm on the DC -- I moved here from DC, so I was at the original SSM hearing in DC, but I never -- I went to the past two DOE EIS -- NTS EIS meetings.

DOE PANEL: Did you get on the mailing list through that?

UNIDENTIFIED SPEAKER: Yeah, but I haven't received anything yet.

DOE PANEL: By registering tonight you'll be part of ours.

DOE PANEL: You know, I will have to say that we didn't do -- have a mailing go out, but I have received in my office yesterday about 20 returns because of addresses or people not being at those particular addresses. So we're looking at that.

DOE PANEL: The mailing list included all people who have attended the scoping meeting that was held here almost two years ago now and also any people that have since that time expressed an interest in

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getting a copy of the documents, almost 7,000 people.

UNIDENTIFIED SPEAKER: Nationwide?

DOE PANEL: I'm sorry?

UNIDENTIFIED SPEAKER: 7,000 nationwide.

DOE PANEL: Basically five sites. Nationwide, yes, but essentially the responses came from these particular sites that were being looked at.

UNIDENTIFIED SPEAKER: Is there something that has a list of DOD sites that are decommissioning weapons, where they're located?

DOE PANEL: No. Those -- that's essentially classified information. But what it is is the Pantex receives everything. There isn't any other place that does assembly, disassembly, but from where those weapons are coming from that's classified information.

HT11/26 06.001

UNIDENTIFIED SPEAKER: Can you talk at all about water usage and where for the dismantlement of the 20,000 pits at Pantex?

DOE PANEL: Yes, I can. I don't remember right at the moment where the water usage is but --

DOE PANEL: It's in the water quality section.

DOE PANEL: Yeah, it's in the water quality section, and right after this we can look it up

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for you.

DOE PANEL: Section 4.5.

DOE PANEL: There's a table in there that it has it up at the top.

UNIDENTIFIED SPEAKER: That would be in volume one?

DOE PANEL: Yes.

UNIDENTIFIED SPEAKER: 4.5?

DOE PANEL: Yes. Some people have these sections memorized.

DOE PANEL: It's 4.6.

DOE PANEL: That's not a page number: that's a section number.

DOE PANEL: 4-79.

UNIDENTIFIED SPEAKER: So has -- this was addressed at the local hearing in Amarillo, water usage?

DOE PANEL: Yes. We just had the joint public hearings for the stock pile and management, the storage and disposition, and Pantex site --

UNIDENTIFIED SPEAKER: All three of those or --

DOE PANEL: -- at Pantex, all three at the same time Monday and Tuesday of this week and water usage is an issue there.

HT11/27 06.002

UNIDENTIFIED SPEAKER: But the Pantex

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HT11/27 06.002 continued

plant feels that there is enough water to disassemble the entire 20,000?

DOE PANEL: Yes. Now water usage is always an issue because it's an agricultural region and looking at draw down of the overall, but Pantex is not a huge percentage of the water usage in that area. Agriculture is the major water usage there.

Do you have any other questions?

Maybe what we can do is break for about ten minutes or so and again take some of you over to our display area and show you a little more of the videotapes, et cetera.

(Short break.)

DOE PANEL: We're going to get started again if you have any more --

UNIDENTIFIED SPEAKER: No. Was there another prepared --

DOE PANEL: No. Just a little break because we knew you were looking at the documents. Just wanted to give you an opportunity to gather your thoughts in case you had some more questions or comments.

(7:30 p.m. Session.)

HT11/28 01.004

UNIDENTIFIED SPEAKER: What's the difference between continuing the current mission and no

HT11 (CONTINUED)

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HT11/28 01.004 continued

action?

DOE PANEL: They're very similar except the no action says that once you get to 12,000 pits you shut down the dismantlement operations out there because you cannot store any more than that, and you could not transport them away from the site because that's the alternative. So that's really what is looked at in no action.

UNIDENTIFIED SPEAKER: What routes do you -- how many containers would be on a particular vehicle on a truck?

DOE PANEL: We have evaluated nominal of 20 to 25 containers on an SST.

HT11/29 16.011

UNIDENTIFIED SPEAKER: And is this legal -- are they legal weight?

DOE PANEL: It's my understanding that bhey are over-the-road requirements.

HT11/30 16.012

UNIDENTIFIED SPEAKER: What routes would you use?

DOE PANEL: I can't tell you right at the moment exactly which routes they are, but we've summarized them in the document, and one thing I can tell you is they would not go over the dam, so to speak, but we can get that information for you sort of which routes would be used.

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UNIDENTIFIED SPEAKER: Do you have a copy of the -- your handouts?

DOE PANEL: Yes. We have a copy of our handouts. We also have copies of the EIS. Would you like more than one?

UNIDENTIFIED SPEAKER: Yes, I do.

My name is Russell Dibartolo, and it's D-i-b-a-r-t-o-l-o. I'm with the Clark County, Nevada Department of Comprehensive Planning, Nuclear Waste Division. And my particular area has to do with impact assessment and review of Department of Energy impact assessments or impact -- environmental impact statement activities.

HT11/31 16.013

One of the major things that we have found with a number of Department of Energy EIS's or environmental assessments is that we feel that they unrealistically limit their regions of influence that are studied. If you studied, for instance, the Nevada Test Site within a 50 mile radius you are leaving out with regard to any potential impacts or risks over a million people or two-thirds of the population of the State of Nevada when you're dealing with shipments to the Nevada Test Site.

So one of the major requests we would have of you, the individuals preparing this particular

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EIS and others within the DOE complex, is that you take a very good look at the space between the sites. The areas between the sites in this case is the Clark County metropolitan area also known as the Las Vegas valley metropolitan area.

HT11/31 16.013 continued

We're primarily concerned with the routing of this material. There are certain areas in Clark County that we know of that are very high in accident rates. We know that there are a number of areas in Clark County where there's construction anticipated on major -- on the interstate and U.S. highways. This construction program to last about ten years. We know there's a high correlation between construction, congestion, and accidents, and we would like you to take that into account.

We also, depending upon the number of shipments and nature of the shipments, we also are concerned here with perceptions of risk and possible

HT11/32 11.006

consequences of that on the tourism industry. This is how -- this is the mainstay of Nevada economy, and if there were to be an incident or accidents on the interstate, especially near The Strip, this could have various severe consequences, economic consequences.

HT11/33 17.003

With regard to environmental justice, if you're shipping by -- through the interstate, or if you

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happen to use rail, both the interstate and the rail go along about the same route, more than 38 percent of the minority population of Clark County lives within half mile of either of those routes. And so the impacts or risks might be a little bit higher since -- let me back up. 38 percent of the population along the railroad and the interstate is minority or low income. In Clark County the minority, low-income percentage is 11. So there's a substantial difference between the minority, low-income population along the routes and the general minority, low-income population of Clark County.

HT11/33 17.003 continued

What we -- and the reason I'm here now is that we have -- we were surprised by this meeting. Maybe there were -- maybe there was public information or scheduling announcement that we missed, but we would like to have the Department of Energy no matter whether it's Pantex or has to do with the people that are doing NTS, EIS or any of the EIS's where Nevada Test Site is involved, we would like to have a mechanism set up whereby Department of Energy representatives and representatives of local governments that may be affected like Clark County can meet so that we can have a briefing so that we can prepare ourselves for statements which in many cases might be statements of support given that certain mitigation measures are take

HT11/34 23.007

HT11 (CONTINUED)

HT11/34 23.007 continued

or at least addressed.

And at this point I'd like to request a meeting among the management of Clark County, probably the Director of Comprehensive Planning, County Manager, and so on and representatives of Pantex to give us more detailed information. And I would like to also to request in your institutional program that there be periodic updates with identified state holders or units of local government that are affected.

HT11/35 23.008

DOE PANEL: Yes. I think that that can be arranged. I know that there's a request to meet with the PBC, the State's advisory board, and we would be doing that in June time frame so we would be more than happy to come and meet with you at that time.

MR. DIBARTOLO: You should also know that the Nevada Test Site has established for their EIS process a transportation advisory group, and within that group is a smaller subgroup or team that's called a protocol working group. This particular working group has already provided recommendations and census recommendations among a number of local governments and other interested individuals or groups that have already been sent to the Department of Energy prior to the comment deadline.

HT11/36 16.014

They are already working and addressing this, and this particular protocol working group or transportation advisory group has turned out to be a very good vehicle for our interactions. That's the route that we're -- it's Frank DiSanza who is head of that program. It's D-i-S-a-n-z-a. He works with DOE Nevada, and he has -- they have staff and brought together that group. That group meets on an as-needed basis, generally once every two months. The transportation advisory group meets usually about once every quarter, and that's been going on for probably a little bit more than a year.

HT11/36 16.014 continued

And it came up for shipments such as this. There were shipments that were planned to come in through North Las Vegas. North Las Vegas by accident heard about them. Turns out that they were just a very few shipments going to the test site cutting across Craig Road, which is a convenient way to get from -- if you're going south on I-15 and you go north on U.S. 95; it's a very good cut-off.

North Las Vegas officials became very concerned about that, and I was working at the university then as a consultant and was brought in to help facilitate meetings. And from that and from the need that was seen for that we developed this transportation advisory group, and it has worked very well.

HT11/36 16.014 continued

DOE PANEL: We would be very happy to maintain contact with them, and the first step would be to make sure that they get a copy of our EIS for review and continue that interaction.

MR. DIBARTOLO: What is the -- is there a comment deadline on this?

DOE PANEL: July 12th.

MR. DIBARTOLO: That meets my statement.

DOE PANEL: Did you have any other responses, and we'll give you our EIS also?

So other than identifying the different transportation routes I think that was possibly one of the major considerations that you had, and, of course, at the moment the Pantex plant is the preferred alternative to our document.

MR. DIBARTOLO: And the other major concern is the ongoing -- the initial interaction and the ongoing mechanism for ongoing communication, that clear communication makes things a lot easier on both sides.

HT11/37 23.009

The person that you might address any correspondence to with regard to establishing a meeting with Clark County is Richard Holmes, H-o-l-m-e-s. He's the director of the Department of Comprehensive Planning for Clark County. His telephone number is area code 702, 455-5175.

HT11/37 23.009 continued

DOE PANEL: Okay. Thank you very much. We do appreciate it.

MR. DIBARTOLO: Thank you for the presentation.

(Thereupon the proceedings were adjourned at 8:45 p.m.)

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ATTEST: Full, true and accurate transcript of proceedings.

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Janie L. Olsen, RPR, CCR No. 406

HT12

PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENTS

PUBLIC MEETING

HELD AT THE NORTH AUGUSTA COMMUNITY CENTER

NORTH AUGUSTA, SOUTH CAROLINA

ON APRIL 30, 1996

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Augusta, Georgia 30903-2567
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MORNING SESSION
PLENARY SESSION
QUESTION AND ANSWER SESSION

Portions of the transcripts unrelated to this EIS have been omitted.

more would be stored there until we looked at some alternate sites. So it was an agreement that was made between the state of Texas and Secretary O'Leary. Does that answer your questions?

PUBLIC CITIZEN: That's part of it, yeah.

MS. BERGMAN: Okay.

PUBLIC CITIZEN: The other part is are the pits surplus on -- on the other EIS?

MR. RUDY: Right. On that part really interestingly enough from an environmental perspective as well as perhaps from a technical schedule of cost prospective, a pit is a pit.

PUBLIC CITIZEN: Yes --

MR. RUDY: A pit doesn't know if it is a surplus pit or a chief reserve pit. And in fact a surplus -- a chief reserve pit today might become a surplus pit down the road. So what the Department is doing in the document that I described is we're looking at storage, an option storing all pits. So it's really a quantity issue. We happen to know at this time what a breakdown would be of how many of those make up 38 tons that are therefore surplus.

But we're accommodating the footprint, an engineering design, which could address all of the plutonium whether it is surplus today or whether it's

surplus tomorrow. So we're trying to plan ahead and be irrespective of a designation. The only place that surplus versus nonsurplus really comes to play is in the area of disposition precluding its reuse in nuclear weapons. The materials which would be held for national defense purposes would not go through the disposition pipeline, only the surplus materials would. Is that clear? Is that --

PUBLIC CITIZEN: We would have a blue one that's -- we would have blue one that's surplus and a red one that's not surplus stored contiguously?

MR. RUDY: Well, you might -- there's one aspect of this design that's pretty important. And when I talk about -- I may have gone too fast on the storage part. You know, safe, secure, cost-effective and inspectable. Because one of the things that, you know, this nation wants to do that has become the offer with Russia and the world community is international inspection, verification of the surplus quantities so that once -- there's surplus in Russia and surplus here, those materials don't find their way back into the weapons pipeline.

So there would need to be verification and we that the facilities would need to be designed to accommodate international atomic energy agency, i.e., IA inspection. And in fact, the material forms may need to

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be changed or some technology applied because we would not be -- wanting to release weapons design information, the shapes and sizes of these components. It's very sensitive information.

And so what we want is to verify with other nations that, yes, this is surplus and it stays here. We have to work on technologies. We can accommodate that without the release of classified information. So they literally won't necessarily be stored in the same rack one above the other, but certainly contiguous in the same facility.

MR. LAWSON: Greg, I think we have a question up front here, please.

PUBLIC CITIZEN: Yes. The other day last week there was a shipment of uranium that was stopped up the Savannah -- in Savannah by the Port Authority and I was wondering how come this shipment was authorized to come up the river without anybody being aware of it? It just happened the Coast Guards stopped the ship because one of the containers seemed like it had been damaged. And now it's sitting at the Port Authority in Savannah.

MR. CHAPUT: I'm Ernie Chaput from the Department here. That -- I just know a little bit about that shipment. I believe that was a shipment in commercial commerce, it was not a Department of Energy

shipment. I believe it was depleted uranium oxide. And while I don't know the details on that, it was being shipped to a fuel fabricator or a -- somebody involved in the fuel cycle. Jim, do you have any more detail on that?

UNIDENTIFIED SPEAKER: Yeah. I'll be happy to talk with the gentleman off-line. I don't think it's pertinent to the discussion here.

MR. LAWSON: Yes, sir.

PUBLIC CITIZEN: Someone sneaked a little word in there that I wondering if there's more implication there when they mentioned commercial fuel, and plutonium and commercial fuel. Is DOE finally recognizing that that commercial fuel is going to belong to them?

MR. LAWSON: Don't all jump up at once.

MR. RUDY: You mean would --

[Audience members laugh and several participants speak at one time.]

MR. RUDY: -- fuel belong to the United States Government? Right now the U.S. Government is under the Nuclear Waste Policy Act outside of the Weapons Program and outside of the weapons materials talked about today. The Nuclear Waste Policy Act mandates a process with the United States Government has to find and characterize a geological repository to be able to accept that fuel. And there's all kinds of debates and lawsuits and things that

I'm not prepared and probably shouldn't be giving my comments on regarding the commercial spent fuel.

But, yes, if the reactor option was chosen for the disposition of the weapons material and then there was mixed oxide fuel, plutonium and uranium, that would certainly be part of a decision and negotiate arrangements on responsibility ownership for that spent fuel. Certainly, no matter who owns it on paper, it would need to be safely and securely stored, maintained in a reactor core and then in the storage pool. The arrangement on how long it stays in a pool, where it goes, who owns, who transports, all of those details, yes, it would need to be negotiated and understood.

The document we're here to talk about today is at programmatic, a higher level, just -- we term, in the ball park, just in Yellow Stone Park, not Fenway yet. We're just a big park right now called technology option. Then later on after that decision, we walk through that gate, then we have to get into those specific kind of details.

MR. LAWSON: There's a question in the back over here, please.

PUBLIC CITIZEN: You mentioned the collaboration with the Russians developing the technologies for doing the various options for the disposal of plutonium. Are

those only limited to the three in the EIS or do they include [unintelligible]?

MR. RUDY: Okay. They principally would fall in those three categories, reactors. But the Russians are also looking at from their perspective different kinds of reactors. They are analyzing fast reactors which we don't use and don't intend to in this country. And they may also be analyzing other reactor types. But principally they would fall in the three basic groups.

MR. LAWSON: Are there any other clarifying questions? Yes, please.

PUBLIC CITIZEN: I've got two quick ones. Will there be an attempt in order to help regular public citizens understand the language between these three Programmatic EISs? Will there be an attempt to produce a simplified document that, in fact, does that, shows the relationship very clearly between these three documents?

And then secondly, on your next steps I notice that there is only one allotted period for public comment and that ends May 7th and July 12th. After the Final PEIS comes out, will there be another opportunity for the public to come back and make public comment on?

MR. LAWSON: Good question. Actually two questions. The first being is there any plans for a relatively short or simplified document which would

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explain the relationship among these three programs and perhaps others? Is that what you said? I'm not sure --

PUBLIC CITIZEN: Yes, that's what I said.

MR. LAWSON: And the other question is to do with the allotted period for possible public review, has that been extended in any way?

MR. WHITEMAN: Let's see. Where was the question? Okay. First of all, I would refer to you, all of the documents, there is a short summary document that is [unintelligible] PEIS. Within that summary document there is a section that describes the relationship among all of these and how the decisions are related. So I think that would answer your question regarding that. We would plan on issuing the Record of Decision in draft form as we issue the final PEIS. And of course, you know, that will be out in 30 days before a final decision.

UNIDENTIFIED SPEAKER: No, we'll wait 30 days after the final --

MR. WHITEMAN: Right, before issuing the Record of Decision.

UNIDENTIFIED SPEAKER: Right. We don't issue drafts records --

MR. WHITEMAN: Right. Okay. I'm sorry. Yes, that's right.

PUBLIC CITIZEN: So 30 days after the final PEIS

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will be a time when the public can come back and review that final draft and make its final recommendations or comments --

MR. WHITEMAN: Yes.

PUBLIC CITIZEN: -- which will then be still integrated into the process of making the final decision?

MR. WHITEMAN: Well, I think the way the process is set up it requires us to wait at least 30 days after issuing a final PEIS before making a Record of Decision. It was set up just so that there would be time for people to look at the final PEIS before the final decision was made.

MR. LAWSON: Does that also answer your second question about the extended period?

PUBLIC CITIZEN: [Indicates affirmatively.]

MR. LAWSON: A question over here, please.

PUBLIC CITIZEN: This whole exercise is done under the mandate NEPA. I keep hearing how different documents are going to become [unintelligible] comment periods and so forth. NEPA very clearly mandates, among other things that should be addressed in a PEIS are economics and impact on future generations. And I think I heard, before I was cut off at last Thursday's forum, that information on these would be forthcoming before a final EIS was published. How does that match with NEPA when you

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having a public hearing on the PEIS that's inconclusive?

MR. LAWSON: Would somebody be willing to explain why the information supposedly on economics and impact on future generations is being developed but it hasn't been included in the documents that we're now in the public review and comment process on?

MR. RUDY: Yeah, I think I can take that. And I appreciate -- it was last Thursday's session that comment came up, and I thank you for bringing it back up. We discussed -- you asked at that time should you bring it up then or now, and I said both. That's pretty important because I'm sure many of the people in this room today are not -- did not have the opportunity to join the Citizens Advisory Board session last week, Thursday.

Let me real quickly -- and I'll just take less than a minute -- use this as a background and then go into some things specific. The National Environmental Policy Act, for all of the good things it does and all of the tortuous process things it does, helps make sure that from an environmental perspective decisions which would have a significant impact on the environment are thoroughly analyzed. NEPA, the law itself in fact, has a section in it which says you do not want to and you should not have costs and financial issues associated with the costs of some of these options overriding or controlling the

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decision.

For example, you don't want to make a bad environmental choice simply because it's real cheap and very inexpensive compared to some other options. Likewise, you do not want to be over influenced under NEPA and fail to choose a very good or benign environmental option simply because it's just very expensive and we don't want to spend a lot of money.

So what NEPA does is it specifically mandates the focus on the environmental issues. And Donna showed that slide, the two columns of all the various things which are analyzed from an environmental perspective including social economic impacts, air and water, et cetera. And in the breakout sessions, or if we decide to stay here as a group, we'll go through some of that. But certainly the Department understands that you don't make decisions on NEPA alone. NEPA is a key ingredient to that, but there are many other things that have to factor into a decision; technical assessments, how well somebody does the job.

In the area I'm talking about in plutonium disposition, the Spent Fuel Standard, for example, these various technical options, do they reach it in a better more sound, more assured way? Technically speaking are any of these options more resilient, more robust? How

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about the schedule? When we look at some of these options, how fast could you get on with the job, reducing global danger? You may have a technology which works but it might take you 50 years to prove it out to deploy it versus the technology which you may have closer to home in which you could get on with this job and complete the mission in a much shorter period, in 10 or 20 years.

That area here of technical scheduled costs and policy considerations -- in fact, let me talk about policy considerations for a quick second. Reactor options, mixed oxide fuel options. There is typically a policy debate where some feel that use of weapons plutonium and mixed oxide fuel, even though you would burn it in a reactor, may not match with this government's policies on reprocessing. Some people draw [unintelligible], understandably you can see it this way, that if you would use this material in reactor fuel you may be down that slippery slope of crossing that line condoning other nation's use of plutonium, the plutonium [unintelligible] and perhaps this government should not step over that line. Now, that's a policy debate, a policy consideration which is not an environmental consideration but it is very important to eventually making a decision on which technology, or technologies, we might deploy.

In this area here and, in fact, in the

environmental -- just by way of a very quick summary, and this wasn't planned to be part of the formal presentation but I thought it was -- it was a helpful summary a little bit last week. There's a lot of considerations and there's no weights to these but, you know, the purpose and need in storage and disposition is really nonproliferation. If you have to boil it down and say, why am I worried about this? Sure for costs and safety, environment, all of those things. But you don't have to choose one of those over the other. It's really nonproliferation, making sure that these materials from the end of the Cold War don't go back into weapons production. Reciprocity with Russia, the policy considerations like I talked about at the beginning to the plutonium [unintelligible] is it good or bad, does it match, you know, what our nation would like to do in the years ahead? Technical issues, is it viable? Do you have existing capability?

One of the things that we look in making that Record of Decision is being practical. If, for example, immobilization was chosen as one of the options or part of it and if we were able to take advantage of the investment that we've already made in Defense Waste Processing Facility and we could use that can in canister concept and get on with it fairly quickly and fairly cheaply, that's a

consideration which will be pretty important to us. And likewise, cost and schedule and then environmental safety and health, the NEPA things.

So those things are all being taken into account. The Department will under Storage and Disposition by the end of this June/middle of July, by the time they distribute it, be releasing the cost assessments for the various options. We're finalizing the cost assessment of the various MOX versions, the various vitrification versions. And they're rather complex but we're attempting to verify and validate those costs and then summarize them to the public. And we'll make those documents available. Those will be available this summer. A Record of Decision comes at the end of the year.

So there are several months' time where these documents are going to be available to the public to understand and review and provide input. NEPA provides a certain mandate, start and stop time for public comments on environmental. There is nothing which precludes -- and in fact one of the things the Secretary of Energy expressed when she came on board -- there is nothing which precludes, and, in fact, she wants public involvement and information, communicate with the Department up to the Record of Decision. And don't just look at communicating under the NEPA schedule, the NEPA clock. That's only part

of it. In fact, there's a lot more opportunity to understand and to work with the Department in that decision-making process outside of NEPA.

MR. LAWSON: You have got a question? Yeah, go ahead.

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PUBLIC CITIZEN: First of all, I -- if I suggested it, I didn't mean to, that cost should drive the decision, but I think NEPA itself mandates that they be considered. If you've got two that are close together in environmental protection you better know what they cost and maybe -- you mentioned proliferation, which is the reason for all of this exercise. Timing, timing is not mentioned here. It might directly -- it could have an impact on the decision and the costs.

And further you -- I don't think you mentioned in your response anything about the impact on future generations and conservation of nonrenewable resources like fossil fuel which it would bring [unintelligible], nuclear power is what I'm hearing. And certainly one direction that this exercise could end up in would pretty well be the [unintelligible] of nuclear power. If we do that, then France and England and Russia and China and all the rest of them cut back on fossil fuels, [unintelligible] 50 or 100 years from now. And [unintelligible] but [unintelligible] got to talk about

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future generations is to talk about to some of these alternatives.

When I look back at some of the -- the DOE programs, Yucca Mountain, even close to home, DWPF, they don't always follow the schedules. If we have technology that's available today, that might not be [unintelligible] and it's not even addressed here. I'm looking for a complete environmental assessment that's not [unintelligible] and radiation releases and so forth, the total environmental picture including as NEPA mentions repeatedly, impact on future generations and conservation of nonrenewable resources.

MR. RUDY: I think the best I can offer you is the assurance that from an environmental perspective which includes impact on future generations current and future, the environmental document analysis being done is intended to address those issues under the various options. And when it comes --

PUBLIC CITIZEN: Future generations, I don't see those two words in those four documents. I may have missed it, I don't know.

MR. RUDY: Well, we'll take a look at it, bu it it's certainly inherent as we analyze materials with half-lives of several thousands of years. That's clearly the driver that we have and the understanding that we have

going in to that analysis.

PUBLIC CITIZEN: Okay. Reprocess spent fuel, [unintelligible] half-life of Plutonium 239, the reprocessing itself removes enough plutonium from that waste you're going to put in the ground somewhere, but the natural decay would take over 150,000 years. Until we [unintelligible] reprocessing [unintelligible] 150,000 years if you're looking at long-term.

MR. RUDY: But what this document was intended to do was take the [unintelligible] up to the form of the spent fuel standard but then not to go beyond that. It doesn't preclude or prejudice future decisions on that spent fuel, but brings it to the spent fuel standard whether in the form of glass, a geologic bore hole, which is it's hard to get at spent fuel several kilometers deep in steel, or the form of spent fuel itself. It brings it up to that point, again, under the purpose and need to preclude the reuse of that material in weapons.

If in future generations decisions are made to reprocess or recycle that material, that would be a separate issue way down the road beyond this focus on precluding the reuse of that weapons material --

PUBLIC CITIZEN: Mr. Facilitator.

MR. LAWSON: Yes.

PUBLIC CITIZEN: I think this could go on for

some time. Is there something better in the breakout session later on [unintelligible]?

MR. LAWSON: Well, I would say that we pursue it a little bit later. But I do, I want to thank you for your comment and assure you and other people who have made similar comments that while you may not get the answer that you would like in a situation -- by making a comment not only will you try -- they try to answer it here but they also will try to respond in writing in the comment response document, the points that you've made, so.

MR. RUDY: And also we'll take that into consideration. I mean, as we move towards these decisions, understanding these public issues and feelings, it's helping us, you know, to be on the ground here listening to people back and forth. So there's a way -- I can't measure that for you, but there's a way that I can assure you we understand and appreciate that input.

MR. LAWSON: Before we get to specific comments, I want to have time for that --

PUBLIC CITIZEN: This is a procedural question.

MR. LAWSON: Okay.

PUBLIC CITIZEN: Regarding the breakout sessions, as I look around I've seen some of these folks in many other public meetings and I know that they have some things to say. Are the breakout sessions going to be

-- are they going to allow enough time for people's comments or is it going to be kind of a classroom school for you-all to tell us about these three projects?

MR. LAWSON: Actually --

PUBLIC CITIZEN: I would recommend the former actually. And I don't know what kind of setup you-all have, but to make sure that we have enough time for people to make comments. And [unintelligible] if we even started right now, because I've been to a lot of these meetings where it gets down to about 10 minutes and then you say, well, submit it in writing, thank you very much for coming.

MR. LAWSON: The intent of having the three breakouts is to maybe make a maximum of three times as much opportunity for somebody to speak than they would have if they were just in one group. And so there would be short presentations, hopefully with a minute or two at the beginning of each one so that you would be back into the flow and the understanding of what program you're talking about at that time. But the rest of it's going to be facilitated discussion. The facilitators, all of us are principally interested in what your comments are, the issues that you want to raise, and that there is a good dialogue or comment period for all of you.

I thought I saw a hand back here. Yes, sir.

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PUBLIC CITIZEN: I would like to make a comment if I could. My name is Al Lodge [phonetically spelled]. I grew up in Savannah, Georgia and lived there for many years. I have lived in several places and as I was relocating to Augusta mostly for my family reasons and for professional reasons I wanted to check out the Savannah River Site more clearly. And I guess my message is to the Department of Energy and that is that I did a considerable amount of homework talking to lots of people and spending some in-depth time with scientists as well as potential neighbors about the Savannah River Site because so much of what I have heard was negative information, negative environmental information, negative about the number of [unintelligible] related to the site.

Well, I was given some reassurance. And what I have found to be the case since coming to Augusta seven years ago is that, in fact, much of the negative information heard was without basis and fact. And that friends and now neighbors and many others that have worked at the site for many years, really have a deep abiding interest in making certain that first of all it is safe, secondly it is secure and simultaneously that it is environmentally sound. It looks like the Department of Energy is appropriately wrestling with some major issues regarding the future, not just at the Savannah River Site

but the whole complex.

From what I have gathered the most supportive community of any of the areas within the site is in this one, the Augusta-Aiken region for the site. It looks to me like with your various considerations of environmentally sound and safe disposal options as well as those for remanufacturing, the Savannah River Site is the logical place. Logical from -- in every way.

Lots of folks not just in this immediate area but in Savannah, Beaufort, Charleston, the greater area, are interested in environmentally sound policies and practices and procedures. And it looks to me like from the safety standpoint and from an environmental consideration, the Savannah River Site is the logical place for the storage and reprocessing of plutonium if we're looking to make certain that things are environmental safe.

There's a different issue as well in our area, and that is for many years the Savannah River Site has been the largest employer. And largest employer also means that it has employed a wide variety, a true diversity of our work force, of our population in this community. And with the downsizing that has taken place there have been some negative residual effects. All the folks that have lost their jobs and/or potential jobs here

at the site has taken its toll.

So from an economic development and pure job standpoint, I encourage the Department of Energy to look favorably at all of the options to consolidate processes in to the Savannah River Site and use the existing very intellectually capable work force as well as the physical infrastructure that has been built up here over time and take full advantage of that. It's a receptive community. We welcome you. Thank you.

MR. LAWSON: Thank you for your comment. Yes, ma'am.

PUBLIC CITIZEN: I have a question about the three PEISs in terms of the environmental justice considerations. Could you -- maybe you went over this in your explanation but because we seem to be moving toward breaking down into three separate groups, could the three presenters explain a little bit of what went into that particular analysis? What did you look at when you were looking at this whole question of environmental justice considerations?

MR. LAWSON: Okay. Very good. Who wants to go first?

MR. RUDY: If I can just take it, I guess, from an overview perspective. First and foremost we took a look at the potential environmental impacts associated

with normal as well as off-normal for accident scenarios under the various options for storage and disposition. Once that was technically done to be able to determine the quantity disposed, the material types of dispersion, the mediums of dispersion, et cetera, an overlay on that, an understanding of the populations for any given site, Savannah River Site, Pantex Site, Oak Ridge.

So consistently across the board, understanding of the demographics of a region, understanding the wind patterns and the applying the potential accident scenarios to that could be able to determine if in fact from any of these options there would a disproportionately high or adverse impacts on certain areas around the site. So that's generically the approach that we took and technically the approach across all of our community sites.

MR. LAWSON: Does anybody want to add anything?

UNIDENTIFIED SPEAKER: No, I -- Stockpile Stewardship demands that, you know, we follow the -- essentially the same approach. And in [unintelligible] sites, we had eight sites in the weapons complex, there's a section, it's the 11th section [unintelligible] the environmental resources where we discuss environmental justice and actual disproportionate impacts.

Let me just add, the Department has really

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wrestled with the whole question of environmental justice and it doesn't have a comprehensive guidance yet on how to do it, so there may be some differences between the documents but each one lays out its methodology and how it went about it. But it's essentially what Mr. Rudy said.

MR. LAWSON: Ms. Bergman?

MS. BERGMAN: Yeah, I -- let me show you real quick. I've got an overhead on it. We've got a section, this -- environmental justice and human health are the two we looked at in depth in the Pantex Site-Wide EIS. And the work that would need to be done in order to store the pits at the Savannah River -- at the assembly area of P Reactor is all internal to that structure. It would all be internal modifications to make it safe for the storage of the pits.

And so the conclusion that we reached within the analysis of the environmental justice is that there would not -- we would not be expected to experience any disproportionate higher adverse human health or environmental effects. And that is discussed in detail within that section of the EIS and we can discuss it further as we breakout into our workshops.

MR. LAWSON: I just want to do a survey. Are there any other questions before we get involved in other comments? There's a question in the front row, please.

Here.

PUBLIC CITIZEN: Yes.

MR. LAWSON: Just one second and we'll get a microphone so we can hear you.

PUBLIC CITIZEN: Plutonium Storage and Disposition PEIS, as far as the MOX fuel is concerned, is converting the plutonium metal to the powder form as a part of that process, what is the criticality and explosive factor of the powder as compared to the metal form of the plutonium?

MR. RUDY: The explosive factor, what you're [unintelligible] saying, it isn't an explosion issue of powder and oxide, plutonium oxide. You would -- the concern would be the [unintelligible] exposed air. So what the document analyzes -- and it might help if I just give a very quick overview. There is a technology which warrants Livermore and Los Alamos National Lab [unintelligible] to convert a weapons plutonium pit, a metal sphere, to cut in half a near zero waste band so that there's no metal pieces or shards, and then in the presence of hydrogen in a furnace so you control the quantity of material is very important, so that at any given time there's only a certain amount of the material. And in the presence of hydrogen and with heat, the plutonium would what they call hy-dry, it would flake off.

It just -- you can actually see it flake almost like snow from the -- the half of a pit and would fall into a crucible, in an oven, which would then be heated and would become a metal hockey puck.

Another part of that process is at a later stay you have in a controlled glovebox in earth environment where you control the quantity of material and the environment that it's in to avoid exposure to air and other accident scenarios to convert that to a powder by adding oxygen.

PUBLIC CITIZEN: And the powder is an airborne powder with plutonium --

MR. RUDY: Oh, no, this would not be airborne. In fact, it would be in a sealed contained glovebox in an earth gas, an environment where it would not be exposed to the air.

PUBLIC CITIZEN: Is that sometime, the powder, an airborne form of pow- -- plutonium powder?

MR. RUDY: It would be through the glovebox system in a can and then when it is mixed it would be mixed in a -- it would not be in the exposed --

PUBLIC CITIZEN: No, that's not my question. The question is: At sometime in the process does this powder have the capability of being airborne as opposed to a powder that has a metal that is so heavy that it can't

be airborne?

MR. RUDY: In an accident scenario --

PUBLIC CITIZEN: Right.

MR. RUDY: -- potential dispersion. Andre will on our system for that. If there's anything you want to add in particular --

MR. CYGELMAN: Your question is specifically with regard to the size of the plutonium oxide that's formed.

PUBLIC CITIZEN: Right.

MR. CYGELMAN: In general, the material that is of most concern to human population is below 10 microns. And I believe some of the oxide that would be formed within this glovebox could be about 10 microns.

PUBLIC CITIZEN: And it's contained --

MR. CYGELMAN: It is contained --

PUBLIC CITIZEN: -- but in an accident scenario it would dispersed?

MR. CYGELMAN: In an accident scenario there is a potential for it to be dispersed, yes. And there would be particles within the 10 micron range.

PUBLIC CITIZEN: That's -- okay.

MR. LAWSON: And by the way before we go any further, I failed to introduce some of the technical experts who are here. Andre Cygelman who just spoke is

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with the Storage and Disposition. I'll point to Jay Rows [phonetically spelled] who spoke earlier has been document manager for the Stockpile Stewardship Management Program. And Nanette Founds is also here from Pantex Site Wide. Are there any other questions before I take comments?

All right. Are there any folks who would like to make comments before we take our break and then come back a detailed discussion in whatever form? Yes, sir.

PUBLIC CITIZEN: My name is Sam Goro. I'm only a concerned citizen. I do not work at SRS, nor do I have any financial or any other gain from SRS. My comment or concerns address two issues. First is the preservation of a core of U.S. intellectual and technical competence in nuclear weapons to continue the high level of competence this area, Georgia and South Carolina have in safety and reliability. Since I retired nine years ago I have watched the Army be reduced in size to a point where the American people are beginning to question what happened to the high level of competence we've had in our Army in the past. I am fearful with the continued that -- I am fearful that SRS without a continued needed mission, SRS will begin to lose the high level that currently exists in Georgia and South Carolina and our competence and reliability in this area.

My second issue I wish to comment on has to do

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with all of the sites under consideration. Today at SRS we have a good future use plan. I am concerned that all of the other sites might not have a similar plan. Our SRS future use plan is an effort to -- to maintain the largest national wildlife research area in America. I hope the undeveloped areas of at all of the sites have that same protection for their wildlife. With SRS's future uses plan, all future development is restricted to only areas that have had prior development. No undisturbed areas are to be developed.

I wish that DOE would make this a DOE-wide policy. I know how developers prefer to build on undeveloped land and are reluctant to take land previously used and reclaim it for new development. Future development on all DOE sites start the trend in America to build new on old abandoned sites.

In closing I hope DOE quickly discards the deep bore hole alternative as discussed in their Storage and Disposition PEIS. Thank you for this opportunity.

MR. LAWSON: Thank you very much. Is there anyone else who would like to make a comment before we take a vote and then go to a break. Yes, sir.

PUBLIC CITIZEN: My name is Wayne Rogers. I have been a resident of this area for, I guess, 28 years now working on both sides of the river. And I have never

had any direct association with SRS before. I'm currently Director of Planning for the Lower Savannah Council of Governments and in that capacity I've had the opportunity to work more directly in recent years with some of the SRS programs.

But speaking as a citizen and having been here 28 years I think that the facility at some point in time has touched everyone's life whether it's through employment directly or indirectly, and they have been good neighbors. It's been, we feel -- or I feel and I think all my friends do, well-run, very conscientiously managed and we feel that it's even more so at this point in time and this is no reflection on what's come to pass. I think it's just the legislation, the regulations, and so forth that have occurred.

But having worked with various federal programs and state programs we -- I feel that the utilization of existing facilities out there, the maintenance of the core, the experience and technologies and the manpower -- and womanpower, if you will -- that we have in this community, it's been an integral part of our community. We feel that going forward -- the analyses that have been quickly made, have been made in a very conscientious and straightforward manner. I think that the things that are going on here now and have gone on the last few years in

an effort to inform the public, not only locally but nationally, are prime examples of that. And as a local person I think it's very important for us to have a better understanding of what -- what is going on with the facility and what its potential is.

And I think that we would like to see the recommendations implemented. We would like to see the SRS facility utilized for the programs are outlined in these three statements. We feel that the facilities are there, the land area is there, the expertise is there and that it is not only in the best interest of the community on the economic side, but nationally. And we appreciate the opportunity of having -- to be able to comment in this regard.

MR. LAWSON: Thank you, sir. Is there anyone else who like to make a comment? Yes, sir. Right up in the front here, Jim.

PUBLIC CITIZEN: My name is [unintelligible] Mohammed from Savannah, Georgia. One on my main concerns is that if plutonium can turn into, like, powder or dust form -- it states here in the Storage and Disposition of Weapons-Usable Fissile Material summary is that the African-American community, or you-all consider low income or minority, would be disproportionately affected if there was an outbreak.

HT12 (CONTINUED)

My concern is that I would not like to see -- I would like to see Savannah River Site close down or consolidated -- the plutonium and highly enriched uranium be consolidated at one site further -- a long way away from Savannah River Site. My concern once again is that if there was an outbreak or any kind of release, the low-income community will be the ones that will be affected. And that's one of my main concerns.

MR. LAWSON: Very good. Well, thank you for your comment. That's great. Yes, in the back someone, please.

PUBLIC CITIZEN: And so, based on that, I have a comment that I am going to make later, but I think that it's really important particularly under the NEPA regulations and in effort by the Department of Energy to really bring the public more into this discussion that at some point we look at what is the weakness of our outreach strategy that does not allow us to bring more -- a diverse group of people from this area to these kinds of meetings.

HT12/4 17.008

Because based on what the gentleman just said -- and I just saw that in the summary that it does, in fact, state that a disproportionate burden would be borne by minorities as it's defined here and low-income people in this area -- then they should be in greater numbers at this table to, one, learn what is at stake, what are the

potential dangers, what are the benefits, et cetera, et cetera, but also to be here to raise their own questions and concerns and then be prepared to help make recommendations that will be factored into the final decision.

HT12/4 17.008 continued

Because we can point to the successes of the plant, the positive role that it has played in this community, the fact that it is one of the largest employers, but there may be some other things that these regular citizens need to say that may in some way shape the final decision on these particular three EISs that's needed.

MR. LAWSON: Good point and thank you. Anyone else with a comment? Yes. Well, actually a couple hands in the back. First, we'll come to you, sir.

PUBLIC CITIZEN: One thing, I've been sitting here listening to this, about the Barnwell plant that was closed by President Carter, why can't we reopen that and do what's necessary to process a lot of these fuel rods and radioactive material?

MR. LAWSON: Okay. The question is, the Barnwell facility in South Carolina, why can't that be opened?

MR. RUDY: I'll -- I'll address that, I guess. Again, the Barnwell facility would be for reprocessing of

the spent fuel. And in terms of the Spent Fuel Standard, the issue here is to take it to a spent fuel form. There -- when we're talking about the surplus plutonium it is versus the amount of spent fuel that already exists commercially in this country, let alone the world. This is an extremely small percentage.

So this document does not envision reaching out all the way to reprocessing and then eventually recycling material. It takes it to the point where it is changed from a weapons shape and useable form into a spent fuel standard. Future decisions aren't precluded or prejudiced regarding that.

PUBLIC CITIZEN: I understand that but we have five reactors over here sitting full of spent fuel, been sitting there for five years. I think it's time we started looking at that, too.

MR. RUDY: I can just take that comment, but I understand that. What we're attempting to do is get on with the job of [unintelligible] without stopping work on those areas which have been going on, you're right, for several years, but -- to make progress in this area.

MR. LAWSON: Okay. This gentleman -- oh, no, I'm sorry. I called on your first here and then --

PUBLIC CITIZEN: I want to respond to that --

MR. LAWSON: All right.

PUBLIC CITIZEN: My name is Chris Noah. I'm the Land Use Coordinator at SRS for Westinghouse, but I'm here on my own time speaking for myself. And I've got a little presentation but I believe I'll save it for one of the breakout sessions. You don't have enough time right now. However, some of the things that were said require one slide just if I may --

MR. LAWSON: Excuse me. Will it brief?

PUBLIC CITIZEN: It will be very brief, yes. This has to do with the future use of SRS. And what I want to stress is -- and by the way, I just wrote a book on environmental uses of the Savannah River Site, or I'm writing, finishing up. So I've done a little research, it's just not off of the top of the head sort of thing. But what I want you all to keep in mind is that if we look at a primary use which is industrial, the -- it can be nuclear or non-nuclear, you can do a lot of things using the land use concept and multiple use, okay? You've got the primary use right here which would be the project that you all are talking about now. And as you go out from this primary area the protection increases.

HT12/5 04.004

So at least it's self-explanatory and I can explain it later. But I just want people to get that idea as we talk, that: Imagine 310 square miles and then the center is where most of your activity, your industrial

HT12 (CONTINUED)

activity occurs, and then as you go outwards you can do all sorts of things, all sorts of environmental things.

MR. LAWSON: Okay. I would just ask you and anyone else who has visuals or a written statement to leave a copy of it with us so that we can -- it can be included in the record. Yes, sir, you had a question regarding a previous speaker --

PUBLIC CITIZEN: A response, somewhat.

MR. LAWSON: Please, go ahead.

PUBLIC CITIZEN: Some 15 years ago I was retired from Allied Signal and prior to that I had been vice-president at the Barnwell plant. I haven't talked to anybody at Allied for ten years about that plant. In the previous [unintelligible]. But when Mr. Carter shut that down, to me that was a prostitution or complete avoidance in the NEPA process. There was a NEPA activity going on, so called [unintelligible] generic environmental [unintelligible] of mixed oxide fuel. It was underway. It had been extended from the [unintelligible] environmental to the question of MOX. He eventually got that off, issued an executive order, and by [unintelligible] NEPA Congress mandated that before any major -- any major action affecting the environment should be subjected to NEPA review. He ignored that, by-passed it. A couple of weeks ago [unintelligible]. But anyway,

as far as -- and I'm, as I said, I'm not speaking for Allied Signal, but if I had an investment in any company and they offered at this time to get into the nuclear fuel cycle making MOX fuel, reprocessing spent fuel, I would argue completely against it. Once the federal government can by the signature of one man tear down something like $250 million in private investment and just throw it away, no Record of Decision. They did this before.

I was earlier involved in the [unintelligible] process in the mid '60s. A private venture, we put about a million dollars into it. We thought we were doing well, it was an R&D thing, extremely highly classified. It was highly classified and, you know, it was all private. And that was cutoff. And their reason: If we continued to pursue this it might encourage other countries.

I talked to Europeans after that and their conclusion was you guys must have had something going or they wouldn't have shut you down. And so they all started work on it and now it's a very popular way of enriching uranium. It's all over the world. To cut off reprocessing in this country to influence other countries, you can see how successful that's been. And it's the only valid reason that I've -- it's the only reason I've really heard put forward to it, is to discourage others by setting a good example. It didn't work before, it's not

going to work this way. I don't like [unintelligible] version.

And incidentally, don't taken any of my comments as being against the people from DOE. To me they're marching to the beat of a drummer who is the President, they work for the President, they do what he tells them to do.

It's amazing -- I've been doing -- working -- attending a lot of the Citizens Advisory Board meetings lately, talking to people from the site who have contacted to DOE contractors at various sites. If you get them by themselves out in the hall at some of the meetings, at lunch or something like that, most of them share my positions the only way to get rid of plutonium properly is to burn it and recover what's left and burn it and go on down the road.

So I'm not saying this critical of anybody in DOE from the top to the bottom, I'm [unintelligible]. You mentioned Barnwell, and it touches a -- yeah, a nerve.

MR. LAWSON: All right. I appreciate your comment and I would encourage people to try to keep your comments focused as much as possible on these documents. We certainly don't want to limit your comments, but -- yes, sir, we have another comment here and then I would like to take a survey of how you would like to go --

HT12/6
14.069

continue on with the rest of the day.

PUBLIC CITIZEN: Yes. According to your summary report there was a calculation of potential risks of -- the citizens of Savannah are within the range of the site for getting cancer over a estimate of 50 years. Was there -- did you-all calculate the -- not only the potential release of radiation coming from the Savannah River Site, but did you-all calculate the other plants that's releasing other types of chemicals and other types of radiation or other forms of radiation in combined with that which is coming from the Savannah River Site?

Because if you haven't and you only estimated the potential risk of cancer coming from the Savannah River Site, then there may be a greater risk of low-income people getting the repercussion of what we economically are trying to benefit from the Savannah River Site.

MR. LAWSON: It's a question of cumulative impacts. Do you -- Andre Cygelman.

MR. CYGELMAN: I believe that it represents a cumulative impact, what would be projected to be operating plus what would be --

PUBLIC CITIZEN: I mean, that's not -- that's not clear. You're not exactly sure.

MR. CYGELMAN: Okay. Then we'll have to make it clearer.

HT12 (CONTINUED)

MR. LAWSON: Now, I would just -- Andre, I think -- you were talking about non -- sources that were non-DOE; is that correct?

PUBLIC CITIZEN: Right. Well -- yes, sir, combined.

MR. LAWSON: Right.

PUBLIC CITIZEN: Combined with --

MR. CYGELMAN: We would only be looking at what was from Savannah River, not anything outside the Savannah River area --

PUBLIC CITIZEN: Well, that's not -- well, my opinion, that is not fair to the citizens of Savannah because now you're only projecting what Savannah River Site, this is supposed to be a total -- this is supposed to be a total sum of -- assessment of what's going to -- a health assessment, what's going to take place.

HT12/7 14.070

So not only should it be calculated, the radiation that's going to be released from the Savannah River Site, but what is -- what is the total impact because say, for instance, we may have a better chance if the Savannah River Site was closed down, you know, instead of adding what radiation or what contamination would be released from the Savannah River Site, we may have a better chance of having a longer life span if we would close the plant down. So if there was a total calculation

HT12/7 14.070 continued

along with all the other plants along with Savannah River Site, then I think there would need to be more input in the study as far as health -- as health is concerned. It

MR. CYGELMAN: I understand your comment. I'll have to take it up with our [unintelligible].

MR. LAWSON: All right. Thank you. Anyone else with a comment now that can't wait -- yes, ma'am, please.

PUBLIC CITIZEN: I just find it ironic -- I understand under the Stockpile Stewardship and Management PEIS there's discussion about upgrading the pit production at Los Alamos and under the Storage and Disposition of Weapons-Usable Fissile Materials we're worried about what we're going to do with all these pits that we've got. It just seems kind of strange, we're going to make some more and we don't know what to do with these we've got.

MR. LAWSON: Okay.

MR. RUDY: I'll just -- I'll try to link here with Earl. What Earl's document is talking about is making the new pits to maintain the stockpile, the nation's national defense nuclear deterrent. A pit is not a pit. There's different types and forms and ways that you would make pits for special types of weapons design. Because the President under a national security policy has stated we will maintain the nation's nuclear deterrent,

Comments omitted from intervening pages here do not concern this EIS.

deal with that before we go on to some other issue.

Do you want to restate your concern here so we can --

PUBLIC CITIZEN: My concern is birth defects toward our children, the future children. I've read in the past how different radiations has affect births, pregnancies of mothers and I would like to know the same situation in this area.

HT12/8 14.071

MR. LAWSON: Okay. Earl or Jay, any thoughts on that?

MR. ROWS: Yeah, I mean, I can talk about it. I mean, it's true that radiation can, you know, cause cancers, can cause birth defects. And I would just point your attention to -- I hate to just throw you to a document but appendix E of our document discusses all the human health effects from radiation, okay. So that's where we discuss it, and the way we set up the EIS is we're trying to make decisions on -- for a given mission of where to site, you know, the mission, i.e., you know, the one thing that's considered at Savannah River is producing plutonium components. The other site we're looking at is Los Alamos out in New Mexico. And we essentially have to compare that site against this site as to -- from an environmental impact, what are the environmental impacts of doing that mission at Los Alamos

HT12 (CONTINUED)

what are the environmental impacts of doing it here at Savannah River. So, again, we look across the whole gambit of environmental impact, you know, how it's going to effect water, how it's going to effect air, and we also look at what the radiation effects are going to be. And the data is in the EIS, I can sit here and tell you numbers and things like that.

PUBLIC CITIZEN: No, I don't want that.

MR. ROWS: But that was our approach and it's for the general population producing plutonium components is a very, very low-risk mission. There's not a lot of radioactivity emitted when you do that mission. So essentially we don't see in our analysis any effects to the population from this.

MR. WHITEMAN: Yes.

MR. ROWS: And I can cite you numbers.

MR. WHITEMAN: Let me comment. My wife and I have two grandchildren in elementary school and the third may go very soon, and it scares us to death what our kids are -- you know, are seeing these days in the schools. You know the drug problems, I'm sure what you see every day, the violence. You know, it scares me to death to see what those poor boys are going through. Believe me the last thing I'm concerned about with those boys growing up is anything, like, related to radiation. And we certainly

live in New Mexico at a very high elevation so the radiation levels from the sun are much higher than here in Augusta. But believe me those radiation levels are not what I'm concerned about with those boys. I'm concerned about what you see in the schools as well.

PUBLIC CITIZEN: I have a broad spectrum of all of that but right now we're dealing with this aspect of it and this is why -- where my concern lies because we also had an outburst, I think it was Cumela [phonetically spelled] in Savannah, the explosion in Savannah. They're telling everyone, well, there was no harmful effect. I really don't believe that. I really don't believe it. Whether it's minute or what, I don't believe it was none. And this is what they're trying to stay like, I think what you're trying to tell me there now, it's such a small scale of effect from this wherein the crimes in school, the drugs and so forth. But I think enough different companies, like we have Cumela in Savannah. We have Union Bag in Savannah now. We have Savannah River Site, all of this putting pollutants in the air, I still think it's a concern in reference to our children.

Another thing is you said you live in Mexico in the high elevation. They have a tendency to always put it in the low income areas, also. This is with children that don't -- they don't practice prevention, health

prevention, no how. So all of these pollutants in the air is a downfall for them in that way, also. So out of all of that this is just adding another stringent toward the downfall of the youth today and I don't think we need anymore.

PUBLIC CITIZEN: We have friends in Los Alamos, too, and we're concerned about them.

PUBLIC CITIZEN: Yeah.

PUBLIC CITIZEN: And they live on a reservations. And it's a dump in their yard.

PUBLIC CITIZEN: Okay. This --

PUBLIC CITIZEN: So you can't say they're not affected at all.

HT12/9
17.009

PUBLIC CITIZEN: Could I just piggy back on that? I'm just curious is there additional government policies that certain demographic groups as being less valuable, more expendable, whatever the term may be in, you know, humane terms, as opposed to other populaces with regard to institutions like SRS?

MR. WHITEMAN: No.

PUBLIC CITIZEN: Two things, Barry. I'd like to -- I'd like to go back and give you my sentiments on the note you read a minute ago that our concern is jobs only. It's not. My judgment, it's not jobs. I want a viable, technical facility that is capable of moving into whatever

Comments omitted from intervening pages here do not concern this EIS.

HT12 (CONTINUED)

for destruction.

MR. LAWSON: So your concern is two points. One is the weapons being here and then second for the weapons that are being dismantled, whatever may be remaining from the weapons being here, both of these?

PUBLIC CITIZEN: Right. Right. And all that is out of control. I mean -- I mean, why -- you know, if it wasn't -- if it had been checked from the beginning seem like -- everybody said, well, okay, well, let have a ball with -- with making all these weapons, for what? Who was we going to kill with them? We have intention of killing a bunch of people or everybody live on the same planet.

And everybody live on the same planet so where -- what was in the minds of the people who designed this plan for weapons of destruction. You know, I mean, destruction of the world, so now we have it. I mean, we're storing that. We're going to destroy the world with just storing it, destroy the rest of the population, destroy the water supply, everything. We're storing it.

This is what this impact statement is about. This is what -- where we're at right now in this day and time. I mean, from a scientific point of view we find ourselves sort of stuck.

MR. LAWSON: Yeah. So let me translate this so that we can address this. Maybe you ought to talk about

what the source of the decision for having nuclear weapons is in the first place, and then second, what the options are for either storing the weapons here or what to do with this stuff that is taken from dismantlement.

HT12/10 22.011

PUBLIC CITIZEN: Right. Right. And -- well, I mean, not to go on, but everything seems to deal with policy. I mean, if we had some type of impact on the policy making from the beginning then now -- it seems as if now y'all are backtracking and want some type of input from the community, when we don't really -- y'all did it behind our backs all the time and now you expect us to think y'all not going to continue to do this behind our backs, I don't know. I'm sort of stuck on, why is it like that.

HT12/11 22.012

PUBLIC CITIZEN: You know, that's my concern as well. I was discussing with Sister [unintelligible] and [unintelligible] earlier and they already made that decision. What's our input, how do we know this is going to count. You already did what you wanted to do without asking for permission, you're going to continue doing that but this part is just really a bunch of bull crap, we're just here.

So how we know what's going to be the outcome and is the true outcome. If we say right now we don't want no more -- we don't want to deal with this anymore,

HT12/11 22.012 continued

is it going to take place, are you going to ship it somewhere else that's not going to happen where we don't want it to happen. Or it's already voted that this is going to -- hey, you're just here we already voted where it's going to go.

MR. LAWSON: Okay.

PUBLIC CITIZEN: So I guess a over-arching question would be, is there a -- does the Department of Energy have a preferred site and is that site SRS?

MR. WHITEMAN: Yeah, we do have a preferred site for plutonium fabrication and it's not at SRS.

PUBLIC CITIZEN: Okay.

MR. WHITEMAN: We did not plan to add anything to SRS as a result of this EIS.

PUBLIC CITIZEN: May I ask what is that preferred site?

MR. WHITEMAN: Excuse me.

PUBLIC CITIZEN: May I ask what is that preferred site?

MR. WHITEMAN: Los Alamos.

PUBLIC CITIZEN: Los Alamos.

PUBLIC CITIZEN: And that's covered in the EIS?

PUBLIC CITIZEN: Would that actually be consolidated where it was -- at the facility will be upgraded to store plutonium and high rich uranium. I

mean, is that one of the sites where --

MR. WHITEMAN: Let me refer you back to here. We plan to have some missions at all eight of these sites. In the case of Los Alamos this is -- the pit is a plutonium fabrication, we have planned to add there. Savannah River Site, the tritium facilities that are there will continue but we don't plan to either add or subtract any new missions from Savannah River. So the various missions associated with the U.S. nuclear weapons program are spread among these eight sites, and we don't plan to -- generally we don't plan to move any from one site to another as part of this. We're generally shrinking and reducing the size of what we have at those eight sites.

PUBLIC CITIZEN: Is there -- is there an effective way in which we as citizens can aggressively approach in trying to actually close down Savannah River Site and help you all focus on a particular site like, such as Los Alamos, where we can just totally do away with the Savannah River Site. Because we -- we're finding out through you alls research that African-American or low income people are the ones that's going to be accepting all the waste, you know. So what we want to do to protect our children and protect our families we want to do away with the total site.

Because even when I called the -- I called the

HT12 (CONTINUED)

national wildlife, the state national wildlife, and from not only the Savannah River Site but other plants that exist along the Savannah River, that actually destroy the natural habitat along the river. And if we allow these facilities, such as Savannah River Site, to continue to exist then we won't have anything, you know. And I mean, you'll get on a plane and go back to Mexico, everybody else will go their own way, and everybody else here we have to go back to our home town, you see. So -- to a nuclear dump in a sense.

MR. WHITEMAN: This particular PEIS, I -- because we're not looking at either adding or subtracting any missions from Savannah River, if you're concern is one of wanting to close Savannah River, I'm not sure there's a vehicle for addressing that through this PEIS. I think it's something -- certainly we're responding in the Department of Energy to policy guidance laws coming from our elected officials. And I think you're probably -- your best way to deal with that is through your elected officials, through your [unintelligible].

PUBLIC CITIZEN: Let me ask this. This brochure that came out that said the Department of Energy is interested in your comments. You all are familiar with this?

MR. WHITEMAN: Uh-huh [yes].

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PUBLIC CITIZEN: It's a one-pager, we actually have it just [unintelligible].

MR. WHITEMAN: I haven't seen that but I'm sure it came out as a result of this.

PUBLIC CITIZEN: Right. And on that -- and so I'm going to ask a practical question. At the bottom of each description of the PEIS it says, DOE is considering the Savannah River Site as one of the alternative locations for the long-term storage of materials for plutonium pit fabrication activities for the relocation of interim storage of plutonium pits from Pantex. Is this same kind of document being circulated at the other sites and the same thing reads, DOE is considering Los Alamos as one of the alternative on across the board so that this is --

MR. WHITEMAN: Yes.

PUBLIC CITIZEN: Because I tell you why you're probably hearing some of our questions framed in the way that it is is because we took this paper to mean that Savannah River Site was the preferred site. And so it's a little bit misleading, perhaps you can just put in parenthesis and there are seven other sites that are being considered as well, so that the citizens in this area don't get confused that they are being -- they're the number one choice and that while the PEIS is saying that

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seven other sites are being looked at, that we are, in fact, the preferred choice.

MR. WHITEMAN: When we were here last summer for the scoping meeting on this, we identified all of the alternative sites, at that time, we were considering. And as it turns out we didn't change any of those, alter them from last summer till now. But, yeah, of the things that you mentioned there, you know, the pit fabrication is the one that's being considered as a part of this PEIS and that's the one that we've already made a declaration or the secretary of energy did about six weeks ago, that our intent or our preferred action was to do that at Los Alamos. The others that you mentioned there in terms of interim storage and long-term storage plutonium are being addressed in the other two meeting rooms here. And in those cases they have not yet made a preferred alternative selection. So those -- for those missions, that I don't know where that will be -- who knows where that will be made. Savannah River is still a potential for those others.

PUBLIC CITIZEN: Yeah, that's why we were trying to get a sense of the integration of the three activities, you know, the Pantex, the stockpile and stewardship and the disposition.

MR. WHITEMAN: Well, it would -- yeah, I think

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that's why it's helpful having the three together because there is some overlap issues seen in that.

PUBLIC CITIZEN: Yes.

MR. WHITEMAN: The decisions relative to Savannah River, DOE -- relative for this PEIS -- DOE has made it's public declaration of its intent and that is to not add or subtract any missions from Savannah River. On the Pantex EIS, DOE has also indicated its intent and that is to keep those pits and the interim storage there at Pantex, not to relocate them here. For the long-term storage and disposition that's in the meeting room next door, DOE has not made any decisions there. And so -- and that won't occur until sometime in the next year.

PUBLIC CITIZEN: But --

MR. WHITEMAN: But those are the -- that's the one where there are potential decisions that would relate to Savannah River that have not been made yet.

PUBLIC CITIZEN: So the draft EIS would not have the DOE's preferred site and --

MR. WHITEMAN: Well, the --

PUBLIC CITIZEN: -- alternative decisions?

MR. WHITEMAN: The draft does not. The -- you -- DOE -- the way these EISs work, if you know what you plan to do you should tell people. But if you're not sure well, you, you know, you keep studying it. Well, in

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HT12 (CONTINUED)

the case of this PEIS, we determined, based on all the studies we had done or what we wanted to do, and so we told people. For the storage and disposition one next door they're still studying the matter and there's no declaration of what do we want to do. And so --

PUBLIC CITIZEN: Well, there will have to be another one after the decision is made, once it is.

MR. WHITEMAN: Well, the final PEIS that will come out this fall, at that point we have to say what we would intend to do.

PUBLIC CITIZEN: And then you have to do another EIS to say --

MR. WHITEMAN: No.

PUBLIC CITIZEN: -- what are the consequences of doing that action at the site you want to do it at.

MR. WHITEMAN: No. That would contain all of that information.

PUBLIC CITIZEN: The final PEIS?

MR. WHITEMAN: Yes. Yeah. But -- so, anyway, for two of the three DOE has made it's declaration of what it plans to do because, you know, we knew so we told people. And in those cases there was no change of new or subtract or add to Savannah River. The third one that is still up in the air and it could involve new commissions here.

HT12/12 23.029

PUBLIC CITIZEN: May I ask a policy question?

MR. WHITEMAN: Yeah.

HT12/12 23.029 continued

PUBLIC CITIZEN: By what process do you valve strategic concerns against potential negative impact to local populations?

MR. WHITEMAN: Well, that's -- that's what this EIS is trying to do. I mean, that -- that's the vehicle the government has for addressing these sorts of things.

HT12/12 23.029 continued

PUBLIC CITIZEN: I was just wondering was any particular formula, equation, process?

MR. WHITEMAN: Well, there's a -- for every area that gets looked at in an EIS, whether it's water, air, socioeconomic impacts, there's a standard way of doing that that has developed in this country over the last 15 years so that there are people who are professionals that work in those particular areas and that becomes sort of the standard format.

PUBLIC CITIZEN: But are you all working with any type of independent entity that's not in total opposition to DOE but, just in case -- you did a case study, let's say for instance, cancer. And have you ever brought -- have you -- are you all bringing out -- bringing in outside resources to say well, this is not what I'm -- this is not what we're finding.

HT12/13 23.030

PUBLIC CITIZEN: Independent peer reviews.

PUBLIC CITIZEN: Right.

PUBLIC CITIZEN: Of a sort.

PUBLIC CITIZEN: Right. So it just won't be coming -- just from strictly DOE because we've been -- we've been --

MR. WHITEMAN: Well, the way we've dealt with that typically over the last decade or so, well, sometimes with sites going back 25 years, we generally tried to deal with an organization that people in the community can trust, and because, you know, I know, it's hard whether you live in Texas or New Mexico or South Carolina to trust somebody coming in from Washington saying, well, I'm from the government, you know, you should trust me.

So we try to get somebody that -- some organization that people at the local level can trust to be an independent body to overview those sorts of things. In the case -- I know in New Mexico, you know, we -- we fund the State of New Mexico's environment and health organizations. We do that sort of work for us as well as the Environmental Protection Agency.

I suspect here in South Carolina that the State of South Carolina and perhaps Georgia, as well, are funded to provide an independent view of the air monitoring, water monitoring and, you know, all those effects around here. I know the Center for Disease Control in Atlanta

has been contracted to do independent health effects studies around our sites.

So we've -- it's hard to find, you know, an organization that everyone believes is truly independent because there will always be somebody say, well, you say trust them but I don't, you know, so -- but we've hired every group that we think are credible people that can come in and look at how we're doing --

PUBLIC CITIZEN: Well, now, see, that's where the problem may be at because you all hired them, you know. I mean, we had, like, say, for instance, Citizens for Environmental Justice based on the fact that they're -- we're raising some very serious questions then you all should be able to fund us with money for us to be able to go out and find out own independent study -- own independent researchers, the individual that will research our problem for us. And then we could sit at a round table and then y'all -- you-alls side and our side can sit down and see can we come up with an answer, you know.

HT12/13 23.030 continued

But just for you all to appoint us someone to say, well, I got this person here you can call him and he'll help you out. Man, that's not going to work because that's no different than you all sending out doing the independent research yourself.

MR. LAWSON: We have two other people who want

HT12 (CONTINUED)

to put their oar in the water on this -- there in the back there.

PUBLIC CITIZEN: Well, I think it's worth noting that the preferred selections that are announced are not always the ones that are final choices, and that they're not even always alternatives that were in the first draft. That there is input from this -- these meetings and as an independent that makes it through the process and it gets looked at and sometimes selected, they get rewritten or there are supplements that are issued.

PUBLIC CITIZEN: Can you give us an example of --

PUBLIC CITIZEN: Some of the spent nuclear fuel in the basins, in the disassembly basins here in the recent record of decision for that, there was an additional month that -- or so longer maybe that was added and there were new alternatives that were not in the original document.

PUBLIC CITIZEN: And if there -- if you all say, for instance, you all decided to use Savannah River Site, what can we do as citizens to say that we don't want that? If you -- in the record of decision and we -- we'll -- and we don't agree as citizens with that, what proper step do we need to take to say that we're not -- what proper step do we need to take to reverse that decision?

PUBLIC CITIZEN: May I interrupt here? Are you familiar with this citizens group that was formed recently with Savannah River? They've had meetings down in Savannah that a number of you people that are members of it, are you familiar with that group?

PUBLIC CITIZEN: The Citizens Advisory Board?

PUBLIC CITIZEN: Yeah.

PUBLIC CITIZEN: Yes, we're familiar with that.

PUBLIC CITIZEN: Okay. Are you participating in that?

PUBLIC CITIZEN: Yes, we do.

MR. LAWSON: Are you suggesting this is one place to make --

PUBLIC CITIZEN: This is the place for the citizens to have a voice. Now, they've been -- I'm not a member of it. They have been able to change DOE's mind on some of the things they did. I read the minutes of the meetings, I've attended very few of them. But they meet sometimes in Savannah, sometimes in Barnwell, sometimes here, but that's your opportunity to participate at a very influential level. Now, they're your neighbors.

MR. WHITEMAN: Yeah. Let me comment if I could. The question you raised is a dilemma in a democracy, you know, of how do you -- I think it's very valuable for government organizations, whether they're DOE or whatever,

to stand up to and talk and answer questions and make sure that the people who live in the communities that are affected by the government's actions understand and have an opportunity to provide feedback. The dilemma then is of where -- you will never find everyone in a community that agrees.

I mean, there will always be somebody that said, well, I'm against that action, you know, I don't like you to build the dam or I want you to build that dam and you're not going to or I want you to do this. I think it's incumbent on the government as much as we can to make sure that we communicate our intent that we listen to people and understand their concerns and factor those into the information that we provide to the people who are elected to make decisions for the government.

But at some point, you know -- and that's why we're here is to make sure that we understand what are the concerns and issues and questions the people that live around Savannah River might have.

But you should understand as well this is a democracy and the -- we have elected officials for us that ultimately make those decisions, you know, I don't. I work for the Department of Energy. I'm responsible for making sure that I provide sound advice and judgment, you know, as -- for the things I am responsible for and that

that advice and judgment gets relayed to people who will then make the decisions.

But we do live in a democracy, I mean, it's -- I think it's one that allows people to provide their point of view but it doesn't always mean that every point of view is the one that the government will follow.

PUBLIC CITIZEN: Well, I think I've got a follow- up question. Excuse me, sister, and I'm -- I just -- two things. One is that a more narrow question is, is there a way to challenge the rod, not to necessarily change it although it may get changed in your process but his specific question is what is the procedure to challenge a rod if you feel that that decision is against your community.

HT12/14
23.031

MR. WHITEMAN: Yeah. Jay, can you answer that? Yeah, there is a --

MR. ROWS: Yeah.

PUBLIC CITIZEN: This is a more answer to --

MR. WHITEMAN: Yeah, and there is a process for doing that and Jay --

MR. ROWS: Essentially when the NEPA was written, you know, the legislature set up an avenue by which -- and it's really through the administrative procedure that I -- which NEPA falls under, it's kind of complicated, but essentially when the decision makes -- or

HT12 (CONTINUED)

when the government makes a decision on a NEPA document, a record of decision, any potentially effected citizen can challenge that and just file a lawsuit that DOE violated the NEPA act, and --

MR. WHITEMAN: So the --

MR. ROWS: We get sued, I don't want to say regularly, but Department does get sued and --

MR. WHITEMAN: And we win some and lose some.

MR. ROWS: We win some, we lose some.

MR. LAWSON: By this -- short of that though, isn't there -- when the final EIS comes out there's 30-day period in which, before the decision is made, extra written pressure or whatever could be --

MR. ROWS: Oh, sure. I mean, that's why we have a wait period between the final and the official record of decision is so that people can weigh in on what's in the final EIS and that may sway the decision maker in our case that's the secretary of energy and then she'll make her decision. But once the record of decision is made, really your only practical recourse to change that is through the legal course.

MR. LAWSON: I just wanted to get back to this lady's point over here, that just because something is preferred doesn't necessarily mean it will be accepted. And so that if you need -- you shouldn't just say, well,

he said it was the preferred and then all of a sudden that gets changed; if you have feelings about the preference whether you agree with the preference or you don't, it's important to weigh in in what your point of view is. Because I mean --

MR. WHITEMAN: Well, I think you should take the preferred alternative as an indication that, you know, the government didn't wait until the last minute and say, here's what we plan to do. It's based on everything we knew at this point, the consensus was, this was the decision that was most likely to be made and therefore we should tell people that. I mean, it's not the final decision but it certainly does -- the best knowledge you know today.

MR. LAWSON: Excuse me, this woman over here has been quite patient.

PUBLIC CITIZEN: Yes, she has.

PUBLIC CITIZEN: I was just wondering, I think that these information sessions are great and I hope that you take into account what people say but I must say your own graphics would indicate that you don't because this arrow for public information and involvement just goes off to nowhere.

[Laughter].

And I really wonder is that the real

Comments omitted from intervening pages here do not concern this EIS.

PANTEX SITE-WIDE EIS

QUESTION AND ANSWER SESSION

- - - - -

HT12/15 12.005

PUBLIC CITIZEN: What is the intent of the hole the square?

MS. FOUNDS: The square, oh. That is, if you will look at this partly, you have these -- and they unload them, but that hole is where the beams or the -- let me try this again. This is a little bit different in that the actual mockup is such that when you have the automated guided vehicle, there's a boom that goes into that hole there. And this forklift can [unintelligible] either swing this boom and swing it around and place it -- these things on here. So that's really what that is for. It's sort of a guide to place it and it's also where the boom goes in terms of up there.

PUBLIC SPEAKER: Thank you. The example didn't look like that though.

MS. FOUNDS: Yeah, it doesn't, but our video tapes do show the automated vehicle and how that boom works.

HT12/16 14.072

PUBLIC SPEAKER: I assume that's gama. The worker at what distance for that 6 rem?

MS. FOUNDS: The worker -- the uninvolved worker's considered to be at about a hundred meters.

HT12 (CONTINUED)

That's an uninvolved worker. What you're doing right here is looking at the exposure based upon how operations are currently performed at the Pantex Site to get an overall dose to people handling it, because there are people that are going to be in contact, you know, with the containers themselves, putting them on pallets, forklifts, et cetera, to handle them to get them placed into storage. So that's what this corresponds to, whereas this corresponds to noninvolved workers, people are involved with the operation itself, and then starting to be members of the public with this one being if a person was actually at the fence line, what would that exposure be. So you're getting the worse possible of all the public.

PUBLIC SPEAKER: I guess a forklift puncture --

MS. FOUNDS: Uh-huh (yes).

PUBLIC SPEAKER: -- a forklift driver is maybe six feet away from the plutonium.

MS. FOUNDS: Uh-huh (yes).

PUBLIC SPEAKER: Now, he's going to be 6 rem at that distance?

MS. FOUNDS: I think that that's correct because you're -- remember that --

UNIDENTIFIED SPEAKER: Yeah, this is alpha.

MS. FOUNDS: Yeah. You're talking about the material itself getting out.

PUBLIC SPEAKER: That's the whole pit getting out?

MS. FOUNDS: It was a portion of it because we took a fairly conservative case in terms of how much of the material. You have to remember that these are like balls and we were actually, you know, in the scenario looking as if it could actually almost be pressurized and get some portion of that out and then a smaller portion of it being the 10 micron range, for instance, that could actually be inhaled.

UNIDENTIFIED SPEAKER: That's not an instantaneous dose, either.

MS. FOUNDS: Right.

UNIDENTIFIED SPEAKER: That's over a fifty year period assuming that he inhaled part of the dose and would have resided there over that long period of time.

PUBLIC SPEAKER: That's not very realistic, is it?

UNIDENTIFIED SPEAKER: It's not very realistic that it would happen, but it potentially could happen.

PUBLIC SPEAKER: Yeah. The sky might fall too, though.

MS. FOUNDS: Well, actually these -- well, as I said, this is a dominant one with the exposures associated with, but the probability of that accident happening I

think is like one times ten minus a fifth, somewhere around in that. So it is an improbable one and the document goes in and looks at it as a risk perspective, which is both the consequences plus the probability of it actually happens. The document does look through that. Sir?

HT12/17 12.006

PUBLIC SPEAKER: Isn't the newer method of staging, it doesn't have a forklift rider on the forklift?

UNIDENTIFIED SPEAKER: There is a point that it does.

MS. FOUNDS: But there are points at which you do use the forklifts but, again, if you go and look at the videos it shows you of the things being placed, there's a boom and there are censors on the front of this boom that would stop its travel, for instance, if it was hitting up against a canister. And those 18400A's they're, what, three-quarter inch stainless steel is the inner container and a quarter inch stainless steel is the outer container. And I think Kevin can show you the mockup of one of those 18400A's. Did I get the dimensions on it right?

UNIDENTIFIED SPEAKER: Yes, but they're backwards. The inner one is the quarter inch -- yeah.

MS. FOUNDS: Okay, and then there's three-quarter inch on the other one, okay.

PUBLIC SPEAKER: I have a question. I missed --

I've apparently misunderstood what you said. You said when I load these things I'm going to put them in a Type A container.

HT12/18 12.007

MS. FOUNDS: Type B.

PUBLIC SPEAKER: Type B container, okay, fine. Now, you never said I'm going to take them out of that Type B container.

HT12/18 12.007 continued

MS. FOUNDS: Uh-huh (yes).

PUBLIC SPEAKER: So I'm assuming they're stored in a Type B container which is suitable for drop for 30 feet --

HT12/18 12.007 continued

MS. FOUNDS: Yes.

PUBLIC SPEAKER: -- or puncture and so forth.

HT12/18 12.007 continued

MS. FOUNDS: Uh-huh (yes).

PUBLIC SPEAKER: How in the world is a forklift going to ram a hole through it?

HT12/18 12.007 continued

MS. FOUNDS: It's a very conservative estimate, sir.

PUBLIC SPEAKER: I just -- Bob, I agree with you.

MS. FOUNDS: We try to ban the accident scenarios and as you can see the consequences are not great and we are looking at the probabilities of those accidents, and they're not large for this particular type of an operation.

HT12 (CONTINUED)

PUBLIC SPEAKER: But, anyway, to pick up the 6 rem and say that's what they're going to be exposed to --

UNIDENTIFIED SPEAKER: Less accident.

PUBLIC SPEAKER: And it's utterly ridiculous.

MS. FOUNDS: Well, I think, as I said, we go through and we analyze these things. We analyze them as conservative --

PUBLIC SPEAKER: Yeah, and that's the game that's been played with these EIS's and you're not going to change it and I'm not going to change it, but somehow we've got to put a little realism in these things.

UNIDENTIFIED SPEAKER: But that is real. In other words, that is the most credible type of action that could occur. And the probability of that accident, as Nan said, is very small but we have to report what the probability is and should it occur, what are the consequences, and that's all in this report.

PUBLIC SPEAKER: Has it ever occurred?

UNIDENTIFIED SPEAKER: Not that I'm aware of.

HT12/19 12.008

PUBLIC SPEAKER: Okay, how many forklift operations has occurred?

MS. FOUNDS: But the probability is, is that what we're saying, like the ten and the minus fifth is that it would not -- it would occur like once in a hundred thousand years. So, therefore, the probability of it

happening within fifty years is, you know, not having see that would be consistent without probability.

UNIDENTIFIED SPEAKER: Well, and we'll take the comment and see if there's some opportunity to phrase it differently in the EIS so that it puts a dose of reality in --

UNIDENTIFIED SPEAKER: We're going to get it both on the board, too, so we'll bring that up in summary.

UNIDENTIFIED SPEAKER: Let me get one more slide. We've got about ten minutes.

MS. FOUNDS: Okay, so these are the -- again going back to --

PUBLIC SPEAKER: Let me ask a question. You know all those things are in the EIS, we can look at the right?

MS. FOUNDS: Uh-huh (yes).

UNIDENTIFIED SPEAKER: I guess I misunderstood your words. Back in the beginning you said that our preferred alternative is continued operation. I don't find the preferred alternative in here. There's a proposed alternative.

MS. FOUNDS: That is -- it is a proposed, but it is also the Department saying that it is the preferred alternative. And it is not in there though.

PUBLIC SPEAKER: Where have they done that?

UNIDENTIFIED SPEAKER: It was in the Federal Register Notice, correct?

MS. FOUNDS: Yes.

UNIDENTIFIED SPEAKER: Just to clarify that again and make sure everybody -- I don't know -- so the preferred alternative is the proposed alternative and that's been in the Federal Register Notice as recently?

UNIDENTIFIED SPEAKER: When we issued the EIS we put the Federal Register Notice --

UNIDENTIFIED SPEAKER: At the same time, okay.

PUBLIC SPEAKER: Does Pantex conduct a peuter storage operation in facilities that are considered to be

HT12/20 03.003

nuclear facilities, rated nuclear facilities and, you know, that conform to the DOE orders for nuclear facilities 6431A, for instance?

MS. FOUNDS: Yeah, there's a lot of debate about whether or not the storage facilities are a nuclear facility, but the do conform to the SARs for instance that are out there and we have --

HT12/21 14.073

PUBLIC SPEAKER: You have done SARs on those facilities?

MS. FOUNDS: Uh-huh (yes). On the Zone 4 area there are SARs. And they went through an operational readiness review in order to be able to store out in those facilities. And for the past, I don't know, thirty or

forty years, we have been using those -- the similar magazines for weapons storage.

PUBLIC SPEAKER: Plutonium vulnerability assessment.

MS. FOUNDS: Excuse me?

PUBLIC SPEAKER: You can fix -- familiar with

HT12/22 14.074

plutonium vulnerability assessment done in November of '94? It says that operations of storage activities are continuing with a -- on the basis of a bio instead of approved safety analysis reports.

MS. FOUNDS: Actually, I mean the whole Department is going through a process of upgrading to what are called 5480 DOT 23 SARS and all of the sites have bios. They all went through and did an assessment and put up bios as we all upgrade to those DOT 23 SARS. The time 4 happens to have a SAR that was approved recently.

UNIDENTIFIED SPEAKER: It was approved in December '92 and they are currently going through and update the DOT 23 Standard, which I believe is on sched to be completed by the end of this year.

PUBLIC SPEAKER: Can you put that in English? You're talking to the public now. That's what this meeting's suppose to be. Upgrading to the SARS something or other.

MS. FOUNDS: There are certain requirements in

HT12 (CONTINUED)

looking at -- in any facility. You go through very much like this EIS. You look at the hazards. Obviously there are hazardous material out there. There's plutonium in what is called the Zone 4. I don't have any of those U-graphs that showed Zone 4 with us, do I?

UNIDENTIFIED SPEAKER: Uh-uh [no].

MS. FOUNDS: And obviously, as I said, the hazard out there is the plutonium and the possibility of dispersing that plutonium. From normal handling accidents there's not much of a risk of dispersing it. The greatest threat out there is the fact we also have weapons out there and you might have an aircraft impact into those weapons magazines or into those pit magazines and creating a possible dispersal accident. So what happens in a SAR is you go through and you analyze all those different scenarios, how credible they are, what the probability of an accident is, and then the consequences from those things. Very much like what we're doing here in looking at a transportation accident because that's what we would be doing to transport the pits here, and then what, you know, you're storing the pits out here, how likely is an earthquake, you know, that would potentially disperse some of the plutonium in this area.

PUBLIC SPEAKER: I was surprised we only had a few minutes to discuss, if we're moving on to the others,

and I've got a lot of comments that I'd like to make. I guess I'm going to have to put them in writing.

MS. FOUNDS: Please, go --

UNIDENTIFIED SPEAKER: Just keep moving on. Keep going.

UNIDENTIFIED SPEAKER: You're welcome to stay.

PUBLIC SPEAKER: Are you going to -- if I stay you're going to have to hear me.

PUBLIC SPEAKER: I've got a few more I want to throw in too, Chris.

UNIDENTIFIED SPEAKER: No, we -- we've got time now. We're going to just continue on. If you feel --

UNIDENTIFIED SPEAKER: Let's just take comments, that's it.

UNIDENTIFIED SPEAKER: Yeah, just keep going.

PUBLIC SPEAKER: I'm surprised as the Westinghouse Land-Use Coordinator that I didn't know that P-Area was proposed, okay. It's probably a good idea but I chair something called the Land-Use Technical Committee and nobody came to me and said, golly, gee, we would like to put this somewhere, okay. That's the first thing.

MS. FOUNDS: Well, we have a site point of contact.

UNIDENTIFIED SPEAKER: It's also in NEVA.

PUBLIC SPEAKER: I know and I should be talking

to that person and they'll kill me 'cause I'm here as a private citizen now but --

MS. FOUNDS: No, that's fine. I was just going to say we have been interacting with the Site.

HT12/23 23.032

PUBLIC SPEAKER: The other thing is on your evaluation list I had a question about why you didn't discuss things in detail and why you did. For instance, the facilities in infrastructure at SRS are excellent, okay.

MS. FOUNDS: Right.

HT12/23 23.032 continued

PUBLIC SPEAKER: But it says it's not discussed in detail.

MS. FOUNDS: Well --

HT12/5 04.004 continued

PUBLIC SPEAKER: Are you all aware of this Land-Use Baseline Report that was put out?

MS. FOUNDS: Uh-uh [no].

PUBLIC SPEAKER: Well, I want to submit that for you all to look at and read, okay. It tells -- it's a synopsis of what the attributes of the Site are. Also, it talks about things like you were talking about with the fault line and you said it's not in a fault area. It's near a fault area, but it's capable versus noncapable and that's something you have to look at, but here it says you didn't discuss in detail. One thing is the positive, the Site doesn't have a wind -- a consistent wind

[unintelligible], okay, so if there is an accident it's not going to head over or down to Savannah or it's not going to go over to Evans, Georgia or whatever, okay. because it's not predictable.

MS. FOUNDS: Right.

PUBLIC SPEAKER: Intrasite transportation, the railroad, one advantage of P-Area is that it's right next to a railroad classification yard, if you're using railroads. I don't know if you --

MS. FOUNDS: We're not.

HT12/24 17.010

PUBLIC SPEAKER: Okay. And then I had another question about the list, how come environmental justice is broken out and it's not included under cultural resources or socioeconomic resources? And having taught NEPA, we normally would put it under there and not have it by itself. And I noticed it was discussed in detail -- there are only two things discussed in detail and the rest is not. And that might be my --

MS. FOUNDS: Let me go back. One of the reasons that we selected Savannah River is because it had those assembly areas. They were sizemically qualified, those types of things. There was a large warehouse. You could have almost picked up the Pantex operation and put them in P-Reactor. So when I say we didn't discuss them in detail, we evaluated them but there was no need to discuss

HT12 (CONTINUED)

them in a great deal of detail because the facilities --

PUBLIC SPEAKER: Well, this is misleading that way, then.

MS. FOUNDS: -- you know, and okay. But in terms of that we do not evaluate them in a great detail, but in the document each one of those areas is addressed. For instance, we're putting it in the P-reactor. Those are fine facilities. You would not have to modify them so, therefore, there's not a great deal of action necessary in order to consider them, you know, you don't have to construct, et cetera.

UNIDENTIFIED SPEAKER: And there's a chapter devoted just to Savannah River to discuss all of those areas. But then we come to a conclusion, too, that there's no environmental impact and that's why we don't go into the detail. We don't need --

PUBLIC SPEAKER: Okay, but what I'm saying, this is misleading.

UNIDENTIFIED SPEAKER: Okay, thank you for pointing that out. We appreciate that.

PUBLIC SPEAKER: And, Rick, I'm sorry. Go ahead. I had my two minutes.

HT12/25 14.075

PUBLIC SPEAKER: I think that also the other vulnerability noted for Pantex was that the -- Pantex is the only site, the only major plutonium site that is

HT12/25 14.075 continued

identified as having a single barrier plutonium with environmental public. Now, you know, that's a fact, but the book.

UNIDENTIFIED SPEAKER: What do you mean?

PUBLIC SPEAKER: I'm curious what's being done to upgrade and correct that before you talk about putting more there. Also, I have the general comment that storage at Pantex is like a lot of other DOE programs that really is only interim action. It really doesn't lead to anything. These pits, you know, eventually are either going to be in the strategic reserves, stockpile management program or the disposition program, and really

HT12/26 01.018

you're a lot better off with bringing them, you know -- my particular bias, of course, is bringing them to Savannah River where you get this energy of feeding into other programs because Pantex is not an operating plutonium site. Well, you just say, well, we don't really have nuclear facilities, we really don't have plutonium facilities. To do these other missions you need those. So my general comment is that you ought to look at putting them at a functional plutonium site, which there really only happens to be one. Also, another subject is there tritium involved in any of these pits? I don't see any discussion of health impacts related to tritium.

UNIDENTIFIED SPEAKER: No, it's part of the

disassembly, the reservoirs are taken off and shipped back to Savannah River. And we are just considering in ours the impacts of Pantex of continuing to ship that back to the Savannah River Site. Did you want me to try to answer some of your questions?

PUBLIC SPEAKER: Well, most of them are related to the aspect of nuclear facilities, plutonium sites, and in particular the vulnerabilities that are noted and if you'd like to address those, go ahead.

UNIDENTIFIED SPEAKER: Well, going back to the one -- well, let me start out with when you're talking more like a long-term storage, we're looking at it for an interim basis for the next five to ten years while you make those decisions for the PEISs as to long-term storage and those things. So basically, you know, operations are to store them until these other decisions can be made. That's one point I wanted to make. When you talk about vulnerabilities at the site, actually the pit is encased in metal. That's one barrier. The container is a second barrier. And then you have the structures that they're in that are containment but do preclude some of the accidents or some of the consequences out at the Pantex Site. So it is possible to go ahead and store those pits at Pantex. But you're right in terms of there is no processing out at the Pantex Site.

PUBLIC SPEAKER: That's, you know, the structures are ventilated, the atmosphere --

UNIDENTIFIED SPEAKER: And that's -- they are not in containment.

PUBLIC SPEAKER: And, in fact, they're [unintelligible] out in here that the storage container, you know, is not sealed so it's not a containment barrier either.

HT12/27 12.009

UNIDENTIFIED SPEAKER: Wait a minute. The storage container is not sealed?

PUBLIC SPEAKER: ALR8s being unsealed the AL8 container does not --

UNIDENTIFIED SPEAKER: They're sealed containers. And the other point is that regardless of which option we're going to the AT400-A, which have the pit which is flat, the inner vessel which is welded, and then you have the outer canister. So actually that's layers of containment there and that's what we're going to in terms of the AT400-A.

HT12/28 23.033

PUBLIC SPEAKER: What I'm hearing Rick say to you is that he's reading another DOE document that's not badly out of date and it's different than what your EIS is saying and what you're telling us here. And in order to go forward from here you need to take that document and to make a review against your EIS, correct and modify as

HT12 (CONTINUED)

HT12/28 23.033 continued

necessary. Isn't that what you're saying, Rick?

PUBLIC SPEAKER: I think that's certainly appropriate.

UNIDENTIFIED SPEAKER: We will look at those documents, but we're also very familiar with how the operations are at the Pantex plant.

PUBLIC SPEAKER: But not how plutonium is stored. The new 3011 for example --

UNIDENTIFIED SPEAKER: But I have gone out and I watched how they take the weapon apart, where they put it in there. We have this --

UNIDENTIFIED SPEAKER: We have this and we'll visit the issue.

PUBLIC SPEAKER: May I make a couple of comments?

UNIDENTIFIED SPEAKER: Certainly.

PUBLIC SPEAKER: I think these are comments. Basically on page 533, you're talking about the worker at Savannah River health consequence and which you show on your chart up there at four ten and a minus three as the maximum exposed individuals. But you say the probability of a cancer from all causes to the general public is estimated to be twenty percent which implies that six of the thirty workers are going to develop cancer. Now, that doesn't sound like an insignificant consequence to me.

HT12/29 14.076

HT12/29 14.076 continued

That sounds like a significant consequence.

UNIDENTIFIED SPEAKER: But that's -- what that is is saying that twenty people in the United States, regardless of what they're doing, will over their lifetime once that group, all of them, not twenty percent of them, will have died from cancer.

UNIDENTIFIED SPEAKER: That's from natural cause. Let me comment that the paragraph is unclear. That's what I'm saying, okay. The paragraph is unclear. I know what it means -- what it should mean.

HT12/29 14.076 continued

UNIDENTIFIED SPEAKER: Do you have the page number for that?

PUBLIC SPEAKER: Yes, it's on page 533.

UNIDENTIFIED SPEAKER: Thank you.

PUBLIC SPEAKER: Another comment is you claim here and also in the document of the Savannah River section fully evaluates environmental justice. And I read the two or three pages on environmental justice and there are a lot of facts, there are no conclusions, okay, and -- now, your companion EIS over here, the stockpile maintenance -- stewardship, makes all kinds of erroneous conclusions on environmental justice, okay. But you don't make none. And yet you claim you --

HT12/30 17.011

PUBLIC SPEAKER: At least they weren't erroneous.

PUBLIC SPEAKER: Yes, you completely analyzed them. The third comment is the comment that a large fraction of the accident analysis is directed towards airplane accidents -- airplane crash dispersing material. And you go through that at Savannah River which is very improbable and low consequence should it happen, and you consider that a bounding accident. I question whether it is in fact a bounding accident for a Class I facility like the P-Area reactor. I don't know that you've analyzed the bounding accidents.

HT12/31 15.042

UNIDENTIFIED SPEAKER: The bounding accident was a forklift accident.

PUBLIC SPEAKER: Okay, now then you're coming to my next point. It is the conservatism that you put in the bounding accidents are way too conservative. They need to have some credibility even though they are bounding accidents. You can't just assume like the safety analysis does everything is the worse, NEPA doesn't allow that. NEPA says that you will develop reasonable but bounding accidents and I concluded from reading it before Bob raised the question here earlier in the day that the accidents were not reasonable. They were bounding, certainly. You know, I could have said that the guys consume each of the whole -- or inhale the pit and, therefore, that's bounding, but that's certainly not the

HT12/32 23.034

HT12/32 23.034 continued

intent of a NEPA process. I find -- the last point that I want to make is probably the more important one to Savannah River and that is that the process for establishing the program for Pantex should be considered to be totally moved to Savannah River Site or should be evaluated as part of the Environmental Impact Statement, not to move 8,000 or 20,000 pits for interim storage to Savannah River Site.

UNIDENTIFIED SPEAKER: When you say the entire program, what do you mean by that?

PUBLIC SPEAKER: The pit operation --

UNIDENTIFIED SPEAKER: Assembly, disassembly operations.

PUBLIC SPEAKER: Assembly, disassembly.

UNIDENTIFIED SPEAKER: That's being considered in the Stockpile Stewardship EIS. We do not --

PUBLIC SPEAKER: I've not seen that as an option.

UNIDENTIFIED SPEAKER: Right, but that's considered within that EIS whether it should be -- that mission should be moved or not.

UNIDENTIFIED SPEAKER: There is a section that talks about the relocation of operations other than storage. When they did that initial analysis of alternatives they concluded that there was only one

HT12 (CONTINUED)

possible place that they could relocate the operations at a reasonable investment and that was for Nevada. That was analyzed but it is not a preferred alternative.

PUBLIC SPEAKER: It doesn't matter where --

PUBLIC SPEAKER: Is this [unintelligible] that it's going to have to take place anyway?

UNIDENTIFIED SPEAKER: Just a second. Let's finish up with this question.

UNIDENTIFIED SPEAKER: We will take your comment and also give it to the Stockpile Stewardship.

PUBLIC SPEAKER: Thank you. I'm going to make the Stockpile Stewardship --

PUBLIC SPEAKER: You don't have to.

UNIDENTIFIED SPEAKER: I assumed so but, anyway, that will be a crosscutting issue.

UNIDENTIFIED SPEAKER: And before we get to your question I just wanted to check and see because we're not -- I might get in trouble with Mr. Barry in a few minutes but we want to continue this.

PUBLIC SPEAKER: I'd like to --

UNIDENTIFIED SPEAKER: Yeah, and we have -- how many people do we have still wanting to provide comments? I just want to get a feeling so I can tell him how long it's going to take? More comments, okay. I just -- good, let's keep going. Go ahead. Thanks.

HT12/33 14.077

PUBLIC SPEAKER: Work chart is totally confusing to me. And how a dose rate of one rem per year at one meter at the surface of the trailer, why does that [unintelligible] affect the human dose based on geography?

UNIDENTIFIED SPEAKER: This is, again, looking at the shipment of 20,000 pits. So this is looking cumulative dose over however long it's going to take us, okay, in order to ship those pits, those the public would be getting for Savannah River a 3 person rem. The entire public. That's an additive dose.

PUBLIC SPEAKER: That's the transportation dose?

UNIDENTIFIED SPEAKER: Yes.

HT12/34 14.078

PUBLIC SPEAKER: All right, now, what's the natural radiation dose?

UNIDENTIFIED SPEAKER: Background radiation for people it's like a --

UNIDENTIFIED SPEAKER: We have that in the document.

UNIDENTIFIED SPEAKER: -- I believe a millirem.

PUBLIC SPEAKER: From the radon that you're getting sitting here in this room?

UNIDENTIFIED SPEAKER: That's correct.

HT12/35 14.079

PUBLIC SPEAKER: Now, I submit Pantex has a much higher background radiation than Savannah River. Now, you do not say we ought to move it to Savannah River in order

HT12/35 14.079 continued

to get -- decrease the number of people at Pantex, did you? Get the people out of that god-awful place.

UNIDENTIFIED SPEAKER: Are you saying that this meeting -- you're saying that there is a dose at Pantex that you would average out, for instance, from having those containers at Pantex versus at the Savannah River Site, is that what you're saying because of the background radiation?

PUBLIC SPEAKER: No, I'm saying we ought to decrease the population at Pantex --

PUBLIC SPEAKER: Move over to Savannah River, huh?

PUBLIC SPEAKER: Yeah.

PUBLIC SPEAKER: Sounds good to me.

PUBLIC SPEAKER: I agree. Put that down. Put a double check mark.

UNIDENTIFIED SPEAKER: Moving people from Pantex to Savannah River, right? Okay, we'll get that down --

PUBLIC SPEAKER: Take away the jobs at Pantex and we'll reduce cancers, right.

[Several participants speak at one time.]

UNIDENTIFIED SPEAKER: We won't put the word deplete.

PUBLIC SPEAKER: Talking about aircraft accidents --

UNIDENTIFIED SPEAKER: But, again, you can also see here when we talk about the risks this is what we're looking at, too --

PUBLIC SPEAKER: Sunday I had occasion to go from Wichita Falls back here and that ASA plane could cause no damage whatsoever to any facility.

MS. FOUNDS: We do look at those things when evaluating an aircraft crash and one of the reasons we don't do it in detail for Savannah River is because, you're right, there isn't a lot of air traffic around Savannah River Site. So, again, you go through a screening process and because you don't have a lot of air -- a number of aircraft operations, you can, therefore, eliminate that as a very credible accident at the Savannah River Site.

UNIDENTIFIED SPEAKER: Okay, Nan, while we take just a second and get some more questions, this comment period goes to July 12th and there are copies of this available for people who have not yet seen it, right?

MS. FOUNDS: That's correct. They are in the exhibit hall. You can just go in and pick those up.

PUBLIC SPEAKER: There are copies of the record -- are the Deferred Action Notification in there?

UNIDENTIFIED SPEAKER: In our document?

PUBLIC SPEAKER: No, somebody --

HT12 (CONTINUED)

MS. FOUNDS: But it's the Federal Register Notice. It's the Federal Register Notice and we can get that to you.

UNIDENTIFIED SPEAKER: Okay, so we need to get you a copy. If we can, make sure before we break up we get you a copy of the Federal Register Notice so. Okay, there's several people who want -- so, Donna, we'll need to get those name before we get out of here. Let's get your names and make sure we get you on a list to get that Federal Register. I think we have cards available to do that.

UNIDENTIFIED SPEAKER: Yeah, if you put it on a card, we'll make sure and mail a copy to you.

UNIDENTIFIED SPEAKER: Okay, now, moving on. Any other comments? Yes.

PUBLIC SPEAKER: I have a comment. It's a crosscutting issue, it should be brought up in each one. I'm past chair of something called the CSRA Planners Group which means that -- you know what CSRA stands for? The people in the area have a problem with DOE coming in saying that -- what am I trying to say? The State of South Carolina is concerned with any new project coming into the area if Yucca Mountain doesn't come about. And that really has to be addressed strongly. And I've heard it from folks in the governor's office and folks in the

HT12/36 13.008

area around here that before we can have any of these, that issue should be solved at the policy level, like somebody -- you were talking the policy I think --

UNIDENTIFIED SPEAKER: Of state's concern of moving additional operations here with South Carolina?

PUBLIC SPEAKER: Without their feeling that they will be a dumping ground.

HT12/36 13.008 continued

UNIDENTIFIED SPEAKER: Okay.

PUBLIC SPEAKER: And that Yucca Mountain should be the dumping ground or whatever, but it's -- the issue is let's not have it stop here, and each one of these projects should be looking at the waste issue and even DWPF is not suppose to have its glass containers stay here. So that's something that has to be stressed somewhere as a crosscutting issue. I know it's not unfamiliar with you-all.

UNIDENTIFIED SPEAKER: But across all three or what -- across many, more than the three, okay. Okay, thank you. Other comments, questions, concerns? Anybody want to make a statement on the record?

PUBLIC SPEAKER: How do the people at Pantex feel about this?

MS. FOUNDS: Well, there is a large group -- we -- let me go back to our scoping.

UNIDENTIFIED SPEAKER: You want Bob Juba

[phonetic] to answer?

UNIDENTIFIED SPEAKER: Yeah, I can do that but -- okay, what is it?

UNIDENTIFIED SPEAKER: Yeah, Bob.

UNIDENTIFIED SPEAKER: The people at Amarillo and the Panhandle are very supportive of the operations at Pantex. Plutonium's been at Pantex for over forty years and, you know, weapons were a pit form. Support is unanimous among local elected officials, state elected officials, federal elected officials. Public opinion polling places Pantex is supported around 80 percent, so overall the support for those continued operations is there.

UNIDENTIFIED SPEAKER: Thank you, Bob.

PUBLIC SPEAKER: I have one other -- it's a question. I don't know the answer to it, but I found nothing in the EIS that addressed the aging of a pit relative to what happens as a pit goes from 35 to 50 years. You talk about a ten-year window, even the ten-year window is not clearly described in my way of thinking in the EIS.

PUBLIC SPEAKER: And in specific, related to that, when you look at the impacts of releases and pit failures, are you taking into account the aging of pit stockpile increasing the probability or the frequency of

failures?

PUBLIC SPEAKER: You know, that's basically where I'm going. You know, but the question -- I've heard it stated and certainly it is a case based on experience that the pits are good at peace. You know, you can store the material in there. Certainly our experience today, that's been the case. What are we estimating to take place in those units as they continue to age that would influence or cause increased frequency or increased consequence of damage? Oxidation or growth, grain growth or --

MS. FOUNDS: Okay, but one of the things is, of course, those things are sealed containers, so you're trying to not expose it so that you don't have, as you call, the growth and things like that. They were part of the vulnerabilities in that study that we done. But there is a surveillance program that is established by the laboratories to look at these aging effects and to pull containers out, open them up, look at the pit, you know, ship them back to Los Alamos for some testing and things like that. So there is an active evaluation program and it is described as part of the Pantex piece of this document that that surveillance activities are going to continue.

PUBLIC SPEAKER: That certainly has been the

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case in the past when we talk about them as part of the war reserve. They are no longer, some of them, from the answer that I got to my question this morning which was surplus and which were not. They're going to be stored brother and sister right there beside each other. I doubt that the 2A program that's been set up for the weapons is going to continue to look at surplus materials as thoroughly as they're currently looking at those things they might reuse.

UNIDENTIFIED SPEAKER: Sandia is actually setting up a program by which they are going to -- and have certain milestones, et cetera, to polling those, doing a random sample of them in order to evaluate the effects of having those storage. And so there is a QA program in place for that -- will be in place for that material.

PUBLIC SPEAKER: I hope that you will in your final EIS talk to this issue, talk to and commit to whatever happens if Sandia's work finds that they are deteriorating, what do you do?

UNIDENTIFIED SPEAKER: Thanks, that's a good point.

PUBLIC SPEAKER: I have some comments that I'd like that are more crosscutting --

UNIDENTIFIED SPEAKER: Okay.

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PUBLIC SPEAKER: But rather than jump around from room to room, I'd like to make them here, if that's - is that okay?

UNIDENTIFIED SPEAKER: Sure.

UNIDENTIFIED SPEAKER: Yeah, that's fine and we'll share the ones you --

UNIDENTIFIED SPEAKER: We'll get them to everybody. We'll share them in the session when we get a chance.

PUBLIC SPEAKER: I'm not here to give a class. I'm not going to use all these but I thought I would -- and Lee has heard some of this with future environmental uses and all that so he can go onto the next one.

UNIDENTIFIED SPEAKER: Are you going to leave us a set of these?

PUBLIC SPEAKER: Yeah.

UNIDENTIFIED SPEAKER: Okay, great.

PUBLIC SPEAKER: This is a modified presentation that I gave the federal planners of the American Planning Association, and I'm the immediate past chair of the Federal Planners Division. Two weeks ago we got all the federal planners together from the Navy, the Army, DOE wasn't there as much as we would like, but anyway we had a few of the folks and we looked at future uses, that was just one of them. So I'm not going to go through the

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whole thing. What I want to do is if you-all will skip past the situation, this is the main point I want to make, okay, that environmental uses -- since this is a NEPA, National Environmental Policy Act, we can expand environmental uses on federal facilities. And now I'm talking more specifically to SRS without affecting current missions.

It's my view that we can take all three of these missions and not hurt any of the environmental uses, and I'll get to that. However, you're going to need thoughtful planning. You just don't throw these things in there as you all know. And I showed a little version of this somehow, let's see. This is the way environmental planning, this is from NOSS in 1987, this is how environmental planning used to be where you protected a core of the environment, okay. And then as you went out the use intensity increased. And then as you go into the -- I call it the target, okay, as you go into the target, protection increases. And that's a pretty basic way of doing environmental -- or doing planning, excuse me.

However, at federal facilities, I haven't been to Pantex so I don't know, but I've been to Hanford, Oak Ridge, Los Alamos, a lot of the labs. But let's look a the bigger ones like Hanford, SRS and Oak Ridge. You've

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got -- imagine on this map that is in that baseline report and say this is the Savannah River Site. Obviously, it's not a circle, it's got the little tail down here, but the major industrial area and say P-reactors right over here, right on the edge of it, okay. That's where you-all are thinking of putting your uses. What you can do is have that but also on the outskirts, the first buffer zone, the first part of this target, you can have types of recreation, research. This goes with this National Environmental Research Park concept that Dr. Fiori's looking at, the NERP concept you can have here. You can even have some sort of forestry or forest management. We can even have red-cockaded woodpeckers which we have onsite. Our big issue, we've got several other threatened endangered species but, anyway, in that area. Then as you go to this final one, and out here it's just farmland, okay. We've got one little town of Jackson over here and Barnwell's over here, but most of it's farmland. You can have more active environmental activities happening, the public education. We have five or six thousand people that come to the Site per year. That can be -- my contention is, again, that it can be increased. And I just mentioned basically what the environmental uses can be, a lot of technology demonstration. Even associated with these projects that are coming we can demonstrate

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ways of reclaiming environmental -- or reclaiming land back to 'clean level'. Natural resource land, but again I mention these, too.

PUBLIC SPEAKER: I had a question about the --

PUBLIC SPEAKER: Yeah, sure.

PUBLIC SPEAKER: -- the previous slide.

PUBLIC SPEAKER: Oh, yes.

PUBLIC SPEAKER: I was -- I didn't quite understand what that was saying. My view of the way the land is used is that the closer you get to the core nuclear facilities and the nuclear materials the protection increases. I've always felt that way. And that arrow shows that it's just the opposite. And I would be concerned if people might get the impression that --

PUBLIC SPEAKER: That's a good point.

PUBLIC SPEAKER: -- that the protection is good.

PUBLIC SPEAKER: Different kind of protection, environmental protection, okay. The protection that you're talking about is --

PUBLIC SPEAKER: All environmental protection.

PUBLIC SPEAKER: -- safety security.

PUBLIC SPEAKER: Okay. I see.

PUBLIC SPEAKER: I'm talking about multiple environmental uses, but, yeah, I didn't mean to make it like Wackenhut is stronger out here and not here. That's

our protective guard.

PUBLIC SPEAKER: Chris, help me get to where you're trying to get to relative to these EISs.

PUBLIC SPEAKER: What I'm saying is that Savannah River --

UNIDENTIFIED SPEAKER: I hear what you're saying in terms of the program, but that's --

PUBLIC SPEAKER: Savannah River can take these projects and it won't affect the environment, okay. As a matter of fact, if you use a careful planning you can take these projects, put them in the core, we've got 310 square miles, put them in the core and even increase environmental activities in these four or five areas. Does that help?

HT12/37 04.005

UNIDENTIFIED SPEAKER: Yeah, the message I think is --

PUBLIC SPEAKER: That's about -- I'm sorry, that --

PUBLIC SPEAKER: -- is Savannah River has the capacity to do those.

PUBLIC SPEAKER: Let's develop it.

PUBLIC SPEAKER: That point is great for me 'cause I --

PUBLIC SPEAKER: Yeah, I'm sorry, yeah. You know -- these come from the Citizen's Advisory Board.

Land-Use Technical Committee, my research and a group for Environmental Justice, the Environmental Advisory Committee which is a group of scholars that advises the Site. So what I did was I took them and thought it was smart to get it into the record at least that we're saying the boundaries should not change. That doesn't matter too much to what you-all were talking about. However, this is what I'm talking about here is that we should have -- we should keep the Site industrial. This goes back again to what Lee's question was, and this is why that we may need it for future projects. SRS is unique and we can go into that, but it -- and I don't want to get into Pantex versus SRS. But it has a lot of unique characteristics. I won't get into that. I mentioned this, I mentioned this, I mentioned that and that. So it's basically, this is the bottom line on recommendations.

PUBLIC SPEAKER: I have a question on that one, too.

PUBLIC SPEAKER: Yes, sir.

PUBLIC SPEAKER: Natural Resources Management. What are the opportunities for public involvement in the way the resources are -- the natural resources out there currently are being managed?

PUBLIC SPEAKER: You mean how do they --

PUBLIC SPEAKER: I get the impression that the

timber industry is out there well represented. What's the representation vehicle for the public right now?

PUBLIC SPEAKER: On the public, it has something to do -- Natural Resource Management means cutting trees, yes, but it also means setting up red-cockaded woodpecker colonies. We started -- when I started this particular job, four years ago we had fifty birds. Now we've got eighty-some and we want to get to 450 birds.

UNIDENTIFIED SPEAKER: Chris, I think the issue is I think that you do have other federal agencies like the Forest Service, the Official Lawn Service actively participating in Natural Resources Management at Savannah River.

PUBLIC SPEAKER: Yes. South Carolina D&R manages the hunting out there --

UNIDENTIFIED SPEAKER: So you can get involved.

PUBLIC SPEAKER: Yeah, you can hunt. You can't fish because of possible contamination. Is that the sort of thing you mean? I mean --

PUBLIC SPEAKER: No, my question I think was slightly different. What are the -- I don't see similar discussion opportunities for those issues with the public. I know that perhaps with the Citizens Advisory Board you're saying that there is some of that, but largely it just seems that the timber industry is very well-

HT12 (CONTINUED)

represented in terms of how that land will be used. It's quite a resource.

PUBLIC SPEAKER: Well, there's a lot of research there but if the average Joe or Jane that wants to come in there, they can come in and hunt. They can -- we're trying to open that up so they can come in and look at the endangered species and the cultural resources and that sort of thing, the archaeological resources there that are -- what happened in 1950 is the Site just stopped being seven communities and there are all sorts of resources there and have been built -- the forrest land's been built up and the cultural resources weren't destroyed. But as far as public access to those avenues, we're trying to increase them.

PUBLIC SPEAKER: What's your guess as to when things may open up?

PUBLIC SPEAKER: I'd say in the next three to five years I think they'll open up. And talking to these other federal planners that's the -- those are the trends to open up these sites. And, finally, federal facilities but SRS -- too often we talk about these things as liabilities. We call them waste sites, they're contaminated and, yes, some parts of them are, but 310 square miles of Savannah River Site or 562 miles at Hanford are not contaminated. So we should see them as

environmental assets, not just economic assets.

UNIDENTIFIED SPEAKER: And that's all sites?

PUBLIC SPEAKER: Yes.

UNIDENTIFIED SPEAKER: Okay, thank you, sir. I appreciate that. And thanks to everybody for being flexible in these abbreviated sessions but I wanted to go ahead, and any other comments or questions at this point? The one session I know has broken sometime ago. The other one is, I think, winding down next door. You're more than welcome to stay for this session. Nan, you had a couple -

MS. FOUNDS: I just wanted to make sure. You can give us additional comments, also. There is fax, we have a fax number out there. We also have a hotline if you have additional comments that you'd like to make --

PUBLIC SPEAKER: We can call from here, right?

MS. FOUNDS: -- after reading these. We also have an E-mail address so if you happen be able to E-mail them that way, and did I miss out on any of the --

UNIDENTIFIED SPEAKER: Well, we've got phones that they can actually call in.

PUBLIC SPEAKER: You'll allow me to write you a letter, won't you?

MS. FOUNDS: That's right. You can write -- well, that's okay, too.

PUBLIC SPEAKER: That's one of those options.

MS. FOUNDS: I would sincerely like to thank everybody for participating. This has been a good discussion. Thank you.

UNIDENTIFIED SPEAKER: I appreciate it and come back and join us again. Thanks.

Comments omitted from intervening pages here do not concern this EIS.

HT12 (CONTINUED)

highlights. I was hoping to make it three or four, but I couldn't have done that. Any other comments regarding that? You're very observant, by the way. Now, I know there's at least one comment to be made.

PUBLIC CITIZEN: Basically this is a very brief comment. We are from Savannah, Georgia, representing the concerns of our citizens. There are two things that we want to bring to the attention. And we've already mentioned one, and that is there really needs to be beyond an outreach effort to minority communities to bring them into this process that is leaning toward decisions that they will have to live with for some time to come. Outreach in the forms of radio announcements, TV advertisements, brochures and the like are not enough because they're simply announcements. And then you in your busy schedule as an African American working and trying to be an active part of your community trying to make decisions, can you take the time off to come to this meeting that starts at eight o'clock in the morning. Other reasons why we do not have more people with us that should have been here this morning is because we could not get them professional leave to attend this meeting. If they were going to take a day off of their jobs, they would have been penalized not only monetarily, but they were going to be written up by their supervisor because it

was deemed that this was not an important part of life, nor was it related to any part of their jobs.

So it is incumbent upon the Department of Energy at the Savannah River Site to try to think through ways of going beyond the cursory outreach at this, to bring particularly downstream communities and rural communities into the roundtable discussions that are going on in the name of public involvement. Beyond just talking to them there also has to be a strategic effort that is launched that will begin to train these communities in the information, because it's not enough for us to come to the table and politely nod. We want to be able to contribute substantively. In order to do that we have got to build a base of understanding amongst not only the "minority populations" which I hope they'll move from using that term to perhaps people of color or effected communities because it's not only affecting African-American communities, it's also affecting low-income communities.

We also want to see the analysis take into consideration the exposure of low-income or affected communities to not only what the operations are at the Savannah River, but those industrial entities that's also exposing those communities to chemical hazards. To be able to assess if there is a result or an impact from those combined exposure to exposed to what's going on from

SRS, exposed from what's going on at Piedmont or [unintelligible] because that's very important to us.

We do not want to come to another meeting where there isn't a substantial representation if it's held in North Augusta or Augusta without the black community being here because we feel that you cannot continue to make these decisions without our input and still live up to the requirements of NEPA. And in addition to that, we have read the NEPA regulation and our understanding is that it calls for the involvement of local elected officials, which is a component to us that's very important, and we have not been able to somehow register that with the Georgia side. I don't know about the South Carolina side. And we feel that it's very important. So to the extent that DOE and SRS can begin to filter this information to our city councils and our county commissioners and encourage them to be involved, it will be very helpful to us, because there seems to be a disjuncture between the citizens of Georgia and the government that's running Georgia and its relationship to DOE because the Site does not sit in Georgia, it's in South Carolina. But there are two things that are a consideration for us; it's, one, that the waterways from Savannah River Site end up in Georgia, and the other one is that so much of our work population works at the plant and they have to come home

to the families, and so there is that intimate relationship there. So we hope that these things will be noted in the comments.

And finally, it is almost a disservice to us who are just regular people to ask us to wade through 1875 pages of the Disposition and Storage EIS and then 1465 pages of the Stewardship Stockpile and then 1233 pages of the Pantex. That is just horrendous because you must take into consideration that in a lot of these communities the reading level is at third grade standard. And so if we have to go through all of this, it's really cumbersome, let alone just outright difficult. And so we've got to find ways to get this information into the heads of laypeople where they can understand it, interpret it and translate it, and then be ready to give an intelligent response as well as to raise the kinds of questions that will help us to understand the whole picture, because right now we're neutral people. We're not pro this or anti that. We know that we're pro help and we know that people must have jobs, but we don't want the two just oppose against each other. And then we want the facts not only from DOE but reputable, independent scientists that we can trust and rely on as well.

MR. LAWSON: Thank you very much. We appreciate that. Is there anyone else that has a comment that

HT12 (CONTINUED)

anybody can make or questions to ask? Any DOE people have anything that you'd like to add? Okay, this person over here.

PUBLIC CITIZEN: My name is Arthur Smith and I'm from Augusta. I live in this area and I'm also from the impacted area called Hyde Park. But I also have been working hand in hand with Dr. McLane and the organization Citizens for Environmental Justice. And I just wanted to put another pin in that point about people coming out and start inputting at these meetings, because it's important to us, too. And there's got to be another way to get word out to them because like Dr. McLane was saying, we feel with our heart but we've got to live with the situation once it's here. But we all need to be at the table together, you know. We don't want the situation to be where it was when Savannah River Site was built. We understand the urgency then to make the nuclear bomb and now we have to deal with what we have here.

I just want to say that we are interested, but like Dr. McLanie said, a lot of my friends wouldn't come because of the work situation. More will be here at six o'clock. But you need to get another word put out to let them know there's other people, because we are people, all of us, and we want input from people with color. Thank you.

SPEAKER: Thank you. Anyone else? There's a comment up here.

PUBLIC CITIZEN: I don't know how many SRS employees are here, whether it's DOE, Westinghouse or some of the other contractors and subcontractors. But as I said earlier, I took my day off to come here as a private citizen and speak. And I happen to be living in Georgia. I agree with Mildred where she says that let's concern ourselves with Georgia. Thirty/forty percent of the people that work at SRS are Georgia citizens. But there's another unrepresented group here as well and I think that's employees that work at Savannah River Site. And, for instance, we were told -- you said you found out a week ago. There were --

PUBLIC CITIZEN: Well, not quite --

PUBLIC CITIZEN: There were ads in the paper. We got an E-mail yesterday that said if you'd like to come to this, come at six o'clock or come on your own time. And I think over the last 45/50 years the employees, and a lot of them are retired in this audience as well, have put out an awful lot of work and sweat and blood and it would be good if we, since we're being all-inclusive here, to maybe bring them in. Have DOE find some ways to bring in their own employees and contractor employees and say, look, this affects you, I know you've got bowling and I

know you've got your jobs and I know that you've got church work and that sort of thing, but this really does affect you. And maybe even to the point of having meetings on the Site like when Secretary O'Leary came when they had selective people talk with her. This affects them more than Secretary O'Leary coming to the Site. There's future uses and future missions and environmental problems and health problems. And I think it would be a disservice not to include all the employees, because the outside world sees SRS employees as SRS people. They don't know whether you're DOE. They don't know whether you work for Brown & Root or Westinghouse or whatever. So I think while they're including everybody here, let's think of the employees as well.

MR. LAWSON: Thank you very much. Any other comments? Well, let me just add a few things in closing. First of all, from my own perspective and certainly from the Department, we all appreciate your taking the time off you did today to come and making your comments and giving the input that you have. I think we can safely say that with all notetakers and court reporters it has been duly noted. As I indicated before, all these comments become the basis for a public response document which will respond to all the comments that have been made and all the meetings that have been held. Second, I would like to

remind you that there is a meeting as you -- nice transition -- there is a meeting this evening between 6:00 and 10:00 or 11:00 in which you're invited to come back. The program will be basically the same. Whether we break into small groups or large groups will all be determined by the amount and the size of the people -- the group of people, not the size of the people, the number of people who are here.

And I also just want to remind you again that the comment period is coming to a close on Material Disposition and Stockpile Stewardship. Those comments should be in by the 7th. The other, Pantex, goes until July 12th. And there are other ways, there's the phone, fax, electronically mailed. You can write them down and send them by mail or phone or whatever you want to do, whatever is most convenient to you. And I hope that you take advantage of that.

By the way, is there anything else -- there are feedback forms that if you haven't filled out, if you would fill those out before you leave that would be good. And those written comment forms are also there in case you have some written comments you want to send in after this meeting. Yes, sir.

PUBLIC CITIZEN: Based on the amount of comments coming from a particular area, let's say for instance the

HT12 (CONTINUED)

Savannah --

MR. LAWSON: Yes.

PUBLIC CITIZEN: -- if we were to rally up a 100,000 votes -- I mean a hundred thousand people to actually call in and write that we are in -- that we oppose any type of new facility being constructed on the Savannah River Site or anything -- as a matter of fact, I'm in favor of opposing the whole site and I believe consolidate it at another site.

MR. LAWSON: Right.

PUBLIC CITIZEN: But if there was, say for instance, a 100,000 people from Savannah called in at the DOE Department or faxed the information in, how effective is that going to be for ROD or the Record of Decision?

SPEAKER: Well, I can't answer that. I'd say that somebody -- you'd get somebody's attention if you had 100,000 of them --

[Several participants speak at one time.]

MR. RUDY: No, I think if you could get that many the phone lines would be certainly busy. But the Secretary would understand as the ultimate decision maker, she'll understand not only the comments from this session but from all the other sites that we have. In fact, that's a part of her decision process, to get briefed from us on what we hear, what we learn, what the extent of

these comments are and what the people feel. So the Secretary would be exposed and have an appreciation of that. So if there were lots of calls and lots of letters and lots of faxes, she would see that.

PUBLIC CITIZEN: Well, I hope they ain't quoting it like that paper that -- I don't see it. There was a -- what was that paper she had where --

MR. LAWSON: Oh, the advertisement for this one?

PUBLIC CITIZEN: Well, all the arrows pointing from the one for the public should be straight down to the bottom and everything for the Record of Decision is coming from DOE. You know what I'm saying? So I mean that's the reason why I made that -- I asked the question that I asked.

MR. LAWSON: Very good point. And another question or comment?

PUBLIC CITIZEN: The gentleman that just spoke, I resent his statement about transferring everything to some other area. I would like you to briefly state what his position on it.

MR. LAWSON: Well, that's up to him. If he'd like to, that's fine.

PUBLIC CITIZEN: Okay, that's all right. That's all right.

MR. LAWSON: The gentleman was asking you if you

have a preferred site that you would like to see stuff go to. It's up to you to answer if you'd like; if you don't want, that's fine.

PUBLIC CITIZEN: Well, according to the Summary, I would think that Oak Ridge would be one of the preferred spots. I mean if the decision was being made -- was made by [unintelligible] Pantex, but not here at Savannah River Site. Maybe because low income people or people of color are definitely at risk and that is one of the main reasons why I'm here. Now, if there was any other community like such as native Americans, then this audience would be full of native Americans, okay. So because they are not at risk at this particular point in time, then I'm here because I have a daughter and I have a family. And you-all stated in here that people from low income are definitely at risk. It's nothing that we said. This is what you-all said. So that's the reason why I said let's move Savannah River Site to Pantex or Oak Ridge or the West or anyplace else besides here.

PUBLIC CITIZEN: Let me just put a little tidbit on that and that is that we do not want to fall into the syndrome of not in my backyard but in yours. So what we've got to consider is what is going to be the impact if it's in anybody's backyard and how do we make it in such a way that we minimize the risk to the workers, their

families and the communities because I know if I call up Juan Montez [phonetically spelled] out at Los Alamos and tell him that we in Savannah are going to send it over there, I know the people who run the [unintelligible] festival and who live near Oak Ridge, and we're talking about [unintelligible] they're going to say, well, how did you do that.

So I understand the point because we're looking at how it's written up in the summary documents and how you've analyzed the impact when you say, okay, there will be an adverse effect -- a disproportionate impact on low income and minority populations. But the humanitarian that I am, if it's going to kill rich, white folks, I'm opposed to that, too. So we've got to figure out how do we deal with this in such a way that we minimize the risk to human beings and our health and environment.

MR. LAWSON: Okay. Thank you very much for that comment, and thank you all. And I appreciate it very much. We will reconvene another session at six o'clock. Thank you again for coming.

HT12 (CONTINUED)

Comments omitted from intervening pages here do not concern this EIS.

PANTEX SITE-WIDE EIS

QUESTION AND ANSWER SESSION

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MR. LAWSON: Okay. That was a quick analysis. Is there -- are there any questions or comments that folks would like to make? Back on the left-hand side.

PUBLIC CITIZEN: A quick question. I just want to make sure that I'm clear and everybody else is clear. The pits that are discussed in this EIS, are those strategic reserve or is there a mix between strategic reserve and surplus or what?

MS. FOUNDS: Right at the moment these are the ones that are coming from the dismantlement operations and they're not divided into strategic reserves or surplus. Right at the moment we're considering that all the same material.

MR. LAWSON: Anyone else? Yes, right over here.

PUBLIC CITIZEN: Could you explain again the basis for the current limitation of the 8,000, I gather it was, pits that you're allowed to store? Is that a state limitation or DOE imposed or?

MS. FOUNDS: That was DOE imposed. We had done an environmental assessment for the storage at the Pantex Site through citizen participation. They wanted us to look at that in greater detail in terms of -- you know,

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they wanted us to look at effects on the aquifers out there, et cetera. So it was a negotiated position. And we have about 6,000 in storage at the time. There were about -- at a rate of 2,000 dismantlements a year nominally, and it would take us about three years to do an EIS. So that was how the 12,000 was arrived at. It wasn't because there was, you know, a jump or anything else in terms of accidental risks.

MR. LAWSON: Any questions or comments? Anything further? Okay. Let's now move on to Storage and Disposition.

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HT13

U.S. DEPARTMENT OF ENERGY

COMMENTS ON SWEIS FOR
CONTINUED OPERATION
OF PANTEX PLANT AND
ASSOCIATED STORAGE OF
NUCLEAR WEAPONS COMPONENTS

PUBLIC HEARING
ON THE
ENVIRONMENTAL IMPACT STATEMENT
ALBUQUERQUE CONVENTION CENTER
ENCHANTMENT ROOM
ALBUQUERQUE, NEW MEXICO

May 7, 1996
3:00 PM

KATHY TOWNSEND COURT REPORTERS (505) 243-5018
1005 LUNA CIRCLE, NW, ALBUQUERQUE, NM 87102

approached Kirtland and said this was something that they were looking at and were proposing, the sitewide EIS and the process that goes along with it, I was nominated by the base to be the base spokesman.

What we have done so far is per the direction of the Department of the Air Force and delegating that down to Air Force Material Command, which is our headquarters in Dayton, Ohio, they said that we are authorized to participate in the study, i.e., answer the questions the Department of Energy has concerning capabilities, good points, bad points, et cetera, at Kirtland Air Force Base and how they apply to the needs of the Department of Energy.

Do you have a question for me?

UNIDENTIFIED SPEAKER: Were there other Department of Defense sites that were assessed in this EIS?

MS. FOUNDS: No, there were no other Department of Defense sites that were assessed in terms of the EIS.

UNIDENTIFIED SPEAKER: Is there a reason for that?

MS. FOUNDS: We went through a selection process, and as part of that, we sent our selection process over to the Department of Defense, they

evaluated that and recommended essentially two sites to us, that being Seneca Army Depot and also Kirtland Air Force Base. The Air Force responded that they would become a cooperating agency, and at the time, Seneca was going through part of the process. As part of that process, they were selected for closure and are in the process of disposing of the base.

The Department of Energy could not say that they would absolutely use that site. We needed to do this EIS because of that, and we responded that there were other sites that we had that would fulfill the missions for this particular -- for the storage and as such did not consider Seneca Army Depot as part of that. In our EIS, it does go through, and it explains the process that we used.

UNIDENTIFIED SPEAKER: I have a number of questions that I hope the major can answer or maybe Nan, and it relates to part of chapter 5 of the document, which is the basic environmental analysis about Kirtland. Let me just go through a few things, and any time anybody else wants to jump in and ask a lot of questions, please feel free. I don't necessarily need to monopolize time.

HT13/1/2 01.007

I guess I want to understand a couple of things. The document talks about the 120-odd bunkers

and, then it talks about the 41 that are actually in the mountain, and on 555, it says that more than 30 of these 41 magazines have a minimum overburden of 9 meters, and 6 pages later, it says 35, so I just first want to get some clarification about the bunkers that we are talking about.

HT13/1/2 01.007 continued

How many are there, and is the position -- and Nan may be able to answer this as well as the major, is the position that if storage happened at Manzano, only the bunkers with at least the minimum 9-meter overburden would be used?

MS. FOUNDS: Yes, I believe that that is the overburden that we considered for the accident analysis, so we are really looking at putting those within that area.

HT13/1/2 01.007 continued

UNIDENTIFIED SPEAKER: So how many of the 41 actually meet that standard?

MS. FOUNDS: I believe it is 35, but I can check on that. Cliff, can you --

MR. JARMAN: I'd have to check.

MS. FOUNDS: It was my understanding that it was 35.

UNIDENTIFIED SPEAKER: In my reading of the documents, I am unclear.

MS. FOUNDS: We will take that and look at

HT13 (CONTINUED)

those.

UNIDENTIFIED SPEAKER: The document also says that construction began June, '47, and became operational in April of '50, so that would essentially say that the bunkers we are talking about are more than 45 years old. My specific question is what is the design life of those bunkers?

HT13/3 03.001

MS. FOUNDS: What we did was, and I can let you answer this question, but we looked at that in terms of looking at the designs of the facilities, and we felt that it was adequate for the storage of those facilities. There may have to be some upgrades that go along with that and inspections of those facilities prior to becoming operational for this activity.

MR. MARTIN: Just to amplify a little bit what Nan said, when they came to us with questions, what we did was we identified to them that these bunkers are not -- they are 45-plus years old. Some are perfect. There are some upgrades, some rework that is going to have to be done. As far as an absolute, this is the design of them, and I have seen nothing to indicate that.

UNIDENTIFIED SPEAKER: I have a question related to Don's question. In the EIS, it doesn't show that there are the three faults that go through

HT13/4 05.021

this stupid mountain, and yet, it is well documented on many geologic reports that there are three major faults that go through the Manzano weapons storage facility.

HT13/4 05.021 continued

My question, as is Don's, is if these facilities are 45 years old, they obviously were not built with the current technological skills that go along with earthquake-type design. To me, that is a major concern. Also, my concern is -- I love it. You guys always put the stuff on the east side of the mountain so it goes to the Manzanos. We really object to that heartily, you guys. Put it in Four Hills.

UNIDENTIFIED SPEAKER: Were you going to add some more?

MS. FOUNDS: Go ahead.

UNIDENTIFIED SPEAKER: I guess that the design question is an important one, I think from a variety of standpoints, so my request would be that we get some more detailed design and engineering analysis of the bunkers in terms of design life, design capability. The major had said some of them need to be upgraded. It seems to me we need to have more specific information on those things.

HT13/5 03.002

I didn't see any references in the document that give me that kind of detail, so if I have missed

it, I'd like somebody to tell me if there is a document that describes it. I'd like to know what it is. If there isn't a document that describes it, I'd like to know how that information is going to be presented.

HT13/5 03.002 continued

MS. FOUNDS: We can certainly look at the additional information or information that we think we could get ahold of. The one thing I'd like to point out is that the AT-400 is a fairly substantial container, it is a certified shipping container, and that is what these pits would be put in. When you talk about an earthquake environment, the earthquake probabilities and things like that are still fairly low for this area, and I will let Cliff go over that in greater detail.

The other thing is that if you have an earthquake out there, and you have the mountain come down, essentially, you have a very nice sealed area and probably would not have a release of plutonium under those kinds of conditions.

UNIDENTIFIED SPEAKER: Have any cost estimates been done on the required rework?

MS. FOUNDS: No, they have not, and that has been identified that we need to be doing some cost estimates, but it has not been done at this point.

UNIDENTIFIED SPEAKER: I am interested in knowing, since there are 41 identified bunkers in the mountain, and 20 or so, up to 25 could be used if all 20,000 pits would come, what is the present and continuing mission for the other nearby bunkers? What would be in them? What would happen to them? What effect does storing pits have on those bunkers? What might be in the other bunkers that could affect the mountain and the pit storage?

HT13/6 01.008

MR. MARTIN: The bunkers -- all different types of bunkers at Manzano are currently being used by a number of different groups. For example, the Department of Energy, Sandia National Laboratories has some bunkers. We have some bunkers that are under the control of Phillips Laboratory. We have some, as I recall, that are Los Alamos National Laboratory's. There are numbers of people who are using the bunkers right now who are using them where their presence is allowed.

One of the things that we identified in the process was the issue of compatibility. If a decision is made that pits are going to, in fact, be stored at Manzano, we need to look at the relocation of the current tenants. We need to look at what they have got in there, and there are any number of things, as

HT13 (CONTINUED)

there are some operational activities that are going on there right now by Phillips Laboratory.

You would have to actually talk to Phillips Laboratory for that type of information, but it is a real concern about where would the current tenants go to? What are their actual requirements? There also are concerns about what sort of buffer zones would be required from the bunkers and so forth, and those are all questions that are going to have to be answered in the future.

HT13/6 01.008 continued

UNIDENTIFIED SPEAKER: Are they going to be answered in the context of between now and the time of the final EIS?

MS. FOUNDS: In terms of that, that would have to be if the Department decides to relocate these things to the Kirtland Air Force Base, then the negotiations would have to begin, and memorandums would have to be written in order to co-locate these with other activities that are on the mountain. That would be worked out once the decision at headquarters was decided that we wanted to place it in the Manzano Mountains. There are a lot of operational concerns that would have to be worked out at that time.

UNIDENTIFIED SPEAKER: Since you brought up the memorandum of understanding or agreement, let me

ask a couple of questions about it. The document doesn't seem to make clear whether if Manzano was used, they would be under DOD or DOE control.

MS. FOUNDS: They would be under DOE control.

UNIDENTIFIED SPEAKER: So the memorandum of agreement would be between DOE and who?

MS. FOUNDS: DOD.

UNIDENTIFIED SPEAKER: DOD or the Air Force?

MS. FOUNDS: It would have to be through DOD, and it would also have to be with the Air Force Material Command. They are actually the cooperating agency in this action, the Air Force Material Command, because they are the ones that possess the base or own title to it or whatever you wish to call that, so it would have to be through the DOD and through the Air Force Material Command.

If there is anyone else who wants to ask a question, please raise your hand, and we will be happy to turn the floor over to you and then turn back to Mr. Hancock.

UNIDENTIFIED SPEAKER: Let me ask a coupie more questions, then there may be a natural break for folks to come in. I'd be very interested, and Ann has

HT13/7 06.038

already mentioned the earthquake issue. Another thing

is the water and the springs in the mountain. Dry as it seems all around here, particularly when we don't have any rain, there is actually water in the mountain. There is an intriguing sentence on page 5-59 in the document that says some magazines show

HT13/7 06.038 continued

evidence of water intrusion.

I am interested in knowing to what extent the water intrusion affects any of the 41 in the mountain and how many of the ones that potentially -- well, let's start with that. How many of the 41 are affected by water intrusion?

MS. FOUNDS: When we were looking at records, there were several as to activities in each of the bunkers. There were two identified of all the bunkers that had some water in them, and it was Phillips Laboratory's, and they own it for their purposes, so there were only at that time identified that there were two.

We went through several of the bunkers in terms of looking at them for part of our evaluation criteria, and the ones that we went through were in good shape, but again, to make these things operational, we would have to look at some of those criteria.

HT13/8 06.039

UNIDENTIFIED SPEAKER: Do you know what the

causes of the water intrusion in the two were? Is it water source? Is it flaws, engineering flaws, or cracks in the facility, or why is it and how is it

HT13/8 06.039 continued

that the water came in? The obvious follow-up is how do you know that there won't be similar problems in any or all of the other 39?

MS. FOUNDS: Again, it was sort of my understanding that this was from some rain events, and it could have been either around the doors out there and things like that, but anyway, this would have to be considered before they were made operational and certified for operation.

UNIDENTIFIED SPEAKER: Let me ask the specific question, has there been any study of what the cause of the water intrusion in the two was?

MS. FOUNDS: No, there has not that I know of.

UNIDENTIFIED SPEAKER: I guess I have probably one more on this subject, and then I will let some other folks in. One of the issues that a lot of

HT13/9 22.003

us are concerned about when it comes to pits, wherever they are, is the availability of not only local and state inspection of these facilities but international inspection.

A lot of concern about pits both here and in

HT13 (CONTINUED)

HT13/9 22.003 continued

Russia and in other places is folks want to know how they are handled to make sure they are not being misused, reused, put back in because those are, after all, supposed to be surplus pits that are not supposed to be for weapons anymore.

MS. FOUNDS: They are supposed to be what pits?

UNIDENTIFIED SPEAKER: Surplus pits. Pantex is a CERCLA site, but Sandia isn't yet. The question though is how would international inspection be accommodated at the Manzano site, that is both at

HT13/10 22.004

presidential directive in terms of the nonproliferation policy, and it is also something the rest of us are interested in, so I am interested in knowing how the access and accessibility of the site would be for international inspection.

MS. FOUNDS: In terms of that, at Pantex, the pits themselves are not inspectable, and that is something that the storage PEIS is really looking at in the long term. We did not look at that for the near term because, of course, you are going to have to meet certain criteria for the inspectability of that material at that time, but we did not look at that as part of the interim storage process.

HT13/11 22.005

UNIDENTIFIED SPEAKER: So you don't know

HT13/11 22.005 continued

among the five sites which you have shown if there are advantages or disadvantages from an international inspection standpoint?

MS. FOUNDS: As I said, again, that was not something we evaluated as part of the site selection process. We are doing this for interim storage, and the pits are not inspectable, if I could say in that time period, so it is really the long-term storage and ultimate disposition that is looking at those in those kinds of issues.

UNIDENTIFIED SPEAKER: Just to be clear, the pits, for whatever interim period of time they are in whatever facility they are, need to be inspectable. That doesn't necessarily mean that somebody can come in and physically look at the pits. There are ways

HT13/12 22.006

that pits can be inspected without physically being able to require to divulge the shapes and those kinds of things.

So as an affirmative statement, and one of the many flaws in this document, from my standpoint, is the fact that it doesn't evaluate that issue, does not set up at any and all of the possible sites

HT13/13 22.007

inspection criteria as a serious flaw, and I would also argue that the policy of the United States set by the president is that surplus materials, these are

HT13/13 22.007 continued

surplus --

MS. FOUNDS: These are not yet surplus. They are not considered that at this time.

HT13/13 22.007 continued

UNIDENTIFIED SPEAKER: We will get to that one -- are supposed to be subject to international inspection.

MS. FOUNDS: I do want to make the point that they are not surplus and are not considered that this time. That is something that will be taken up as part of the stockpile stewardship and management and the storage and disposition. These are considered materials that are part of the Department's needs and have not been declared surplus at this point.

Also, just to -- as part of the selection criteria, again, just going back, that was not part of our selection criteria, but we will take your comment as part of the record.

HT13/14 23.024

UNIDENTIFIED SPEAKER: Just to clarify, I think it is legitimate to have varying selection criteria that go into less detail, but part of what an Environmental Impact Statement is required to do by law is to also evaluate the environmental impacts, so you could use potentially certain criteria to select the sites, but once you have selected them, whether it is Manzano, Nevada, Pantex, et cetera, you need to

HT13/14 23.024 continued

look at the environmental consequences.

Part of the consequences, both environmental because inspection is going to be important from not only an international, but frankly from a national confidential standpoint, is the availability and the accessibility and how inspection could work.

On the face of it, it seems to me, knowing something about all the five sites which you are looking at, that there are differing ways, at some sites, it would be easier to have international inspection, and some would be more difficult, and I think that should be analyzed.

MS. FOUNDS: We will take that as a comment.

MS. BERGMAN: Do we have other people who would like to ask any questions or comments?

UNIDENTIFIED SPEAKER: I just have a clarifying question. What is the maximum number of years that would be considered interim?

MS. FOUNDS: Our EIS has said that we are looking at a ten-year period at the Pantex site. Interim really means until decisions can be made in the storage and disposition PEIS, so at this time, I don't have a cutoff date for what interim would be, but those are the documents that would decide for long-term storage. The ROD for storage and

HT13 (CONTINUED)

disposition is scheduled to be out again until the December time frame and for the stockpile stewardship in the August time frame.

UNIDENTIFIED SPEAKER: If these pits become declared as surplus and therefore not valuable and would need to be eliminated, would there be -- I want to be sure that they are not going to end up -- that Manzano Mountain is not going to end up as a nuclear waste dump. We don't need it in Albuquerque.

MS. FOUNDS: Again, there is a storage and disposition programmatic EIS that is considering ways to dispose of the plutonium, and they have various options in there that include vitrification and several other things. They consider consolidation of the material at sites other than the Kirtland Air Force Base. It is being considered on an interim basis. Those other decisions would take over for long-term storage disposition.

MS. BERGMAN: Let me clarify that. Kirtland is not being considered for long-term storage or disposition. It is not a site that is being considered. It is only being considered for interim, so that was ruled out as a long-term storage and disposition site.

HT13/15 02.006

UNIDENTIFIED SPEAKER: Is there a reason why

HT13/15 02.006 continued

it is only being looked at as interim and not long term, or why is it suitable for one and not the other?

MS. BERGMAN: In the long term, they were also looking at other materials besides plutonium pits. It is my understanding that they did not feel that those bunkers at Manzano were suitable for those other materials, so therefore, it was not considered.

Do we have any other questions?

UNIDENTIFIED SPEAKER: I have lots more.

MS. BERGMAN: I know you do, but I want to give other people a chance.

MS. FOUNDS: We could take about a five-minute break, and I would like to point out our displays in the back, and we can certainly show you various videos on the stage right -- I'm sorry, the TV has acted up on us, but we can do that and explain some of the process.

MS. BERGMAN: Would anyone like to take a break or keep going?

UNIDENTIFIED SPEAKER: Before you do that, I am not objecting to taking a break, but I want Nan to clarify a statement that she made. She said the AT-400 was certified, and I don't believe it is. I believe you are intending to do it, and intending to

put it in operation, but it is not yet in operation.

MS. FOUNDS: It is not yet certified, but it is on track for being certified, and it has passed the drop tests and the crush tests and things like that, so it is in the process of being certified.

HT13/16 16.017

UNIDENTIFIED SPEAKER: Last, to clarify, who is doing the certification?

MS. FOUNDS: The technical answer for this thing is DOE is doing the certification for this thing, but the tests are being conducted at the Sandia facilities, et cetera, and they were the design agency for the container itself.

UNIDENTIFIED SPEAKER: That testing that is being done on this new container, does that include another wonderful 90-minute burn test where 15,000 gallons of JP-4 burn and go over the east mountain area and pollute our skies, or are they small enough to fit in SMURF?

MS. FOUNDS: I will let -- it is my understanding that those tests have already been conducted, so therefore, if you haven't noticed anything, no, they are not thousands upon thousands of gallons, but it is a burn test where they are also subjected to a fire after the crush and drop test, and then they are subjected to a fire also. The container

itself is a fairly small scale.

As I said, I wish we could show you the video tapes, but we can't do that, but maybe what we can do is send those tapes to the Citizens Advisory Board and have them viewed at that time.

MS. BERGMAN: Any objection to a five-minute break? We will take five minutes.

(Recess taken and reconvened.)

MS. BERGMAN: I'd like to ask first if there is anyone who has any questions before we turn the floor back over to Mr. Hancock.

UNIDENTIFIED SPEAKER: One of my biggest complaints about the document, which strangely enough some of us do actually read it, a lot of times, under the affected environment, you list everybody all the way from Rio Rancho to Belen and everybody to the west. There are people who live east of Manzano Base. It is the fastest growing area other than Rio Rancho, and this is something that needs to be brought up.

HT13/17 11.019

Interstate 40 where these SSTs go right down is our major corridor. If something were to happen like if we had an accident there where some truck turns over, that blocks the whole east side of the mountain. In order to get to Albuquerque, it is 120

HT13 (CONTINUED)

miles if you go by way of Santa Fe or whatever, so transportation through that corridor is a really crucial issue. Should something happen in, as we lovingly call it, "Nuke Mountain" or on the highway, you have created a major problem for the whole southwest.

HT13/18 14.057

Also, I wish the documents in the future would at least admit that we exist. Kirtland, in 1989 when they started the fire by accident, which was an accident, said that South 14 could be the fire break. There are over -- at that time, there were 500 homes. Now, there is probably 750 to 1,000 families who live directly east of this facility. We would like some recognition of our concerns as well as the Four Hills residents.

MS. BERGMAN: Thank you.

MS. FOUNDS: Any other comments? No other comments?

UNIDENTIFIED SPEAKER: If you are going to get rid of them, why don't you ship them and then take them apart? Why are you taking them apart -- which is easier, and which is safer?

MS. FOUNDS: Which is safer is to take them apart at Pantex, so we disassemble the HE, they are taken off, the HE is taken off the pits at the Pantex

plant and then shipped, and that is the safer configuration.

UNIDENTIFIED SPEAKER: While we are on the subject of bombs, there are also bombs at Kirtland Air Force Base. I know that is a classified thing, and I am sure the major can't say a whole lot about it, but I'd like to hear what he can say about it, and that issue is not at all discussed in this document.

MR. MARTIN: I think I need more specifics about what your question is exactly.

UNIDENTIFIED SPEAKER: My question is, isn't it true that there are bombs stored not in the bunkers at the Manzano equipment storage area but in another facility at Kirtland Air Force Base?

MR. MARTIN: Are you talking about any specifics?

UNIDENTIFIED SPEAKER: I am talking about nuclear bombs.

MR. MARTIN: It is the policy of the Air Force to neither confirm nor deny the presence of nuclear weapons.

UNIDENTIFIED SPEAKER: Isn't it true -- that's always been the Air Force's position, I have heard it. Isn't it true, however, that the Air Force has now, in fact, confirmed that the Manzano weapons

storage area, the area we are talking about for pit storage, did, in the past, store nuclear bombs?

MR. MARTIN: I need to reiterate that it is the policy of the Air Force to neither confirm nor deny the presence of nuclear weapons.

UNIDENTIFIED SPEAKER: So the Air Force officials who have confirmed and, in fact, have taken the media on tours of the same bunkers that we are talking about and told them there were, in fact, nuclear bombs stored there were saying something that was unauthorized?

MR. MARTIN: I am not privy to that information as far as what was told and what was not told.

UNIDENTIFIED SPEAKER: Let's go on to something that hopefully you can talk about. In the document on 5-60 and 61, you talk about intrasite transportation within the bounds of Kirtland Air Force Base. There is no discussion here, and again, no reference documents, that describe any transportation-related accidents within the bounds of the base.

HT13/19 12.001

I am interested in information in terms of varying kinds of accidents ranging from fender benders to other kinds of accidents that would have happened

HT13/19 12.001 continued

within the bounds of the base over whatever period of time you have that information.

MS. FOUNDS: Well, of course, on the base and things like that, speed limits are controlled, the drivers of the SSTs, et cetera, are instructed to follow the speed limits and things like that. Therefore, you are not talking about accidents that are capable of causing dispersal accidents. You can have controlled situations on the base.

Obviously, in transporting them from Pantex, you do not have that kind of control as you do on the base.

UNIDENTIFIED SPEAKER: That wasn't my question. My question was what documentation exists of transportation accidents within the bounds of the base?

HT13/20 12.002

MS. FOUNDS: What Air Force documents?

UNIDENTIFIED SPEAKER: DOE has got documents. If the Air Force has documents, that is fine. I want to know what exists because there is nothing referenced in this document, in the sitewide.

HT13/20 12.002 continued

MS. FOUNDS: As I said, as part of the document, we have done an analysis for the intersite and again, the intrasite is primarily based upon an analysis of the types of operations, which would be

HT13 (CONTINUED)

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the lower speed, et cetera, operations, and the access roads to those particular areas, so again, those type are not considered dominant or capable in a risk scenario.

Cecil, do you have some clarifying remarks?

MR. BLACK: In chapter 4 of the Pantex plan where we talk about the operations in Pantex, there is a discussion of intrasite transportation at Pantex which covers the same kind of operations and others up to the point where the pits would be removed and transported by forklift.

Up until the point at which a forklift is introduced into removal of the pits to place them in magazines, the safety analysis reports that Pantex has done have indicated there is no credible transportation accident which could cause a dispersal of the plutonium. The forklift accident is analyzed at both Pantex and at Hanzano. In Pantex it is not a dominant accident because there is another type of accident which could have a greater possibility of releasing plutonium.

The only credible accident that could occur in a place like Hanzano is a forklift accident because all of the other high explosive materials have been removed.

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HT13/21
12.003

UNIDENTIFIED SPEAKER: I will be glad to get to the accident scenario in a little bit, but my question hasn't been answered. Just to sort of add to it, there is some interesting numerical information in chapter 4 about actual numbers of transfers internally within Pantex. There is not that same kind of information in this document about Hanzano, and that is the kind of information I am looking for, and either you don't have it -- and so, Nan, my specific question to you is as you were looking at intrasite transportation issues, did you receive, did you have access to, did you look at actual transportation analysis of accidents, transportation accidents, not necessarily dispersal accidents, just accidents within the bounds of Kirtland Air Force Base?

MS. FOUNDS: What we really looked at is sort of the type of operations that are ongoing in what you say is the transportation of them. We did not do studies or gather information, for instance, about all different types of accidents that have occurred on the base, for instance, if that is what you are asking.

UNIDENTIFIED SPEAKER: Let me ask the major the question then. Is he aware of information that presumably the Air Force, but I don't care whose

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information it is -- are you aware of information about transportation-related accidents? And again, I am talking about accidents, I understand that there could be lots of dispersal, but accidents within the bounds of the base.

MR. MARTIN: I am not aware of any such study, no.

UNIDENTIFIED SPEAKER: Are you aware of individual reports of accidents that have occurred within the bounds of the base?

MR. MARTIN: Information such as that I would recommend be referred to the Office of Public Affairs who could conceivably look at Base records to see what sorts of accidents there are. I am not aware of such data. It may, in fact, exist.

UNIDENTIFIED SPEAKER: Nan, are you the AT-400 expert? You are the one whose's been talking about it. You are the expert?

MS. FOUNDS: In terms of this, I am the one at the moment to talk about the AT-400. If I cannot answer your question then, of course, we will take the comment and have the people who are working on that prepare additional responses to your comments.

UNIDENTIFIED SPEAKER: I am interested in a variety of kinds of information more than what is in

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here and more than some other printed material that I have seen coming out of the Pantex office specifically, including the design criteria and detailed design.

Are there detailed design documents available -- let's go one at a time. They aren't cited in here. Are they available?

MS. FOUNDS: I don't know if they are available to the general public. I will have to go back and look and see. I am assuming that what you really want is the type of information that would be in a packaging SAR.

UNIDENTIFIED SPEAKER: That was my next question. When are you going to have a SAR?

MS. FOUNDS: I will have to get back to you as to when there will be a SAR for the AT-400, the actual final date.

UNIDENTIFIED SPEAKER: Do you have an idea when the date is? Are you expecting it before there is a final out?

MS. FOUNDS: Actually, yes. It was my understanding that the schedules for those things were before the final for this document, but those could have changed since the last time that I spoke with the AT-400 people.

HT13 (CONTINUED)

UNIDENTIFIED SPEAKER: You have said, and the draft EIS also says, that there has already been some testing done of the AT-400 at Sandia, and you have talked about the results of those. Again, there is no written documentation that is cited in the EIS about the results of those tests, and I am wondering about the availability of written information about those tests.

MS. FOUNDS: I want to make sure that -- in the back of the document, we do talk about the transportation aspects, and we do describe the AT-400, et cetera, so you want specifics?

UNIDENTIFIED SPEAKER: Even before the SAR, traditionally, and I have done this with numerous other Sandia tests of transportation containers, traditionally, before there is a SAR, there is actual information memos, et cetera, about the result of the test.

MS. FOUNDS: Right.

UNIDENTIFIED SPEAKER: I assume that it exists because you seem to talk about it, and the document seems to talk about it, but there is no memos. There are no reports.

MS. FOUNDS: There is a videotape.

UNIDENTIFIED SPEAKER: I have seen lots of

videotapes. I find written information actually a lot more useful.

MS. FOUNDS: We will communicate with you on that. I will go over and ask the AT-400 people if they have any additional information that is releasable and that we can give to you on that subject. As I said, in our document, we analyzed for a Type B package shipping container, and so therefore, that is the basis for our accident analysis, et cetera.

One of the things I'd like to do is maybe at a break, we could go over the references in there and what you think you still need besides references that are in there.

UNIDENTIFIED SPEAKER: Oh, good, yes, we can do that. Let's move on to the health and radiation exposure issue. Nan, in your chart that you showed at the beginning, you showed a couple of things, you showed the comparative chart, and you also talked about the exposure numbers. I am a little concerned about how the document deals with that issue, and I won't even go into sort of the health related things I am concerned about, but, for example, on 4-182, it talks about exposures at Pantex to workers from loading pits.

MS. FOUNDS: Correct.

UNIDENTIFIED SPEAKER: It talks about -- it talks about several things, but the rem numbers that you use seem inconsistent between Pantex -- let me ask the question differently. Is your assumption that the levels of exposures to workers are the same from loading the pits at Pantex as they would be to the workers who would unload the same pits at any of the other sites?

MS. FOUNDS: Yes, that is primarily sort of the baseline there. The numbers are approximately the same.

UNIDENTIFIED SPEAKER: They are about the same, but they don't seem to be exactly the same, which is why I asked the question.

MS. FOUNDS: Cliff wants to clarify that.

MR. JARMAN: For the assumption of how much exposure the workers would get unloading the pits, we used -- what you see for the workers at Pantex is they do things other than just loading the pits, so they receive other exposures, so the numbers are not the same for what the Pantex workers get and what the others get. For the loading and unloading activities only, yes, it is the same, but the Pantex workers would also be loading and unloading weapons and doing

other things, and they get some exposures from that.

UNIDENTIFIED SPEAKER: Without going into a long debate, Pantex workers could be limited from a radiation exposure to just loading the pits. Those workers could be assigned so they do have other jobs that would have no radiation exposure, so it is not a requirement from a population standpoint. Certainly there would be higher cumulative doses because there are other operations going on.

MR. JARMAN: We assumed the same workers would be doing it, so we showed the largest amount the workers could get. Individual workers might not get that amount because they might not be doing both activities.

HT13/22 02.007

UNIDENTIFIED SPEAKER: You may not want to talk about this, but it seems like the Department is taking the position that these workers' doses that we just talked about are inevitable, because even if the pits stay at Pantex, they will still have to be loaded out of zone 4 and moved again, because the disposition PEIS says even if they all stay at Pantex, they would be loaded into zone 12, is that correct?

MS. FOUNDS: Isn't that the stockpile stewardship and management that says that they would move the number 4, the strategic reserve, into zone

HT13 (CONTINUED)

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UNIDENTIFIED SPEAKER: The disposition EIS also says if you did long-term storage of pits at Pantex, you would also move them to zone 12, they would not stay at zone 4, so in essence, you are saying that the worker exposures are going to happen regardless at Pantex?

MS. FOUNDS: Concurrent with the alternatives that are being looked at.

HT13/23 01.009

UNIDENTIFIED SPEAKER: Does anybody else want to jump in before I go into some other things? How did the 20,000 number get established, 20,000 pits?

MS. FOUNDS: That was the bounding number from dismantlement that was considered.

HT13/23 01.009 continued

UNIDENTIFIED SPEAKER: Why is that the bounding number since when we started dismantlement, we had considerably more warheads than that?

MS. FOUNDS: Tell me what your reference is when you say "considerably more warheads than that."

HT13/23 01.009 continued

UNIDENTIFIED SPEAKER: It is a public number that the United States in the '80s had well over 25,000 nuclear weapons. It is also a well-established number in the START II treaty which has been ratified by the senate of the United States that the goal would

HT13/23 01.009 continued

be to come down to 3,500 warheads, so on the face of it, we would dismantle more -- from dismantlement, we would have more than 20,000 pits.

MS. FOUNDS: You are talking about for the cumulative amount? The projection of those that needed to be stored from the dismantlement operation were based upon what we would be taking back from the stockpile now, and that much had to be stored in an interim fashion.

Cecil, you wanted to say something else?

MR. BLACK: The issue that you have raised is really addressed in the stockpile stewardship EIS. However, the number of warheads or the number of weapons governed by START II is not really weapons but is deliverable weapons. Under the START II treaty, the United States would have a number of weapons greater than 3,500. That number is classified, and I don't even know what it is, so there is not necessarily a discrepancy between the numbers that you cite and the fact that the Department plans to dismantle up to 20,000.

HT13/23 01.009 continued

UNIDENTIFIED SPEAKER: Let me ask the question a little differently. Isn't it true that the 20,000 number was first used by the Department of Energy in an Environmental Assessment done three years

ago, more or less, at Pantex, which was an environmental assessment that said, "Let's do this interim storage of 20,000 pits at Pantex"? That is the first place that I am aware of that the Department used that number. Is that not true?

MS. FOUNDS: That is my understanding.

HT13/23 01.009 continued

UNIDENTIFIED SPEAKER: That number is a pre-START II ratification number, and it appears to me it is a pre-START II number in any case, and the real question is to put it in the context of the sitewide. The sitewide says there is the potential of handling up to 2,000 weapons a year in terms of the analysis of the operation at Pantex, it talks about up to 2,000 a year, although it assumes that a more likely number is 1,000 a year during this ten-year time frame.

Isn't it the case that in terms of Pantex and the numbers of pits that during the next ten years, there could be more than 20,000 pits?

MS. FOUNDS: In terms of the math that you are citing from the dismantlement operations, it is not my understanding that we will exceed the 20,000 pits. Now, if you look at all pits out there, I would have to go back and understand exactly what all of those numbers are, but these are primarily from the dismantlement operation.

In terms of responding to your comment, we will have to look at the numbers in stockpile storage and management and make sure our math adds up.

HT13/24 01.010

UNIDENTIFIED SPEAKER: I guess the specific question that I'd like to see addressed in the final, this final, is 20,000 pits for interim storage actually a bounding number, or within the next ten years, could the number actually be higher than that? That is the specific issue I would like to see addressed.

MS. FOUNDS: For our alternatives, we are considering no more than 20,000, so therefore, you cannot undertake an activity that would put more than 20,000 out there unless there were other decisions that were part of the consolidation efforts under the storage and disposition, so 20,000 is what we are considering as the definition of what our alternatives are.

HT13/25 01.011

UNIDENTIFIED SPEAKER: Two questions in that regard, one is that if, in fact, the Department is taking the position that they would have to somehow supplement this or some other NEPA document before they completed 20,000, that should be expressly stated, and if that is not the Department's position, that specific statement needs to be made in this

HT13 (CONTINUED)

HT13/25 01.011 continued

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document and in the ROD.

Related to that, I would also request that the document analyze where the 20,000 number came from and how that would relate specifically to less than START II levels of dismantlement.

MS. FOUNDS: Thank you.

UNIDENTIFIED SPEAKER: As you know, a lot of us have argued, in the context of the stockpile stewardship and management, the Department needs to analyze an arsenal much less than 3,500. The Department doesn't want to do that, but we don't need to get into that argument. The point is that it is possible that there will be dismantlement of less than START II to an arsenal smaller than START II within the time frame covered by this document.

MS. FOUNDS: Again, I would say that that is an issue that we will probably address with stockpile stewardship and management, because it is really their document that would analyze those stockpile cases.

UNIDENTIFIED SPEAKER: I am suggesting you also have to do it here.

MS. BERGMAN: Does anyone else have any questions?

HT13/26 01.012

UNIDENTIFIED SPEAKER: I am going to throw out something, that you drop Kirtland, Sandia, from

HT13/26 01.012 continued

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this project because it is not going to be a permanent storage. You should get your act together and put it where it is finally going to be. Put it at one of the places that will be a permanent storage because of the fact that you, yourself, have said it is only considered able to handle the plutonium and not others, and this is only interim. Well, just wait and put it where it is finally going. Get your other plan together, decide it, pick a site and hold onto it until then.

MS. FOUNDS: Thank you for your comment.

MS. BERGMAN: Do we have any other comments or questions? Did you want to continue?

UNIDENTIFIED SPEAKER: I can continue, or I can also stop.

HT13/27 02.008

UNIDENTIFIED SPEAKER: I have a question or statement relating to how the sitewide and the two PEISs, the surge and disposition and the stockpile stewardship PEIS, are relating. We just spent a lot of time working on bringing people from all over the state to the stockpile stewardship hearings, and the main topic of discussion is plutonium pit fabrication at Los Alamos, and here we are talking about thousands and thousands of plutonium pits being dismantled.

It seems to me like the left hand doesn't

HT13/27 02.008 continued

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know what the right hand is doing. One hand is trying to figure out what to do with pits, and the other hand is creating more. Is that something that can in some way be tied in --

MS. FOUNDS: What you are talking about is not fabrication of new pits.

UNIDENTIFIED SPEAKER: I understand that, it is retooling.

MS. FOUNDS: Right, so we really aren't looking at new pits as you are calling them, not fabricating them from new plutonium.

HT13/27 02.008 continued

UNIDENTIFIED SPEAKER: I understand that, but if we have got pits, it seems to me confusing that we would need to retool them to different specifications.

MS. FOUNDS: It is a -- do you want to answer that?

UNIDENTIFIED SPEAKER: No, I want to contradict that.

UNIDENTIFIED SPEAKER: Contradict me?

UNIDENTIFIED SPEAKER: No, I want to contradict her.

MS. FOUNDS: Before I answer, basically, it is an issue with maintenance of the stockpile to make sure that the availability of the weapons that are

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considered necessary, we keep reserved quantities, and therefore, in order to maintain those weapons for the purposes that they were designed for, et cetera, we may need to have the ability to keep the pits available for maintenance of the stockpile. Then I will let Don contradict that.

UNIDENTIFIED SPEAKER: Before Don jumps in, I think that retooling pits may be making them better, if there is such a thing as a better pit, contradicts the intention of arms control treaties and is sort of setting a new arms race, within the certain amount of weapons that we are allowed to have, that we are going to have the best darn weapons out there. To me, that violates the spirit of the arms control treaty.

MS. FOUNDS: That is a policy decision by the United States, and the weapons that are needed in the stockpile are determined by DOD and are communicated to us, and we are the ones responsible for making sure we can support that stockpile.

UNIDENTIFIED SPEAKER: To me, it doesn't seem very efficient.

UNIDENTIFIED SPEAKER: It is also downright dangerous. I guess I want to clarify what you said, Nan, because I couldn't believe my ears. Were you suggesting that in the context of the stockpile

HT13 (CONTINUED)

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stewardship and management PEIS, the Department is not including a plutonium pit fabrication capability at Los Alamos?

MS. FOUNDS: No, that is not what I said. She asked about new pits. I was referring to -- the production capabilities at Rocky Flats have been shut down, so we do not have the capability to start from scratch at the Rocky Flats plant in order to fabricate new ones at this time.

UNIDENTIFIED SPEAKER: You don't have that capability at Rocky Flats, but you do have that capability at Los Alamos, and part of what the stockpile stewardship and management PEIS wants to do is to specifically say that that capability will be clearly identified and clearly available at Los Alamos for the next 25, 30 years or longer, correct?

MS. FOUNDS: Yes.

UNIDENTIFIED SPEAKER: Including the capability -- just to nail this point down, including the capability to fabricate, quote, new pits?

MS. FOUNDS: For maintenance of the existing stockpile.

UNIDENTIFIED SPEAKER: What I wanted to clarify is I thought you had said that Los Alamos and the stockpile stewardship and management PEIS does not

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cover that capability of fabricating for new pits, and that is what I felt was a contradiction. If I misheard, that is fine, but I wanted to clarify it so it is clear what SS&M does.

MS. FOUNDS: I was confused by what you said.

MS. BERGMAN: Does anyone else have any questions or comments? Let me just mention again, if you do have comments you want to make but this is not the form you want to do it in, there are lots of opportunities to make comments through E-mail, Internet, fax, 800 number, so please recognize that the comment period is open until July 12th, so there will be lots more time and opportunity in case you do have more comments.

UNIDENTIFIED SPEAKER: I have another question. Will there be any difference in the level of transparency in the plutonium pit disposition process if the plutonium pits are sitting on a DOD or DOE site in terms of international surveillance or in terms of the public being aware of what is happening with pits? Is there any difference in what the public will know --

HT13/28 22.008

MS. FOUNDS: DOD maintains control of those pits, and the information about those would come under

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the jurisdiction of the Department of Energy.

UNIDENTIFIED SPEAKER: The Department of Energy's secretary does have a policy of greater openness, which is not something I have heard from the Department of Defense and don't expect to hear it from the Department of Defense. I am wondering where there will be some difference should be pits be at Kirtland.

HT13/28 22.008 continued

MS. FOUNDS: The information about the pits will be the same. Again, that is what we are talking about here is DOE activity on an Air Force base.

MS. BERGMAN: Do we have any other questions or comments? We have got ten more minutes. Don, did you want to make a few more?

MR. HANCOCK: I will take considerably less than ten minutes so people can get out early. Two points I want to make are, one, the fact that we have such difficulty in figuring out what to do with 20,000 pits, which I certainly do and would hope that everybody here is, on the one hand, glad that we are getting 20,000 pits out of bombs. That is a good thing, but the fact that what comes from the good thing of having fewer warheads armed and able to destroy the world several times over is another problem, which is what to do with the 20,000 pits.

HT13/29 02.009

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It is even more complicated because, as has already been stated, it would be one thing to say we know what to do with the 20,000 pits in the short term because we know what it do with the 20,000 pits in the long term. We know what the disposition is. In fact, we don't know what the disposition is.

I have talked about it in another context, so I will just summarize. I have no confidence that the disposition PEIS in fact is adequately analyzing or is going to come up with a possible reasonable solution for longer term what to do with those 20,000 pits. So I think it is something that some of us in the public and hopefully people in the federal government will pay a lot more attention to in the future.

HT13/29 02.009 continued

We have created some problems, quote, inadvertent problems, that we dare not create. The dangers associated with these plutonium pits in or out of warheads are going to last for a long time, and it is unfortunate that we didn't have a broader public discussion about all of these issues before a decision was made to even create the 20,000-plus warheads and what these unintended consequences would be.

I certainly hope we don't do that again, and I certainly hope as we talk about interim storage of

HT13/30 14.068

HT13 (CONTINUED)

HT13/30
14.068
continued

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pits, which frankly, for better or worse, is going to be a lot longer than ten years, and this document should more clearly state that kind of along the lines, Nan, that you, in fact, said in answer to Janna's question, but I don't really see that kind of comment reflected in here, so that is the kind of change that needs to be made in this document.

MS. FOUNDS: I do want to point out in the beginning, it does talk about the other PEISs and the decisions that are being made, and they are for the long-term storage until those disposition options are there, so that is the other.

UNIDENTIFIED SPEAKER: As long as you add the word "supposedly" being made in those other documents, I might agree.

MS. FOUNDS: Thank you for your comments. We will be available for a few minutes at the display, so if there are any other questions that we can answer, they will not be recorded, however, but we will be happy to talk about the various displays that we have.

Thank you very much.

(First session concluded at 4:53 p.m.)

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* * * SECOND SESSION 6:00 P.M.* * *

MS. BERGMAN: I'd like to introduce Major Martin, who is our Air Force representative here, and between Nan and myself and the Major and some of our technical experts, we'd be happy to try to address your questions and receive any comments that you might have at this time.

This is our only mike. This afternoon, we seemed to do pretty well, the voices seemed to carry in the room without the mike, but we may need to ask you to use this if we have difficulty hearing you, so at this time, does anyone have any questions or comments?

UNIDENTIFIED SPEAKER: How close is the Manzano bunker storage area to the 2,000 warheads that are stored already at Kirtland Air Force Base?

MS. FOUNDS: We looked at the pits, which are in the bunker area, and you have that fence, and we primarily looked at it just within the region with the fence and that being the buffer area.

MR. MARTIN: To give a comment on your question, it is the policy of the Department of Air Force that we will neither confirm or deny the presence of nuclear weapons.

UNIDENTIFIED SPEAKER: I feel that it is

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very hard for us to assess how dangerous this is for us or not dangerous it is for us when we don't know what goes on at Kirtland Air Force Base now. There are so many things there that we are not allowed to talk about or hear about. The Tribune years ago did an article on the bunker, which if I remember correctly is within two miles of the commercial runway there that has bombs in it which have aging safety devices. I understand those were taken out of the Manzanos and now are in the bunker.

I question in my mind if the Manzanos weren't safe for the bombs, are they safe for the plutonium pits? Why were those bombs moved? I feel like before there is any more projects on Kirtland, this veil of secrecy has to be lifted somewhat because we are much more frightened here in Albuquerque now by the nuclear projects in our state than we are by any enemy we can see, which makes us focus on the dangers at home. We feel like the war is here in our state. We have many nuclear projects here.

MS. FOUNDS: We will take your comments. The policies of the DOD in general are not an issue within the NEPA, and I understand what you are talking about in terms of looking at accident scenarios and things like that. Primarily, the pits are going to be

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stored in the bunkers that are out there in the mountain, and other activities that are reasonably foreseeable out there are not a danger to the pits in terms of a dispersal accident.

We have looked at what is out there. We have looked out bounding-type accidents. We have looked at the aircraft crash scenario for that mountain, too, which would probably bound any of the hazards that Kirtland presents to those pits, so that is why we give that in terms of the storage accident, both, a bounding accident is a forklift puncture out there, and also, we did look at the aircraft crash scenario.

We are also considering the bunkers that are on the east side that would be farthest away from other operations on Kirtland Air Force Base.

HT13/31
01.013

UNIDENTIFIED SPEAKER: How many bunkers are required for 20,000 pits?

MS. FOUNDS: It is -- about 4,500 square feet was the selection criteria, and I think that is nominally about 25. I am going to look to my technical experts to look that up. It is in the document.

UNIDENTIFIED SPEAKER: Page 5.

UNIDENTIFIED SPEAKER: So 25?

HT13 (CONTINUED)

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MS. FOUNDS: Yes. I'd be happy to let you look the page up, Don.

MR. HANCOCK: Yes, ma'am.

UNIDENTIFIED SPEAKER: Our group hasn't taken a position on this issue, but when you are considering environmental justice, do you also consider the number of nuclear projects that are already within a state? I have been to so many hearings lately that I hardly have time to eat dinner.

HT13/32 17.006

I mean it is like I am up in Los Alamos, and they want to move Rocky Flats operations to Los Alamos. They want to shoot missiles. They want to dump radioactive waste in the Rio Grande. They want to put midlevel waste at WIPP. They want to do more -- they want to expand the Alamogordo testing range. Shouldn't that be part of environmental justice to look at how many nuclear projects there are already in the state?

MS. FOUNDS: Our guidance in terms of that is looking at what projects that we are considering and then seeing how our project affects the local area, and that is our implementation guidelines. You are always -- we will accept those comments and forward them up to headquarters, because many things

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come into play when the actual ROD is considered, but in terms of the sections of the EIS for the relocation alternatives, we consider what our project will do and how that interrelates to the standards that DOE has.

UNIDENTIFIED SPEAKER: Isn't there an impact section that addresses the fact that there is no evidence that cumulative impacts will lead to a significant consequence to the people? Is that a part of the environmental justice?

HT13/33 17.007

MS. FOUNDS: A part of the overall document is the cumulative impact, and that is particularly prevalent for the Pantex site where we are looking at all of the activities on the Pantex site in looking at that, its impacts to the population.

Yes, ma'am?

UNIDENTIFIED SPEAKER: I would suggest that cumulative impact part of your Environmental Impact Statement should also include a cumulative psychological impact of all these projects on the people of New Mexico and how much people here are going to take before there is some kind of rebellion involved. We already know that cancer rates at Los Alamos, breast cancer rates, are 20 to 50 percent higher. We know that the child death rate there is higher than anywhere else in the state. We know a lot

HT13/34 23.025

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of bad things about Los Alamos.

We are looking at the rest of our state and wondering if the rest of our state is going to go that way, too, so I would suggest a psychological impact also be part of the cumulative effect of projects in an area.

HT13/34 23.025 continued

MS. FOUNDS: We will be happy to take your comment on that. I will -- it has not been the policy to do that in terms of NEPA, and I believe that there are some court rulings that state that for NEPA analysis, you do not have to do that type of an analysis, but we will take your comment into consideration.

Sir?

UNIDENTIFIED SPEAKER: All of the recent surveys and public attendance in the last decade or more, public opinion polls show that the people of the State of New Mexico are very much in support of both the Department of Defense and the Department of Energy's activities, so I don't know what the basis of some of these -- factual basis of some of these remarks are.

MS. FOUNDS: I appreciate your comment.

UNIDENTIFIED SPEAKER: That is not completely true because the majority of the state have

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been stated to be against the WIPP project, and the people in northern New Mexico who have been in favor of Los Alamos Lab are quickly losing their favor for that lab since it's been planning production and fired about 1,000 people from around the lab.

MS. FOUNDS: I'd like to take this opportunity for a moment, and I don't want to necessarily get into a large debate here about Los Alamos because right at the moment, I'd like to, if we can, focus on the NEPA analysis here at the Kirtland Air Force Base. I understand your concerns at Los Alamos, but as far as the analysis in our document, there would be no impact to residents in the Los Alamos area because of that.

If you are concerned about what is happening here, we have done the analysis for dispersal accidents and for transportation risk, and those are the type of operations that we are concerned about here in Albuquerque.

UNIDENTIFIED SPEAKER: But you don't live in Albuquerque, and I am telling you what I am concerned about living here in the state.

MS. FOUNDS: Yes, I do. I live in Albuquerque. I am based here in the Albuquerque area.

UNIDENTIFIED SPEAKER: Do you live here?

HT13 (CONTINUED)

MS. FOUNDS: Yes.

UNIDENTIFIED SPEAKER: How do you feel, yourself, about storing plutonium pits in a population center with 650,000 people, surrounded by that many people?

MS. FOUNDS: Like I said, this is sort of a personal debate, and I am not trying to get into a personal debate, but we have looked at the risk of doing that, and the risk is not -- is not high against our evaluation criteria.

HT13/35 22.009

UNIDENTIFIED SPEAKER: I guess the problem with the Department manager doing the risk is that nobody trusts the Department of Energy. I think that if you had somebody independent doing the risk analysis, then it would be more palatable.

MS. FOUNDS: I understand what you are saying, but we do have specific guidelines and procedures that we do follow in doing this. The contractor that supports us is very knowledgable in these risk areas and things like that and do constitute at least a partial independent review of this analysis, and we do follow the procedures and guidelines that most other agencies use in assessing risk.

MS. BERGMAN: The State is also looking

closely at our data to make sure they can understand the logic there and that they follow it as well, so there are some independent reviews of the data outside of the DOE arena.

MS. FOUNDS: I might also point out that that is the very nature of these public forums is to get that information out to you so you can comment on it and give us comments.

HT13/36 22.010

UNIDENTIFIED SPEAKER: I appreciate all your efforts, but there is just such a long history of deception here that it is hard to overcome and believe and trust data that comes out of the Department, and I am sorry that is true.

MS. FOUNDS: Any other comments?

UNIDENTIFIED SPEAKER: What is the role of the Air Force?

MS. FOUNDS: They are a cooperating agency. In other words, they supplied us data for our analysis, and they have agreed to be a cooperating agency in terms of the consideration as an alternative for the relocation of the pits. If I am not answering your question, please clarify a little bit more.

UNIDENTIFIED SPEAKER: In what way were they helpful with the data? What did they provide?

MS. FOUNDS: They provided us baseline

environmental data that they had. Also, we went out to Sandia for some of that information.

UNIDENTIFIED SPEAKER: Doesn't the Air Force decide if you should store pits at Manzano? Isn't that the relationship?

MS. FOUNDS: There would have to be memorandums of agreement on how to effect that so DOE would retain control over the material, and the procedures, et cetera, that would be followed would be DOE procedures. Obviously, the material command, the Air Force Material Command would remain the owner of the facility, so to speak, but we would have jurisdiction over the material, the way it was handled, the way it was operated and those type of things.

UNIDENTIFIED SPEAKER: Is it permissible to comment about publicly available information that perhaps the Air Force officer is not free to discuss, but it's been in the Albuquerque Journal and perhaps could respond to some of their anxieties? Is that permissible?

MS. FOUNDS: What is that?

UNIDENTIFIED SPEAKER: Is it permissible to provide information as a private citizen that perhaps the major is not free to provide?

MS. FOUNDS: You want to make comments?

UNIDENTIFIED SPEAKER: Yes. I want to help answer that question.

MS. FOUNDS: You are free to make a comment.

UNIDENTIFIED SPEAKER: I don't know what is in the Kirtland underground munition storage area, I don't know what is in there, but I do know it is a couple miles away from the Manzano weapons area.

MS. FOUNDS: I thank you for your comment. I will refer back to what the major said in terms of Air Force policy.

UNIDENTIFIED SPEAKER: I was just asking if you are getting information from the Air Force and are able to confirm or deny any of the data they give you.

MS. BERGMAN: Yes.

MS. FOUNDS: As I said, we also did look at some of the Sandia data, too, for baseline information.

UNIDENTIFIED SPEAKER: Does the gentleman over here know how many miles it is from the runway? Is it 2 or 1.8 our 1.4, do you know, or a closer distance than about 2 miles?

UNIDENTIFIED SPEAKER: It is closer to the runway than it is to the Manzano weapons storage area

HT13 (CONTINUED)

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in Four Hills, but it is out of the way, and it is below ground, and it is extremely heavily -- extremely heavily reinforced.

MS. FOUNDS: Any other questions?

UNIDENTIFIED SPEAKER: This afternoon, there was a considerable discussion about some of the information related to Kirtland and what you had considered and not considered and what documents were available and what is not available. I guess the question I want to ask, and I'd like both Nan and the major to answer it, please, is if currently, the Manzano site is not the preferred option.

MS. FOUNDS: Yes.

UNIDENTIFIED SPEAKER: If the Manzano site became the preferred option, what additional NEPA analysis would be done?

MS. FOUNDS: What additional NEPA analysis would be done? If we actually store the pits here? The intent was to make this EIS such that it would constitute the NEPA analysis for implementing that alternative, so there would be no other NEPA analysis necessary to implement that if the regular decision so stated.

UNIDENTIFIED SPEAKER: I'd like the major to answer that question, too.

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MR. MARTIN: There are some other requirements that extend beyond the requirements of the National Environmental Policy Act, or NEPA. What we would get into would be what is known as a real estate transaction, and we, the Air Force, as owners of the land would require the Department of Energy as the users of the land to get a real estate authorization saying, "You may go ahead and use this for your intended purpose," and it would be their stated purpose.

The main thing that would be required is we would have what is known as an environmental baseline study done. What that is is at the time of turnover of authorization -- not turnover, we don't give them the land, we still retain ownership of the land, but at the time we say they may go ahead and use this land, snapshot in time, what are all the environmental questions there, taking into account past activities.

We would go out and look at, for example, old restoration sites and so forth. We would say, "Okay, this is the state of the land when you got it." If the lease were terminated at some time, either not renewed or they changed their mind or whatever, moved somewhere else, then there would be memorandums of agreement and understanding for

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restoration of the property based on what they did.

Does that answer your question?

UNIDENTIFIED SPEAKER: So is it the Department of Defense's position that -- since you have the microphone, I'd like you to answer it first, and then we will go back to Nan. Is it the Department of Defense's position that the draft EIS as it currently exists adequately analyzes environmental impacts associated with pit storage at Manzano, and the second part of the question, is it your position that it adequately analyzes archeological sites for historic preservation purposes?

HT13/37
10.002

MR. MARTIN: Let me answer the second one first. The whole archeological and cultural resources requirements of NEPA have been taken into account. We have a natural resources person in environmental management, of which I am the deputy director. We also have someone who does the cultural resources. We have had studies done on both concerns, and those were fed to the Department of Energy saying, "Okay, we have got these concerns at these sites."

Does that answer that adequately?

UNIDENTIFIED SPEAKER: If that is all you are willing to answer.

MR. MARTIN: Of all the sites that have been

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identified, we have done a cultural and natural resources survey for the Air Force base and for the affected area we are talking about. We identified our concerns to the Department of Energy.

MS. FOUNDS: I would point out that the Air Force Material Command has concurred on the document as it stands as a draft, and they will be asked to concur on the document in final form.

UNIDENTIFIED SPEAKER: Concerning the cultural resources at Manzano, national labs for the Department did a very extensive archeological survey of the entire Manzano weapons storage area.

UNIDENTIFIED SPEAKER: I have just gone from being mildly concerned to being outraged. If this is the new, open DOE, I'd like to say for one thing, we never got a written notice of this hearing at all. The last hearing about the DOE weapons complex, the 20-year plan, two weeks before that hearing, I was calling everybody in DOE trying to find out the date, and no one even knew the date yet.

This is outrageous that you say this is going to be the only hearing about storing plutonium pits in our mountains. Nobody knew about this hearing. You put a notice in the paper a few days ahead of time. We didn't get a written notice at all.

HT13 (CONTINUED)

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and you are going to say that this is the only hearing you are going to have when you are talking about storing the most deadly element known to man in our mountains. It is outrageous.

MS. FOUNDS: I want to make sure that our comment period actually extends to July 12th, and there are various avenues by which you can continue to comment on our document. We have, out in the lobby there, a poster by which you can comment by fax, by mail, by telephone, by E-mail, and what is the other one?

UNIDENTIFIED SPEAKER: In order for the people of Albuquerque to be represented, they have to be at a meeting, and they have to be able to ask questions and have answers to those questions. They need a month's notice before an important hearing that will impact their -- possibly impact their health and welfare. This is outrageous what you are doing. You are trying to sneak things in on people while pretending to be open, and it is outrageous. I am outraged.

MS. BERGMAN: May I ask what group --

MS. FOUNDS: Citizens for Alternatives to Radioactive Dumping, and I have already gone through this whole thing with Al. We were left off the list.

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MS. BERGMAN: We sent a notification to Garland Harris, that was the representative we were given, and it was sent to the home address of Garland Harris. If this is not the appropriate contact, please, we want who is and where we should send it.

UNIDENTIFIED SPEAKER: How far in advance did you send that notice?

MS. BERGMAN: It was about a month ago. We sent them out as soon as the Notice of Availability was put in the Federal Register, so it's been about a month. We apologize for that. Our intention certainly was that everyone had adequate notice, and we really want to know who the appropriate contacts are.

UNIDENTIFIED SPEAKER: We have many members in our group, and we'd like to receive notice at our office, please.

MS. BERGMAN: Could you indicate on the card where we should send that to in the future and who it should be sent to so we can make sure that this never happens again?

HT13/38 23.026

UNIDENTIFIED SPEAKER: Well, I also feel that if Kirtland becomes your number one choice that it is your obligation to hold a hearing here, not to just do this.

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MS. BERGMAN: Thank you. Did I see another hand?

UNIDENTIFIED SPEAKER: I got my letter at least a month ago.

MS. BERGMAN: I guess we have had some problems with the mail, I guess. Do we have any other questions or comments?

Yes, sir?

UNIDENTIFIED SPEAKER: I am just coming in late, but I didn't see any discussion, at least in the summary of the EIS, on what further research into high explosives is going to be done at Pantex and the environmental impacts projected for the continued work testing new or old high explosives.

MS. FOUNDS: In terms of our analysis, the summary, you may have to go into the main body. They do describe the alternatives in the proposed action, and it does indicate those operations, and that includes continuing high explosive operations out at the Pantex site, so we have looked at that as part of our alternatives in the proposed action, the continuing missions out there.

Now, there is also the stockpile stewardship and management which is actually looking at possibly relocating those operations from the Pantex site to

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Los Alamos or Lawrence Livermore.

HT13/39 14.037

UNIDENTIFIED SPEAKER: Could you talk some about the scope of what the high explosive research program is and what the fatality rate has been over the last decade for workers who are messing around with high explosives?

MS. FOUNDS: In the document, we go through a -- it is under human health, and in there, it identifies different accident scenarios. Part of what is identified in there is a detonation of high explosives as part of the machining operations. I believe that that has happened once in the last 20 years, and we have in there -- we discuss what the accident was and what the changes in the procedures are.

Again, I said that happened many, many years ago, and procedures have changed since that time.

UNIDENTIFIED SPEAKER: So in terms of research on new types of high explosives and accidents involving research on high explosives separate from the dismantlement --

MS. FOUNDS: That is mainly the operations out there, and that would be the dominant scenario, because that involves most of the handling because you are machining on high explosives, you are handling

HT13 (CONTINUED)

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them and things like that, so that describes primarily the dominant accident scenario that is involved at the Pantex plant from high explosives.

HT13/40 14.038

UNIDENTIFIED SPEAKER: So is the Pantex plant going to be planning to experiment with new types of high explosives as we look ahead in the coming years that the sitewide is supposed to cover?

MS. FOUNDS: Cecil?

MR. BLACK: The principal role of research and development at tho Pantex plant is not really in developing now types of explosives. That work is principally done at Los Alamos and Lawrence Livermore. What the Pantex plant does primarily in R&D of explosives is testing explosives to see how they perform over time.

When they bring in a weapon and disassemble it, there may be a requirement for a test on a particular explosive removed from that weapon, for example, to see what has changed in that explosive since we made it, so it is not really the kind of thing that you are probably thinking of.

UNIDENTIFIED SPEAKER: I thought I remembered, in fact, they are continuing to explore different sorts of -- the chemical makeup of different sorts of high explosives. In fact, that is where the

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fatality of the last decade occurred.

MR. BLACK: There's been one accident involving a fatality. The fatality the last decade was a Lawrence-Livermore-developed high explosive, and it was an experimental high explosive that Lawrence Livermore had developed, and the Pantex plant was doing fabrication research on that material.

UNIDENTIFIED SPEAKER: So they were fabricating an already --

UNIDENTIFIED SPEAKER: All research and development activities, and I believe it was on -- I am not going to guess what it was, but all of that was done at Lawrence Livermore National Lab.

UNIDENTIFIED SPEAKER: Will Lawrence Livermore and Los Alamos be shipping different sorts of compositions to Pantex and expecting them to do the machining and tooling?

HT13/41 16.018

UNIDENTIFIED SPEAKER: I would presume whatever the role that is identified for Livermore and Los Alamos in the stockpile stewardship and management that it will be supported by Pantex in their mission.

UNIDENTIFIED SPEAKER: I couldn't find it in here.

UNIDENTIFIED SPEAKER: If you look in the summary, it talks about one paragraph of the R&D of

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high explosives. I presume, if I recall, what the total document has is much more detailed.

HT13/42 01.014

UNIDENTIFIED SPEAKER: Is there a justification for continued exploration and alternatives forms of high explosives at this point in time that would justify the health and environmental risk?

UNIDENTIFIED SPEAKER: I wasn't aware that NEPA was a justification kind of document. I thought it was merely an analysis of environmental proposed activities.

UNIDENTIFIED SPEAKER: My understanding was there had to be a justification for the environmental and health risks.

MS. FOUNDS: Sir, again, NEPA requires us to analyze the action. There is a purpose and need described in the document for the continuation of the activities at Pantex, but again, as was pointed out, it is not a justification document, per se. It is analyzing those and giving what the impacts would be at the site considered.

UNIDENTIFIED SPEAKER: I want to clarify a couple of things in this conversation, particularly for the record. I'd like it to be indicated that the person who discussed the fatalities, et cetera, was

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Dave Rosson, retired Department of Energy employee, who has been intimately involved with this document, which is the reason that he can speak to it knowledgably, but because he wasn't identified, I think the record should be clear in that regard.

HT13/43 14.039

Secondly, related to that, there's been some discussion about a fatality related to the Lawrence Livermore incident. Nan, I thought you said the fatality occurred at Pantex. That is not necessarily what I thought I heard Dave say, so I wish that somebody would clarify that with as much information as you fully have so that it is clear to everybody.

MS. FOUNDS: Let me make sure of this thing. We do have a procedure in place at these meetings that individuals may or may not, as they wish, identify themselves. As you indicated, the individual who did speak is no longer with the Department of Energy. Just as -- I do not require you to give your identification either, unless you wish. so I want to make sure that we adhere to these policies. Since the individual back there --

UNIDENTIFIED SPEAKER: What I said, Don, was that the R&D in the main development of explosives was done at Livermore, and the fatalities occurred while Pantex was doing fabrication studies on it. That is

HT13 (CONTINUED)

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what I said.

MS. FOUNDS: It was still in the machining operations, and those procedures have changed. They are robotically done at this time. As I said, those procedures and designs of the handling or the machining is quite different.

UNIDENTIFIED SPEAKER: I still need clarification. Dave, you said in the last decade --

MR. ROSSON: I think that happened in 1978. I am not sure, but I believe that is when it happened.

UNIDENTIFIED SPEAKER: I would like to clarify for everyone there were three people killed at Pantex in 1977. If I remember correctly, two of them inside the building and one of them outside the building was killed, so what I would like to ask is how will a document like this handle a facility at Pantex that is known to be deficient?

HT13/44 14.040

There is a high explosives machining facility at Pantex that has public access and public parking too close to the building, and it does not meet the plant's current standards, so how is something like that addressed in a document like this?

MS. FOUNDS: I'm sorry, I am not sure I followed you on that one. You are saying that which parking lot at the Pantex plant --

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UNIDENTIFIED SPEAKER: I am saying you have a facility at Pantex that is a high explosives facility that the public can get too close to the building, and this is something that was brought before the Pantex Citizen Advisory Board a couple months ago.

HT13/45 14.041

MS. FOUNDS: The public can get too close via what route?

UNIDENTIFIED SPEAKER: People at the plant that are not working inside that building, there is a parking lot too close to the building so that people who are outside the building could be injured by an accidental explosion, that is other workers at the plant that may not be working in that facility, but they can be near that facility because the buffer zone is not appropriate.

HT13/45 14.041 continued

How does a document like this handle a deficient facility?

MS. FOUNDS: Let me make sure that I understand, because I want to clarify this. When you say a deficient facility, what DOE guidance are you looking at to state it is deficient?

UNIDENTIFIED SPEAKER: I can't remember, but it was presented by DOE that it does not meet the plant standards, and I can't tell you if that is an

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SAR or what, I can't remember, but it was presented to the Citizens Advisory Board for the Pantex plant.

UNIDENTIFIED SPEAKER: Nan, is this issue that she is talking about addressed in this document, and if so, where?

MS. FOUNDS: We are not indicating that there is a deficient facility. What we are looking at are the types of operations and the accidents, that is why I want to make sure I understand her comment in terms of a deficient facility. We will try to address that on a very specific basis, and if you could give me any other additional information, when it was presented and what facility it is, I'd like to take a look at that and see how we did look at all the buildings, because we did go through and look at the operations out there and come up with our bounding scenarios.

We looked at everything from emergency management procedures, SARs, et cetera, to come up with our bounding accidents, et cetera, and those things do look at the types of structures and the workers, and in each of our accident scenarios, we do look at workers, noninvolved workers, which would be members of the plant itself and how close they are and also maximally exposed public individuals as well as

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public exposure within a 50-mile radius.

UNIDENTIFIED SPEAKER: In theory, I want to understand how a sitewide EIS addresses a facility that is not -- do you just do this generally? Also when you find something specific, do you discuss it in this document in general, or do you turn it into a generalized accident scenario rather than addressing specifics?

HT13/46 14.042

MS. FOUNDS: In terms of this, as I said, we analyzed it in the document. There is a discussion in the back of all the different accident scenarios that we considered, and then we look at what the bounding cases would be so that you can get a risk analysis for the public as well as workers and noninvolved workers.

MS. BERGMAN: I still don't think you were answered. I think what you are trying to say is that we would have analyzed the accident scenario for that building in relation to how close things were, and if it was known, come up with some mitigative measures, and that would have been indicated if the results of the accident scenario warranted it, and that is the way we would look at it, I think is what you were trying to say.

MS. FOUNDS: We did do a screening level of analysis.

HT13 (CONTINUED)

MS. BERGMAN: Your concern is if we didn't look at it, is this something we should look at, and we need to take a look, and that is why we want to know which building you are talking about.

UNIDENTIFIED SPEAKER: Let me express a concern that I think is related to this, and that is why -- let's keep on this point, because I don't think Nan is quite understanding the point, which is on the high explosives facility and the parking and also related to the gaps in the doors of the zone 12 assembly/disassembly bays, there was analysis done related to this document.

HT13/47 14.043

However, I believe, and I would be delighted if anybody here can point me to it, I believe that neither of those specifics, the lack of buffer zone around high explosives and the specifics of the gaps and the mitigation efforts that have been taken, neither of those things, in fact, are included in this document.

MS. BERGMAN: The doors are.

UNIDENTIFIED SPEAKER: The discussion of the doors and the gaps that were found and what was done is in this document? Where?

MS. FOUNDS: As part of this, what we do is we have -- I believe it is scenario 1 in there, and we

are looking at the risks from dispersal initiated as a one-point detonation of the high explosives. That is a combination, and it is looked at in that discussion from what would happen if you had an explosion in bays, cells, and special purpose facilities, and that is looked at, and because what we are looking at is the overall Pu dispersal accident and what the consequences would be from an accident in one of those and also what the cumulative effects would be from having plutonium in any one of those facilities.

There is not a detailed discussion in that document as to, yes, we are considering a gap size of so much, et cetera, but in terms of the risk that is identified in that document, it does include an analysis of the cells. It also includes the analysis of bays and special purpose facilities because that is where a one-point detonation can occur.

UNIDENTIFIED SPEAKER: Let me just ask one more question to see if we can get a short answer.

MS. FOUNDS: Okay.

HT13/48 14.044

UNIDENTIFIED SPEAKER: Where in this document does it specifically say that you have, in an existing high explosive facility, a parking lot that is closer to the building than what current DOE requirements are, and secondly, where in this document

HT13/48 14.044 continued

does it say that there were gaps around doors in virtually all of the major assembly/disassembly bays at Pantex that were there for up to 13 years? Where are those two statements in this document?

MS. FOUNDS: Those statements are not in there.

UNIDENTIFIED SPEAKER: Thank you.

HT13/49 14.045

UNIDENTIFIED SPEAKER: What computer model did you use to assess the risk associated with transporting the pits from Pantex to Manzano? I have a series of questions I want to ask.

MS. FOUNDS: It is the adroit model, and that was one that was developed by Sandia National Laboratory. The Department has used it in what are called the DIPTRA, which is an accident analysis scenario, so that is what was identified in the document as the model that was used to assess transportation.

UNIDENTIFIED SPEAKER: In that model, there are several options for how you input the human population numbers along the transportation route?

HT13/50 16.019

MS. FOUNDS: Yes.

UNIDENTIFIED SPEAKER: Can you tell me which of the options for the input of population data into those model runs, which of those options were used?

HT13/50 16.019 continued

Are there some default values such as rural is one person per square mile, urban is five persons per square file, suburban is 2.5, defaults values, then there are more specific ways to enter population data into the model?

MS. FOUNDS: For the population, et cetera, what we used was the 1990 census data along those transportation routes in order to get very specific cumulative doses to the population on those transportation routes.

UNIDENTIFIED SPEAKER: The default values are also calculated from the 1990 census. I think my question was more specific in that we have this route, I-40, between Amarillo and Manzano, and I am wondering whether actual population data for, let's say, a quarter mile, approximately, on either side of I-40 between Manzano and Pantex, is that the sort of information that was used, or was it just the default value plugged in where the default value also comes with the '90 census, but it is like a statewide average or a regional average for rural and suburban?

HT13/51 16.020

MS. FOUNDS: I will have to go back and check for specifically the radius that was used, et cetera, but I can tell you that you are much more than several meters and things like that away from the

HT13 (CONTINUED)

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outside of the trucks themselves. You don't have large exposure, and it is not much of a background, so it falls off very rapidly.

HT13/52 16.021

UNIDENTIFIED SPEAKER: Could you give me an answer in sufficient time so I could submit a written comment about the values before the deadline?

MS. FOUNDS: Yes, I can do that.

UNIDENTIFIED SPEAKER: I was looking again and couldn't find it. Perhaps I have missed it in volumes 1 or 2 for the discussion of the tritium risk, current and proposed activities in Pantex. I understand during disassembly, they have to take the tritium bottles off of the weapons, and sometimes there may be trouble with the valves being open that should be closed.

HT13/53 14.046

I didn't see any discussion in here of the number of times that a base had to be shut down because of tritium release setting off the monitors, and I didn't see any analysis of what the health risk was from the tritium exposures that happened during dismantlement in the current report.

I didn't see any more generalized analysis of should an accident happen that allowed tritium to go into a water form and escape from the building kind of what the analysis of the public and environmental

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HT13/53 14.046 continued

health and safety was. Did I miss it somewhere, or is it not in here?

MS. FOUNDS: Let me make sure that I understand. You are saying that there are many scenarios by which the alarms go off at Pantex?

UNIDENTIFIED SPEAKER: There is a history, isn't there?

MS. FOUNDS: From what basis?

UNIDENTIFIED SPEAKER: Tritium.

MS. FOUNDS: From what basis that the alarms go off consistently?

HT13/53 14.046 continued

UNIDENTIFIED SPEAKER: I didn't say "go off consistently," but I have heard there's been a number of incidents were tritium has escaped from a weapon that was under dismantlement.

MS. FOUNDS: I believe in our accident scenario, it does go through, and it talks to that.

HT13/53 14.046 continued

UNIDENTIFIED SPEAKER: I didn't see any accounting of the numbers of tritium releases that have happened inside.

MS. FOUNDS: In terms of that, we look at the probability of that happening, and it is in one of the scenarios that we give, and I can't identify exactly which scenario. If I can, after this comment period, we will go through and look at that particular

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scenario, but we do go through and look at the probability in order to come up with our risk numbers, and again, we looked at that and then came up with the bounding accident scenarios.

HT13/53 14.046 continued

UNIDENTIFIED SPEAKER: How many times has there been tritium released during dismantlement to this point in time?

MS. FOUNDS: I believe there was one incident out there in the cell, and that cell is currently not operational.

HT13/53 14.046 continued

UNIDENTIFIED SPEAKER: In your bounding scenario that you have got, you are ballparking how many times that will happen as we move ahead into the future?

MS. FOUNDS: That would be consistent with the dismantlement. We were looking at -- in our analysis of the 5,000, 1,000 and 500 levels, we looked at that for consistency with those numbers as if we were dismantling those, completely dismantling those weapons.

HT13/53 14.046 continued

UNIDENTIFIED SPEAKER: Do you expect there to be a subsequent tritium accident where there is tritium released?

MS. FOUNDS: Again, that is defined by our risk analysis, and those probability numbers are given

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there. Cecil -- I can go over that with you in the document.

HT13/53 14.046 continued

UNIDENTIFIED SPEAKER: Is it the usual 1 x 10-4 when you have already had an accident that was 1 x 1?

MS. FOUNDS: As I said, I can go through that with you in terms of the probability. I will be happy to show it to you.

HT13/53 14.046 continued

UNIDENTIFIED SPEAKER: What I am suggesting in my comment is really the failure to report accurately on the accidents that have already occurred at Pantex.

MS. FOUNDS: We actually do discuss that cell scenario in this document, and I'd like to look at that with you.

UNIDENTIFIED SPEAKER: Let me just finish my comment, if it is okay.

MS. FOUNDS: Sure.

HT13/53 14.046 continued

UNIDENTIFIED SPEAKER: The failure to really have a full discussion of the accidents that have already occurred makes the public reader of these documents be somewhat skeptical about the extremely low estimates about accidents happening and extremely low estimates of health effects from the accidents that come about.

HT13 (CONTINUED)

HT13/53 14.046 continued

A more full discussion of the accidents that have already occurred, I think, would have contributed to a much greater sense of public credibility and that which I think you will be encountering through the rest of this process.

MS. FOUNDS: Thank you for your comment.

MS. BERGMAN: I'd like to suggest that we take a ten-minute break and come back again at 7:35.

(Recess taken and reconvened.)

MS. BERGMAN: We are ready for more questions or comments. Would anyone like to start?

HT13/54 15.041

UNIDENTIFIED SPEAKER: When you did your aircraft crash analysis for Pantex, you assumed it would be in what kind of container?

MS. FOUNDS: You mean the pits?

UNIDENTIFIED SPEAKER: Yes.

MS. FOUNDS: I believe the analysis was done on the AL-RA for the aircraft crash scenario. I want to make sure that I point out that the dominant scenario is a weapons incident out there, and that is what the dominant scenario is for Pantex. I will also check and confirm that that analysis was done on the AL-RA.

HT13/55 14.047

UNIDENTIFIED SPEAKER: In your accident analysis, you have a puncture, so that is a puncture

HT13/55 14.047 continued

of one pit container, right?

MS. FOUNDS: That is correct.

HT13/55 14.047 continued

UNIDENTIFIED SPEAKER: Did you ever consider the possibility that there could be more than one?

MS. FOUNDS: Well, in general, what you are looking at is the operation of the loading and unloading, and that is, essentially, the time on the forklift, so in general, it would not be credible to state that you'd have two punctures, two cans, because you don't have that ability to puncture multiple containers.

The other thing that I do want to point out is that there is a conservative analysis in terms of the ability to puncture those containers because the AT-400 undergoes a drop test where it is dropped from 30 feet onto a spike, and we have had pictures of that. That is part of the process to certify that it meets those standards for Type B packaging, and it does not damage, it does not breach the containment. You might see a few dents on the outside of the container.

The container itself weighs about 350 pounds and is stainless steel, so again, it is a fairly conservative analysis that assumes that it will get punctured.

Any other questions?

HT13/56 14.048

UNIDENTIFIED SPEAKER: Yes, ma'am. What is the fire tolerance?

MS. FOUNDS: Again, it is the fire standards that are appropriate for Type B packaging, and at this moment, I can't remember the temperatures that it is exposed to, but it is like a 30-minute fire test, and they are tested in serial. They will drop them, they do the crush test, and then they do the fire test.

HT13/57 16.022

UNIDENTIFIED SPEAKER: I just want to make sure I understood. Would you repeat what you said about the drop onto a spike in terms of transportation testing?

MS. FOUNDS: I believe that is a -- I said 30 feet, right? Drop onto a spike that has a flattened surface on it.

HT13/57 16.022 continued

UNIDENTIFIED SPEAKER: Would you then explain why on page 4-256 of the document it says the puncture test is a free drop of 40 inches onto a 15-centimeter diameter steel pin?

MS. FOUNDS: I believe that is one of the tests. This is another part of that test, and again, the videotapes can show that, but --

HT13/57 16.022 continued

UNIDENTIFIED SPEAKER: Again, to clarify, because I am trying to understand what is the

HT13/57 16.022 continued

information people should rely on, on page 4-256, the 30-foot drop test which you have talked about, and this is a quote, "a 9 meter 30-foot drop onto an unyielding surface." It is not onto a pin or a spike. It is onto a flat, unyielding surface. I just want to clarify what you are saying in relation to what is in the document.

MS. FOUNDS: There are multiple standards that this thing must go through, and one of them is dropped onto an unyielding one, then there is also the ones onto the --

MS. BERGMAN: I think Don's point is that the distance is different between what you are saying and what the document says, and we will go back and double-check that.

Dave?

HT13/57 16.022 continued

UNIDENTIFIED SPEAKER: In the document that was identified or accepted by the Department of Energy for its container certification, and I assume you are talking about the AT-400 certification, there are three tests that are done. One is a 9-meter or approximately 30-foot drop test. The other is a drop test on an unyielding object. The other test is a puncturing test where they drop it from a lesser distance, and I believe it is 40 or 50 centimeters. I

HT13 (CONTINUED)

am not sure, on the spike that they are talking about.

These tests are done in sequence, and then there is also a temperature test. Those tests are done and required by the NRC for certification of over-the-road transport of special nuclear material.

HT13/57 16.022 continued

UNIDENTIFIED SPEAKER: I do want to point out that in these documents, please go back for very specific measurements to the document.

DR. KERLINSKY: My name is Dr. Dan Kerlinsky. I am with the New Mexico Physicians for Social Responsibility. We heard a lot of discussion in the SS&M. There is an S&M --

MS. FOUNDS: It is storage and disposition, and that is referred to multipally as --

MS. BERGMAN: He was talking about the stockpile stewardship and management.

DR. KERLINSKY: We don't have any records about how these pits are going to hold up in the coming decade, so we need to invest multiple billions of dollars in doing research to see if problems could develop in these pits sometime in the next 10, 20, 30, 50 years. There is a lot of discussion about multiple billions of dollars going into trying to answer those questions.

HT13/58 14.049

Then when we get to the pit storage site when we have to ask how stable are these 20,000 pits in storage going to be over the next 50 years, somehow, did I miss, again, somewhere in this document where there is some discussion of what the stability of the pit is going to be over the next 50 years and what sort of research is underway to see what the long-term storage risks are? Because certainly, with a city like Albuquerque, which is kind of -- may not have the history of Pantex, the notion of thousands of pits coming here where we don't know what the long-term stability of the pit is going to be inside the containers that are being developed, did I miss that?

MS. FOUNDS: Let me make sure that I clarify in a couple of areas. For stockpile stewardship and management, they are concerned about the performance as a nuclear weapon, and that is a key to looking at their alternatives and things like that. That is a little bit different in terms of the stability in terms of a hazard to the public and things like that.

This isn't going to necessarily decay or things like that. They are in these containers. The containers are sealed, and there is a surveillance program so that we will monitor the aging effects of

the pits and be able to assess what kinds of problems there could be, if indeed there are any.

UNIDENTIFIED SPEAKER: Currently, how many of those pits in storage are actually under surveillance or actually looked at visually each year of the 12,000 whatever it is pits in storage in Pantex? How many of them are actually taken out and looked at each year? Could you give us a ballpark idea?

HT13/59 14.050

MS. FOUNDS: How many each year, it is in the document, and I discussed this with my office partner because he was one of those people. It is around like ten, I believe, a year.

UNIDENTIFIED SPEAKER: Ten out of that 12,000?

MS. FOUNDS: What it is is Sandia goes through and does a statistical analysis and does present a sampling regime for looking at those pits, and they will continue to monitor those things to determine aging effects in terms of the stability.

UNIDENTIFIED SPEAKER: What is the length of time that the current containers have been studied to see how effective their seal has been?

HT13/60 14.051

MS. FOUNDS: In terms of the AT-400, those are recent designs.

UNIDENTIFIED SPEAKER: So what is the track record?

HT13/60 14.051 continued

MS. FOUNDS: The history of these particular ones, since they have only been designed in the recent years, there isn't historical data to go back 10 or 20 years.

UNIDENTIFIED SPEAKER: The reason why I ask is the similarity between the stockpile stewardship concern about what is going to happen to plutonium in the aging pit inside a very carefully sealed weapon where there's been decades of study of humidity, moisture, air pressure, materials compatibility --

HT13/60 14.051 continued

MS. FOUNDS: It provides a good basis for what we are doing with the AT-400.

UNIDENTIFIED SPEAKER: With all this study, they are still investing multiple billions of dollars, because if you get a leak inside your pit, inside your container, inside your weapon, if there is even a pinprick air hole, you can get moisture introduced inside a weapon, and the moisture can cause all sorts of problem, and oxygen, as we know, with these materials can cause all sorts of problems, but somehow, those same sorts of problems could happen with the pit in storage, could it not, if the seal on the containers is broken?

HT13/60 14.051 continued

HT13 (CONTINUED)

MS. FOUNDS: Some of those things do not present a hazard to the public in terms of the health risk. What they are very concerned about in terms of some of those is its operation as a nuclear weapon, again, to produce a yield that is reliable, et cetera, so we are interested in making sure that there is not a process going on inside of those containers that we are not aware of, and we are pretty much aware from the vulnerability studies and things like that what kinds of processes go on. Again, that is why we have designed the AT-400 the way it is.

UNIDENTIFIED SPEAKER: I may be wrong about this, but apart from the risk of a criticality accident, a nuclear explosion, aren't there also risks from the plutonium meld getting oxidized, and isn't the oxidized metal more mobile than the metal itself in the shape and the form of the pit? Isn't there a flammability risk for the plutonium metal as well? I thought I understood there were those two potential risks.

HT13/60 14.051 continued

MS. FOUNDS: I think what you are doing is talking about plutonium vulnerability studies like up at Rocky Flats and how it was stored, so we are storing it differently than how they were in those containers, and again, those containers were in powder

form, et cetera. You talk about a couple of things. Criticality, there is not a criticality problem with these pits in that form. Again, they are in sealed containers, and we are going to be monitoring them throughout this process to make sure that we understand what the aging processes are.

UNIDENTIFIED SPEAKER: Are you saying there is no flammability risk for the pits that are in storage in the current containers?

MS. FOUNDS: Plutonium, particularly in a powder form, has somewhat of a flammability issue. However, in the pits, in the pit form, it doesn't present that same problem.

HT13/61 14.052

UNIDENTIFIED SPEAKER: So are you saying it is pyrophoric, meaning that it ignites on contact with air?

MS. FOUNDS: It can ignite.

UNIDENTIFIED SPEAKER: So if your container developed, for example, a pinprick --

HT13/62 14.053

MS. FOUNDS: It would not ignite. The pits would not ignite.

UNIDENTIFIED SPEAKER: If the seal on the pit developed a pinprick hole or rusting crack --

HT13/62 14.053 continued

MS. FOUNDS: It would not ignite.

HT13/62 14.053 continued

UNIDENTIFIED SPEAKER: -- then the plutonium

metal became oxidized from the contact with the oxygen which it wasn't supposed to have, and you had some plutonium in an oxide form inside the plutonium metal pit, and if it was exposed to air, are you saying there is no flammability risk and no dispersal risk?

HT13/62 14.053 continued

MS. FOUNDS: From the scenario you outlined, there really isn't a flammability issue.

UNIDENTIFIED SPEAKER: Because why?

MS. FOUNDS: Because the form that the pit is in does not present itself as a highly flammable issue. Also, the oxidation reaction does not immediately ignite the rest of the pit.

UNIDENTIFIED SPEAKER: If you drilled a hole, for example, through your container, then you drilled a hole through a pit, and you left it sitting out in the sun for a couple of decades, there wouldn't be any problems whatsoever with any health or safety or environmental problems with the these stored pits? Is this what you are saying?

HT13/63 14.054

MS. FOUNDS: I don't think that the Department has ever considered that scenario. We understand the hazards that are involved with these materials and take very meticulous care of it in order to make sure that we are not going to have a problem.

UNIDENTIFIED SPEAKER: What is the

HT13/64 14.055

difference between a drilled hole and a pinprick hole in terms of introduction of oxygen into a part of the nuclear weapon pit that wasn't designed to have contact with oxygen? If you have never considered this scenario that, in fact, you might have a leak in a storage vessel --

HT13/64 14.055 continued

MS. FOUNDS: I am not sure what you were saying --

UNIDENTIFIED SPEAKER: -- environmental element, what is the use of all these documents?

MS. FOUNDS: Let me go back to this gentleman.

UNIDENTIFIED SPEAKER: Isn't it true that the container in which the pit is placed is multilayered, there is metal, there is styrofoam, and there is stainless steel? We are not talking about going through the external wall of the pit container, and then you have got the pit right there.

HT13/65 14.056

MS. FOUNDS: Right, because even though, for instance, if you punctured it with a forklift, there is not an ignition hazard.

UNIDENTIFIED SPEAKER: What if you had a pinprick hole --

MS. FOUNDS: What I am saying is that I have considered the accident scenario where you puncture

HT13 (CONTINUED)

the container so that you expose that, it comes out, you have a dispersal, but there is no, as I said --

HT13/66 14.057

UNIDENTIFIED SPEAKER: What if you puncture a pit, what happens then?

MS. FOUNDS: You have the ability to disperse the plutonium.

HT13/66 14.057 continued

UNIDENTIFIED SPEAKER: How much of the pit would disperse?

MS. FOUNDS: How much? I think we consider about -- for conservative purposes, okay, we analyzed, I believe, about 20 percent of the pit.

HT13/66 14.057 continued

UNIDENTIFIED SPEAKER: How would it actually get dispersed from a puncture?

MS. FOUNDS: Again, the scenario that we considered was that because of the mechanical properties, it would be damaged in a mechanical sense, and it would be formed into particles that could actually come out of the container itself.

HT13/66 14.057 continued

UNIDENTIFIED SPEAKER: These would be metal particles or oxidized?

MS. FOUNDS: They probably would be oxidizing as part of the process, but it is not a --

HT13/67 14.058

UNIDENTIFIED SPEAKER: Over what length of time would that oxidation process and dispersal process happen if you have had a puncture through a

HT13/67 14.058 continued

pit?

MS. FOUNDS: Minutes.

HT13/67 14.058 continued

UNIDENTIFIED SPEAKER: Then how would the dispersal occur? Would the process of oxidation actually suspend some of these particles into air spontaneously without it having to receive further kinetic energy?

MS. FOUNDS: You could get it from the mechanical properties and things like that, but the dispersal mechanism, again, it would just be a mechanical dispersal from the kinetic energy from the forklift puncture, and it would not be dispersed in a wide area.

MS. FOUNDS: We are fairly conservative because, in general, a forklift puncture would not cause a high amount of this material to be dispersed, so we are being conservative in our analysis.

UNIDENTIFIED SPEAKER: So if you had somebody that opened up 100 pits and poked holes in all of them, this kind of scenario like an internal

HT13/68 14.059

sabotage scenario, somebody was really mad at the DOE for getting laid off from their job after serving their nation for 25 years in a job where they get picked on by the public all the time, and they went in and they opened 50 of these containers and poked holes

HT13/68 14.059 continued

in pits and walked out, what would the general scope of plutonium dispersal impacts be? Did I miss it somehow?

MS. FOUNDS: You missed that one in there because that is not considered a credible --

HT13/68 14.059 continued

UNIDENTIFIED SPEAKER: Same where the wind is blowing 50 miles an hour?

MS. FOUNDS: That one is considered an incredible.

MS. BERGMAN: We don't look at incredible accidents, and that one is considered incredible.

HT13/68 14.059 continued

UNIDENTIFIED SPEAKER: But you have all the security around Pantex and the Kirtland base, and you don't consider that.

MS. BERGMAN: We need to, and that is one of the things that is discussed in there, if the pit storage operation was moved to Kirtland, there would have to be some upsizing of the security force in order to protect it, so that is discussed.

HT13/69 16.023

UNIDENTIFIED SPEAKER: So if you are transporting 8,000 pits, and somebody gets ahold of a shipment -- I forget how many pits are on the typical shipment.

MS. FOUNDS: About 20.

UNIDENTIFIED SPEAKER: So somebody got ahold

HT13/69 16.023 continued

of 20 pits and decided to poke holes in them --

MS. BERGMAN: You can't pop the containers open. It is still an incredible.

MS. FOUNDS: If you can show me the bit that is going to go through that container, I'd like to see it.

UNIDENTIFIED SPEAKER: What?

MS. FOUNDS: If you can show me the bit --

HT13/70 16.024

UNIDENTIFIED SPEAKER: What is the material that is so powerful?

MS. FOUNDS: It is stainless steel.

HT13/70 16.024 continued

UNIDENTIFIED SPEAKER: How thick is this?

UNIDENTIFIED SPEAKER: In the last couple or three years on the front page of our newspapers, we saw on opened plutonium canister and a powdered substance, which was plutonium, and it was caused by a pinprick hole, and the comment of the Los Alamos scientist was, "We don't know very much about storing plutonium," so it comes a little bit out of our experience as citizens.

MS. FOUNDS: What were the documents you were looking at?

UNIDENTIFIED SPEAKER: The front page of the newspaper, and it was a powdered plutonium.

MS. FOUNDS: That is not what we are

HT13 (CONTINUED)

considering here. Again, as I showed you, it is a metal form that is about that size, and they are not in a powdered form.

UNIDENTIFIED SPEAKER: This had not been when it was stored.

MS. FOUNDS: Right, that is what you are looking at, and the article was very specific for the type of storage operations, I believe at Rocky Flats, is that correct?

UNIDENTIFIED SPEAKER: This was at Los Alamos.

MS. FOUNDS: We are talking about a form where you have got it in a pit, which is essentially a ball, but it is not the highly dispersible form when you have it as a pit as opposed to the powder.

MS. BERGMAN: When was it in the paper?

UNIDENTIFIED SPEAKER: I think it was a couple of years ago. I remember that we talked to the scientist when we went up there for a hearing, and he just said, "We really don't know much about the storage of plutonium."

UNIDENTIFIED SPEAKER: Here I am with my memory again. As I recall, the incident you are talking about was at the Rocky Flats plant, and it was about some plutonium pieces that were stored in a

glove box, in a stainless steel unsealed can that was put there, and they were in process when in 1989, the Secretary of Energy ceased processing it at the Rocky Flats plant.

In fact, there was a leak in that can, and the plutonium did, in fact, turn to oxide. There was no fire. There was no release because it was inside the glove box. As far as someone saying, "We don't know very much about storing plutonium," I can't comment on that because the Department of Energy, at least up to six months ago, knows a considerable amount about storing plutonium as pits.

UNIDENTIFIED SPEAKER: I don't think it is the same instance because this seemed to have taken place in Los Alamos, and the person we spoke to was at Los Alamos.

MS. FOUNDS: Do you know the person you spoke with?

UNIDENTIFIED SPEAKER: Dan, do you remember this, that young physicist who said, "We don't know much about storing plutonium"? He carried a mock-up to a hearing we went to.

MS. FOUNDS: A mock-up of what the thing had looked like?

UNIDENTIFIED SPEAKER: Joe Marks.

MS. BERGMAN: Does anybody else have any questions?

UNIDENTIFIED SPEAKER: I do, but let him go ahead.

HT13/71 16.025

UNIDENTIFIED SPEAKER: Somebody passed me this nice diagram, AL-RA, and this is what you were telling me was the container that was so secure that nobody could ever get a hole through it?

MS. FOUNDS: That is the one that is currently used for storage at Pantex. The AT-400 is a different container, and again, where did it go? There is a mock-up of the container back here, and there are specifications of the container here, too. You have it, I believe, there on the left-hand bottom picture. There is the AL-RA -- I'm sorry the AT-400, and it is in the process of being certified as a Type B transportation container.

HT13/71 16.025 continued

UNIDENTIFIED SPEAKER: It is a quarter-inch stainless steel, this new one that is proposed that isn't yet being used, that is a quarter-inch.

MS. FOUNDS: And the other one was three-quarter-inch stainless steel with overpacks in it, and then the pit itself rests inside of both of those vessels.

HT13/71 16.025 continued

UNIDENTIFIED SPEAKER: So you are saying you

HT13/71 16.025 continued

don't think it would be possible for anybody to get that container open following a transportation accident because of that quarter-inch of stainless steel?

MS. FOUNDS: You are also in safe, security transport trailers.

HT13/71 16.025 continued

UNIDENTIFIED SPEAKER: Well, again, the credibility of believing that that sort of container would be so -- that there would be no possibility whatsoever that that container could be breached under any sort of accident scenario --

MS. FOUNDS: I believe we do go through in the document and go through the forklift accident which does describe the risk associated with that kind of a Pu dispersal, and we consider that to be a bounding case, so anything that you would be considering, the multiple scenarios you are considering are probably incredible, but the other ones would have less dispersal than what would be considered by our forklift puncture scenario.

HT13/72 14.060

UNIDENTIFIED SPEAKER: Page 5-61 of the draft statement says that each of the bunkers at Manzano has the capacity to store up to 800 pit containers in a stage right configuration, and you showed the stage right configuration in your slide

HT13 (CONTINUED)

HT13/72 14.060 continued

show. Has there been a safety analysis report done on storing 800 -- up to 800 pits in those bunkers?

MS. FOUNDS: No.

HT13/73 14.061

UNIDENTIFIED SPEAKER: Has the safety analysis report for storing pits in zone 4 at Pantex been updated since I believe it -- was it the 1993 safety analysis report that was done at the time of the EA for interim pit storage at Pantex?

MS. FOUNDS: It is currently being updated. Tracy, can you give me the time frame? I know for that one, I believe it is into Albuquerque in a concurrence process for the update.

HT13/74 24.002

MR. HANCOCK: My specific question is, and what my comment would be, is that that safety analysis report be made available as the previous safety analysis report for zone 4 was made available to the public, and I specifically, Don Hancock, Southwest Research and Information Center here in Albuquerque, want to be noticed when that safety analysis report is available.

MS. FOUNDS: Thank you for your comment. We will interact with the plant to get those documents out.

MS. BERGMAN: Did you have a question?

UNIDENTIFIED SPEAKER: If no one else does.

HT13/75 14.062

Back to the AL-RA which is currently being used at Pantex, that has an oxygen atmosphere, and it is not a neutral atmosphere, it is not a sealed container, am I right?

MS. FOUNDS: When you say a sealed container --

HT13/75 14.062 continued

UNIDENTIFIED SPEAKER: You haven't put a special neutral helium in there, and you are not preventing oxygen from getting in there. It is just air, right?

MS. FOUNDS: I believe that is correct.

HT13/75 14.062 continued

UNIDENTIFIED SPEAKER: Thank you. So what I would like to know is how this document accounts for not just an accident like if a forklift threw something, but a pit that has a minor flaw that you all had checked for but overlooked so that over time, years of storage, you once again have this perhaps pinprick sort of thing going on in a container where oxygen is present, so you have your plutonium to oxidize over time and perhaps surprise some worker when they open that canister at some later date.

How does this document evaluate that kind of scenario?

MS. FOUNDS: You are talking about the aging, et cetera. Again, what it has looked at is

primarily the AT-400 as the long-term -- interim storage container for this analysis, and it has documented that the procedures that we will be using is to continue to monitor the pit for these types, as you said, of flaws to identify any aging effects to the material in those containers.

HT13/76 14.063

UNIDENTIFIED SPEAKER: Do you stand by your earlier comment that about ten pits per year are all that are examined out of the almost 8,000?

MS. FOUNDS: Yeah, I think that is --

HT13/76 14.063 continued

UNIDENTIFIED SPEAKER: That is the number that I think are destructively tested.

MS. FOUNDS: That is right, that is the number that are destructively tested out there. I will go back and check those numbers.

HT13/77 12.004

UNIDENTIFIED SPEAKER: Are you all, in this document, proposing that the pits, currently AL-RA containers, be transferred into AT-400 containers in this interim time frame?

MS. FOUNDS: Yes.

HT13/77 12.004 continued

UNIDENTIFIED SPEAKER: What is that time frame? Over what period of time would that transfer be done?

MS. FOUNDS: Well, in terms of my understanding is that it would be sort of on the

availability of the containers themselves, and they would be specific for the type of pits, and time frames would be something on the order of four or five years, but I would have to check and make sure what those schedules are.

HT13/78 14.064

UNIDENTIFIED SPEAKER: Where are the impacts, including radiation exposures, from that transfer to be discussed in the Pantex draft EIS?

MS. FOUNDS: It is -- let's see. Cliff, can you help me out on that particular one? We discussed that before in terms of where that was handled in the document.

MR. JARMAN: For the pit repackaging as currently written down, the packaging may be undergoing some changes in how they foresee doing it. Currently, in written plans, they were looking at doing that remotely, and so the amount of repackaging would be in with some of the other activities from the Pantex plant workers that you had mentioned before. That is why it is different at the Pantex plant than the other sites. Some of that was repackaging.

As plans are being finalized as to exactly how they might repackage certain pit types and lines, we are getting some more information on that. During the final, we will be looking at the estimates for

HT13 (CONTINUED)

HT13/78 14.064 continued

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worker exposure.

UNIDENTIFIED SPEAKER: Just to clarify that, you are getting information to use in the final, so there will be -- this further information you are talking about will be available before the final? I am trying to figure out essentially where it fits in.

MR. JARMAN: If they officially change their plans before the final is finished, we will have it in the final. If they don't change their plans on how they are doing it, then it is already included. If they change their plans after the final is done, that is not my call.

HT13/78 14.064 continued

UNIDENTIFIED SPEAKER: Let me say what I understood you to say so you can correct me if I misheard. You are saying that any worker exposures, radiation exposures to workers, for this transfer from the AL-RA to the AT-400 is covered in the overall worker exposure analysis of operations in this document?

MR. JARMAN: In the total, yes.

HT13/78 14.064 continued

UNIDENTIFIED SPEAKER: Is the operation -- is that operation, in terms of where it happens at Pantex, in terms of what facilities, et cetera, is that discussed in the document, and if so, where?

MR. JARMAN: No, it is not discussed in

HT13/78 14.064 continued

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detail in the document. Most operations, single operations as to what building each single operation at the Pantex plant takes place in, the procedures by which it takes place, how many people are involved in each procedure, none of that is discussed in that level of detail in the document.

HT13/78 14.064 continued

UNIDENTIFIED SPEAKER: Is there a safety analysis report or other document that describes this transfer process?

MS. FOUNDS: One of the things that I do want to make reference to, is the information is in documents at the Pantex plant which discuss more of that type of detail in them.

HT13/78 14.064 continued

UNIDENTIFIED SPEAKER: I am asking you now to tell me which specific document that you are talking about.

MS. FOUNDS: The Pantex has information documents. They are the program information documents, the environmental information documents and the safety information documents, and those describe operations in a little bit more detail for that type of thing in those documents.

HT13/78 14.064 continued

UNIDENTIFIED SPEAKER: Again, just so we are speaking the same language, those three documents that I heard you talk about are what I call the three

HT13/78 14.064 continued

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background information documents.

MS. FOUNDS: Yes.

HT13/78 14.064 continued

UNIDENTIFIED SPEAKER: I don't recall, and if there are people here that know these documents better than I, that is why I am asking, I don't recall in any of those three background information documents that this transfer procedure is, in fact, described. If it is, I would like somebody who knows that to tell me, because I missed it, and I'd like to read it.

MS. FOUNDS: We will have to find out and get back to you on that.

UNIDENTIFIED SPEAKER: Are these documents released yet?

MS. FOUNDS: I believe there have been copies sent to several individuals. They are also in the reading rooms.

MR. JARMAN: There are copies here in this reading room in Albuquerque and more copies, I believe, are going to be delivered.

UNIDENTIFIED SPEAKER: I requested a set of them.

MS. FOUNDS: They are in the printing process, so if you are on the mailing list, et cetera, and have requested those -- Cecil?

MR. BLACK: As you said, they are not back

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from the printer yet. What we have is an advanced copy that we made a copy of and put in the library here.

UNIDENTIFIED SPEAKER: I just wanted to make sure I understood the differences between the plans for the plutonium pits and the can assemblies. Do I understand correctly that there is no consideration of storage of can subassemblies along with the plutonium primary pits? Currently, are can subassemblies being stored in Pantex, and are they under consideration for storage in Albuquerque?

MS. FOUNDS: Only as part of the continuing operation, they are shipped to the Oak Ridge facility, and that is where they are being processed and then stored, so in Pantex's part of the continuation of operations, they would not be stored other than staged out to Oak Ridge.

UNIDENTIFIED SPEAKER: So they generally get shipped off as soon as they are dismantled?

MS. FOUNDS: Within a reasonable lot, so to speak.

HT13/79 01.015

UNIDENTIFIED SPEAKER: As I imagine the process, then they go through a series of disassembly of the can subassembly to separate the different layers of metal, et cetera, so the final storage of

HT13 (CONTINUED)

HT13/79 01.015 continued

the can subassemblies, is that considered anywhere?

MS. FOUNDS: Not in our documents, because the scope of our document was to consider the transportation of those to the Oak Ridge site.

UNIDENTIFIED SPEAKER: I wouldn't be incorrect in assuming that there is much more processing of a can subassembly that has to go on before it is ready for some sort of storage and the processing involved in the plutonium pit once it is removed? Is that correct?

HT13/80 01.017

MS. FOUNDS: Yeah. For the plutonium pits, yes, it is just a mechanical disassembly, et cetera, and the exact process out at Oak Ridge that they undergo, I am not that familiar with.

UNIDENTIFIED SPEAKER: Have they decided what they are going to be doing with the metal components from Oak Ridge once they have disassembled the secondaries to the point that they could go into storage that is equivalent to what the plutonium storage would be, and would these sites possibly be considered in the future for storage of components of the secondaries the way we are currently looking at storage of the primaries?

HT13/81 02.010

MS. FOUNDS: Cecil?

MR. BLACK: Can subassemblies are shipped to

the Oak Ridge Y-12 plant. The only involvement Pantex has in those components is to ship them to Oak Ridge. At Oak Ridge, they take care of any processing, any disassembly and any storage that is done on those, and for that, we'd refer you to the Y-12 EA which was published about a year ago.

UNIDENTIFIED SPEAKER: They were not planning on shipping any of those components that are disassembled from the secondaries back to Pantex or Albuquerque for -- it is all going to stay at Y-12 and Oak Ridge?

HT13/82 02.011

MR. BLACK: As far as the future goes for all the stockpile management activity including that, please look at the stockpile stewardship and disposition PEIS where it picks up where the other left off and handles all those activities.

UNIDENTIFIED SPEAKER: You understand my general concern is you develop a bunker that can store a pit in a storage vessel, then you have got a bunch of spherical uranium or plutonium in the secondary components that need to go in at some point in a storage bunker inside a container format. Wouldn't we be looking at the potential of once we put, for example, an Albuquerque bunker system into process, we'd be looking at potentially in the future getting

HT13/83 02.012

HT13/83 02.012 continued

more than just the primary pits and looking at potentially getting a variety of others?

MS. BERGMAN: We are not aware of any plan like that, but that would be addressed in the SS&M.

HT13/83 02.012 continued

UNIDENTIFIED SPEAKER: So the can subassemblies would be going into underground storage at Oak Ridge, or they have got a whole different --

MS. BERGMAN: We don't know. We didn't cover that in this EIS.

MR. BLACK: Long-term storage and disposition of materials coming from that would be handled by the storage and disposition PEIS.

MS. BERGMAN: Don?

HT13/84 13.006

MR. HANCOCK: Reference page 6-4 in the draft where it talks about permitting and specifically permitting at Manzano if pit storage was done, and I have several questions related to that. Has either the Department of Energy -- has the Department of Energy had discussions with the New Mexico Environment Department about what kind, if any, of permit modifications would be needed if the pit storage was done at the Manzano site?

MS. FOUNDS: No, there have been no consultations with the New Mexico Environment Department on this. We have briefed some of the

committees on these particular actions.

MR. HANCOCK: Has the Department -- does the Department have a position about whether pit storage would be subject to a RCRA permit at Manzano or any other site?

MS. FOUNDS: Since this is not waste or surplus material, it would not be part of a RCRA permit.

HT13/84 13.006 continued

MR. HANCOCK: Reference page 6-4 which says in the discussion it has about permit requirements and the fact that Kirtland has an existing permit, it says that new permits or permit modifications could be required. Would you explain that statement in relation to the statement that you just made, Nan?

MS. FOUNDS: Basically, we are just trying to make sure that any type of waste streams from just the monitoring, which would be minimal at best, would be covered, and those types of things would have to be, but it does not include the pits themselves.

HT13/84 13.006 continued

MR. HANCOCK: So will the final EIS have a clear statement about what RCRA permitting requirements the Department feels will be necessary at Manzano or any other site from a RCRA standpoint?

MS. FOUNDS: Can I make sure? Your comment was for which page? 6-4, we will look at that in

HT13 (CONTINUED)

terms of our other discussions in there about our activities going on.

MR. HANCOCK: Just as a follow-up to complete the loop, and I have primarily been talking about the Manzano site, but the question really relates to that I was surprised that the draft singles out Kirtland for that on this page. The Pantex site, of course, also has a permit, so the question is is the similar waste stream modification, to use your term, or waste stream results, would that be included at any site that had a RCRA permit?

HT13/84 13.006 continued

MS. FOUNDS: Now, at Pantex, since they are currently doing this operation, it is included as part of their levels, et cetera.

HT13/84 13.006 continued

MR. HANCOCK: To make sure I understand, you are saying that the existing Pantex Part B permit covers storage of 20,000 pits at Pantex?

MS. FOUNDS: Let me go ahead --

MS. BERGMAN: It is not RCRA. It wouldn't fall under --

HT13/84 13.006 continued

MR. HANCOCK: RCRA waste might result from those kinds of operations, but that is not saying those are RCRA-type waste.

MS. BERGMAN: The section under Manzano, we cannot be covered by the Air Force permits, so

whatever permits would be needed, if any, we have to go and get ourselves. We cannot fall under Air Force permits, so that was the intent.

MR. MARTIN: That question was asked specifically of us, and I talked to my compliance chief to make sure, and he said, "No, they have got to get their own. They can't use ours."

MR. BARTOSCH: Waste management, Jim Bartosch, Tetra Tech. In this particular one, Kirtland, because of the memorandum of understanding that has not been drafted yet, we didn't know what the exact language would be for the Manzano area and any waste that would be generated in the storage process. As an example, the safety worker, maintenance or repair, we put this statement in to tell you that there could be a permit modification either through Sandia or through some combination with Kirtland.

I understand what the major just said, but we put that statement, and the Savannah River and Hanford sites we believe generate similar types of waste in managing plutonium in some form or another for similar types of storage activity waste streams, and they could easily add that activity without having a permit modification.

In the case of Pantex, since they currently

store plutonium, they currently generate small quantities of waste in inspection, in security checks, in minor maintenance of the magazines, that type of activity, it clearly fits within their permit, and therefore, there was no statement similar to this one that pit storage activity would generate a permit modification at Pantex.

HT13/85 13.007

UNIDENTIFIED SPEAKER: To follow up on that helpful comment, is there a document that exists that describes that analysis that you just gave?

MR. BARTOSCH: For Pantex, the information identifies the types of waste they generate per certain activities, and that information is in there. In terms of their permit, they list also waste streams that cover a wide range of activities including storage of plutonium.

In terms of the other sites, yes, you can go back to their permits and, again, any additional documents like a notice of registration for waste stream lists, and I can't speak facility by facility within those cells, but again, we believe that the information exists that would not require a permit modification because of pit storage.

HT13/85 13.007 continued

MR. HANCOCK: My comment would be that prior to the time of the final, I would hope there would be

some written-down analysis that would be either included in the EIS or referenced in a supporting document reference that provides this explanation that has just been made, because I don't see it in page 6-4 in the way I read it, and certainly, there is no document referenced, document or documents referenced on that page that provides that information.

HT13/85 13.007 continued

MS. BERGMAN: Thank you. Other comments?

UNIDENTIFIED SPEAKER: I want to go back to an issue that was brought up earlier about the accidents at Pantex and about supposedly deficient facilities at Pantex. I think it should be noted that accident occurred nearly 20 years ago, the high explosives accident that was spoken of earlier.

The practices have changed since that time. The facilities at Pantex for high explosives are extremely modern. They are the only facilities in the DOE complex that can perform this mission today without any modification. The parking lot problem is being addressed by management at the plant. It was brought up to the PBCAB in order to let them know that they are addressing that.

HT13/86 14.065

The door gap issue has been widely discussed in PBCAB meetings and in the community in Amarillo. I think that's been mischaracterized in the meetings

HT13 (CONTINUED)

tonight. I think that is being addressed by management at the plant.

I guess my comment would be both those issues have been raised in recent months concurrently with the production of this EIS, but near the end of the process at the time the draft was issued, I think it is unrealistic to expect very contemporary events that occurred near the end of the process to be addressed in this when they are really day-to-day management things that are being handled by plant management, and they are being done in concert with the PBCAB.

HT13/86 14.065 continued

I will further comment that Pantex has an outstanding safety program. Pantex is used as a resource by employers in the Amarillo region for training information, for how to institute a safety program, and there is an extreme confidence in the safety and reliability of not only the weapons but the employees who handle those weapons at the plant.

Pantex has a high degree of public support in the region. In repeated polling, it has registered over 80 percent for continued operation of the plant. The discussions here tonight about the deficiencies in the high explosives program, I think, are misguided, and Pantex should be selected as a preferred

HT13/87 01.016

alternative in the other PEIS, the SS&M PEIS, for continuation of high explosives.

I make those comments on the record as Bob Juba with the Amarillo Economic Development Corporation speaking with the endorsement of the city government of Amarillo.

HT13/87 01.016 continued

MS. BERGMAN: Any other comments?

UNIDENTIFIED SPEAKER: I just wanted to clarify the high explosive building with insufficient buffer. I used as an example what I would ask that this sitewide do which is provide to people an accurate description of the state of the plant, a Pantex plant sitewide EIS.

So my hope is that we understand -- I would like this document to contain an appendix or something that gives us an update on the status of the SARs at the plant, the facilities and the status of whether or not they are in compliance with whatever DOE orders or whatever applies that DOE establishes to make these facilities meet whatever standards they have decided upon.

HT13/88 23.027

That is what I would like the sitewide to do. It is not to criticize the plant because in 1977, three people were killed, but it is telling that in 1996, you have a building that still has a similar

problem, that people can get too close to it, so I would just like for this document to be complete enough that people can read the sitewide EIS and get an understanding of the plant and where it is going, mitigation, whatever is needed, and it goes forward from there. That is my question.

HT13/88 23.027 continued

MS. BERGMAN: Don?

MR. HANCOCK: I have a request that is kind of similar to and follows along with actually both of the last two comments which related to this document, and that is that not only the history of safety practices at Pantex, but the history of safety practices at each of the alternative sites be included, because while it is not necessarily always specifically factored into your risk analysis that you do in these documents, from a public standpoint, the public is interested in evaluating the safety performance of facilities in terms of handling hazardous and radioactive materials.

HT13/89 14.066

There are lots of differing perceptions on the part of the public as to which facilities are safe and which facilities are dirty. The most helpful and objective way of having some analysis of that is actually having some comparative analysis of the historic practices at those various facilities so that

it can be identified whether certain facilities may have a, quote, better or, quote, worse safety record.

It is not up to me or anybody else to say, "We suppose this," or, "We suppose that." There is some actual data that is released in unclassified form so that it could be available to the public, and so I would request that that kind of information be done on all of the sites and included either in the document or a reference document that cites that.

HT13/89 14.066 continued

MS. BERGMAN: Any other comments?

MR. HANCOCK: Is there going to be, with the final EIS on this document, a classified appendix?

MS. FOUNDS: There is not an anticipated appendix.

MS. BERGMAN: You act like you have no more questions.

MR. HANCOCK: I have lots of questions, but I can ask them in Amarillo.

MS. BERGMAN: Are there any other questions or comments? We thank you very much for coming tonight. We have gotten some excellent comments. We really appreciate it.

(Proceedings concluded at 8:34 p.m.)

HT14

UNITED STATES DEPARTMENT OF ENERGY

PANTEX SITE-WIDE ENVIRONMENTAL IMPACT STUDY

CERTIFIED RECORD OF PROCEEDINGS

PUBLIC HEARING

May 23, 1996

Richland, Washington

6:00 p.m.

Facilitator: Ev Avara

RICHMAN REPORTING (509) 627-0869

Portions of the transcripts unrelated to this EIS have been omitted.

MR. AVARA: Okay. Thank you, sir.

MS. FOUNDS: Did you want me to respond?

A CITIZEN: Yes, please.

MS. FOUNDS: Basically, it's -- Okay, it's the plutonium that we would be considering coming here, and there are three different documents being done all about the same time. Storage and Disposition of Programmatic EIS is also looking at the Hanford Site for the mixed oxide fuel options, and I think there are several people who can probably talk to you more about those.

But, yes, I think that Hanford is being looked at for many different capabilities, and the decision for interim storage won't be made in a vacuum against those other documents. Does that answer your question?

MR. AVARA: Anyone else?

A CITIZEN: Just real quickly, the gentleman that asked about cost studies, are all of the facilities equal as far as where they are in the stage of receiving the plutonium pits? Are there going to be some upgrading, refurbishing that has to be done to any of the facilities? And, also, if you are going to do cost studies, what is that versus cost of transportation to the farthest site versus maybe refurbishing Kirtland, just a cost benefit analysis?

MS. FOUNDS: Yes. We haven't done that at this point and we're asking Headquarters as to whether or not they think they need to do those costs. If you're asking me: Are all of them equal? In our site selection, one of the criteria was that, you know, if an assessment would be made as to whether or not each of these facilities could start handling pits within about six months or so, and all of them were considered to be within that realm.

MR. AVARA: Mr. Blair?

MR. BLAIR: My name is Walt Blair. I live at 706 West 22nd Place, Kennewick, Washington. I'm the primary alternate for the non-management, non-union employees on the Hanford Advisory Board. I'm also a member of the Hanford Advisory Board Health Safety and Waste Management Committee, and I'm a member of Plutonium Round Table.

The Hanford Advisory Board has given some advice. It's consensus is Advice No. 46. The subject was the Storage and Disposition of Excess Weapons Usable Plutonium and Special Nuclear Materials. I'd like to have this document submitted as official comments. And basically -- I'll quickly go through it, if you want.

MR. AVARA: Go ahead.

HT14/1
01.005

MR. BLAIR: Okay, number one, any plutonium

HT14 (CONTINUED)

HT14/1 01.005 continued

or special nuclear material storage disposal program must be compatible and integrated with the Tri-Party Agreement commitments and milestones and should not affect the rate or funding of cleanup. The program would have the safe disposition of plutonium as a priority.

Two, any plutonium program assigned to Hanford must be fully funded from new funding sources. This funding should include appropriate site infrastructure, overhead costs. Funding should fully cover the cost of treatment, storage and disposal of any new waste streams.

Three, the acceptance of plutonium at Hanford should not delay, defer or negatively impact Hanford cleanup.

HT14/2 23.010

Four, appropriate local and regional public information and involvement programs must be conducted by the agencies to ensure that the public is fully informed of the risks, hazards and impacts of such a program. This would be part of the national dialogue on all nuclear materials prior to assignment of any nuclear materials to a specific site.

Five, any permit or plan approval for new Hanford programs/activities must be fully integrated and must comply with all Washington State public health and

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safety rules and regulations.

HT14/3 21.002

Six, equity impacts must be addressed in the assignment of new nuclear materials, including plutonium, to Hanford.

HT14/4 16.015

Seven, the transportation of plutonium and special nuclear materials to Hanford storage will require careful planning of routes and consideration of weather emergencies to minimize the likelihood of an accident. Emergency preparedness for minimizing the impacts of an accident will require financial support from DOE for state, tribal and local involvement, including adequate equipment and training. When materials are shipped, timely notification should be provided to the transportation agencies.

Eight, the choice of disposal options re: Pu will be a determinant for sites such as Hanford. Prior to the choice of the disposal option, complete characterization of the material and the impacts of short and long-term disposition technologies must be reviewed by the public and regulatory agencies.

Nine, acceptable processing techniques, including waste processing, must be developed as an integral part of the new Hanford storage and disposal program. Permanent disposal of waste plutonium at Hanford is not acceptable.

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HT14/5 02.002

Ten, a systems analysis approach should be utilized to select the most effective method for processing and interim storage. This analysis should adequately address public and worker health and safety and environmental issues.

Eleven, if a plutonium disposition mission is assigned to Hanford, every effort should be made to use existing workforce, facilities, technologies and other resources.

I would like to submit this. And if anyone here would like a copy, it would be nice if you'd provide it.

Another document I have is from the Office of the Governor. It's dated the August 31st, 1994, comments of Governor Lowry on the Storage and Disposition of Weapons-Usable Fissile Materials. I'm not going to go through all four points here -- Well, I could.

Safe disposition is only one part of the legacy all Americans must face from the nuclear standoff of the past half century. Decisions about plutonium must be integrated with those about disposal of high-level, low-level, and mixed wastes left over from producing plutonium in the first place.

Two, we believe in shared responsibility. That's the whole gist of this statement here. All citizens

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must bear some risk, as well as the costs of cleaning up this legacy. The burden must be equitably distributed, recognizing that some citizens have already incurred risks and problems as the fissile materials were created.

Three, the proposed programmatic environmental impact statement should examine all reasonable alternatives for permanent management of weapons plutonium, and thoroughly assess the magnitude and distribution of the risks and burdens.

Four, this legacy is a major national problem now in no small part because of the secret practices of the past. Broad, respectful, open, deliberate, and early public involvement is essential to break the distrust and ensure that today's solution does not become our grandchildren's problems.

The overall gist of the Governor's comments here is shared responsibility. In other words, we're willing to do our share as long as everyone else is equitable. And that's why we're pushing very hard for the National Equitable Dialogue. This is another document, if anyone's here, it would be nice if you made them a copy.

I would like to now speak for myself representing the local work force. We, the local work force, is

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HT14 (CONTINUED)

willing to be involved in the final disposition of plutonium. We would like to have Hanford considered as the primary site for the disposition of plutonium. We are not interested in the long-term storage.

MR. AVARA: Okay. Thank you, sir. I appreciate that. Did you want to respond to some of that?

MS. FOUNDS: There were a lot of -- I think most of them went to the disposition ones. So I will let you know, too, that we are coordinating comments with the Storage and Disposition between -- because they're also dealing with long-term storage, as well as what we're dealing with as interim storage, too.

So, just to let you know, our final EIS will be coming out in October 1995, and then after that the Storage and Disposition final EIS will be coming out also. And then a Record of Decision on ours is scheduled for the November 15th, and then theirs is also scheduled for shortly thereafter, I think in the December time frame.

MR. BLAIR: The problem is the word "interim." Members that I work with on the Hanford Advisory Board, when we say "interim," it may be a thousand years. So they aren't going to consider it unless there's an agreement ahead of time who's doing

the disposition of plutonium. They consider it long-term storage.

MS. FOUNDS: The one thing is that, again, we were talking about interim, and that means until a decision is made on the storage and disposition one because they are actually talking about long-term. But I understand what your comment is and will pass that along, too.

A CITIZEN: I'm, like, a high-schooler, so excuse me if I ask a really funny question. But I'm

HT14/6 11.007

wondering just in the general proximity how many jobs, if any, will this create for the Tri-Cities.

MS. FOUNDS: In terms of the number of jobs, I think we're estimating -- To some extent it's a little bit difficult to estimate because I think it's only like 50 or so, because a lot of -- it's the security forces more than anyplace else that we need for the storage option. And you already have an existing security force, et cetera.

So we've estimated across the sites anywhere from 50 to, I think, a hundred or so, if which were actually going to put the interim storage at a particular location, depending upon how many more people the site would have to hire in order to accept the plutonium storage option.

Cliff, did you have any clarifying on that? Those are the numbers that I remember.

MR. JARMAN: The exact number needed would be about 120 people, and the thing is, we don't know how many of those would be reassigned from current work forces or from job retraining and such. So the absolute peak would be 120 new jobs, but it more than likely will be less than that.

MR. AVARA: Here we are, sir.

A CITIZEN: Well, I'm the high-schooler's dad and these are my concerns because my family was born and raised here and I'm here and I brought my girls home, and the reason why is we want to keep our future in the Tri-Cities, and we also have a beautiful facility out there. And what I was concerned about upfront -- hopefully I did it the right way -- is the interim storage which you accurately pointed out.

If we're going to do this thing right, we don't store things for thousands of years. We figure out how to make other things work. That facility out there where this is going to go hopefully could make it work that we could create additional jobs, do the right things, and not store it and cost the taxpayers more money to keep it in the ground. That's not what we're all about here.

What we're all about here is the leading edge of technology with the right people to do the job, and that's what my daughter's here for. That's what I'm here for. Thank you.

MS. FOUNDS: Appreciate your comment.

MR. AVARA: I'd like to mention briefly, this is not the only forum in which you can make comments. The period for comments ends on July 12th, and you can either submit comments through the mail, by phone, by fax or by E-mail, and there's some addresses on the poster outside the door to do that.

A CITIZEN: My name is Pam Brown, and I'm the Hanford Analyst for the City of Richland, and I'm sharing comments tonight not only for the City of Richland, but also for the other communities in this area.

We have an organization known as the Hanford Communities, which is composed of Richland, Pasco, Kennewick, Benton City, West Richland and Benton County. We have recently taken a very careful look at the plutonium or the fissile materials programmatic environmental impact statement and have submitted comments to DOE Headquarters, and I was pleased to hear that you'll be incorporating comments from this process with that process.

HT14 (CONTINUED)

I would just like to summarize some of the issues that we've dealt with, and this position was adopted unanimously by the city councils of all of our communities. One of the things that we think is very important is that the United States deal with the disposition of plutonium and not just simply the storage of it. And this is an issue must be addressed within the United States and that this material should not be sent to Canada or anyplace else.

We also believe that existing facilities should be used to the best extent possible, which would be consistent with what you've discussed this evening. We do not want Hanford to be the nation's plutonium disposal facility, but we believe we can play an important role in the disposition of the plutonium.

We have at FMEF not only a facility that can store materials, but one that can make mixed oxide fuel and could potentially house a small vitrification plant, as well. We have two reactors on site, the Washington Public Power System Plant No. 2 and FFTF that can burn mixed oxide fuel.

We believe that we should form a partnership with other DOE sites in the country that have the facilities to play a role in this process. So the Pantex role in disassembling the weapons is important, and Los Alamos

or Pantex perhaps could be involved in the conversion of plutonium so that it is available for fabrication into mixed oxide fuel.

So that is the general nature of the comments of this community, that we do want to play a role, we have the facilities, equipment, the talented people, and we look to working in partnership with other sites on the DOE complex.

MS. FOUNDS: Thank you very much.

MR. AVARA: Anyone else like to make a comment?

(No response)

MR. AVARA: Okay. We'll take a short break now, and if some more folks come in, we'll take some comments from them. For right now we'll take a 10-minute break and we'll be back shortly.

(Recess)

MR. AVARA: We're going to try and get started again shortly.

MS. FOUNDS: Ladies and gentlemen, if there are any other questions that you'd like to present to us at this time, we'll be happy to answer them. We will be here until 9 o'clock tonight. So if you just want to stay and have us explain anything else -- We do have the displays in back there where we can talk

about the transportation, the AT-400 Area or any other questions that you might have. Sir?

MR. BLAIR: The 12,000, 8,000 pits, total of 20,000, has there been any discussion about declaring any of those surplus weapons or what's the deal? Now, we have -- Presently at the PFP we have, I forget the actual amount, but we have plutonium that's stored that was declared excess weapons program. What's happening with the pits in that direction and what about international controls through the International Atomic Energy Agency? What's gone on?

MS. FOUNDS: Well, right at the moment those pits are not considered excess to the Department's needs at this time. In our document we've considered them as we need to store them from the part of the dismantlement process. It would be the Storage and Disposition who would take the -- and declare that portion excess to the Department's needs that they would be talking about for disposition.

Then in stockpile search, upper management, then they will consider part of, all of it to be the strategic reserve that would support the stockpile. So anything that would be considered excess would be dealt with under the storage and disposition PEIS. Does that answer your question?

MR. BLAIR: More or less. In other words, its not under your control at Pantex?

MS. FOUNDS: Right, yeah. And we're basically not dealing with that. None of this is considered surplus at this time.

A CITIZEN: I'd just like to offer some general remarks as a citizen and taxpayer. My name is Gordon Rogers and you have my address on the sign-in sheet. I have a strong personal interest in this subject. At one time I was the engineering manager during the design and construction of the Fuels and Materials Examination Facility and it's been a source of frustration for over ten years, now, that that thing has never found a suitable mission.

I know this discussion of the plutonium disposition is not within the scope of your current EIS, but I'd like to just make a general plea to you as Department of Energy employees, as well as our own local staff here, to do what you can with the Headquarters staff, the Administration and Secretary, and I know you have the same problem that all the other citizens do, but, you know, from the common-sense standpoint and the taxpayers and citizenry, it would be criminal idiocy not to make some constructive use of this plutonium that the nation spent several trillion

HT14 (CONTINUED)

dollars manufacturing.

We can save and store what we need for future weapons replacements and things of that type, but the prospect of constructively using that as fuel and for energy recovery and electric generating plants, such as the Supply System's Plant 2 and the Fast Flux Test Facility, is clearly a sensible thing to do. This would avoid the consumption of fossil fuels, much of which are imported by this nation.

And I think we also have an ethical need to show the world that the United States can take advantage of its technology to avoid further consumption of -- excessive consumption of fossil fuels, and leave these for the less-developed nations to upgrade their standard of living. It's really unconscionable for us to blindly consume natural gas as though it were going out of style. So many people are standing around wringing their hands over the alleged global warming, which is substantially due to carbon dioxide emissions from fossil fuel burning.

We really have a win-win situation here that I think we just all need to really beat on our government representatives, our congress persons, the White House, Secretary of Energy, to sit down, get real, and let's move ahead on this and dispose of this plutonium. It

avoids long-term storage cost and makes use of something that cost us a lot. I think we'd all be better off for it. Thank you very much.

MR. AVARA: Thank you, sir, for that comment. Anyone else like to make a comment this evening?

(No response)

MS. FOUNDS: Again, there are various forms where you can write in to us, or E-mail us if you happen to like the computer systems, or fax us, et cetera, and we will be passing your comments on and entering them into our comment response document.

But we appreciate your attendance. Thank you for coming. And we will, again, be around for a while if you'd like to ask us any other clarifying questions, et cetera. So, thank you.

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(HT15)

TECHNICAL INFORMATION EXCHANGE
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE CONTINUED OPERATION OF THE
PANTEX PLANT AND ASSOCIATED STORAGE
OF NUCLEAR WEAPON COMPONENTS
JUNE 25, 1996
MORNING SESSION

(Due to the acoustics of the room during the morning session, this transcript cannot be certified to for accuracy.)

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Portions of the transcripts unrelated to this EIS have been omitted.

And at any point along this progression if the aircraft accident probability falls below one one-millionth per year, no further analysis is called for.

In the briefings that we've heard this morning, we see that all the analyses that have been done have been larger than one one-millionth, typically in the range of 2 to 4 times 10 to the minus 5th, or 20-millionths, if you will.

So the progression is as follows: You start with an easy screening method and it runs very quickly. And then (inaudible) count. You do it. If your probability is less than one one-millionth, you need to do no further analysis. If not, then you need to go further. And the current DOE guideline goes beyond the old Solomon model with four factor on aircraft analyses and uses FAA operational data collected from control towers. And it uses predetermined coefficients for accident probability. And it makes a prediction.

If that prediction is less than one one-millionth, the guidelines say that's all you need to do. You don't need to go on and look

at the hazard release probability. If, however, that analysis does not fall below one one-millionth, the standard calls for a full probability risk assessment. And that risk assessment, the recommendation, is that, rather than use FAA categories of aircraft which lump a large number of different kinds of vehicles into a group and then treat them all as if they're the worst penetrator of the group when you do your analysis, you should go ahead and characterize in as many subcategories as your data allow. This has not been done.

And so I pose a question for DOE.

HT15/1 15.045

Why in the prepared draft environmental impact assessment did the analysis of aircraft accidents cease at the four factor analysis? And request that before the final EIS is published that the probability risk assessment be conducted.

We've heard this morning that we have tremendous detail because of the foresight that DOE had to install this RAMS, regional radar air monitoring data system. So we've got all the details about where the aircraft are and what kind of aircraft they are. We can do a better analysis. We can follow the guidelines DOE has

HT15 (CONTINUED)

published.

And then there's a second question that I have. The analyses that have been done have been done on the basis of historical data. And the purpose of that analysis is to predict the likely impact on the future operations at Pantex. We know the future of some of the risk factors in the aircraft accident rating. We know, for example, that GPS approaches already exist, so some aircraft are now flying different routes.

We know that the T-37 flights from Reese Air Force Base ceased this month. And we

HT15/2
15.046

know that the T-37 flights, T-38 flights and the B-1 flights from Reese will cease in December. So we know a number of the aircraft that in the four factor model have driven this outcome of about 4 times 10 to the minus 5th for probability of an aircraft accident in a year will not exist in the future.

And I recommend that in the final impact analyses those things that we know be included in the analysis so that we can all together look at the most accurate possible aircraft accident prediction. Thank you.

MR. MATNEY: Thank you, Dr. Rock.

I believe now Dr. Mike McNerney will speak.

MR. McNERNEY: I'm Mike McNerney, University of Texas at Austin. And I'm director of aviation of the University of Texas and former Air Force instructor pilot and a research engineer, civil engineer. And I had some more or less specific comments. I had a chance to look at the DOE standards a little bit and I had some questions related to the DOE and the application to the Pantex site-wide.

And some of them are rather specific. I would like to see if I can get some answers to these. If we can review the draft EIS and analysis (inaudible).

THE REPORTER: Can you speak up, please?

MR. MATNEY: Speak up.

MR. McNERNEY: Okay. If you talk about the previous analyses that have been done in the Solomon model, and, from my understanding -- and get your input on that as well. Does the Solomon model have a high contribution to the in-route airplanes, airplanes that are flying overhead (inaudible) flying over this country that (inaudible) flying over the Pantex plant?

(Inaudible).

MR. SIMPKINS: That's exactly right. The Solomon model is dominated by high-altitude aircraft using the VORTAC, not those using the airport. Not airport operation, but the high altitude in-route traffic dominates the risk of using the Solomon model.

MR. McNERNEY: And there's a different treatment now between the old DOE draft and the new DOE standard. Will the new DOE standard be applied by this EIS?

MR. SIMPKINS: Assuming it doesn't change any further, the latest draft will be used for the EIS. It's my understanding that the draft we have today is not necessarily the final draft. The authors of that are here today. We can ask them. But we will use the latest DOE standard that would (inaudible) that we would use.

MR. JAMALI: My name is Kamiar Jamali. I'm with DOE headquarters. I am responsible for the draft standard. We are planning to finalize this standard within the next week or two. It is very good that you have available to you as what you call some concerns because at the very time we were sending that

information to you. However, this question is just raised. You're somewhat unhappy with some of the shortcuts that were observed in the in-flight model for general aviation and commercial aviation.

So, as I said, that particular document, we were working on that and we believe that we have come to a consensus position with respect to the final resolution of those sticking points. And if I were to assume that the rest of our technical experts will go along with our proposed solution, I can venture to say that the standard will be finalized in about a week, a week and a half.

MR. McNERNEY: In the draft standard appendix it says the generic crash rates for each aircraft category and subcategory

HT15/3
15.047

(inaudible) accident reports published by the FAA in the RSD and by the United States military aircraft -- military craft. Did -- you don't reference that published data. Is that data available and can we get a copy of that data?

MR. JAMALI: The data for general aviation and commercial aviation can be made available to you. The military data cannot be

HT15 (CONTINUED)

made available.

MR. McNERNEY: You said the evaluation techniques used to estimate crash rates are documented in References 1 and 2. But those references are also in the draft and they're not available to us here.

HT15/4 15.048

MR. JAMALI: That's correct. They will be made available soon after the standard is finalized. That should be hopefully less than two months. Some of them are available, the ones (inaudible). The structural response technical support documents (inaudible).

DR. ROCK: The methodologies that you used to convert FAA or military accident data into crash probability (inaudible). Is that methodology available for our review?

HT15/5 15.049

MR. JAMALI: Yes, it will be.

DR. ROCK: When you do calculate that crash probability data, one of the important things is that -- doing landings by retrieving these -- each individual landings part of the data so you have a probability based on each individual landing. But the accident data (inaudible) the accident data to crash rates per incident landing, particularly when some military sorties have

multiple landings per sortie.

I guess the question is until we've had a chance to look at your data and an opportunity to do analysis, how do we know that the crash probability distribution or the crash rates per landing probabilities reflects military operations, other military people, military pilots (inaudible) this analysis?

HT15/6 15.050

MR. JAMALI: I guess probably the best thing is to wait until we've had an opportunity to review whatever portion of that data that will be made available to you. But we had a large number of experts with a variety of backgrounds that contributed to the developing of the standard and they would also be all Q.A.ed.

So hopefully you will find that both the introduction numbers and the assumptions made on the crash rate you see are defensible. We have, as a rule of thumb throughout the standard, attempted to learn and (inaudible) and, depending on the level of the uncertainty took steps toward conservatism throughout the standard.

So I guess what was one of the unknown contributors to the conservatism (inaudible).

DR. ROCK: I have no other questions.

MR. McNERNEY: Were you able to determine the small military operations that are actually from Reese Air Force Base?

HT15/7 15.051

MR. SIMPKINS: No, we do not have that. We also don't know when they leave Reese, whether they're going to some other base that may still conduct flying from here. So we did not attempt to answer that question.

MR. McNERNEY: The initiative Tom Williams spoke about in the reduction initiative, is that taken into account in your application to the standard in the EIS or will it?

HT15/8 15.052

MR. SIMPKINS: There's a brief statement within the EIS that talks about previous analysis and risk reduction associated with those measures. It's not specifically in the numbers I presented today. But if you define all of those risk reduction measures that they outline, moving the backcourse localizer approach, implementing the GPS. We even projected some time out in the future, say, 65 percent of the aircraft are equipped with GPS, as opposed to five percent now. We got a relative risk reduction of 82

percent.

So what you could do is take that hit probability that I presented and reduce it by 82 percent to account for those measures that were mentioned. This is just one more level of conservatism of the EIS.

MR. McNERNEY: The other point I wanted to make is small military tends to be the controlling hit probability in the environmental impact statement. And because there's such a wide variety of aircraft types, why can't we actually do the analysis subcategory. Why can't we actually identify individual aircraft types and use available crash rates?

HT15/9 15.053

MR. SIMPKINS: We had that same discussion yesterday, and are working to do exactly that. And the concerns that Dr. Rock mentions also the initial (inaudible) will be included when we do the final analysis.

DR. ROCK: I'm not sure this question was addressed. But the final draft of the DOE standard and aircraft accident analysis, we're told that will be released in two weeks.

HT15/10 15.075

We're told that the support documents, the driving coefficient that control the outcome of the four

HT15 (CONTINUED)

HT15/10 15.075 continued

factor detailed analysis will not be available for two months. And we're being asked to wait. It's an issue of we're being asked to trust the support documents are fine, but we're not in a position to see for external peer review. That is per the DOE.

And yet I'm here today because I've been asked to do a technical peer review of the draft and of the final EIS if we get a chance to review that. That depends on soon to be published DOE standards that depends on support documents that will not be made available.

HT15/10 15.075 continued

And my question is can they be made available in a fashion that will keep this process in a time line and give us a reasonable opportunity to do a technical peer review?

MR. JAMALI: (Inaudible). I'm not for quite certain. I sympathize with your position. It's not an issue of not making it available to you. We just haven't created them yet. We had some earlier versions of these technical support documents that are no longer valid.

So we don't even have an internal review copy, if you will, to supply to you. We've

gone out of our way to supply you with material. (Inaudible). These are really documents taken -- we will make them available to you at whatever shape they would be available to us when they're available to us. But they're just not put together yet. And we don't (inaudible) them.

MR. ROCK: We do too have a finite problem in time.

MR. SIMPKINS: I can tell you how we would respond, given the schedule that the EIS is on. We'll do the same thing on the draft. We have a schedule-driven level of detail. And if the additional documents aren't available to us, we went to the authors who were working on those documents and got the best information we could get from them to incorporate into our volume.

Where additional level of detail is not available, we remained conservative with our analysis.

DR. ROCK: And that leads to what I think will be my last question this morning. One of the difficulties I have with published risk assessments throughout the environmental impact

HT15/11 15.054

process -- so this is not specific to DOE. It's a generic problem. We've talked several times this

HT15/11 15.054 continued

morning about the safety factors.

The safety factors are there and they're not quantified. Is it possible to produce a document that says this is our best estimate and this is the uncertainty that remains in the assessment?

MR. SIMPKINS: In many cases, it is a matter of how much additional money you want to spend quantifying the uncertainties. That can certainly be done.

HT15/12 15.055

DR. ROCK: Since these numbers as point estimates will be used to make your decision, I think it's important that we be able to tell the senior decision-makers when we have a lot of confidence in a number and when it's sort of a fuzzy number.

MR. SIMPKINS: That's actually exactly why we stay conservative.

HT15/12 15.055 continued

DR. ROCK: No, no. When you stay conservative, you create another problem. If I focus exclusively on one risk in life to the exclusion of others, I can bring that risk to very near zero, but my risks in other areas go up.

MR. SIMPKINS: (Inaudible). One of the answers to your first question as to why we

didn't go into additional level of detail, when the aircraft crash was analyzed to the point that it wasn't a predominant risk, we began concentrating on other risks that were more dominant. That's why the aircraft craft was not as dominant as the cell scenarios for accident case.

DR. ROCK: Okay. Thank you.

MR. MATNEY: Are there any other questions from state officials? Roger? Sir, would you identify yourself?

MR. MARTILLOTTI: I'm Joe Martillotti. I'm with the Texas Department of Heath, Radiation Control. Given the limited

HT15/13 15.056

availability of the final analysis numbers, I find it very difficult to try to guess what the impact might be in the refinement of the standard. And I haven't heard this morning any kind of estimates as to whether or not the refinement of the standard and the supporting documents might provide some clarification on this fuzziness Dr. Rock talked about, this conservatism.

Is it generally agreed upon that there will be some reduction in that numerical risk probability or is there any kind of feeling

HT15 (CONTINUED)

HT15/13
15.056
continued

that anyone has on this?

MR. SIMPKINS: Based on what we've done so far and my understanding of the additional level of detail that we can go into now, the next generation document, the risk numbers are likely to go down. They're not going to go up, based on my understanding of the existing models.

MR. MARTILLOTTI: Is there any way to guess?

MR. SIMPKINS: It would be just that, a guess. I'm guessing at least probably, for the fire case, it would be higher than for the explosive case. And they're likely to be in the 10 to the minus 7, low 10 to the minus 7 range. Possibly even 10 to the minus 8 range if we find a way to account for the super stout structures, for example. It's going to be well below other risks that are analyzed in the document also.

MS. FOUNDS: Joe, I want to make sure I'm getting the argument. You do believe that, at this point, that we're conservative in our analysis for the EIS, based upon the discussions that we've had here? So in each one of the steps that we could or will be taking will be to reduce those conservatisms, as Bret was

saying. So, again, it's sort of -- it's our responsibility to, within the time frame of the EIS, to give the decision-maker an appropriate point.

And what we have been saying is that our analysis is conservative, but it's reasonable in order to let a decision-maker have what's there now from a hit probability. We're looking first to state -- the hit probability that drives us to the consequence. Then we look at those overall risk numbers. They are still fairly low for the Pantex site. So it still provides the decision-maker with a good reference frame, with the understanding that it is still a conservative model.

MR. MARTILLOTTI: That does provide the decision-maker some measure of comfort, if you will, in the conservatism of the numbers, but it does the exact opposite to the

HT15/14
15.057

local citizens. It provides them a sense that the plant may not have been as safe as indicated over all the years that it's been in existence, which I don't believe is the case. I believe that there's a point somewhere in between that is more like the real answer to this problem. And that needs to be

HT15/14
15.057
continued

stated.

What I'm hearing is that the information model might be available in two weeks, the supporting documentation available in two months. If the EIS moves along on this driven schedule, my understanding is that the final date is October?

MS. FOUNDS: That's correct.

MR. MARTILLOTTI: Well, we're looking at two and a half months from -- we're end of June now -- for the information to be available to do those calculations and present that data. There won't be enough time to look at that and to say we accept this or we agree with this.

It really places the state reviewers in a difficult position at this

HT15/15
15.058

point. I think it's impossible, actually. And I'm wondering about the date that the EIS is driven, given that the other two PEISs that accompanied this document are now, I think, in some question as to what dates they will be available or -- is that correct? Are they on track? Is this still concrete or is there a possibility that we might allow for more comprehensive review of the information to provide

HT15/15
15.058
continued

the level of certainty that we can for --

MS. FOUNDS: If I can, as I said, if you sort of agree that this provides a decision-maker a reasonable basis, we can continue to work together in terms of the standard and provide the basis for the EIS bounding numbers. And then, as the rest of it progresses to sorting out those other conservatisms, provide that information to you.

In your mind, you're saying that it's conservatively limited to the EIS. What we're saying is that it still provides the decision-maker the appropriate tool at this time to make those decisions. And then, as the additional information comes along, there are other methods to stay in contact and to show how, from this base line, you get that increased reduction in conservatism.

And as far as I know, the stockpile stewardship and management is still on track. And so is the storage and disposition for their dates. Are -- essentially, what you're making is a request to extend the deadline?

MR. MULDER: This Roger Mulder.

HT15/16
15.059

I'm with the State of Texas. Yes. What we went

HT15 (CONTINUED)

HT15/16 15.059 continued

is the right information and we want accurate information in the EIS. And if that calls for a delay in order to get the right numbers in there, then we are going to formally request that the site-wide EIS delay until those right numbers are clear.

MS. FOUNDS: I think what we can do is we've discussed here some of the addltional numbers that can be put in there. Like the T-38 and the skid distances and those types of things can be put in to our model for the final document.

Now, in terms of some of the additional support, like I said, as long as we may be bounded, NEPA is not necessarily held to, you know, the -- because after the standard is published there may be some additional data that comes, as you said, such as aircraft movement, and things like that. So, as I said, we'll take that as a consideration and get back to you. But whether or not we're still conservative, those numbers are still very low in order for the decision-maker --

HT15/17 15.060

MR. MULDER: If I hear you correctly, you're saying that you are drlven by a deadline. And if later information comes in after

HT15/17 15.060 continued

that deadline you'll make those adjustments. And what we're saying is we're not bound to that deadline. We'd rather have the right information. And if that takes a couple of months, we're willing to move that deadline back.

DR. ROCK: On the issue of whether the EIS properly characterizes the conservatism, I will not in this comment refer to the EIS. Instead, I will refer to the Pantex meeting of the final draft of the DOE standard. And in Table B-14 it talks about minimum and maximum numbers for general aviation and crashes per square mile. It has a minimal value of about six in a million and has a maximum value of about 200 in a million. And then it lists site by site all the values for DOE sites, laboratories, and so forth.

Not a single one of those sites is in the range of the one in a million. They're all in the range of 200 in a million or higher. And so I submit that this table nowhere says -- when a decision-maker looks at this table, there is nothing here that says that these may be an important factor.

It isn't self-evident when anybody

looks at the summary. And the only way we can make it self-evident is where the numbers appear to give the minimum and maximum values of the actual probability, so that a decision-maker knows if they're looking at a minimum or maximum value. Thank you.

MR. JAMALI: I can respond to that. It's interesting that you should say that because the present version of that table has no midpoint (inaudible) values stated for each one of these sites. So I think you will refer to that. We were not comfortable with that particular table. (Inaudible). The current estimates we have for Pantex, in particular, will be more.

DR. ROCK: And will that discipline carry over to the final draft, the final version of the EIS?

MS. FOUNDS: Yes.

HT15/18 15.061

DR. ROCK: So it will give a range and best estimate and worst case estimate, and, if we're really lucky, the lowest accident estimate?

MS. FOUNDS: We will continue to describe conservatisms that are in the EIS.

HT15/18 15.061 continued

DR. ROCK: If you only put it in the introduction and you don't put it with the

HT15/18 15.061 continued

numbers so that the numbers are self-evident -- all of us have had enough experience with the media -- I understand the headline will lead to an incorrect assumption.

MR. MATNEY: Are there any other questions from officials here? Yes. Please identify yourself. Be sure that you get the microphone close enough. Our audio is having a hard time trying to get all of this broadcast.

MR. JUBA: I'm Bob Juba with the Amarillo Economic Development Corporation. I'm also here today representing the City of Amarillo at the request of the Pantex facility. I'll lead off my comments. First, I want to thank the DOE for the hard work on reducing and minimizing the risks, to the extent possible. The committee that Tom Williams has worked on changed the approaches to the airport.

HT15/19 15.062

But, to build on the last comment there, I'm afraid that in a very important process like an EIS process is (inaudible) and should be. I'm reminded somewhat of the scientific information that was put out by groups that later proved incorrect, like a food scare about eggs are good for you or bad for you, whatever. We get

HT15 (CONTINUED)

HT15/19 15.062 continued

these maybe presumptive announcements about the risk factor that don't concur necessarily with previous ones and they've not undergone the type of scrutiny that good science work demands.

And that is what the State of Texas is asking for today is to try and do that kind of peer review based on documents that will be coming in in the future.

Going back to meet the consistency, people need to understand what the risks are and grasp that, including the new level of conservatism that over -- you know, one element is very conservative and another (inaudible). The accumulative effect of that conservative changes the number radically from what was the risk published in previous studies.

I think there needs to be -- as Dr. Rock mentioned, there needs to be annotation in the document itself if you're going to remain fixed on those numbers. And I think the public deserves a very good explanation of why this number may not square with previous numbers because the number of planes flying over there and the types of planes hasn't changed.

Finally, I think that some mention

HT15/20 15.063

-- and perhaps you can do this through using actually a number for the risk today because you're looking at the current operations of the plant. But you're also looking at the operation of the plant 10 years in the future.

If you know that steps are being taken to minimize that risk or the number of overflights over Zone 4 in the future, maybe there should be a number for what the risk will be in those outcomes if it is indeed reduced through mitigation steps. And I think those are things that could serve the public well and will make them feel more comfortable.

MS. FOUNDS: Just to respond, the document does go through and outline the various mitigation measures that have been undertaken by the overflight reduction. And they are outlined in the document. And, as Bret said, there are going to be some numbers in there where the flight path, what the relative risk reduction may actually be.

Again, it's hard to quantify exactly because, as we have RAMS data right now for what we're looking at, we obviously don't have RAMS data for what's going to happen five years

from now. But the document describes those mitigating actions and also some of what could be anticipated as the hit probability reductions based on some of the actions that have been taken.

So it does try to address some of those issues. And we can, again, continue to emphasize that in the final draft -- or in the final document.

MR. JUBA: I appreciate that, Nan. But, I guess the only comment I had is the numbers look very much different than they did in past studies. And what I'm hearing from you is really

HT15/21 15.064

things are extraordinarily conservative and minimized, but that's not what's conveyed in the text. And maybe there's some way to convey that more clearly in the text.

MR. MATNEY: Other questions from state officials? If not, we'll go to comments from the public.

MR. MARTILLOTTI: Nan, where you referred to the Zone 4 overflight work initiatives

HT15/22 15.065

quantifying the results, does that mean -- this would be Volume 1. The initiatives are described in Section 4145d, I think. But there's no numbers

HT15/22 15.065 continued

applied there. There's no reduction, I guess, in the estimates.

MR. SIMPKINS: Give me a few minutes.

MS. FOUNDS: Joe, we'll point that out to you as soon as we find it.

MR. MATNEY: If there are no more questions from the stage, let's take a 10-minute break and come back and pick up public questions and comments. There's coffee in the back of the room. The restroom facilities are over here. And we'll stand in recess for 10 minutes.

(Recess.

MR. MATNEY: I believe that Bret Simpkins has a response to the last question. Bret, you'll be on Mic 2. If you will, Bret, get very close to your microphone, please.

MR. SIMPKINS: Joe, in response to your question, the 82 percent reduction number is documented in Section 4.15.6, potential mitigation measures. Page 4-253 of the document, second column, it says it is estimated that implementation of the MOU, the offset localizer, relocation of the VORTAC and 65 percent use of the GPS will result in an 82 percent cumulative risk

HT15 (CONTINUED)

reduction, DOE 1995h:22.

MR. MATNEY: We would now like to open this issue for comments or questions from the general public. We would invite you to sit at the table, if you'd like, or approach a microphone. Do we have a question from the public or a comment? Ms. Gattis. And I believe she's on Mic 6.

MS. GATTIS: I'm Beverly Gattis. I have one or two things. A brief question. I was curious about if I may -- I don't see the gentleman still here. In the figures for -- gosh, I've lost it now -- closest point approach 244 days of information. And it looks like there was a whole year that you were able to draw information off of, April '95 to March '96. (Inaudible) 244 days instead of 365?

HT15/23 15.066

MR. WILLIAMS: First of all, the data is being processed as it comes in manually, people putting this data together. That particularly applies here in Amarillo where the air traffic controllers write, for each flight, a paper (inaudible). We link that up with computer information data, radar and someone has a manual. And I believe there's probably at times at least a

30-day delay period, or more, on how fast we can get that data in there and actually record it. At the time we decided to take on this effort (inaudible) data was used for modeling and so forth. We had a cutoff date and said, let's take all the information we have available right now. (Inaudible) and so forth. So, more or less, there was a decision from this date back. This information is what was in the information we had at that time.

As data went out, we got more and more data. So it's a matter of time. It's a matter of collecting and putting it together and so forth. So the data will be a lot more than what we have as time moves on more and more.

MS. GATTIS: Thank you. Shall I go ahead?

MR. MATNEY: Sure, go right ahead.

MS. GATTIS: We really are interested, as the State is as well, in seeing that the evaluations are good science, good process and all those things, because I don't think any of us are interested in having the numbers be unreasonable for any reason or uninformed for any reason.

HT15/24 23.040

So that is a problem for us. We do like the idea of being able to read the document and understand thoroughly from what is in the document, that we do think it's clear; there are not terms that are used that are not explained.

HT15/24 23.040 continued

To go on a minute about a concern that I see and I'll just raise here to respond to the issue. Under the description of the risk about plutonium on Page D-5, both workers involved and the public are vulnerable to plutonium inhalation if an accident occurs that disperses it as respirable particles, for example, a fire or explosion. Then when you go over to Page D-3 in the application of the accident (inaudible). On Page D-23, there in the first column, first paragraph, it says the long-term exposure pathways and the liquid exposure pathways were not considered.

HT15/25 14.091

So we want to be sure, not only that you can take into accurate account types of flight and that type of thing. We want to make sure also that the consequences of the release on a population on-site or off-site are accurately taken into account. And (inaudible) given for

plutonium we have (inaudible) long-term exposure have to be a consideration with soil, farming and water. And so I would raise that concern. I have certainly not done full justice to this document, but I raise these issues.

HT15/25 14.091 continued

And I do have one more thing. If y'all would like to respond I'm happy for that to happen.

MR. SIMPKINS: With respect to the long-term exposure and resuspension, we left the analysis at (inaudible) assuming emergency response evacuation and cleanup, which is typical, I believe, of processes that we see at DOE.

MR. JESSEN: I am Jim Jessen and I'm from Tetra Tech. Just one point to add to that. We did review the Rocky Flats dose reconstruction data that reviewed past accidents at Rocky Flats. And one of the areas of information was that the dose from the initial cloud was dominate and -- the long-term effects were minimal. So we did look at other studies and explore that issue.

MS. GATTIS: That's fine. I understand that. (Inaudible) I would like to offer that as a private issue speaking about

HT15 (CONTINUED)

farming. And it's a decision based on events from Rocky Flats we would like to have taken into account.

MS. FOUNDS: I wanted to point out, too, is that to print out for 50 years and assuming that (inaudible). So, again, this is only the dominant.

MS. GATTIS: Thank you. The other observation I'd like to make is that statistics are a fascinating thing. They are not a solution. They are no guarantee. So the aircraft crash probability to be quite low is one thing. But it is that such things don't happen can happen. As I think Walt Kelley said at a previous meeting on one of those issues, statistics only get you so far.

HT15/26 15.067

I think the most impressive thing to me are the mitigation efforts that the Department is undertaking, as well as made. What I would like to know is if in all those calculation (inaudible) looked at probability. And I think that's valid. I want to know is it possible that the Department of Energy will then stop those mitigation efforts and we will not try to move aircraft from flying over the plant.

HT15/27 15.068

HT15/27 15.068 continued

MR. JOHNSON: The mitigation factors we've already given the tower notification. So everything is on track and we're going through with that regardless of what those numbers show. Because I don't agree with what you said. And I know we've had a discussion on risk before. Risk analysis, to me, shows you sensitivity analysis, shows you comparative analysis, not one risk compared to another. (Inaudible) risk management make it possible for absolutely anyone. And our commitment at Pantex is to reduce the risk in any way we can regardless of what those risks are, using the most reasonable approach.

You have to (inaudible). But we are committed to the aircraft reduction issue.

MS. GATTIS: Thank you. I guess my final comment I'd like to make is that one of the effort of Pantex in moving overflights further toward the northwest corner of the plant. I can't help but observe that's where the nuclear reactor might be and that there are other facilities that are going to have to be taken into account so that we know this is considered under this aircraft crash analysis versus the aircraft analysis that

HT15/28 15.069

related to the current EIS. Thank you.

MR. MATNEY: Thank you, Ms. Gattis. Are there other comments from the public on this issue? Ms. Smith. Let me suggest -- there's an echo in this room. And let's be sure that all of us, in answering the questions or in commenting, please get the microphone right in front and speak loudly. It must be very difficult for Ms. Wingo to try to get a transcript.

HT15/28 15.069 continued

MS. SMITH: I am Doris Smith and I am a neighbor to the west of Pantex. And I can appreciate the work that's been done with regard to the -- I can appreciate the work that has been done with regard to the moving of the aircraft away from the hazardous materials storage areas in Zone 4, et cetera. And I can appreciate all of the GPS, VORTAC and all of the instrumentation that is indicated in the document.

What comes to my mind is where in all of this analysis does human error and reliability fit in and has that been factored in in some way within the document?

MR. JAMALI: Well, in this particular analysis, human error initiates. So the crash rates that you're observing, whatever

they maybe contribute half to crash in the first place. Are basically reflected in the frequency of the aircraft crash impact to the facility. From then on, there's no responsibility taken in the model and active systems and, hence, there will be no human contribution taken into consideration thereafter. So, basically, as far as -- the short answer to the question is the only impact of human error is the past rate and that is not something we control.

MR. GOLDER: I'd like to add to that. There's an old axiom that says that the pilot is usually first to arrive on the scene of the accident. So he will do everything he can to avoid a facility like Pantex to the best of his ability.

MS. SMITH: I'm sure that that is, but there are those times when there are accidents that do happen and that are beyond the control of any of the mechanical problems that possibly could go wrong with an aircraft. And this was just an issue that we were wondering if it has been factored in and how it was going to be factored in.

HT15/29 15.070

MR. JAMALI: Well, crash rate and

HT15 (CONTINUED)

impact (inaudible) and in fact that contribution stops. Another thing that subsequent to the crash of the aircraft involves (inaudible).

MR. WILLIAMS: I think moving the aircraft away from the facility is the Number 1 thing we can do to take that human element out, by getting them out of the proximity of the facility that effects them. That's the most effective measure you can take. A pilot out of Dallas/Fort Worth isn't going to affect Amarillo International Airport. Albeit, pilot error not in proximity to the Pantex plant is not going to effect it either.

So the best thing we can do is physically move those aircraft away from the facility. Mitigation itself is a way of trying to prevent that from happening. And that's actually why we're doing that because, in the present circumstances, under normal operations, aircraft fly over the plant every day. And either through mechanical difficulty now or pilot error now if we move those airplanes, then that likelihood goes down significantly and that probability.

HT15/30 15.071

MS. SMITH: My next question that I'd like to ask, since there are maintenance and modification of facilities at the Amarillo

HT15/30 15.071 continued

Airport, there are planes that are out on test flights. And they do a lot of circling. And we wondered were there considerations that these are not aircraft that are in tip-top flying shape given consideration in the document?

MR. GOLDER: The maintenance chief of the facility, who is in charge of repairing these planes and then maybe sending them back to their own fleet, has to file with the FAA before an aircraft can take off on what you call a test flight for a letter of reception to give for the period of flight. And what happens, this takes place long before the actual day of the flight. They file this with FAA with a few exceptions. For instance, the plane will have to take off with VFR conditions and can't take off in bad weather.

Usually what happens is it's brought in and they check the airplane. And they're an experienced certified crew, airline crew, that will take off and just make one circle of the area to make sure everything is working properly and then they'll go on their way. (Inaudible).

MS. SMITH: Are these test flights included in the EIS?

MR. GOLDER: The numbers will be included in the RAMS data. I can tell you that.

MR. SIMPKINS: They're included in the sense that they are part of the operations, so they will be reflected in a number of operations reported to us by the FAA.

MS. SMITH: Are these test flights always from the same runway and do they use 04, or is there a difference in the runways that these aircraft can use?

MR. GOLDER: For safety reasons, it should be take off into the wind. However, we had discussed this yesterday. We could approach the FAA and in that letter take issue, make a statement, that we would take off on 22 to avoid that.

MS. SMITH: I think that we would like to see some information included in the document to make certain that these issues were addressed.

MS. FOUNDS: What I'd like to do is wrap up some things in the overall sense of operations of the airport and how we do include them in the EIS. Now, if you're talking about mitigating action, then we can include that as,

again, under a regular action section, these are how things are done as part of that process.

HT15/31 15.072

MS. SMITH: I think that where we really are having difficulty with this on test flight is, to our knowledge, they are not all the time actually perfect aircraft that are taking off. And I do appreciate this thing that they have to be in a certain condition. But that does not mean they do not have a problem at the time of test flight. And these considerations, we thought, needed to be brought out in the document.

MR. MATNEY: Mavis Belisle.

MS. BELISLE: This is a follow-up question to, is it, Jim on the soil dispersion? Just within the last couple of weeks we've received some reports out of Rocky Flats from studies there that indicate movement of plutonium in soil maybe much greater than they had previously anticipated. Are you aware of those studies?

MR. JESSEN: Yes. We will be reviewing them for the final. They're coming out of the review group. Another point I'd like to make is, as Bret mentioned, we assumed some type of remediation.

HT15 (CONTINUED)

HT15/32 15.073

MR. MATNEY: Any other questions or comments? Mr. Ahlenius.

MR. AHLENIUS: My name is Steve Ahlenius. I'm with the Amarillo Chamber of Commerce. I'd like to commend DOE and the FAA in their attempts to alleviate some of the concerns of the citizens on the probability of airplane crash in Zone 4 and Zone 12.

I hate to show my ignorance in this, but could you, in plain English, tell us what the probabilities of a crash are? Is it one in a million? Is it --

MR. SIMPKINS: It's 4 times 10 to the minus 5, which is 40 in a million.

HT15/32 15.073 continued

MR. AHLENIUS: In previous studies that number was quoted around. Why has that increased?

MR. SIMPKINS: The study that I referred to, the Zone 4 SAR, which was referenced by the 1994 EA, that number that was later rejected when errors were found in the calculations. And all of those other studies that I referred to are indicated that if the probabilities are tending to agree with each other, the various models and various studies at

the 4 times 10 to the minus 5 range.

HT15/32 15.073 continued

MR. AHLENIUS: Does that take in those hit probability factors?

MR. SIMPKINS: Yes. The skid distance is a model as part -- skid is a model as part of our target area.

HT15/33 15.074

MR. AHLENIUS: In past studies that skid area has been factored and reduced. Is that -- which skid factors are you using to determine?

MR. SIMPKINS: We used the recommended skid lengths from the draft standard. And we -- from each part of the facility, each facility, we looked at a 360 degree circle around that facility, to then identify any adjacent facilities that would be in the way of a skidding aircraft. And we reduced the skid lengths for cases where one building was protected by another. So the skid numbers aren't simple circles.

They're buildings with specific targets, specific surroundings. There are several structures out there in Zone 4, for example, that are not taken into consideration. There is a vehicle there, an aircraft domestic cable barrier,

steel pylons that encircle Zone 4. There's five fences -- three fences. One of those fences has a vehicle barrier. Those barriers were not considered in terms of shielding, although they do certainly provide some.

MR. AHLENIUS: And then with regards to the number of igloos or facilities in which plutonium pits are actually stored, does that number take into various accounts, in terms of the number of pits stored versus the percentage chance that they'll be hit?

MR. SIMPKINS: Yes. The frequencies for fire case verses explosion case. In the fire case, the plutonium pits are only in six of the 16 modified Richmonds. And I don't recall the number of SAC magazines. That was taken into consideration. How many of those magazines are occupied by pits, pits with no high explosiveness, and how many of those magazines are occupied by full weapons.

MR. MATNEY: Are there any other questions?

MR. JAHALI: I just wanted to add one small note to these proven numbers and not really a number of interest. In number of

Comments omitted from intervening pages here do not concern this EIS.

HT15 (CONTINUED)

accidents are not severe enough to cause deterministic effect. And that is based on the ICRP and, of course, the dose numbers calculated in the EIS.

The final slide we have here is regarding synergism between chemical and radiological exposures. Our understanding of that issue, as of right now, is that there have been synergistic effects seen in laboratory animals and cultured cells, but the data is very limited for humans. And we realize that a lot of people are studying the issue. Right now there is no model to quantify those effects. And, with that, I think that's all we have.

MR. MATNEY: Now, I believe Gerry Johnson is here. Gerry, are you next up on this? No? Anybody else from Tetra Tech or DOE on this issue? No one? We'll go to our state officials then. And I believe Mr. Hartillotti.

HT15/34 14.092

MR. MARTILLOTTI: For transportation of material, the listing of the accident scenario included environmental impacts for transportation accident (inaudible). In the evaluation of those accidents, it wasn't included in this event tree analysis.

MR. JESSEN: It was a separate analysis that will be discussed probably this afternoon. And in terms of what you asked, the human health analysis looked at on-site transportation impacts. And if you want to look at Pantex EIS Appendix F, there is detail of the methodology that was used for inter-site transportation, if you want to.

MS. FOUNDS: I think, Joe, that this is just a difference in we had structured human health around the accident scenario. And transportation is later.

MR. MARTILLOTTI: That's actualiy the transportation that you assessed.

MR. JESSEN: No, we did both.

MR. MARTILLOTTI: I see what you mean. In that section, I don't believe that there was the same degree of detail according to the review of hazardous material as there may have been to the radiological aspects of

HT15/35 16.029

transportation.

I don't the aspects of transportation, but not in the potential for explosion, potential for HAZMAT spill, those sort of things in transportation in the transportation

HT15/35 16.029 continued

section. And I didn't see those addressed as potential candidate scenarios.

MR. JESSEN: Again, we focused our analysis on radiological impacts, based on stakeholder concerns, information on chemicals and high explosives. We'd be happy to add to the final EIS. And, you know, there's not tanker trucks that have chemicals coming in on a regular basis. And if you want a complete listing of all the chemicals used as in a supporting document to the EIS, the safety information document. And if you want more detail, you can consult that.

MR. MARTILLOTTI: Thank you.

MR. MATNEY: Other comments? Roger? Geof?

MR. MEYER: I'm Geof Meyer with the TNRCC. (Inaudible) it's really talking about

HT15/36 14.093

the risk for inhalation of hazardous substances, as I understand the document. The risks for ingestion haven't been included in there. (Inaudible). And that's the only one you used?

MR. JESSEN: No, that's not correct. The model used inhalation and ingestion.

MR. MEYER: What was it used for?

MR. JESSEN: In terms of plutonium

risk significant pathways.

MR. MEYER: And for hazardous? My understanding is it was only used for --

MR. JESSEN: Yeah. We're confusing what model was used for what. In terms of the hazardous chemicals, ICS will be used. They will talk more to that in the air quality discussion.

MR. MEYER: Okay. The inhalation

HT15/36 14.093 continued

cancer risk is above normal, except for 1.45 times 10 to the minus 7. (Inaudible). And also I wanted to ask what was the assigned risk bin for

HT15/37 14.094

accidents involving the Ogallala Aquifer.

MS. FOUNDS: I'm not sure. When you're talking about release to the Ogallala Aquifer, in terms of we analyze the accident scenarios in the document and looked at their effects, in terms of population inhalation of those, et cetera. So there is a portion that describes, therefore, if you have plutonium release transported down to the Ogallala, when we go back to our accident scenarios, those probabilities are given in the document. Is that what you're referring to?

MR. MEYER: Not quite. I was

HT15 (CONTINUED)

HT15/38
14.095

wondering whether we had a similar contact with the other PEIS with the accident -- we had trouble, particularly when the Ogallala was involved. We had trouble accepting -- multiplying the risks times the frequency that would happen. Thereby (inaudible). In other words, if you're considering 10 to the minus 7 or 8 or 9, that multiplied by the likelihood of the accident occurring, it reduces the significance (inaudible). The problem with reducing the Ogallala is it would be such a catastrophic event that we'd rather not allude to the risk by the possibility of the accident occurring. Do you understand what I'm saying?

MS. FOUNDS: I'm not quite sure. What you're saying is that you want us to look at it as if the accident had occurred?

MR. MEYER: That's correct.

MS. FOUNDS: And there is a short write-up, because this was done, my understanding -- and I think Cliff can talk to this a little bit more -- is that they looked at it as if you had the accident and looked at the transport down to the Ogallala. Then they looked at it as if you had cleaned up and transport down to the Ogallala.

HT15/39
14.096

And this was a (inaudible) analysis. So that write-up is also in the document, a short summary of that particular study.

MR. MEYER: Yeah, I understand. That was done in the past. And I understand this EIS really evaluates the future activities at Pantex and several standard alternatives. So I think that approach is valid. But it seems that if the hazardous instances were discounted, one, because it was limited -- the constituents' concern were limited, based on that, were not seeing above this particular level. Their evaluation was not carried forward.

My understanding is that the risk was posed only for inhalation pathways, not that that would be only added together. (Inaudible).

MS. FOUNDS: Are you talking also about the (inaudible) when you look at, for instance, what the plant uses -- and we have looked at the emission sources and things like that. And then, from past activities, they have evaluated further environmental restorations program and cleanup levels for that. Now, that's separate from future, you know, projections right at the moment complying with their permits. And,

therefore, we looked at their permit levels and what --

MR. MEYER: I agree. I'm not concerned about that. I was wondering about the likelihood of an accident is from (inaudible) 100 (inaudible).

MS. FOUNDS: Yeah, in terms of the (inaudible), the dominant risks, again, the chlorine. We went through the matrix of looking at the risk base hazards. Otherwise, the material that they use and controls are not, like I said, risk dominant in that sense. So you went through this matrix of overall versus (inaudible). And any chemical releases would have been documented by chlorine release.

HT15/40
14.097

MR. MEYER: Model for chlorine. (Inaudible) especially for chlorine (inaudible) I take it was dropped out?

MS. FOUNDS: That's right.

MR. MEYER: I think I'll save that (inaudible) if that's all right.

MR. MATNEY: Thank you. Sir, for the record, would you identify yourself again?

MR. MEYER: Yes. Geof Meyer, the TNRCC out of Austin.

MR. MATNEY: Thank you. Other questions from the state officials? Roger? No? Hearing none, we'll ask now for comments or questions from the public on the issue of health and safety. Yes. Mr. Finegold. Be on the audience mic.

MR. FINEGOLD: I have a few questions. First, on the summary of consequences to the public, you have some figures here. It says excess cancer fatality risks. Is the calculation of this risk based upon the population dose that you claim in the adjoining column or is the calculation of that risk based upon some combination of the likelihood of an accident with the expected consequences of the population dose as you have it here? Let me state it another way. Do you understand the question?

MR. JESSEN: Yeah. The risk number is frequency times the consequences of the accident.

MR. FINEGOLD: The risk number then is based not simply upon this population dose, but upon the product of that with the possibility or estimated probability of an accident occurring?

HT15 (CONTINUED)

MR. JESSEN: Yeah, you're correct.

HT15/41 14.098

MR. FINEGOLD: Okay. Did you base the probability of the accidents occurring on the data of accidents that have occurred in the past?

MR. JESSEN: In some cases for anticipated events, that's correct. But for the events that haven't occurred, we based it on existing safety analysis.

HT15/41 14.098 continued

MR. FINEGOLD: Would your analysis predict that there has been as many as one fatality in the plant due to a radiological release?

MR. JESSEN: No, I don't know that would be correct.

HT15/41 14.098 continued

MR. FINEGOLD: What would you say the probability is, based on the data that you have, that there would be a death from the radiological release at the plant by someone working in the plant?

MR. JESSEN: First of all, are we talking accidents?

MR. FINEGOLD: Yes, we are.

MS. FOUNDS: In our document, we're not projecting anything happening due to a radiological event. We did look at both 100 meter

worker and the public. So, in terms of that -- and if there was a, for instance, like in the aircraft crash analysis, in there for workers you might have fatalities because it would be more likely to be hit by the aircraft than have the radiological. So, in that sense, we are not projecting the radiological.

HT15/41 14.098 continued

MR. FINEGOLD: Based on past experience with the plants, you do not project any fatality -- any fatalities from a radiological accident?

MS. FOUNDS: Not in this document.

HT15/41 14.098 continued

MR. FINEGOLD: Did you estimate any probability of this occurrence based upon previous experience?

MR. JESSEN: As we already pointed out, we identified the HE operation risks dominant activity to the workers.

HT15/41 14.098 continued

MR. FINEGOLD: But the radiological risks were regarded as negligible; is that correct?

MR. JESSEN: No, that's not correct. We identified them in the document.

HT15/41 14.098 continued

MR. FINEGOLD: Well, if you calculated them, what was the probability that

HT15/41 14.098 continued

someone would incur a fatality on account of a radiologic incident, one in 10,000, one in a million?

MR. JESSEN: We merely -- we would have to look at each scenario, step by step to get the number.

MR. FINEGOLD: Did you do any overall risk assessment from that?

MS. FOUNDS: Yes, sir. We did that and we looked at it in terms of the latent cancer fatalities. And what we're doing is calculating those tests and then multiplying that by a latent cancer fatality number. And then that comes up with, given the doses of, and then you multiply that by the risk. So, in that sense, we have had analyzed.

HT15/41 14.098 continued

MR. FINEGOLD: Fine. So what did you calculate the probability to be that any worker at the factory would die as a result of a radiological release?

MS. FOUNDS: We calculated -- the probability numbers in there state that for the population for the -- something like that -- you have less -- much less than one expected fatality. So the higher probability is that no one won't

because that's what we're talking about in terms of the excess latent cancer fatality.

MR. FINEGOLD: How much less than one would it be? I suppose --

MS. FOUNDS: I think we have numbers up there of risk factors, 5 times 10 to the minus 7th. That's off the top of my head for those types of things.

HT15/42 14.099

MR. FINEGOLD: Have you ever heard of a case of Mr. Glen McGough? The data indicates that there actually has been a death due to a radiological accident at the plant.

MS. FOUNDS: I'm sorry. I'm not familiar with that. Obviously, you have a story in mind.

MR. FINEGOLD: Well, actually I have several stories in mind. And the question is, based upon the actual history of the plant, could you have calculated fatalities in the future? And if the calculations that you made

HT15/43 14.100

indicate extremely low probability of deaths in the future from radiological release, how reliable are your calculations since what we do have, what we actually know is (inaudible) indicates a vastly greater risk than even you calculated.

HT15 (CONTINUED)

HT15/42
14.099
continued

MS. FOUNDS: What are you referring to in particular?

MR. FINEGOLD: A case with a man named Glen Edward McGough. The exact cause of his leukemia was never exactly identified. And the court case was sealed in 1983 so that there never has been an attempt to find out if his particular death was due to a radiological release.

We've also got recent cases involving a man named John Bell who claims that his illnesses are due to a radiological release. And he also anticipates his demise very soon. There may be some other cases. I have heard of a few.

In other words, without taking the actual records on people who have worked at the plant and doing anything, the probability that their deaths were in some way related to accidents that occurred in the plant, we have no reliable way of projecting how many deaths may occur in the future.

MR. JESSEN: I guess the general response is that the overall cancer risk in the state of Texas is greater than 20 percent. And, in terms of just because someone worked at Pantex

HT15/44
14.101

and developed cancer, doesn't correlate that Pantex was the cause of the cancer.

MR. FINEGOLD: This is certainly true. And it bears some examination as to whether or not these particular cases are attributable to the fact that some of them were working at Pantex.

However, the point is that you've made a risk calculation. And in order to determine whether or not it's accurate, we need to identify cases which may be contributable. It's not so much that I fear what is current activity at Pantex. It's what I anticipate may be coming in the future if the plutonium processing occurs. And, in that case, we need to be exceedingly careful about the possibility of radiological production.

If we calculate now what may happen in the future and our calculations are inaccurate, we will probably be inclined to take a much greater risk in the future operations in the plant than we ought. I think you should give that consideration.

MR. JOHNSON: Could I ask? You mentioned Glen ----

MR. FINEGOLD: McGough. I believe

HT15/45
14.102

it's spelled M-c-G-o-u-g-h. And the records were sealed in the court of Judge Edward Nobles, I believe, in 1983. And there may be some of these other cases which are worth examining. I think it's worth noting that in one obvious example of an industrial accident which occurred at Pantex in 1979 that resulted in fatalities, neither the plant operator nor the federal government was willing to take financial responsibility for the consequences of the accident.

MR. MATNEY: Thank you. Are there any other questions or comments on the issue of health and safety?

MS. FOUNDS: Can I -- just for one moment. And I may put Rex on the spot here. If he could describe sort of the model. What you do is you go out and you determine what the person-rem doses are to individuals. And then, through studies that have looked at what radiation does, then that's where you get what your latent cancer fatalities are. So, again, we are using valid scientific bases for what our computations have said. We will all (inaudible). But, in terms of the models, these are appropriate for the person-rem and to the latent cancer conversion

factors.

Rex, can you add anything to that?

MR. MATNEY: Sir, if you would kindly step up to the mic.

MR. BORDERS: My name is Rex Borders. I'm a Department of Energy employee. My title is environmental scientist. I'm also a certified health physicist. And the document identifies the potential dose to the workers over the next 10 years as 330 rem, to 330 workers over 10 years.

And, through the recommendation of the International Commission on Radiological Protection, a factor of 4 times 10 to the minus 4 latent cancer fatalities per rem is applied to that number to result in an estimate of .03 total latent cancer facilities occurring in these 330 workers through this method. And this is in addition to the estimated 20 percent of people that will experience a fatal cancer in their life.

So what Nan says is essentially correct. The estimated dose to the workers is multiplied by a factor which is recommended by an international body of radiation experts, through

HT15 (CONTINUED)

the study of human data and the latent cancers in this population. And these numbers are recommended in the EIS as well. And the site-wide environmental impact statement identifies this dose to the workers as the result of an external source from within the weapon components and working on these materials. And, essentially, that identifies (inaudible) exposure to these workers over an extended period. And that's about all I can add, unless there's a specific question.

MR. HATNEY: I now recognize Don Hancock.

MR. HANCOCK: Don Hancock from the Southwest Research and Information Center in Albuquerque. The reason I wanted to come in now was to ask you a couple of questions related to the same page the gentleman just referred to in the EIS, Page 4-219. Statements made on that page that the maximum dose to an indivIdual involved worker is not allowed to exceed 900 millirem during the operation.

My question relates to is that a current administrative limit? Is that administrative limit going to stay for the entire 10-year period of the EIS. And, in fact, if the

doses discussed in the document are true, why is the administrative level not being lowered for the coming period of time?

MR. JOHNSON: This is Gerry Johnson, Department of Energy. The national standard, Department of Energy standard is five rem per year. Mason & Hanger, I believe until -- I think until the early 1990s had established an administrative level of two rem per year. The current limit is one rem per year. And Mason & Hanger is now indicating the possibility of moving it down to 500 millirem per year. So we continue to try to lower the results as we possibly can.

MR. HANCOCK: If I could respond. I guess part of the reason I raise the question is I've heard you say similar things in the past about what this document won't reflect, but the final would reflect the policies more than this -- what the statement I just read seems to indicate, which to me is a little misleading in terms of what Gerry just described.

The other question I had is related to the actual data on worker exposures coming from the document. And it's not clear to me that the document reflects worker exposures of

HT15/46 12.013

workers who have been dealing with pit storage in Zone 4 west. So I'd like to have some clarification about what is and isn't included in terms of the numbers that you're giving in the documents.

HT15/46 12.013 continued

MR. JESSEN: In terms of the Zone 4 workers, those numbers are provided in the intra-site transportation section. Those are workers that have responsibility for pit handling and storage.

MR. HANCOCK: So what's included in as transportation staging includes the workers in Zone 4 as well as the Zone 12 workers involved in those two sites? I'm just trying to clarify.

HT15/47 12.014

MR. JESSEN: Yes. Those records are from transportation and safety department relating to storage and transportation.

MR. HANCOCK: So, the calculations, then, for those workers (inaudible) are those the 1993 to 1994 similar reading; is that correct?

HT15/48 12.015

MR. JESSEN: Yeah. The reason --

MR. HANCOCK: When are the 1995 similar reading information going to be available and that be included?

HT15/48 12.015 continued

MR. JESSEN: Yeah. They are available and we are looking at them.

MR. JOHNSON: I would like to add two comments. Mason & Hanger has developed a new concept of pit storage called stage right, which basically now everything is handled -- in the past, up until just a couple of weeks ago by shielded forklift. Stage right reduced the radiation exposure by approximately 90 percent. Approximately two weeks ago Mason & Hanger started using remote control vehicles. So now there is not reason for workers to actually enter the magazines in which the pits are being stored. And so I would expect to see radiation exposures to Zone 4 workers to show -- probably should have in '95 -- and in the future start showing further decrease.

Second comment was made, I believe. And I believe it was made to Bret about the fact that if you move plutonium pits to another site the additional exposure would be packaging. In reality, we're going to repackage all the pits into AT-400A containers, irrespective of whether they stay at Pantex or whether they are shipped elsewhere. So that maybe is going to be

HT15 (CONTINUED)

HT15/49 14.103

achieved. Whether or not achieved under the term, that will happen whether or not those pits are removed or stay in the magazines.

MR. MATNEY: I'd like to recognize Ms. Beverly Gattis on Mic 6.

MS. GATTIS: I just need some help understanding about the consequence categories. When I looked at that, it struck me that this was an acute exposure, a one-time exposure type; is that correct, or am I misunderstanding?

MR. JESSEN: It essentially characterizes (inaudible) because in terms of the chemicals, there's a difference on impact radiological release and in terms of HE exposure, radiological exposure. But I think your question is in regards to long-term pathways; is that correct?

HT15/50 14.104

MS. GATTIS: Well, I just wanted to understand what we're talking about when we talk about consequences. The consequences are greatly varied depending on the material we're talking about, just as you referred to. So sometimes you say the acute exposure is probably acute exposure is from an explosion. But, just as we talked about previously with aircraft and the

HT15/50 14.104 continued

probability of a (inaudible) to a plutonium release getting into the soil. (Inaudible). There are materials that are toxic. There are materials (inaudible). So I'm wondering how do they take all those factors into account?

MR. SIMPKINS: The reason we have is, to start with, is so that HE events, radiological events, so we compare them to like scenarios. And they were determined as less dominant when compared with like scenarios. And so the consequences from a radiological source are typically measured in 50-year CEDE.

MS. GATTIS: Does that mean some (inaudible) from having people who, when the accident happened (inaudible) and then subsequent exposures shall happen over time also.

MR. SIMPKINS: (Inaudible) possibility.

MS. GATTIS: Exactly.

MR. SIMPKINS: As I previously told you, the inhalation method is shown to be the predominant risk. It's assumed with respect to that (inaudible) clean up (inaudible).

MS. GATTIS: I guess (inaudible) a decision at level of acceptable exposure as to

whether or not (inaudible). So I think that's a bit more (inaudible).

MR. SIMPKINS: We attempted to look at similar -- other accidents occurred, such as one in Spain where they dropped (inaudible) countryside. I don't know what (inaudible). I know it was an explosive playing. We did not consider that in this event.

MS. GATTIS: And then I guess (inaudible) I understand real quickly. The statement to the public as dismissed by (inaudible) exposure at Pantex. There are a (inaudible). I continue to work to be more clear in the document the exposure through the spectrum of factors are an attempt to, not either/or, as to not to knock one choice or the other. These are additions to exposure.

HT15/51 14.105

The other thing -- the point that I would just offer (inaudible) the concern is how or not... (inaudible) factor to not, contributing to cancer, death or (inaudible).

Was the other thing, (inaudible) I understand what (inaudible) with this document.

HT15/52 14.106

Where other locality (inaudible) are all areas to be... Would you all take to be about exact

HT15/52 14.106 continued

MR. SIMPKINS: As I said, the doses are 50-year CEDE for the exposure period. Because that's the lifetime this document is intended to cover.

MS. GATTIS: This isn't (inaudible) I'm not sure that I know what CEDE is and what it means. But I thank you.

MR. JOHNSON: Let me comment. Earlier, comments were made about the individual who contracted an HIV. In the 1993 EIS there was an East & Bentley study (inaudible) material (inaudible). And it basically concluded that -- and looked at all industries of all employers at Pantex for whatever reason, and basically concluded that the work force was the only (inaudible) at the Pantex plant (inaudible).

If you're considering -- if you look at the industrial setting, the working force typically as the general population. We evaluate (inaudible) until this time. They (inaudible) a part of this effort. But we're also (inaudible) (inaudible) of this (inaudible) of this in this EIS study for future purposes. The State of Texas has also requested to have. So we're hoping that we will have better current data on

HT16

TECHNICAL INFORMATION EXCHANGE
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE CONTINUED OPERATION OF THE
PANTEX PLANT AND ASSOCIATED STORAGE
OF NUCLEAR WEAPON COMPONENTS
JUNE 25, 1996
AFTERNOON SESSION

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Portions of the transcripts unrelated to this EIS have been omitted.

MR. MATNEY: We will continue discussing the health and safety issue. And we were into public comments and questions. As we begin this session, I would like to call on Mr. John Bolin, who is going to address the question regarding inhalation calculations and the resuspension question.

We'll ask Mr. Bolin for his remarks and then we'll open the floor with additional questions or comments. Mr. Bolin.

MR. BOLIN: I just wanted to clarify about the max calculations. For the population dose, the ground resuspension was included in the calculation. Since it's a -- basically, it's an inhalation contributor as part of the long-term dose for that -- for all the plutonium release accidents.

MR. MATNEY: Thank you. And we'll now recognize Ms. Doris Smith.

MS. SMITH: Okay. Along with that inhalation and the statement that was made in the document that DOE only addresses inhalation exposure, inhalation is the only pathway accounted for in the assessment of chemical and radiological airborne hazards from normal operations. Page

HT16/1
14.107

2

4-205.

Now, does this mean that there are exposure pathways of non-airborne hazards, for example, through groundwater contamination? And are these included in the analysis and where do we find them?

HT16/1
14.107
continued

MR. JESSEN: Doris, I'll try and answer that. The water pathways were looked at, but in terms of the long-term dose from accidents, they are not a significant contributor. In terms of the dose, the inhalation as the cloud is passing and the resuspension are the dominant long-term dose pathways.

MS. SMITH: Are there other pathways and accidents that are non-normal operations? Are these included in the accident analysis?

HT16/2
14.108

MR. JESSEN: The only other pathway that we found significant was inhalation through -- or absorption through the skin for tritium oxide. When a cloud engulfs a person, it easily absorbs into the skin. And it can get into your body that way. And, in terms of the plutonium, inhalation is the only dominant pathway.

3

HT16 (CONTINUED)

HT16/6 14.112 continued

MS. SMITH: Was this analyzed in the document?

MR. JESSEN: Yes.

MS. SMITH: Just another note that I had. The Acquazella Study I believe was referred to, the study on the workers at Pantex. Am I correct that this study compares workers to the community at large; isn't that correct?

MR. JESSEN: Yeah. We'd have to look that up. We don't remember that specifically. That's the worker mortality study?

HT16/6 14.112 continued

MS. SMITH: Right.

HT16/6 14.112 continued

MR. JESSEN: Yeah. I don't think we can answer that right now.

MS. SMITH: Okay. In the accident scenarios and analysis, it seems as though everything has to work 100 percent correctly all the time. Are there -- is there any built-in analysis for if something does not actually fail

HT16/6 14.112 continued

into place like it is supposed to?

MR. SIMPKINS: Sure. That's what the initiator frequencies are for the various

HT16/6 14.112 continued

accident scenarios. It's the failure mode, whether it was a mechanical failure of a crane or the probability of a forklift puncturing a pit

container. So failure modes are built into the risk assessment. And that's where you get the accident scenario from is an accident initiator, which is, by definition, a failure of one kind or another.

MS. SMITH: And do you consider that there are different initiating events at different times that would cause a different sequence?

MR. SIMPKINS: Sure.

MS. SMITH: And is there data that supports this claim?

MR. SIMPKINS: Yes. Each sequence that's analyzed has a series of references where we got frequency numbers from from previous studies, typically, the SID, Safety Information Document, or the existing safety analysis, the safety analysis reports.

MS. SMITH: Thank you.

MR. MATNEY: Thank you, Ms. Smith. I'd now like to recognize Mr. Steve Ahlenius from the Amarillo Chamber of Commerce.

MR. AHLENIUS: Just for my own clarification, what is the Panhandle's background, as far as radiological exposure? What's the norm

for the region?

MR. SIMPKINS: It's published, but I don't have it memorized.

MS. FOUNDS: It is in the document. And if you'll let Jim look it up here,

HT16/3 14.109

he can give it to you. I think it's around 400, something like that. But if you'll give us a minute, we'll look that up.

MR. JESSEN: Here it is. It looks like a total of 400 milligram per year for each individual from background sources.

MR. AHLENIUS: From background sources. And in the document you show 330?

MS. FOUNDS: Yeah. The 330 was historical -- well, it was for 1994, right?

HT16/4 14.110

MR. JESSEN: The number I gave you is in that table. It's under all other sources, which includes medical and other extras and that type. 334 is the total natural.

MR. AHLENIUS: 334 is the total natural?

MR. JESSEN: Yeah.

MR. AHLENIUS: So the 330 that you have here, is that in addition to the 334?

MR. JESSEN: The 330 is over 330

people.

MR. AHLENIUS: Okay.

MR. JESSEN: And this 334 milligram per year is for each individual in the vicinity. And the 330 deals with workers only.

MR. AHLENIUS: So the background then is how much again?

HT16/5 14.111

MR. JESSEN: Natural background radiation is described on Page 4-207. And it's 334 milligram per year.

MR. AHLENIUS: Okay.

MR. MATNEY: Are there any other public questions or comments on the issue of health and safety? Yes. Ms. Neusch.

MS. NEUSCH: Hello. I'm Trisch Neusch. And I just wanted an explanation. On your overheads, Bret, you had, under synopsis of results, you have public risk from radionuclide exposures is dominated by sources other than the Pantex plant, like we've been discussing. But this next sentence was, thus, none of the alternatives will measurably change the public risk from radiation exposure. Could you explain

HT16/6 14.112

your reasoning on that, please?

MR. JESSEN: Trisch, I'll try and

HT16 (CONTINUED)

alternatives.

MS. NEUSCH: I see. But this is the site-wide document that will address all of those issues, but you aren't looking at it, right?

MS. FOUNDS: Right. The decisions for those are in the other documents. And so what we've tried to do, again, is summarize, to the extent that we can as we were developing this, this document along with those other ones to give the cumulative impacts should a particular decision be made. But this document will not make decisions on those alternatives.

MS. NEUSCH: But it includes the other documents and those decisions?

MS. FOUNDS: It tries to summarize what those things are because the decisions haven't been made yet. And there were multiple alternatives in those documents, so we tried to summarize what it would be, considering those alternatives.

MS. NEUSCH: So it's basically an ineffective document when it comes to those decisions?

MS. FOUNDS: I guess I'm not quite sure what you mean by that.

MS. NEUSCH: Well, I mean that any person that picks up this document and thinks this is about the site-wide environmental impact statement -- you're talking about impacts on the environment in a site-wide future?

MS. FOUNDS: Uh-huh.

MS. NEUSCH: And, to me, it bears to mention some of those other alternatives that you've discussed in this document.

MS. FOUNDS: And, as I said, in those sections where it talks about cumulative and, in fact, under each of those resource areas it summarizes what's been done in those documents and they go out and look at the different risks too. And so we've pulled them together and said, okay, what is -- what's the information in those documents so you can get an idea what the cumulative impact is.

MS. NEUSCH: Okay. And I'd also request that, Bret, when you're going over these overheads and everything, those of us that have looked through the documents and are familiar with the acronyms, realize what those mean, but there are some of those that you're talking about that it would help, when you say the acronym, if you

would explain what that is. It would kind of help. Thanks.

MR. MATNEY: Thank you, Ms. Neusch. Other questions and comments? Yes. Ms. Gattis.

MS. GATTIS: I guess Trisch has touched on a subject that is kind of a concern to me. I really would like to understand why you all have those cumulative impacts in here like you have, for instance, on -- just one example, Page 4-239, where you're talking about the storage and disposition PEIS. And the last sentence in there is: All doses would be within radiological limits and well below levels of natural background radiation, et cetera, et cetera.

HT16/7 02.019

This document has consistently referred back to the three PEISs and made, I'll say, claims evaluations -- I'm not even sure what the right word is -- but statements about impacts that it doesn't seem, to me, this document has the information to do. Can you all talk to me a little bit about that?

MS. FOUNDS: Part of what it is is, I mean, we're always bound by the radiological control manual, for instance. That's a DOE

order. So it limits the amount of exposure that any one person would get. So, in that sense, we're all trying to stay within those guidelines, their DOE orders, et cetera. So we're trying to do that in those statements that are there.

But then what we do is go out to those documents and look at what the overall impacts that they have projected for those and are trying to summarize them in this document.

MS. GATTIS: I hear what you're saying. I'm not sure I'm persuaded. To me, it's still a very difficult area, a real debatable area and a debatable thing that this document does. It gives the impression you're making solid judgments that I don't think the information is sufficient to do.

HT16/7 02.019 continued

MR. MATNEY: Mr. Hancock.

MR. HANCOCK: Let me try just a couple of follow-up questions on what has just been talked about. This morning when we were talking about probabilities and the basis, the data base, for the probabilities, in some cases you talked about historic plant operations, for example.

HT16/8 14.113

This document and, frankly, the

HT16 (CONTINUED)

HT16 (CONTINUED)

Dave Nolton from the Office of Fissile Materials Disposition in the Department of Energy in Washington, D.C. Art and I have responsibility for the fissile materials long-term storage and disposition PEIS. In the case of storage, we would not expect to do subsequent tiered documentation. We've done analysis in the document that we believe covers the various alternatives at the six sites that we evaluated.

In the case of disposition, we would, in most cases, require tiered NEPA documentation. And I qualified that because some of the alternatives that we have looked at involve existing facilities. For example, if we were to choose the MOX fuel option, where we combine the plutonium with tritium oxide and put it into a reactor to burn it, one of the options we look at is using the existing commercial reactors which are regulated by NRC. The NEPA requirement is in accordance with the [illegible] If we were to vitrify [illegible] defense waste processing [illegible] River, a lot of that NEPA has been [illegible] most cases, we would require [illegible] documentation. Certainly [illegible]

HT16/8 14.113 continued

other PEISs, don't have historic data on worker exposures at MOX fuel facilities that they're basing their projected impacts on. They don't use that kind of data. So when you come to the public and make statements like we're going to be within regulatory limits, that's not -- that doesn't have anything to do with your probabilities and your risks, because the probabilities and risks are not necessarily always related to the regulatory limits.

Sometimes regulatory limits are developed based on those kind of historical practices, but in some cases not. And in this country we don't even have good numbers for what regulatory limits for, for example, a MOX fuel facility should be. So I think it's a legitimate concern that folks have. And I think one of the things that I would suggest is that you make clear in the text of the document, particularly [illegible] issues, specifically how you're basing your analysis on historic data and where you're not basing your analysis on historic data. Because much historic data or very historic data is based upon [illegible] that you are, therefore, [illegible] 30-year CEDE or to a 10-year CEDE, we have the codes in place because it's based upon the rems that are received. It's based upon data from studies as to what those latent cancer conversion factors are. And then the dose rates is based upon biological studies, et cetera, for coming up with a 50-year CEDE. And are you stating that I should summarize, for instance, in the human health section, what those studies were in terms of that extrapolation?

MR. HANCOCK: Well, there are a couple of issues, Nan. One is the basis -- the basis you're using for actual exposures from various types of facilities. In some cases, you, in this document, are using historic Pantex data. In some cases, you are not. I think it would be helpful to be more clear in the document about which you are and which you aren't and for what period of time.

Obviously, the operations at Pantex have been different at different points in its last 40 years of operation. So I'm certainly not saying, you know, let's use radiation

were to construct a new reactor or vitrification plant, there would be site-specific NEPA documentation required.

MR. MATNEY: Yes, Ms. Gattis.

MR. GATTIS: I'd like to ask Mr. Nolton for clarification. If you did -- in your document, storage would not require additional NEPA coverage. And, yet, isn't, in your document, it's anticipated as a new facility, not Zone 4 magazines, but a new facility that would be built?

MR. NOLTON: The analysis of our document for the alternatives -- we have three alternatives, basically, upgrade in place, consolidate at a single facility or single site, or consolidate and collocate plutonium and uranium. And we have done the analysis in the document to cover those alternatives. And we do not think that additional NEPA analysis would be required.

MR. MATNEY: Other questions or comments? Yes, ma'am. Would you identify yourself, please?

MS. ARCHER: I'm Jonell Archer. I thought that not plutonium or uranium necessarily, but tritium was on the table, and that was all.

MS. FOUNDS: In terms of, well, your last one, when I said extrapolating to a 50-year CEDE, we have the codes in place because it's based upon data from studies as to what those latent cancer conversion factors are. And then the dose rates is based upon biological studies, et cetera, for coming up with a 50-year CEDE. And are you stating that I should summarize, for instance, in the human health section, what those studies were in terms of that extrapolation?

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and that there weren't any games going on 50 years ago if you had good numbers, players, that -- to use the [illegible] exactly, Honey, we're not playing [illegible] all or nothing; 12,000 jobs are on the table. Would you speak to that?

MS. FOUNDS: Ma'am, are you talking about the tritium EIS that was analyzed? Because there are several documents. And I may go back to Gary or Dave again. But there was the stockpile stewardship PEIS and then there's the storage and disposition PEIS also. Is that what you were referring to?

MS. ARCHER: Yes, long-term storage.

HT16/9 02.020

table when they came down from Washington. And that was after I got an invitation to go to

[illegible] for three years studying. And Steven Schinki or whoever came up to the table. So he sent the invitations.

MS. FOUNDS: Gary, do you have -- can you clarify?

MR. PALMER: My name is Gary Palmer. I'm from the Office of Defense Programs from Washington. I think you might be referring to Steve Schinki, S-o-h-i-n-k-i. Steve had responsibility for the tritium production programmatic and environmental impact statement, which has been completed and the Secretary has made her decision. That decision was to site those tritium production facilities elsewhere. So it's no longer an active consideration, although it was once upon a time for Pantex. So at the time he was probably

The second issue I raise, though, is for a number of the types of operations that are being talked about for the future, plutonium conversion facilities, plutonium processing facilities, MOX fuel facilities, a new revolutionary light water reactor, there really are no history. There are no good history to go on, in terms of what the actual releases are. So it's the [illegible] you're basing your analysis -- the disposition PEIS is basing its analysis on what the current or assumed regulatory levels are going to be, not on, in fact, historic performance.

HT16/10 02.020

assumed to operate within the applicable regulatory limits.

You know, that would be helpful clarifying information to folks to know you're not basing it on any kind of historic data or practice. You're basing it upon what the assumed regulatory limits are going to be, understanding that regulatory limits also change over time.

MR. MATNEY: Other questions and comments? Yes, sir. Mr. Williams.

MR. C.E. WILLIAMS: On this same line of questioning, my question is if, in fact, Pantex was selected for some of these additional functions, would there be any additional environmental documentation that would have to be done prior to actually starting into those

HT16 (CONTINUED)

HT16/8 14.113 continued

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Sometimes regulatory limits are developed based on those kind of historical practices, but in some cases not. And in this country we don't even have good numbers for what regulatory limits for, for example, a MOX fuel facility should be. So I think it's a legitimate concern that folks have. And I think one of the things that I would suggest is that you make clearer in the text of the document, particularly on the health issues, specifically how you're

HT16/8 14.113 continued

basing your analysis on historic data and where you really don't have much historic data or very limited historic data that you are, therefore, extrapolating to a 50-year CEDE or to a 10-year operational lifetime.

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MS. FOUNDS: In terms of, well, your last one, when I said extrapolating to a 50-year CEDE, we have the codes in place because it's based upon the rems that are received. It's based upon data from studies as to what those latent cancer conversion factors are. And then the dose rates is based upon biological studies, et cetera, for coming up with a 50-year CEDE.

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Obviously, the operations at Pantex have been different at different points in its last 40 years of operation. So I'm certainly not saying, you know, let's use radiation

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exposures of 30 years ago if you had good numbers, which you don't, for what those exposures were as saying that's what you should be using. But you should be clearer about what you're doing in that regard.

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HT16/9 02.020

PEIS is basing its analysis on what the current or assumed regulatory levels are going to be, not on, in fact, historic performance.

And so the point is that you should be quite clear about that, which I think, in some cases, it's really not. For example, on Page 4-239 that Ms. Gattis just mentioned to you, I think it would be very helpful if you would just say, in terms of some of these facilities, there isn't historic data to base it on, so we are basing our analysis on these plants would -- are

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HT16/9 02.020 continued

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MS. FOUNDS: There would -- in some cases, there would have to be specific project NEPA documentation, et cetera. But maybe I can have Gary or Dave talk to those issues specifically.

MR. MATNEY: And, sir, would you identify yourself?

MR. NOLTON: Yes, I will. I'm

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HT16 (CONTINUED)

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If we were to vitrify using the defense waste processing facility at Savannah River, a lot of that NEPA has been done. But, in most cases, we would require additional NEPA documentation. Certainly here at Pantex if we

were to construct a new reactor or vitrification plant, there would be site-specific NEPA documentation required.

MR. MATNEY: Yes. Ms. Gattis.

MR. GATTIS: I'd like to ask Mr. Nolton for clarification. If you did -- in your document, storage would not require additional NEPA coverage. And, yet, isn't, in your document, it's anticipated as a new facility, not Zone 4 magazines, but a new facility that would be built?

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MS. FOUNDS: Ma'am, are you talking about the tritium EIS that was analyzed? Because there are several documents. And I may go back to Gary or Dave again. But there was the stockpile stewardship PEIS and then there's the storage and disposition PEIS also. Is that what you were referring to?

MS. ARCHER: Yes. It's the long-term storage. And that was what was on the table when they came down from Washington. And that was after I got an invitation to go to Washington and discuss what they were going to discuss here, but there wasn't a plane ticket in the invitation.

Then the man from Washington had been on a -- he didn't even really identify himself. He just came and sat down at the table and discussed it and that was it, went back to Washington. But it was at one of our meetings at the Sunset Convention Center. And he had been on

a hiatus for three years studying. And Steven Sulvinski or whoever came up to the table. So he sent the invitations.

MS. FOUNDS: Gary, do you have -- can you clarify?

MR. PALMER: My name is Gary Palmer. I'm from the Office of Defense Programs from Washington. I think you might be referring to Steve Sohinki, S-o-h-i-n-k-i. Steve had responsibility for the tritium production programmatic and environmental impact statement, which has been completed and the Secretary has made her decision. That decision was to site those tritium production facilities elsewhere. So it's no longer an active consideration, although it was once upon a time for Pantex.

So at the time he was probably talking to you in terms of possibilities. But those possibilities have been resolved in terms of no possibility for Pantex here at this time for tritium production.

MS. ARCHER: But not storage? The storage is still on the table is what I hear.

MR. PALMER: Tritium normally doesn't require storage. We have such limited

HT16 (CONTINUED)

quantities that we're using it constantly. And more of a concern is the recycling of it, how you take it from one application back, clean it up, so to speak, and put it into another application. So there was a recycling component of it in addition to the production. And that recycling remains at Savannah River, where it has been traditionally. That's the best I can do at this point. I think that answers your question.

MS. ARCHER: Okay. Thank you.

MR. MATNEY: Other comments or questions? Comments or questions on health and safety? Hearing none, let's close our discussion on that issue and move to our third issue. And that is the issue of transportation.

We do want to remind you that if you would like to ask a question anonymously, you may do so by getting a card out in the lobby and writing your question and have someone -- perhaps one of the officials around the room -- bring it to me and I'll be glad to phrase that question for you.

Also, for those of you who may be new to our afternoon session, our format is that the Tetra Tech and DOE officials will present the

issue. And then state and local officials will ask questions and make comments. And then we will open that particular issue up to public questioning and public comments.

So let's move forward with the transportation issue. And I'll turn it over to Tetra Tech official Jim Jessen. Jim.

MR. JESSEN: Okay. In terms of transportation, we looked at the impacts from both off-site and on-site transportation activities. We analyzed the impacts from normal operations and potential accidents and we analyzed the differences between the alternatives.

In terms of the proposed action, we looked at the radiological exposure expected to the transportation workers on site. We based that on that historical information. And the numbers there are in the graphs. No public impacts are expected from normal operations.

For the no action alternative, which is to store only 12,000 pits at Pantex, those numbers go down a little bit because there will be fewer pit transfers related to the repackaging activity.

In terms of the relocation of

pits, we found that it would increase the risk to the workers due to the additional handling, specifically the loading and tie-down within the SST. And that's estimated at 28 person-rem.

The inter-site transportation, we also evaluated normal impacts and potential accidents. The methodology is discussed in Appendix F. Again, we evaluated the differences between alternatives.

And, just to summarize those results a little bit, relocating the pits will increase the risk to the public relative to the proposed action. The shipment of 20,000 pits to the Savannah River is the highest impact alternative. And that would increase the normal operational radiological risk by 58 percent and the accident risk by 31 percent.

And we kept this short since we were running over time. Thank you.

MR. MATNEY: Okay. We'll ask now if there are questions from any state or local officials. We'll start, I believe, with Joe Martillotti.

MR. MARTILLOTTI: Joe Martillotti, Texas Department of Health. The stockpile

stewardship and management PEIS discussed manufacture of high explosive components at other sites and transporting them to Pantex, as it was briefed, as, I believe -- maybe not a written alternative, but a preferred verbal alternative at the April meetings. And that issue is not discussed at all in the transportation materials in this EIS. And I believe, if that's an open possibility, it should be addressed.

MR. JESSEN: In terms of that, like Nan said, we're looking at the nearest 10-year term. And those activities are not going to occur while this document -- in the time frame we're looking at this document. The analysis for that should have been covered in the stockpile stewardship PEIS.

MS. FOUNDS: So we would just tier from that document. At the time that we were also writing this, there was no preferred alternative at that time either. So we would be going back and looking at the stockpile stewardship and looking at what transportation risks that they would be and tiering that into our document, in terms of a summary format. Pat, did you have anything to add to that?

HT16 (CONTINUED)

MS. O'GLENN: My name is Pat O'Glenn. I'm with the Department of Energy in Albuquerque. We don't have a preferred alternative yet on the HE mission. We won't have until probably later in July. However, the transportation of HE components in and out of Pantex for all alternatives was assessed in the SSM PEIS.

MR. MARTILLOTTI: It was in the SSM PEIS, but not in this document?

MR. O'GLENN: Right.

MR. MARTILLOTTI: And, if that occurs, it would occur after this 10-year period. Is that what you're saying here?

MS. O'GLENN: It would probably start to occur around the year 2000 or so.

MR. MARTILLOTTI: Yeah. It was my understanding that it would occur within that 10-year period if it did.

MS. O'GLENN: Yes.

MR. MARTILLOTTI: So that's what I'm saying. If it were a possibility, it should be looked at in this issue.

MS. POUNDS: We would just tier from their document to say, okay, this is the

impact that they have shown in their document in our transportation analysis for what they would say. So it would just be going back to their document and tiering from it.

MR. MATNEY: Other questions from state or local officials on this issue? Hearing none, we'll open the questioning and comment session up to the public on the issue of transportation. Yes, ma'am. If you would identify yourself, please.

MS. CLUSKINS: My name is Dorothy Cluskins. It just occurred to me just as I was listening to you talk about whether or not there would be less exposure if the pits were left on site rather than transporting them -- and I wondered if the repackaging were not part of the long-term storage in that option if they were to be left on site. And -- well, if so, if repackaging is a part of the action, that would be part of the analysis also? Because it would provide the same worker exposure as taking it out of the bunkers and moving it to a new location.

HT16/10 12.016

HT16/11 14.140

MR. SIMPKINS: Repackaging is a part of the analysis that's in our site-wide EIS. And Gerry addressed this topic earlier this

morning that the repackaging is going to take place independent of where the pits ultimately are stored. Is that right, Gerry?

MR. JOHNSON: That's correct.

MS. CLUSKINS: So if the pits -- if Pantex is chosen for long-term storage, then the workers would actually be exposed to the same activity bringing them out of the bunkers as they would if they were taken out and moved to another location?

HT16/12 14.141

HT16/13 12.017

MR. SIMPKINS: The activity -- the radiological exposure associated with repackaging will take place when repackaging takes place. The AT-400 that they will be repackaged into is a better package, in terms of subsequent radiological doses, because it provides better shielding.

MS. CLUSKINS: If it's decided that they're to be moved, would they be repackaged prior to moving?

MR. SIMPKINS: Absolutely. They have to be repackaged in a Type B container. The package they are in now is not certified for over-the-highway transportation.

MS. CLUSKINS: And if it's

determined that they will stay over a longer period at Pantex, will everything there be repackaged in that case?

MR. SIMPKINS: That's what Gerry said this morning, yes.

MR. JOHNSON: The reason for that is that the AT-400 is a sealed container, stainless steel. And it's also -- it basically provides a new sealed barrier around the plutonium head. And so whether they stay -- if they stay at Pantex, we want to do that just because it increases the safety margin. If, in fact, they're going to be shipped somewhere else, they have to be repackaged because the AT-400 is an approved shipping container and the current containers are not approved for off-site shipments.

MS. CLUSKINS: Okay. Thank you.

MR. JESSEN: I just wanted to add something to that. A lot of the dose that we're predicting is coming from tying down these containers within the SST. At that point, they have to take it out of the stage right configuration and it takes a long time for each container. And that is a unique operation.

MR. SIMPKINS: This topic came up

HT16 (CONTINUED)

in a discussion yesterday. It's -- presumably, DOE will develop a new technique for tying down the containers. If they undertake a massive relocation of pits, they're likely to develop a more -- a less exposure method for grouping the AT-400s and maybe palletizing them and placing them in the trucks on the shielded forklifts, rather than having each individual pit container be chained down by an individual in the truck.

So that question has not really been answered as to how that would be undertaken. The analysis we did includes the conservative individual cans being tied down by the transportation workers.

MR. MATNEY: Ms. Gattis.

MS. GATTIS: When you transfer pits on site, do you move them in an SST or do you move them in some other way?

MR. SIMPKINS: There's a special design pit trailer that carries four-packs and six-packs of the pits in the stage right configuration. That's the predominant method of moving them on site.

MS. GATTIS: So if we did in the future a centralized new facility in Zone 12, as

was talked about in the disposition PEIS, for instance, you're still going to have to move these pits? They're going to be removed -- very likely to be moved out of the magazines anyway. I base that partly on your figure in this book that the igloos have an estimated lifetime remaining of 11 years. So that's not as long-term as some things.

Anyway, so they'll be moved -- they'll be repackaged on the site and they're going to be moved -- or inevitably are going to be handled to be repackaged and they're inevitably going to be moved.

MR. SIMPKINS: If they stay in the stage right pallets, they can be moved with very low doses.

MS. GATTIS: Good.

MR. SIMPKINS: They aren't currently designed -- the pallets aren't designed to be chained down in the SSTs when they're transported over the highway. That's why I said presumably a better method would be developed before DOE would undertake shipment of thousands of pits off site.

MS. GATTIS: Okay. Thanks.

MR. MATNEY: Mr. Hancock.

MR. HANCOCK: I have a couple of transportation questions. On Page 1-10 and 1-11 it says, approximately 30,000 transfers of radiological and explosive materials take place each year at the Pantex plant. Where in the document or where in some other document are the actual levels of exposures to workers documented from those 30,000 transfers?

MR. JESSEN: Like I stated before, the transportation and staging worker doses are in -- I think it's 4-14, Section 4-14. And they're responsible for all moves on site.

MR. HANCOCK: So let me make sure I'm following you here.

MR. JESSEN: Okay.

MR. HANCOCK: Page 4-179 lists cumulative doses in the transportation and staging department, the number of people involved in that department and the maximum individual doses for 1993 and 1994. Are you saying that all -- those are the people and those are the exposures related to all 30,000 transfers?

MR. JESSEN: First of all, I'm not really sure where the 30,000 number came from.

MR. HANCOCK: Well, it's on Page

1-10, so I hope somebody can tell us where it came from.

MR. JESSEN: But in terms of the doses, yes. All on-site transportation activities are performed by the transportation and staging department.

MR. HANCOCK: I guess my additional comment is the -- if -- well, there needs to be better documentation about this 30,000 transfers, where it came from, what is involved. When you look at Page 4-74, where it talks about inter-zone transfers -- these are inter-zone transfers between Zone 4 and Zone 12. If you take those numbers, they add up to about 5,500 transfers, far less than 30,000.

So, I mean, my concern is that there are great differences in the numbers we're talking about here. And that doesn't mean -- and that's the reason my question was -- that doesn't mean that there are worker exposures that are falling outside, but I also -- from the document I also can't tell what things are related to what things.

MR. JESSEN: We promise to explore that and get a better feel for that, where that

HT16 (CONTINUED)

number came from.

MR. HANCOCK: I'd be glad for Gerry Johnson to respond, as it looks like he's interested.

MR. JOHNSON: Basically, you have two types of transfers of nuclear materials. One is inter-zone. That would be moving from Zone 4 to Zone 12 or backward. The other thing is we have 64 -- well, approximately 64 assembly bays. We have a number of special purposes bays. And we have a number of assembly cells. Any movement from any one bay to another bay is a transfer. And that's all handled by material handlers.

And so each movement would be -- when it moves from one building or one bay to another bay is considered a transfer. And the transfers are all handled by the same people, which are material handlers. So you have your production technicians who do the assembly/disassembly work, and then you have the material handlers who actually move the materials from location to location.

So you would have a lot of movements within Zone 12. You also have some movements within Zone 4. As you would move them

from one magazine to another would be a transfer also.

So my assumption is that that's where the 30,000 come in, which would be about right.

MR. MATNEY: Yes, sir. If you would identify yourself, please.

MR. JARMAN: Okay. My name is Clifford Jarman. I work for Tetra Tech on the EIS. If you read that sentence, it also includes explosive transfers, which would not have doses associated with it. And so there's one of the sources of why the number is higher in what you're reading from Zone 4 to Zone 12, in addition to what Mr. Johnson said.

MR. HANCOCK: We don't need to have a long debate about this. My concern is that these numbers need to be better documented and better explained. And I've already heard that you're planning to do that, so I will look forward to that.

MR. MATNEY: Other questions or comments? Yes, sir.

MR. PALMER: Once again, my name is Gary Palmer from defense programs. In this

presentation and the previous one, some questions came up about the relationship between this EIS, this environmental impact statement, and the stockpile stewardship of tritium and, finally, the storage and disposition.

And I just wanted to give one piece of historical information that might help explain how it's presented. And that is that when we started on the path of doing all these EISs at the same time, we consulted our -- DOE's office of NEPA assistance and policy because we recognized real quickly that if we didn't do something we were going to have four EISs looking to the same issue, at considerable expense to the taxpayer.

So we discussed it with them and actually got an agreement from Carol Borgstrom, who is the director of that office, that basically the programmatic EISs -- take, for example, stockpile stewardship and management, would go into the generic programmatic levels and would look at the impact of placing new programs at new sites. And they were the only ones that had to do that.

So, for example, if they were going to propose moving a facility to Pantex, we

didn't want the Amarillo area office and Donna Bergman's office to have to go out and calculate what the effect was going to be on Pantex. Rather, that was done by the larger programmatic document. So, in an attempt to smooth things out, that was the basic method that was taken.

Then the Pantex environmental impact statement would take that information from the programmatic document and simply report it. Even more important was the probability or the lack of probability of knowing which programs actually were going to go to which site because, under NEPA, you consider all the alternatives.

So, for example, stockpile stewardship and management was considering multiple sites and multiple missions. And it would be even more inefficient to have each of those sites looking at each of those issues and doing those calculations. So, in the end, we basically agreed to simply have the programmatics do the work and then the site-wides take that information and report it.

In this particular EIS, I think, if you look in Chapter 4.21, it reports the cumulative impacts. It's in a table so one can

HT16 (CONTINUED)

actually add -- you can decide which option you think is going to come to Pantex, and you can add up the cumulative impacts for yourself. It's not added all the way across because it's almost impossible to do that. It's not clear which options may or may not come.

So, rather than try to presuppose a case, we simply presented in here all the various options. And you, the reader, can look at them yourself. That's the history. That's how we came to be this way. And I thought it might help to explain that, based on the questions that came from Ms. Gattis and Mr. Hancock and also the State of Texas.

If that isn't clear, I'd like to expand that. I'll be around. I'll be glad to talk to you off to the side. But it was a conscious decision made over two years ago to pursue it that way.

MS. FOUNDS: Thank you, Gary.

MR. MATNEY: Other comments or questions?

MR. HANCOCK: This is probably more in the nature of a comment than a question, but certainly anybody who wants to respond to it

can. There's been a lot of discussion today about the AT-400A. There is, in fact, however, in the document very little discussion about the AT-400A, in part because it is not, in fact, in service. It is not, in fact, ready to go, et cetera.

So I guess my comment would be I would hope that in the final there is included more analysis and particularly results of actual testing on the container, the limitations on the testing that has been done and those sorts of things so folks will be a little more familiar with how the container is performing in terms of its tests and how it's expected to perform long-term so it will be a little easier to evaluate how well it actually does work, because, at this point, you're basing your analysis on the regulatory requirements that it's trying to meet as opposed to any actual performance of them.

And, historically, whether we talk about these kinds of containers, like the AL-R8 or other containers used to transport other things over time, they frequently are shown to not perform as well long-term as what they have been designed to perform at.

MS. FOUNDS: Well, this is a

question that you had at the Albuquerque. And I am still talking with AT-400A. What they've said is -- a lot of the designing information is classified for the AT-400A. So that's one of the reasons that we've also gone to the -- looking at the analysis in terms of the transportation Type B packaging container in that performance.

So we've -- at a minimum, the AT-400A will have to meet those standards. And so that is presented in the document. Any additional information that I can have in there about the AT-400, I will try to put in there. But, just to clarify that I did go back and talk to them, and much of that information is actually classified.

MR. HANCOCK: And I appreciate that. I guess my concern is if you can't put the actual information in the document, there are a variety of Type B containers that have been used, not for plutonium pits, but for other nuclear materials, over the last 15 years. And there is some history about their performance over time and how many of them have been recalled for modifications and those sorts of things. And that kind of information should, therefore, be included so folks have a little better basis of

understanding, you know, what historic practice has been, understanding it's not historic practice of this particular container because this particular container doesn't have any historic practice to be based on.

MR. MATNEY: Gerry Johnson.

MR. JOHNSON: I think, Don, you bring up a very good point. One of the things on the storage option of plutonium pits is, just like we have a very rigorous quality assurance program evaluation program for nuclear weapons, there's also one that's been established for the storage of plutonium pits, which on an annual basis, a certain percentage of the containers, as well as the plutonium pits, will be pulled and fully evaluated and sampled to determine any long-term trends that are negative or any kind of modifications or changes that need to be done.

So the only point I would like to make is there will be a rigorous surveillance program. So they're not going to be just put into storage for X number of years and not monitored or check or evaluated.

MR. HANCOCK: And it would be helpful if that process got written down so people

HT16 (CONTINUED)

know what's being expected and proposed, et cetera.

MR. JOHNSON: And that program has been defined so it could be described in there.

MR. MATNEY: Yes. Dr. Rock.

DR. ROCK: Hello. My name is Dr. Rock. My question has to do with Figure F-6.3.1 on Page F-19, Appendix F as in fox-trot. There is listed a variety of collisions that might occur during transportation which form the basis for the risk and the consequence analyses in that appendices. And I note that aircraft collisions with the transport train have not been considered, or at least they're not listed.

HT16/14 12.018

HT16/15 15.078

MS. FOUNDS: With the transport train?

DR. ROCK: The stage right trailer, the whatever trailer you would like to consider. I guess there's something hauling a trailer, so I think of it as a train. I admit there's no caboose.

HT16/14 12.018 continued

HT16/15 15.078 continued

MS. FOUNDS: No. It's just Pantex at one time had railcars. And I was wondering if you were referring to those, and you're not.

MR. SIMPKINS: That was not an

oversight. We had considered that potential. But the target is so incredibly small compared to the footprint of the entire plant where plutonium resides that it would -- it's several orders of magnitude below other similar risks.

I mean, we can put it in there. It won't make any difference to the overall results, but it could be included.

DR. ROCK: I guess either I don't understand the target footprint concept and the target shadow concept, or else this target isn't as small as it appears. Because the skid distances that will approach this target are just as long as the skid distance -- we have two targets. We have this one moving slowly and we have the rest of them not moving at all.

MR. SIMPKINS: The ones that are not moving at all are there 24 hours a day also. You also factor in the limited time exposure that those are out in the open. There's another small fraction, another conditional probability that would be added onto that. It gets very small, in terms of a risk number, but it could be addressed.

HT16/14 12.018 continued

DR. ROCK: That's true. If we're really looking at 30,000 movements a year, which

HT16/15 15.078 continued

was the number referred to earlier in the discussion, the total exposure of all of those targets averaged over a year may match the total exposure of a single storage facility, in terms of hours of vulnerability. So it relates to an observation that I've had that, in analyzing the aircraft crash probability, there's been no consideration of the fact that the aircraft is only in a position to impact the target for a short duration, a very short proportion of its entire flight.

HT16/14 12.018 continued

HT16/15 15.078 continued

Here we've got a slowly moving target that's only vulnerable for a short period of time and we've not worried about it. When you're moving the missile instead of moving the target, we worry about the sum total of all these passes. When we're moving the target more slowly, we say, well, it's in the open for such a short period of time that it's negligible.

And I guess I'll just leave it that that's a question. And I don't have the answer, or I'd have given it.

MR. SIMPKINS: We can demonstrate that it's negligible, if that's what DOE directs us to do. We can certainly consider that in the

final EIS.

DR. ROCK: Thank you.

MR. MATNEY: Other comments? Yes, ma'am.

MS. LEE: I have a question. I'm Susan Lee from Austin. I'm associated with several grass-roots groups. I have more experience with nuclear power plants and transportation relating to that. But I know that there are always emissions from trucks carrying radioactive material that can affect the public on the highways as they are alongside of a vehicle or being passed by a vehicle. And I wonder if there's any explicit documentation in the EIS about public exposure on the road as missiles are brought in. That's my first question.

MR. JESSEN: Yes. It's described in there. If you want me to point it out, I'd be happy to.

MS. LEE: That would be helpful.

MR. MATNEY: While he's looking at that, would you like to ask another question?

MS. LEE: Right. The estimates of missiles that will be dismantled, are these only the US missiles or do these include the missiles

HT16 (CONTINUED)

from the former Soviet Union that I read in an Austin paper that UT's Dale Cline was recruiting to bring to Pantex for dismantling?

MS. FOUNDS: No. In this case, we're just looking at the dismantlement for US weapons in our EIS.

MS. LEE: Okay.

MR. JOHNSON: I know of no plans or evaluations or consideration for bringing any foreign warheads or bombs into Pantex for dismantlement. The only assistance that the United States has offered the Russians is to provide some analysis and help with them as far as packaging of their plutonium containers. For example, we have an AT-400 container. We have designed and provided containers to them that's very similar in nature.

We've also worked with some of their transportation systems and we've helped them in the design and the construction of a storage facility. But there's really been no technical exchange or discussion as far as helping either side with the dismantlement of nuclear weapons.

MS. LEE: Perhaps he was misquoted or perhaps he has another understanding. I'll be

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glad to share the newspaper article with you.

MR. SIMPKINS: I can answer your previous question now.

MS. LEE: Great.

MR. SIMPKINS: Page 4-269, Table 4.16.2.1-1.

MS. LEE: 4.16.2-1?

MR. SIMPKINS: It's the only item that's on Page 4-269. You don't need the table reference.

MS. LEE: Thank you. And is that with and without accident?

MR. SIMPKINS: This particular table includes the public incident free.

MS. LEE: Is there one which includes an incident?

MR. SIMPKINS: And expected number of latent cancer fatalities from dispersal accidents, those two columns are both in that table.

MS. LEE: Okay. Great. Thank you.

MR. MATNEY: Other questions, comments? Ms. Neusch.

MS. FOUNDS: I'm Trisch Neusch.

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And I was wondering did you reference or consult with the Texas Department of Transportation or the local emergency planning commission in completing this document, and, if so, how? And, if not, why not?

MS. FOUNDS: In terms of that, we didn't consult with them in terms of the numbers that are in there. We did send the document over to the State of Texas for their comments. And, in fact, I think that's somewhat of the technical interchange that's going on today.

MS. NEUSCH: I see. So the data did not include anything particularly from the Texas Department of Transportation?

MS. FOUNDS: No. In terms of the analysis for both the incident free and the accident, we use -- or included in there, you know, national statistics and things like that on transportation accidents and the type of accidents that do go on. So we have used statistics, but we did not consult directly with the Texas transportation department.

MS. NEUSCH: Okay. Thank you.

MR. MATNEY: Any other comments or questions regarding transportation? Hearing none,

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1994 usage was, at 439 million liters.

For water production, the 1994 usage was 836 million liters, as compared to a capacity of 1,890 million liters. 2,000 weapons level is 1,011 million liters. 1,000 weapons level is 791 million liters. And, again, the 1,000 weapons level and 500 weapons level is less than what the 1994 water usage was.

So that pretty much concludes my presentation.

MR. MATNEY: It is now 3:30. Let's be in recess for 10 minutes. And we'll come back with questioning. A 10-minute break.

(Recess.

MR. MATNEY: Ladies and gentlemen, we'll call our meeting back in session. We've just heard the technical presentation on air and water monitoring. And now we'll ask for state officials to ask questions and make comments. Yes, sir. If you will identify yourself with title and ask your question or make a comment.

DR. GUSTAVSON: My name is Dr. Thomas Gustavson. I'm with the Bureau of Economic Geology at the University of Texas. My main concerns about the discussions of the Perched

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06.048

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HT16 (CONTINUED)

HT16/16 06.048 continued

Aquifer and the Ogallala Aquifer have to do with the limited amount of information that is available describing the limits of the Perched Aquifer to the south and southeast.

And I'm also concerned about the lack of discussion of leakage of Perched Aquifer waters through the perching horizon. In my reading of the draft EIS, these two issues are not treated with any -- in any kind of detail. And I would like to know if there's any additional information available that may be added into the final statements.

MS. MONKS: Essentially, we are going to consider information that is presented to us up until the cutoff date that we have for this document. In terms -- for those of you who may not have heard me, what I just said is, essentially, we'll consider information that is made available to us before our information cutoff date for this document. So -- was there anything in particular that -- any particular studies that you were referring to?

MR. GUSTAVSON: No. I'm pretty familiar with the information that is available. It just seems to me that there's a lack of

HT16/16 06.048 continued

information, particularly with respect to analyses from the unsaturated zone beneath the Perched Aquifer to determine whether or not there are contaminants that have made their way through the Perched Aquifer and are infiltrating, flowing down to the main Ogallala Aquifer.

I suspect that much of the sampling analyses from the Ogallala Aquifer is from wells that have long screen intervals, hence if there were any contaminants, say, towards the top of the main Ogallala Aquifer, that these things might be diluted to the point where you wouldn't know whether contaminants had reached the Ogallala Aquifer. We don't know for sure, for example, what happens to perched Ogallala -- excuse me -- Perched Aquifer waters when they reach towards the limit of the perching horizon. Are they simply flowing off the edge of the perching horizon and then into the Ogallala Aquifer, or is it possible in some cases that the southern margins of the perched horizon are more or less continuous or sort of flow into the Ogallala Aquifer?

If you extend some of the maps in that direction, the elevations of the surface of

the Perched Aquifer and the Ogallala Aquifer get to be fairly close to each other. So I'm interested in those kinds of questions.

MS. MONKS: Okay. Well, that will certainly be considered for the final.

MR. MATNEY: Yes. Joe Panketh, please.

MR. PANKETH: My name is Joe Panketh. I'm from the office of air of the TNRCC. And I'm the Pantex project coordinator for the ambient air monitoring that we're doing at Pantex. A couple of comments I want to make with regard to the presentation. One of the items that were mentioned was that one of the pollutants that we monitor for is for suspended particulates,

HT16/17a 07.004

which is no longer true because there is no standard for total suspended particulates, so we stopped monitoring for TSP. Although we take samples, those filters are forwarded to the Bureau of Radiation Control for radionuclide analysis.

And the other item that was mentioned was that we monitor for metals. Again,

HT16/17b 07.005

we don't -- on a regular basis, we don't analyze for metals. We did take a sample from 1993 about 30 days -- 30 samples. And then we analyzed for

HT16/17b 07.005 continued

about 20 different metals through kind of a screening method. There aren't any concerns there or we haven't been able to identify any. So we have not done any additional analysis for metals.

Now, with regard to the EIS, my comments are only for the non-radiological part of the air quality. And with regard to air quality impacts, both for no action alternative or the consolidation alternative, the non-radiological air quality impacts will be minimal. Only

HT16/18 07.006

potential is for particulates if more construction activity takes place due to consolidation alternative. And, as the EIS mentions, that if that happens, that mitigation measures will be used to control the particulate emissions. And I think that is a TNRCC-accepted method of control for particulate emissions.

I would like to bring up some

HT16/19 07.007

inaccurate statements in the EIS that needs to be corrected. In table -- on Table 4.7.1.3-1 there's a footnote discussing the National Ambient Air Quality Standards, and I think that statement is not accurate, because for ozone and PM-10 the standard -- statement of the standard is determined by statistical methods. And that is

HT16 (CONTINUED)

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07.007
continued

based on expected exceedances over a three-year period. And if the -- in a three-year period, the number of exceedances or expected exceedances, averaged over the three-year period, it has to be one or less, otherwise that area is considered non-attainment for that pollutant.

For sulfur dioxide and nitrogen oxide annual standards and for lead, the quarterly standard, are not to be exceeded. And carbon monoxide, there are two standards, the one-hour standard and the eight-hour standard. And sulfur dioxide, a three-hour standard and a 24-hour standard can be exceeded only once per calendar year. And the statement in the EIS does not make that clear.

And on Page 4-93, there is a statement that says that Air Quality Control Region 211 is designated by EPA as better than national standards for total suspended particulates. That statement is incorrect because when EPA established new standards for PM-10 for (inaudible) particulates, the standards for PM-10 were taken out. So there is no more national standard for TSP.

On the same page, 4-93, there is a

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07.007
continued

discussion about methylene chloride was found in our monitoring at 213 parts per billion by volume on July 6th, 1993. But there is -- no mention is made that this concentration was seven times the effects screening level established by TNRCC. Although, further review and analysis by our staff, toxicology and risk assessment staff, concluded that this one-time episode would not result in any long-term health effects. There is greater discussion about the slightly above ESL concentration of dichloroethane, whereas the discussion on methylene chloride was left out.

Another point I want to make is that in our four years of monitoring at Pantex we have found a number of exceedances of PM-10 National Ambient Air Quality Standards. Although the modeling done by both TNRCC and the EIS staff did not predict any possible PM-10 violations, actual exeedances happened. They could be due to blowing dust or localized earth-moving activities. But that is precisely the kind of scenarios anticipated in the consolidation alternative if additional construction activity takes place. The EIS addresses this issue in Section 4.7.6.

The other item is the modeling

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07.008

that was done that is included in Appendix B. Our modeling staff reviewed the modeling results that was given in the EIS. The TNRCC did clean air modeling in 1995 under the agreement in principle. And our staff used a different methodology to do the modeling for Pantex, the site-wide modeling. And the EIS staff did -- they used the same model, the Industrial Source Complex model, but they used a different methodology to do the modeling. But the conclusions that were arrived at by both models were the same, that only alcohols exceeded the effects screening levels. And when it was modeled for outside the Pantex boundary, there was no exceedance of the standard or the guideline ESL. So that sort of validates the model, that two different groups of people modeled the same emissions using different approaches, but came up with the same conclusion.

However, by reviewing the input into the models our staff found that a number of emission points were left out in the modeling that the EIS staff conducted, like the carbon monoxide emissions from emission points 54, 85 and 160. Some of them are very minimal emissions. But, for example, emission point 160 is a natural gas

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07.008
continued

boiler. It has the emissions of 13,000 pounds per year, which was not included in the EIS modeling. The same thing, from the same boiler, the NOX emissions, the nitrogen oxide emissions, 53,000 pounds a year, that was not included in the EIS model.

Again, when the modeling results came out, there was no impact from these criteria pollutants in both models. So it was -- I just want to point out some omissions. The same thing,

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07.009

there were a number of hazardous air pollutants that were left out in the EIS modeling, which the TNRCC staff used in their modeling.

In conclusion, what I have to say is that the modeling results that were used in the EIS does not -- do not indicate any air quality impacts from either the current operation of Pantex or any expanded operation of Pantex. But, because we have had some PM-10 exeedances,

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07.010

although it happened at the property, they are not considered a violation of the National Ambient Air Quality Standards. But that is one thing that needs to be taken into consideration when this expansion or consolidation alternative is considered, that some mitigation measures will be

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HT16 (CONTINUED)

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employed to avoid exposure to the workers or even potentially to the neighboring residents. That's all I have to say.

MR. HATNEY: Thank you, Mr. Panketh. Other comments or questions from state or local officials? Geof Meyer.

MR. MEYER: I'm Geof Meyer, TNRCC Austin, industrial hazardous waste. I'm going to make some comments. I'm going to read Boyd Deaver's comments. He's not here today. He comes out of the Region 1 office. Then I have my own comments.

On Page 4-57, the first paragraph is somewhat confusing. We'd like to see a statement which clearly states that Pantex did at least historically discharge of Playa 5. It's implied in the statement they have in the first paragraph. We would like to see it just a little more clear cut.

HT16/23 06.049

With regard to Ogallala contamination, I understand the EIS had been written before we discovered some slight amount of contamination in the Ogallala proper. Since the EIS hasn't come out in its final version, I think it ought to be revised to go ahead and reflect the

HT16/23 06.049 continued

conditions we know about now.

With regard to the Ogallala, the homestead wells, the EIS should note that the low vertical permeability of the fine grained zone may

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be compromised by these abandoned homestead wells that have been found on the Pantex site. These wells could provide contaminant pathways through the fine grained zone to the Ogallala.

With regard to the facility boundary, the EIS should mention that DOE will take whatever action is practicable to clean up the groundwater to residential drinking water standards beyond the facility boundary.

And Pantex plant playas, on Page C-2 there's a statement that risk reduction rules -- well, no -- the Texas State Surface Water

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Quality Criteria do not apply to Pantex playas. But if you go through the Risk Reduction Rules, 30 Texas Administrative Code, Subchapter S, Chapter 335, you'll note that Texas Surface Water Quality Criteria does apply to the Pantex playas.

Surface water quality values. The surface water quality determined in accordance with Risk Reduction Rules take precedence over the risk based concentration guidelines from EPA

Region 3, which was cited on Section C.1.2. The list of decision criteria doesn't list the Texas Risk Reduction Rules, which also include Texas Surface Water Quality Criteria and drinking water standards and so forth. We prefer that you not -- well, since the EPA Region 3 guidelines don't apply to Pantex, which is in EPA Region 6 and also in Texas, and we have the Texas Risk Reduction Rules and the Texas Surface Water Quality Criteria, all of which do apply, we'd just as soon you drop the EPA guidelines and substitute the Risk Reduction Standards. This gets to be a

HT16/25 06.051 continued

problem later on.

In Table C.1.2-1, some of the values cited apparently cite the EPA Region 3 guidance. For instance, the standard for antimony should be 0.006 milligrams per liter, based on the Risk Reduction Rules, which refers it back to the safe drinking water act, rather than the 0.15 milligrams per liter cited by EPA Region 3 guidance. So, because we're using the wrong guidance, we're getting the wrong numbers cited in the EIS.

Standards for gross alpha activity, according to the Risk Reduction Rules,

should be 15 picocuries per liter rather than N/A. I'm not sure what N/A -- not applicable. That was cited in the table. No water quality standard is provided by the Texas Surface Water Quality Criteria; therefore, the Risk Reduction Rules specify use of drinking water standards which are based on the Federal Safe Drinking Water Act.

Proposed drinking water standards should be 50 picocuries per liter or 4 millirems per year for beta particle activity. Again, drinking water standard.

HT16/25 06.051 continued

And the TNRCC requests that DOE revise Table C.1.2-1 to cite the more stringent surface water quality standards for radionuclides that are developed in accordance with the Risk Reductions Rules. As such, the standard for plutonium-239/240 would be 2 times 10 to the minus 8 microcuries per milliliter, based on the TRCR standards. I can't remember what that stands for. Where is Joe Martillotti? Well, anyway, they come out of the Bureau of Radiation Control, Texas Department of Health.

Radium-226 and 228 should be 6 times 10 to the minus 8 microcuries per

HT16 (CONTINUED)

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continued

milliliter, again, based on the drinking water standards, Federal drinking water standards. Tritium should be 1 times 10 to the minus 3 microcuries per milliliter, based on the TRCR standards. Uranium-234 and 238 would be either 3 times 10 to the minus 7 microcuries per milliliter, which is a TRCR standard, or 20 milligrams per liter, proposed drinking water standard, whichever is more stringent.

And that's all the comments I have. Thank you.

MR. MATNEY: Thank you, Mr. Meyer. Any response?

MS. MONKS: We'll take that into consideration.

MR. JARMAN: Move that into the final.

MR. MEYER: These comments will come to you in writing once they get past management. I don't expect them to get changed.

MR. MATNEY: Other comments from state or city officials on this issue? Okay. Hearing none, let's now move to the public session on this issue of air and water monitoring. Comments or questions from the public? Yes, sir.

Mr. Williams.

MR. C.E. WILLIAMS: On Page 4-13, Paragraph 4, the City of Amarillo has pledged 5,526 million liters per year of water as a part of a potential expansion. I have three questions from this statement. Number 1, are disposition missions considered expansion? Also, is there any plans on where the water is to be withdrawn from? And, three, what are the time frames and conditions of this pledge?

MS. MONKS: I'll go ahead and address each one of those separately. With respect to your first question, the disposition missions are not considered to be expansion, not in this particular document anyways.

With respect to your second question regarding where the City is planning on withdrawing that amount of water, the City would develop reclaimed waste water from the City of Amarillo Hollywood Road waste water treatment plant. The use of the reclaimed waste water could actually curtail the annual decline rate of the Ogallala Aquifer.

So it wouldn't be pulled from the Ogallala Aquifer itself. It would be water reuse

from the waste water treatment plant, if that was necessary. However, again, that particular -- what that really had to do with, more than anything else, with respect to that pledge, had to do with the large quantities of water that would be necessary if the tritium supply mission was enacted at the Pantex plant.

However, since the date that this particular document was written, as I believe it was stated earlier today, the tritium supply mission has been deemed as a non-viable alternative for Pantex.

Regarding your question about the time frame and conditions of the pledge, details regarding the time frame and conditions are under negotiation.

MR. MATNEY: Mr. Juba on Mic 11.

MR. JUBA: As was just stated, that offer was made by the City of Amarillo in regards to an accelerator production of tritium. As you recall, the water demand requirements for an accelerator for tritium production are quite high. We've never come back and said that offer is no longer good, because if there were a mission that required the use of that water, we might

consider providing treated waste water for a mission.

Under this EIS, it's really not an issue because there's nothing that would cause that kind of demand that would require us to build a pipeline from the Hollywood Road plant to Pantex.

MR. MATNEY: Other questions and comments? Mr. Williams.

MR. C.E. WILLIAMS: I have another question. My question refers to -- it's on Page 4-78. And you recognize, and I quote, groundwater management is a responsibility of local jurisdictions through groundwater management districts. The Pantex plant is located in Panhandle Groundwater Conservation District Number 3, which has authority to require permits and limit the quantity of water pumped.

HT16/26
06.052

And, in view of this statement in the document, why have you chosen not to register the perched water production wells and the monitoring wells in compliance with Rule 4 of the Panhandle Groundwater Conservation District?

MS. MONKS: Could you repeat your question again, please?

HT16 (CONTINUED)

MR. C.E. WILLIAMS: Why have you chosen not to register or permit all of the perched water production wells and the monitoring wells on the site, as required in Rule 4 of the Panhandle Groundwater Conservation District?

MS. MONKS: I believe that the main reason for that has to do with the production, because the perched wells I believe on site are just used for monitoring; however, I believe somebody from the plant may be able to add to that and sort of expound upon that.

MR. SCHUSTER: I'm Kent Schuster with the Mason & Hanger legal department. C.E., if we need to register those wells, it was -- it may have been an oversight, but, as I understood, the Groundwater District required the registration and permitting of production wells. And, as I understood -- I'm not well-versed on these right at this second. But I'd be glad to work with you on that.

But, as I understood it -- and I'm not really the person to be talking to you on this, but that person is not here. And I can get clarification with you for that question. But, as I understand it, for the monitoring wells and for

-- in the Perched Aquifer, it wouldn't need permitting through you all?

HT16/26 06.052 continued

MR. C.E. WILLIAMS: It does not require permitting, but it does require registering and a semiannual report of any water quality analysis that were taken from the monitoring wells. It's a fairly simple process and I'd be sure willing to work with you.

MR. SCHUSTER: I've worked with you before and I'd be glad to take care of that with you. And I'm sorry if there was an oversight on our part.

MR. C.E. WILLIAMS: That's fine. I have one other question while I'm going. I guess I have some concern and I'd like for one of the DOE people to characterize to me how the system failed when, on a meeting on May 13th with Johnny Bolin and Danny Ferguson of DOE, Boyd Deaver from the TNRCC here in Amarillo and myself, agreed that it was in everyone's best interest to not plug the Lee Cockrell windmill located off site. And then, two days later on May 15th, it was related to me that that well was plugged. And I just wondered where the system failed and what has done to correct it.

HT16/27 06.053

MS. FOUNDS: Gerry, did you have any comment?

MR. MATNEY: Gerry Johnson.

MR. JOHNSON: Basically, the well was plugged by mistake and it's being redrilled right now. And the drill rig is out there and it's already being -- I think it's going to be drilled down to a depth of 270 feet. And then samples will be taken from there to decide whether to drill it out further or not. But that's all being coordinated with Boyd Deaver from the TNRCC and we're proceeding under his direction and guidance at this point.

MR. C.E. WILLIAMS: Okay.

MR. MATNEY: Other questions, comments? Yes, Ms. Belisle.

MS. BELISLE: I have two. When you were making the presentation on the water, you said that radionuclides were significantly below DOE standards. Does that mean that they are detectable?

HT16/28 06.054

MS. MONKS: It depends upon -- in some instances, yes, I believe they were detectable, but they were detectable in low levels. When you analyze for radionuclides, you

tend to get a lot of activity. The way that I understand it is that, essentially, what happens when you do those particular types of analyses, is you take your sample and you, essentially, heat it up. And what you're measuring is the activity of the radionuclides.

It's a rather uncertain type of measurement because, as you might imagine, what you're really measuring is the activity rather than the concentration. You tend to get a lot of variation in the numbers. So, as a result of that, there does tend to be a lot of uncertainty. And so sometimes you can get things that are detected, in terms of radionuclides, that may actually be present or not be present.

MS. BELISLE: Thank you. The other question that I have is related to the air monitoring -- well, not air monitoring, but modeling for air emissions and the fact that none of the residences on the south side of the plant were cited. And there are at least six residences within a mile of the fence line on that side.

Can you tell me how that oversight occurred and what's being done to correct it?

MS. SINHA: We have reported one

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resident -- at the south side we have reported two of them. Yeah, the south side we have two resident. And I'm a little bit -- not geographically very good. But I think the south side, on the bottom, we reported two residents. And along the west side, about two of them. And the north side, about -- where the burning ground is there, about four or five of them. Again, on this side, which is the east side, we have reported at least two of them.

So we have reported mostly all the residences. And if you are looking at the map on the EIS right now, it's a little bit in error in reporting the residences actually. But, in modeling, it went very good. We have to correct that map. That's all. I think that might be a problem on that map. So we will be giving you a correct map in the final draft.

But we have taken the residences all around the boundary in the Pantex Plant.

MS. BELISLE: Okay. If the map is incorrect, how can we correlate the numbers, one through 11, with locations? How can we do that analysis?

MS. SINHA: We will give you the

correct map. Right now I don't have with me the correct map. We will provide you -- I'll make sure you'll get the correct map. The resident 10, what I have presented in my slide, which had alcohol slightly over the ESL level about 12 millirem, that is below the Zone 12. I think that the southwest -- southeast. I'm sorry. As usual, I'm -- west and east, I'm always confused. But it's under the Zone 12 on the southwest side.

MR. JARMAN: There was a slight mixup in the residences used in the noise modeling and the air modeling. And when we were trying to consolidate -- I know it doesn't look like it, but we were trying to make the EIS be as compact as possible -- that the figure got confused. The residences 1 through 5 are the same. And those are -- okay. We will be -- I tried to call you personally, but we'll be sending out a figure to you and to the contacts that we have along the south and west -- south and east sides to show where the proper locations are so you can correlate it to the numbers.

MS. BELISLE: And the numbers in the appendix will refer to the numbers on the corrected map?

MR. JARMAN: Yes. The numbers in the appendix are correct for the locations. We went back and double-checked and drove around the plant site with the map, and all of the locations are of residences. There was just a confusion when we were trying to consolidate maps.

MS. BELISLE: And we'll have those before the comment period?

MR. JARMAN: Yes. To give you a quick idea, I can point out basically where they are. Like I said, on the map you have on -- I'm not sure what page. 1 through 5 --

MS. BELISLE: 4-94.

MR. JARMAN: 1 through 5 are the same. 6 is about there. 7 is there. 8 there. 9 here. 10 there. And 11 there. Did I go through too fast on that?

MS. BELISLE: I'll talk to you afterward.

MR. JARMAN: Okay.

MR. MATNEY: Gerry?

MR. JOHNSON: I guess I have a question on -- the comment was made that there was radionuclides found in the water, the groundwater. What kind of radionuclides?

MS. HONKS: Well, that information is listed in Appendix C, in terms of the actual radionuclides that were detected. And, essentially, what they were included gross alpha and gross beta; however, it's important to notice that gross alpha and gross beta are both essencially screening anolytes. They're taken in order to determine, essentially, whether or not you do have any radionuclides present. And they include things like uranium and radium and other radionuclides in them. So it's a more -- since it's more of a screening type analyses, it's not as exact as when you're analyzing for the different radionuclides themselves.

MR. JOHNSON: Where did you get the information from?

MS. HONKS: All of that water quality data came out of the annual site environmental reports.

MR. MATNEY: Questions and comments? Ms. Gattis.

MS. GATTIS: I don't know this part of the document well, so let me just ask. Are all the known emissions for Pantex included in a list in this document, regardless of

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07.011

HT16 (CONTINUED)

HT16/29 07.011 continued

whether or not there's a standard that it was tested for, or do we only talk about things that there's a standard that applies that you pick up in monitoring?

MS. MONKS: Would you mind repeating that, please?

MS. GATTIS: I just wondered if all the known emissions from Pantex are specified in this document, regardless of whether or not there's a standard that applies to them so that we get a picture of the emissions from the plant. And then are they monitored for or not? Is that specified? Or are they only monitored for if there's a standard and if there's no standard they're not tracked or whatever? Have I confused you as much as I've probably confused myself now? I'm trying.

MS. FOUNDS: I'm trying to decide which one can answer that question. We were giving a list of the inventory for the Pantex plant and it was based upon their process knowledge of what they use. And so that was put into the models. And what you're seeing, I believe we modeled -- we modeled about 95 pollutants, but the only ones that are in there

are sort of the ones that were of any significance, in terms of health criteria.

And when I say that, we had -- they're below the ESL levels in the document. And so that's -- but they're a comparative measurement. But we did model for 95 pollutants.

MS. SINHA: Yeah. We modeled for 95 pollutants, hazardous pollutant -- no, hazardous and plus the criteria pollutant, modeled 95. Then, to report, we decided 36 of them in total hazardous pollutant, which is, from the health risk point to the public, supposed to be -- we wanted to investigate on them how they would affect, although every one of them at the boundary, for the public, it was below ESL level.

So -- but still we went ahead and investigated all those hazardous pollutant, how they will affect. And it is in the -- I think it's in the human health section, if you will see the tables are there. And also we compared how it is going to affect the workers who are on the site. So in both the places we have reported the health effect, according to OSHA's exposure limit and also TNRCC's ESL levels.

HT16/29 07.011 continued

MS. GATTIS: I guess I would be

HT16/29 07.011 continued

interested, and would like even to request, it would be nice if this document gave us a good thorough picture of the plant, regardless of, perhaps, health effects or whatever, just what are the emissions. And, if there are no health effects attached to certain things, that's nice if you can specify that or just that there's not a standard, or whatever. But it would be nice to have a better picture, a clearer picture, of this plant as it currently operates.

MS. SINHA: In Appendix B, you see in the air quality we have given the total emissions. We reported all the emissions coming out of the Pantex plant at present and also for the future we projected. We have also shown what are the facilities which will be affected in the future, which is not going to be affected. Every -- all the -- the whole inventory is in that appendix of the air quality, Appendix B. Let me mention the page number.

MS. GATTIS: That's fine. That's what I asked originally. I just wanted to know whether it was included in the document.

MS. SINHA: Yes.

MS. GATTIS: And it's

comprehensive?

MS. SINHA: Yes, it is.

MR. MATNEY: Yes, sir. Mr. Panketh.

MR. PANKETH: Joe Panketh from TNRCC. As I mentioned in my presentation, when we reviewed the emissions data that they have reported in Appendix B and the emissions inventory that was submitted to us for our AIP modeling, there were a number of hazardous air pollutants, about 50 of them, that were left out. And, as I said, they are not very high quantities, but they were mentioned in the emissions inventory that was submitted to us, but it is not included in the EIS. And I have a list of those compounds that I can make available to you. And this has been submitted and now in written comments to.

HT16/30 07.012

MS. GATTIS: Good. I just -- I think it would be very helpful to have that sort of thing complete in a document like this.

MR. MATNEY: Questions, comments? Yes. Ms. Gattis.

MS. GATTIS: You mentioned on the water issue that you were available to receive information until the information cutoff time.

HT16 (CONTINUED)

When is the information cutoff time? I wasn't sure what -- is that the same date as the comment period?

MS. FOUNDS: It's going to extend a little bit longer. But we're scheduled to get our sort of review copy for the EIS August 17th to have for people to review. So we'll have to back that sort of cutoff date up there. But what we're using is asking people to project beyond that to see if there's additional information they think might affect the document and identify that to us. But, essentially, we're looking to, you know, data cutoffs around the middle of July to the end of July.

MR. MATNEY: Any more questions or comments on this issue, air and water monitoring?

MR. SCHUSTER: I'm Kent Schuster with Mason & Hanger. Just a little bit to help us all understand how some of the environmental regulations impact Pantex's operations. As far as the environment restoration and the water issues, everyone needs to remember that Pantex has drafted a risk reduction guidance document. And that document will help us, as far as governing Pantex's cleanup under our RCRA permit. And it

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will bring in to our operations the risk reductions rules. And that document has undergone several revisions. And it's been with the TNRCC and we've incorporated their comments, as far as compliance or governing our cleanup under the risk reduction rules out at the plant. And that's all enforced under our hazardous waste permit, which, as you know, was modified and renewed in February.

Then one other topic is that the plant is a DOE facility. And, of course, the DOE has the obligation to self-police itself for radionuclides. Those radionuclides and the laws that DOE has passed to govern itself are subject to oversight and enforcement by the EPA. And so, when you think of Pantex, you should think of federal enforcement of radionuclide limits for emissions for affluent discharges.

And, as I understand it, the State does not have the jurisdiction over the radionuclide aspect of Pantex's operation, whether that would be through the Texas Bureau of Radiological -- I haven't got that exactly right. But, as I understand it, the State has jurisdiction over possibly normally-occuring radioactive materials, but it would not have

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jurisdiction over radionuclides at Pantex other than that.

And, again, the risk reduction rules are being enforced and implemented out at the plant through our cleanup activities through our environmental restoration department. Thank you.

MR. MATNEY: Thank you, Mr. Schuster. Any other comments? Comments, questions? Ms. Gattis.

MS. GATTIS: Related to what Mr. Schuster brought up -- sorry about that -- I didn't carefully read the section that outlined who had regulatory authority over various parts of the plant, but it would probably be helpful to know where there are places where the plant is self-regulating, where there isn't an external regulator with regulatory authority, as opposed to oversight. You are certainly welcome to describe oversight also. But, for the missions where Pantex is self-regulating, I think that would be very helpful to have those distinctions made. A clearer picture of the regulatory structure for a DOE facility like this would be valuable.

HT16/31 22.017

MR. MATNEY: Other comments?

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activity level and the environmental restoration wastes that are also projected for our EIS time frame. And that concludes waste management.

MR. MATNEY: Thank you, Mr. Bartosch. And I believe Mr. Meyer has some questions and comments; is that correct?

MR. MEYER: Yes. Again, Jim Meyer, TNRCC in Austin. I've got three comments here from Boyd Deaver, Region 1 and a couple of my own. The first is that the permit, the hazardous waste permit 51289 which is issued by the TNRCC and mentioned on Page 4-189, the comment on Page 4-189 should be amended because the brand new permit became effective February 16th, 1996. So, basically, I mean we understand the EIS is somewhat dated, so just put in the new date for the new permit.

HT16/32 13.011

And Section 4.13.1.3 on Page 4-79, some of the units identified in the third paragraph have now been closed and you'll probably want this reflected in the EIS. Again, updating the EIS.

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On Page 4-147 and 148, these paragraphs should be reviewed by the low-level mixed waste team for updates on the current waste

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HT16 (CONTINUED)

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13.011
continued

inventories, waste plans and waste activities. Also, discussion of MTU's may need to be revised on these pages. Again, I think that's a comment to update the EIS. Because we have, I think -- we've issued the agreed order, site conception. It's an agreed order issued October 2nd, 1995 concerning mixed waste. I'm not sure that's fully reflected in the EIS.

My comments were the hazardous waste treatment plant and treatment and processing facility. I don't know how likely it is to have the no action alternative as opposed to the proposed action alternative that you all have promoted in the EIS, the site-wide EIS. But, under the no action alternative, the hazardous waste treatment and processing facility is not to be built. Well, the no action alternative is essentially the same site conditions as when we were negotiating the agreed order for the site treatment plan for mixed waste. And, in that plan, the hazardous waste treatment and processing facility was proposed.

Yet, when you turn around and read the EIS, under the same site conditions, no change, it is now not to be constructed. And we'd

like to see that hazardous waste treatment processing facility built, regardless of the alternative, even the no action alternative, because we feel it's an updated and modern process facility that Pantex, by their own admission, needs in order to keep in compliance with the October 3rd, 1995 agreed order, which we all negotiated in good faith.

MR. BARTOSCH: If I could comment. That's an important issue. The first three comments you made, yeah. That's partially my fault. When we received the copy of the permit that was reissued by the State, I said no, we're not going to make any changes because it was too far along in the process. And there's permitting language throughout this document. And I didn't want to make updates in only certain sections of the document and thus get comments about that.

But the no action alternative, unfortunately, in the NEPA process, requires us not to build the facility. It is not a reflection of the plant's lack of commitment to do it. They want to do it. That's why it's in the proposed action. But it's a NEPA-related requirement. And has brought -- this particular comment has been

almost from day one within the internal review by DOE and contractors like myself. So, unfortunately, that's going to remain that way in the EIS under the no action, because of that NEPA requirement.

MS. FOUNDS: Just to let me clarify. NEPA requires that you have a base line of which to compare impacts to. So, under the proposed action, we do annotate, okay -- under the no action -- we do annotate that the hazardous waste treatment and processing facility is part of the Federal Facility Compliance Act. And so we have annotated that to make sure that people understand that the no action, again, is a base line from which to compare impacts that exists today. The facility does not exist today.

So we're actually, you know, analyzing for those impacts so you have a base line. And that's why it's no action. You can actually pick the no action alternative within any one of those projects and say, this is my record of decision, if that's what the Department wanted to do. So they could even do that without picking the proposed action. So you can do that because we've analyzed the impacts for all the

construction projects and, in particular, the hazardous -- the HWTPF.

MR. MEYER: So the treatment and processing facility was, is it safe to say, dropped out of the no action alternative simply for analysis rather than --

MS. FOUNDS: That's right. It's a requirement of NEPA process to say, okay, at this date, this is the effect to the environment. That's what exists today. So, therefore, you put into the proposed action to say that, you know, what is the difference there between what exists today and what may be down the road. It doesn't mean that you won't build that facility. You could actually pick the no action, if you wanted to, and still construct the HWTPF by stating in the raw that we're going to pick the no action alternative plus the HWTPF. Does that make sense? But it gives you that base line from which to compare.

MR. MEYER: Sure. Thank you very much. I'll add all those into my comments. The other six projects, or the five projects, the laboratories and such that replace the original laboratories built in the '40s and '50s, from just

HT16 (CONTINUED)

HT16 (CONTINUED)

could have a potential impact with some low-level mixed waste. And I guess I've got some questions. You talked about there was no off-site disposal, but we, in fact, have disposed a significant part of our mixed waste in envirocare. I wasn't sure if that's being considered. We also are working with Idaho National Engineering Laboratory now to do some experimental work to put actually more of the mixed waste into envirocare.

You used a factor of 1.45 expansion for treatment. And I'm just wondering what treatment technology, because, at one time, we had talked about mobile treatment units and encapsulation. Now we're talking about simple drum overpack procedure, which is approved-EPA process, but does really not expand the volume at all.

HT16/33

Also, you talked about potentially running out of amount of space. We've made a significant effort over the last two years to minimize the amount of generated low-level mixed waste through the increased characterization and segregation of those activities. I'm just -- there's been a lot of activity over the last year, year and a half in mixed waste. I didn't know if

a purely waste management perspective, any modern updated facility that can handle these wastes better is something that I think the TNRCC would promote.

My last comment has to do with something I said earlier and, I think, generated a comment from the legal -- Mason & Hanger's legal attorney. I think it's Schuster. And also Betty Holwell is hot on this issue as well. I'll read it verbatim: TNRCC would be more willing to embrace the Pantex mission within the State of Texas if DOE would promote independent regulatory oversight of radioactive source, special material and byproduct material. We applaud DOE's willingness to share its information concerning radioactive contaminants; however, it is our opinion that the public would be better served and potentially waste management errors minimized if the oversight authority was shared with the TNRCC. Now, we're well aware of -- this might be a little too brutal -- of DOE's legal obstructionist attitude for the State picking up regulatory authority over radionuclides. We understand we do not have the authority. We also understand that EPA in their assertive program do

all of these additions would be factored in to your analysis or not.

MR. BARTOSCH: The simple answer, I guess, is that we will look at that again. In terms of the space issue, we looked at it from the worst-case kind of scenario. We didn't give you any credit for any shipment potential through envirocare. The DSSS, something like that, is also out there. We didn't give you any credit for that. We're looking at it from the worst case, what would happen if you did not ship, for whatever reason,

HT16/33
Cont'd
continued

Essentially, the numbers, the projections, include the plant's estimations and effects by waste minimization. And, although we have added back a 10 percent margin factor in to see if we could come up with an adverse impact, if you would, that was all considered. The 1.45 expansion, again, we can go back and look at that. That, again, was something that the plant provided to us to use. So we'll entertain, you know, these comments.

MR. BLACK: I just wanted to add that one of the things we wanted to do in analysis was to make sure we provided a bounding envelope

have the authority. And we are working now with the EPA to pick up that authority, at least to piggyback on to it, not that we can assume it or they can give it to us, but we can certainly hold hands, in a sense, partner with the EPA in their assertive program while this NPL is decided, to get some oversight on radionuclides, not that we feel like it's a great issue. The issue is not that we feel there's a bunch of contamination out there. The issue is solely that we want -- we think that DOE would do a better job with oversight.

It's not an issue for Pantex necessarily. We feel that Pantex has done a pretty good job, far better than some of the other DOE sites. It's strictly our ability to do what we are asked to do by the citizens of Texas, which is to regulate and to watch and to concur or not to concur. We don't want to hurt DOE. We don't want to hurt Pantex. We just want to do our job. And that will be -- we're in the middle of an EPA negotiation right now. And this will be an issue that we're not going to drop. We'll get to discuss it quite a bit. And so stay tuned. Thank you very much.

so that the plant would not be constrained, but, yet, we could look at the impacts at the outer edges of that envelope so that anything else within that envelope that was done to improve operations or come up with a better way of doing something would be just a bonus and would be well within the analysis itself.

MR. MATNEY: Sir, would you identify yourself?

MR. BLACK: Cecil Black.

MR. MATNEY: Any other comments from state or city officials on this issue, the issue of waste? Hearing none, we'll open comments now from the public, comments and questions from the public on the issue of waste. Ms. Gattis.

MS. GATTIS: Okay. Thanks. I'd had some comments then in the back after that

MS. FOUNDS: Sir, let me just -- of course, I can't answer a question about who has regulatory guidance. All we did, in this EIS, is to look at the processes, report the impacts. And, of course, you're part of the process in terms of the NEPA analysis.

I do want to make sure that we clarify one thing. When we were discussing radionuclides in our last conversation, I do want to make sure that it was understood that you're essentially accounting for background radiation on what the site reports. And what the screening level is is to make -- it's to look at that, look at the gross alpha and gross beta. And so what you're taking up is background radiation. I think

high explosives related at the burning ground. And it also provides the Pantex plant with the capability to demilitarize and sanitize the materials -- I'm going to use the wrong terms -- the classified sensitive -- requiring what demilitarization and sanitization does. And that's where the difference. That's why this particular thing was put in there. And I believe it's also explained in the EIS in a number of locations, including Chapter 1, if not Chapter 3. Does that help any?

MS. GATTIS: Yes. Thanks. I just wanted to be sure that was what you intended by that. The burning ground is described on Page 4-193. And the second column, the first complete paragraph, in the middle, it says, the burning ground is designed to handle waste HE and

MR. MEYER: Yeah. Actually, one more comment, Mr. Johnson, please. The technical staff of Pantex and TNRCC and Joe Martillotti with the TDH have had preliminary discussions about radionuclides and cleanup standards. And I might be a little too quick with this to say it, but my understanding is we're in agreement on what the cleanup standards are. We are not in conflict. I mean, we essentially all agree, I think, that we can come up with water standards that everybody can live with. So that in itself is not an issue. what the standard should be. What I quoted was

HT16 (CONTINUED)

a subcategory of hazardous waste. And that's where that distinction comes from. I did not purposely leave that out, but, yes, mixed waste is managed -- or the ability to manage mixed waste at the burning ground.

MS. GATTIS: Okay. Well, you might want to just clarify that for folks to know a little more easily.

MR. MATNEY: Gerry, do you want to add something to that?

MR. JOHNSON: Historically, mixed waste was -- not exactly mixed waste. It was -- I'm not sure of any mixed waste that was disposed out there. There were some -- there was some explosives, but they were in the form of components. But all of that work now is done by fluid jet machining. And so the components are all separated before they're sent out to the burning grounds.

It's my understanding now that the only thing that's burned out there is explosives. I will have to get some more information from my folks. I'm not aware of any mixed waste being burned out there.

MR. BARTOSCH: I'm trying to use

my words correctly. But the Pantex plant permit allows for hazardous waste that is high explosives related and also radioactively contaminated to be processed through the burning grounds. But -- yeah, I'd be more than happy to, again, take that into consideration and provide a little more clarification.

MS. GATTIS: Right. Because it's a major factor in the site treatment plan and the compliance plan, if the burning ground is really prominent as being sufficient as it is for handling some of those waste streams.

MR. BARTOSCH: Correct.

MS. GATTIS: And that's a bone of contention between us all, which we have gone through before. I wanted to -- on your other view graph, you said, on the low-level waste impacts, storage surge capacity is flexible since no permits are required. Why are no permits required for the low-level waste storage surge capacity?

MR. BARTOSCH: Essentially, that's DOE's waste and -- in a simple manner. It's a lot more complicated if you go through the regulations. But, essentially, the Department of Energy is responsible for that waste. They set

the requirements. The TNRCC is, as brought up and mentioned across the table here, is not -- does not have regulatory authority over the low-level waste.

HT16/34
13.012

MS. GATTIS: Okay. Then on Page 4-197, first column, first full paragraph, when you describe: In Zone 4, two magazines, eight permitted conex boxes and 25 conex boxes are used for storage of low-level waste. I think I understand that better now. It was very confusing to me when I read it. So eight of the conex boxes are permitted and the other 25 are just the surge capacity that's been added without any permitting process?

MR. BARTOSCH: When the EIS was written as it is today, essentially, there were eight hazardous waste storage conexes at the plant. Recently, five additional ones were added. And those five were in previously low-level waste storage and as part of the 25 that is mentioned there. So, in other words, now, there would be 13 hazardous waste conexes and 20 low-level waste conexes.

MS. GATTIS: You may want to fix that paragraph.

MR. BARTOSCH: You'd be surprised how much fixing has gone on. But, yeah, be more than happy to.

MS. GATTIS: Thanks. And then there is, on Page 4-195, the second column under the first paragraph under other waste types.

MR. BARTOSCH: Uh-huh.

HT16/35
13.013

MS. GATTIS: There's a sentence in the middle of that paragraph that says: Stormwater discharge associated with industrial activities is discharged to the playas on site. I don't know what that means. Can you help me there? I didn't know that stormwater discharge was used in industrial activities. And I'm sure I'm wrong about that.

MR. BARTOSCH: I think it points to the permitting language associated with stormwater runoff versus construction-related activities versus industrial activities, if I'm not mistaken. And I think you can see that on Page 4-188, where we get down to NPDES general permit, NPDES. And you have stormwater discharge associated with non-construction industrial activity, as well as stormwater discharge associated with construction activity.

HT16 (CONTINUED)

HT16/36
13.014

But I think your general comment is maybe a little more wordsmithing for that to clarify what we're trying to say.

MS. GATTIS: Sure. Well, I really hate to drag through all of this, but I was curious. I will quit. But I do want to offer on Page 4-204 where you do your cumulative thing with the PEISs again for the disposition alternative. You list the types of wastes that will be involved in that alternative. And even though a reactor, a nuclear reactor, is kind of the bounding case there, there's no high-level waste mentioned in category of waste that will be generated under that option. I think maybe you may need to add high-level waste or spent fuel storage or something that's going to be impacted under that.

MR. BARTOSCH: I will. Yeah, we'll go back through and pull it out.

MR. HATNEY: Thank you, Ms. Gattis. Any other comments? Yes, sir.

MR. SCHUSTER: Kent Schuster again. I'm not in the waste management department, and that will probably be evident pretty quickly. I'm in the Mason & Hanger legal department. And my boss probably wishes I

wouldn't be talking today, but I was trying to help Beverly understand some of these issues that she's pointing out. And, Beverly, I apologize, I wasn't flipping pages with you.

It helps me to understand this -- and it may be because I'm from Brazos County. And we all know that there's a lot of Aggies in Brazos County. But it helps me to understand this issue better on the low-level waste and the hazardous waste permit. Texas has jurisdiction out at the plant over hazardous waste. Now, you can have a subset of hazardous waste, as the gentleman said, that would be mixed waste. And that has a radioactive component. So, for the hazardous waste portion or the hazardous waste aspect of a radioactive waste out at Pantex, the State has jurisdiction. And, therefore, we have to comply with what the State has put into our hazardous waste permit.

And, therefore, mixed waste has to be stored in a permitted area. For example, I believe you referenced something in the document about some conexes or some boxes or -- I can't ever remember the difference between a conex and an igloo. Thank God I'm not in charge of that.

But what happens is you have to have mixed waste in permitted storage areas. And then it has to be treated according to the permit. And, secondly, low-level waste would not be treated -- I mean, not be regulated by the hazardous waste permit, but it would be regulated by DOE regulations. And we would have to comply with, for example, Nevada test site waste acceptance criteria. And we have an annual audit from that through all of our waste streams that go to the Nevada test site. And, therefore, the storage requirements for low-level wastes must be met under DOE regulations.

Again, I believe -- and I could be wrong -- that the DOE would be self-regulating as far as the low-level waste storage, but then the EPA would have enforcement control over that. If DOE and probably the Department of Justice -- the DOE has its own inspector general for that aspect of that.

I'm trying to help Mr. Johnson since we can't seem to find a waste management person to come up here to this microphone right at this second. You'll find in our hazardous waste permit, as far as what can be treated at the

burning grounds, I believe that you can have only low-level tritium contamination from the HE. And I can't really speak to that. I failed to bring my permit with me today. But we were going to try to clarify that for you all. And I'm sure that we can do that through Tetra Tech's offices.

But whatever goes to the burning grounds, as you know from our contested case negotiations, is regulated by that permit.

MR. JOHNSON: Yeah. I think that that does make sense, because all of the explosive components coming off the line do have very low levels of tritiated contamination -- tritium contamination. And there is no diminimous level at this point in time. And so that may make sense and that may be what you're referring to.

MS. GATTIS: Part of the point of a document like this is to have it clear enough that you don't have to have folks come and explain it to you and that you can get a grasp of it. So it's lovely to have the explanation and I appreciate that. But a document needs to stand more on its own and be clearer that way. And that is one of the things we're really shooting for.

Another issue I would raise for

HT16 (CONTINUED)

HT16/37
13.015

you is, since the contested case hearing negotiations got mentioned, in the settlement agreement there was a much appreciated and significant commitment on the part of the DOE to at least examine one alternative to the burning grounds, an alternative method of incineration of those wastes. It's not mentioned in this document. It should be.

MR. BARTOSCH: I agree. And we'll make the necessary changes regarding the contested case hearing and its decisions and its potential impacts, not only to the plant, but to the operations within waste management.

MR. MATNEY: Mr. Johnson.

MR. JOHNSON: There are -- I think Beverly made a very key point. There are really two initiatives underway. One is the Department has issued a diminimous level now for tritium contamination. We've negotiated with the State of Texas. And right now I think the standard is 1,000 PPM I believe is the criteria that the State uses, which is an NRC criteria, which, basically, now, with that diminimous level, we can, in fact, sell the high explosives versus burning the explosives at the burning grounds if in fact there

are buyers out there.

We're even exploring the options of paying someone to take the explosives off. There has been a demand for explosives in the past we were not releasing because of the very low levels of tritium. And we are exploring basically getting -- disposing of the material off site because it does have a commercial value.

The second activity that she's talking about is a concept called base hydrolysis which, basically, is a concept where we would actually use -- destroy the explosives (inaudible) verses burning them out at the ground site. And both concepts, in fact, should be discussed in the EIS.

MR. BARTOSCH: I agree.

MR. MATNEY: Other comments? Mr. Sewald.

MR. SEWALD: My name is William Sewald. And I have a question on one of the bullets on your view graphs. It was on the page titled impacts from new facilities construction and upgrades. And the first bullet makes one of these sort of broad assertions that it's difficult for some of us to rectify, both with what we read

HT16/38
13.016

in the document itself and the stated objectives of such an effort.

It says new facility construction and upgrades are not expected to impact waste operations. One of the things that I have a concern about in this document is the pit conversion and reuse facility, one of the two new facilities that are covered by this document, which we don't seem to learn a great deal of detail about, in terms of what it generates in waste streams, et cetera.

And, when you went through this view graph, I seem to infer from what you said that this statement was based, in part, on new facilities, I assume waste handling facilities, that had been built on site. And so I'm asking you is my concern a basis of definition of what impact is or what -- I mean, how we bring these kind of broad blanket assumptions back into a document where you're talking about dust particles when you do construction and then you assert that there's no impact. Did that make any sense?

I mean, how do we relate this broad assertion to the fact that we have new plutonium handling functions that are going to

HT16/38
13.016
continued

come onto the plant in this document in this new facility and we have new kinds of hazardous waste operations that are coming on the plant with the other new facility? How can we say that that has no impact?

MR. BARTOSCH: As part of our analysis -- you've got a couple of items in there in your comment. In terms of the pit reuse facility, Tetra Tech and the plant put together the generation rates for each of these facilities, the gas analysis lab, the nondestructive evaluation facility. We put the methodology together to predict what categories of waste and volumes of waste associated with each of those particular activities.

And, for the pit reuse facility, it is not expected to generate any waste that the plant in the past hasn't handled. So, again, that's part of the assertion that there would not be any impacts. And the amount of waste that would be generated by those operations is relatively small, again, compared to the overall plant operations.

And, at the same time, to answer the other half of your question, again, because

HT16 (CONTINUED)

the plant has added a number of facilities over the past few years and has generated construction debris and waste, from hazardous to non-harzardous in the construction process, they have a track record of handling those waste volumes and managing them in accordance with the regulatory requirements for those wastes.

And our position is that, because of that, to add new facilities in the construction phase would not adversely impact the plant because of that past record. Does that help any?

MR. SEWALD: Well, I think it does, but that's not exactly what you said in your view graph. I mean, if you're talking about negative impact as opposed to impact, it's not accurate to say that it has no impact. Maybe your assessment is that none of it is a negative impact. Is that an accurate interpretation?

HT16/38
13.016
continued

MR. BARTOSCH: We might be dancing around a couple of words. The view graph says not expected to impact waste operations. And I think that's the same thing that's almost verbatim in the EIS itself. I would say, again, that it will not adversely impact the plant, based on the construction and based on the actual operation.

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MR. MATNEY: Mr. Hancock.

MR. HANCOCK: I guess I need to ask couple of questions about the pit reuse facility, in part, because none of the documentation related to the pit reuse facility is available to the public in Albuquerque, which is where I live, because the DOE reading room has none of these documents available to the public.

HT16/39
23.041

But my specific question relates to Appendix H-14, where on the pit reuse facility it talks about the glovebox type operations and the glovebox bays that will be included in this facility. I guess I have a couple of questions related to that. How many glovebox type enclosures are currently operating at Pantex?

HT16/40
01.021

MR. BARTOSCH: Being in the waste, per se, I don't believe I can answer that question. Maybe one of the plant personnel could. Or we'll have to get back to you. But, typically, waste management operations don't require glovebox, so I can't answer that.

MS. FOUNDS: Gerry, did you want to try?

MR. JOHNSON: We need to get you the exact answer. But it would be, like, a few.

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MR. BRADFOOT: Okay. I apologize if I'm repeating someone else. I was reading this and I want to make sure that this is gone over. On the Federal Facility Compliance Act, this was being drafted when this draft document was made. And the document says that the impact of this is going to -- well, it's unknown at this time. I want to know if there's been an update on this or will we have -- will there be more information forthcoming?

HT16/41
13.017

MR. BARTOSCH: You're talking with FFA, correct?

MR. BRADFOOT: The Federal Facility Agreement on 4-196.

MR. BARTOSCH: Yeah.

MR. BRADFOOT: Concerning environmental restoration.

MR. BARTOSCH: Maybe Kent would like to speak, or Gerry. We'll use the most recent information about that, but I don't know the details as to where that is.

MR. JOHNSON: That -- currently, there's negotiations going on right now between the Environmental Protection Agency, DOE and the State of Texas on the FFA, if I'm not mistaken.

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And that will cover some of the jurisdictional issues and also the cleanup standards. But those negotiations are underway right now to revise that.

MR. BRADFOOT: So we don't know if it will impact it or how it will impact it?

MR. JOHNSON: I don't know the extent of those negotiations. They just started, I believe, within the last couple of weeks, or last week. And they've just really started -- it really deals with the fact that if you look at our cleanup, environmental restoration cleanup, historically, it was done under RCRA, which the State of Texas does have jurisdiction, with Pantex, as listed under the national priority listing. That placed us under CERCLA also, which is an EPA jurisdiction. And now the EPA and the State of Texas and DOE are trying to negotiate a federal facility agreement which, basically, would talk about who has jurisdiction and what would the cleanup standards be, which would address all three.

And the only feedback I've gotten is the fact that those negotiations are proceeding, but I don't have the results of that.

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HT16 (CONTINUED)

But we ought to have that fairly quickly. Whether they'll be in time to be appropriate here or not, I'm not sure, in the EIS.

MS. FOUNDS: That's basically what we've said in the EIS, is that we're trying to make sure that we're covering the total activities at the plant, which includes environmental restoration. But these have a process all of themselves that are very similar to the NEPA, so we're reporting them -- those results in this EIS to make sure that we are trying to get a complete picture of the plant.

MR. MATNEY: Yes, sir.

MR. SCHUSTER: Kent Schuster again. Adding to Mr. Johnson's statement, we met this week with the EPA Region 6 counsel and technical representative for the plant, as well as with several members of the TNRCC and I believe the attorney general's office for the State to restart the federal facility act negotiations and to hash out whether we would continue with efforts under RCRA and CERCLA as an integrated approach or whether it would be something different than the drafts from last summer. So that's a restart of those negotiations this very week. And the

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technical people are going to meet without the darn attorneys sometime in the next 30 or 40 days. So things may go well.

MR. MATNEY: Other comments, questions? Hearing none, then let's conclude the issue of waste. And it's been indicated to us that it's important that we cover the economic impacts issue. Let me ask this: Is there any opposition to dropping the Pantex plant missions issue, any significant opposition to dropping that issue? What we would do is come back at 7, after a dinner break, pick up with the economic impacts, and then get into our public comment session, unless there is opposition. Ms. Gattis?

MS. GATTIS: I just wondered if I could ask one or two quick questions.

MR. MATNEY: Sure.

MS. GATTIS: If that suits people.

HT16/42 12.019

I was interested, in the document, it commented that 18 magazines are currently being used for pit storage. And then there was a chart that indicated pit storage magazines, 22 of them was all. And, yet, there -- as of August 1995, there's 7,950 pits at the plant. And it just doesn't add up. We need to know where else the

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HT16/42 12.019 continued

pits are at the plant. You've got too many pits for too few magazines.

MR. JOHNSON: Too many pits for the magazines?

MS. GATTIS: Given the numbers that are in the document, if 22 magazines are going to be used for pit storage and currently only 18 are being used for pit storage and you've got right at 9,000 -- I think someone said earlier -- but in the document you say as of August 1995, there's 7,950.

MS. FOUNDS: I think what we can do is get with Bret here and go through the math of where the math is in this particular document. So if you want to, we can sit down with you and go through that.

MS. GATTIS: I don't mean to take up a lot of time, but I think we need, if nothing else out of this document, a good clear picture of how many magazines are going to be dedicated to pit storage. Your chart says 22. That's not sufficient storage. And just different things like that need to be clarified. We need to understand.

MS. FOUNDS: Let me make sure that

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-- what's the chart that you were referring to in there and we'll look at that page?

MS. GATTIS: 4-10. It's a table. Page 4-10.

MS. FOUNDS: Okay. Let us have a chance to look at that and we'll go through the math on that one.

MR. JOHNSON: Basically, we have 18 Richmond magazines, which we've restricted to pit storage. And, also, we're converting, on an as-needed basis, our SAC -- our steel arch construction type magazines, which can be used either for nuclear weapons or for plutonium pit storage. We don't mix the two. But a facility could be dedicated to one or the other. I'd have to get the math numbers, though, but I thought we could get -- we sure don't have a capacity problem out in Zone 4.

MR. BARTOSCH: I can answer the question, because I was also responsible for the infrastructure section, which is what you're talking about here. The table says: Pit storage; approximate number of buildings, 22; example of facilities, magazines, vaults, staging facilities and approximate area; year built; and remaining

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HT16 (CONTINUED)

life.

18 are the Richmonds. And then the staging facilities, as listed in the plant's capital assets management plan that are used for that activity. So there's a vault -- I'm not too familiar. It's been a while. But each of them is listed in our WIP files that we generate, work progress files, to come to that 22. Each of those 22 would be listed.

MS. GATTIS: Let's just say it isn't real obvious to a person who knew enough to be able to read it and still came away with a lot of questions about where stuff is. And I think we need a clear understanding. I also would like you all to clarify -- there's a place where you say pits accumulated on site. I would like to know if there's a certain point at which a pit is

HT16/43
12.020

designated as being in storage and is there kind of an interim staging step where you can have some X number of pits, who knows what? I don't want the terminology to trip us up. If you don't mind, I would like to have clarity about how all pits are categorized, they fall into what categories, et cetera.

I mean, to say pits have

accumulated, does that mean they are all in storage, or do you have a different category of staging before it becomes -- it's a stored pit? Golly. I'm sorry. Y'all are as tired as I am. And this is not seeming to come quite clear.

MR. JOHNSON: The process flow is basically you would do a disassembly and then the plutonium pit is put into a container. Right now it's an AL-R8 container. Typically, there will be four to six of those, like in an assembly cell. They'll be moved out and palletized into either a four-pack or a six-pack. And those pallets are moved out in Zone 4 and put into the stage right configuration. And that process flow runs fairly smoothly, fairly straight-forward. It's not weeks; it's more in the matter of days that those may be in Zone 12. Then they're moved to Zone 4. And, once they move to Zone 4, they're into interim storage at that point in time, once they go into the stage right configuration. And, typically, they will be put into a magazine. When the magazine is filled, then the magazine is sealed for a period of about 18 months.

MS. GATTIS: Okay. Well, that's an issue that just needs to be quite clear.

Something that also doesn't seem to be in the document is the air-conditioning that's being

HT16/44
12.021

installed in some of the pit storage you use. Things like that that have to do with current operation and status of the plant, we'd like to understand better.

MR. JOHNSON: And what I don't remember and I've got to find out -- the Richmond magazine has two sides to it. And I can't remember what the capacity is. It's 400 or it's either 200. I can't remember for sure. But it's 400 per side.

(Inaudible unidentified speaker.

MR. JOHNSON: 400 per Richmond magazine. We do, in fact, record the status and location of all of our pits to the State of Texas and we do notify them whenever we open a magazine or close a magazine down there, so that they do have the opportunity to observe that operation if they so choose. It's easy enough to find out how many facilities are being used.

MS. GATTIS: Well, currently, the document says 18 magazines are being used and that 424 pits fit in a magazine. And when you multiply 18 times 424, you don't have enough space for

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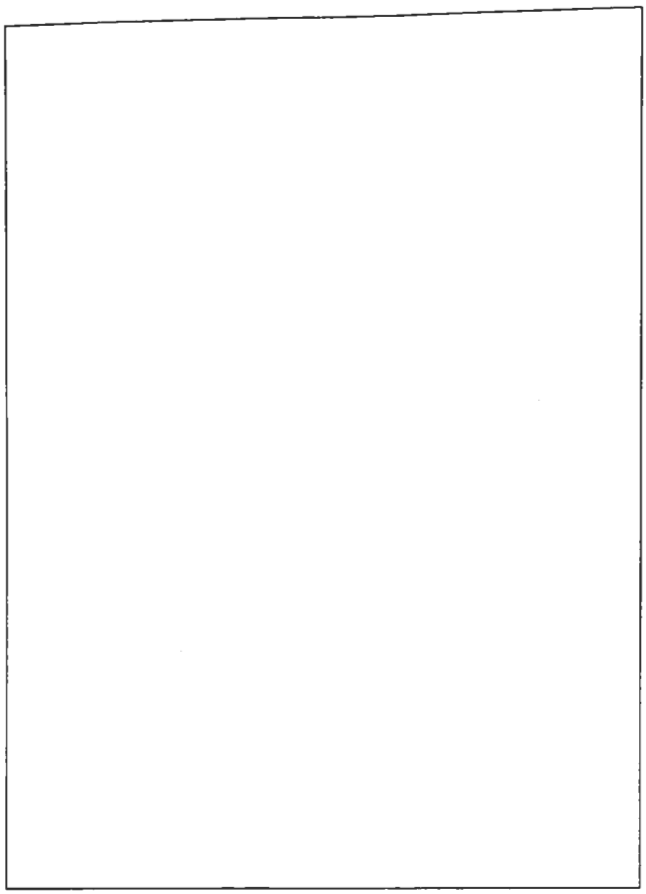

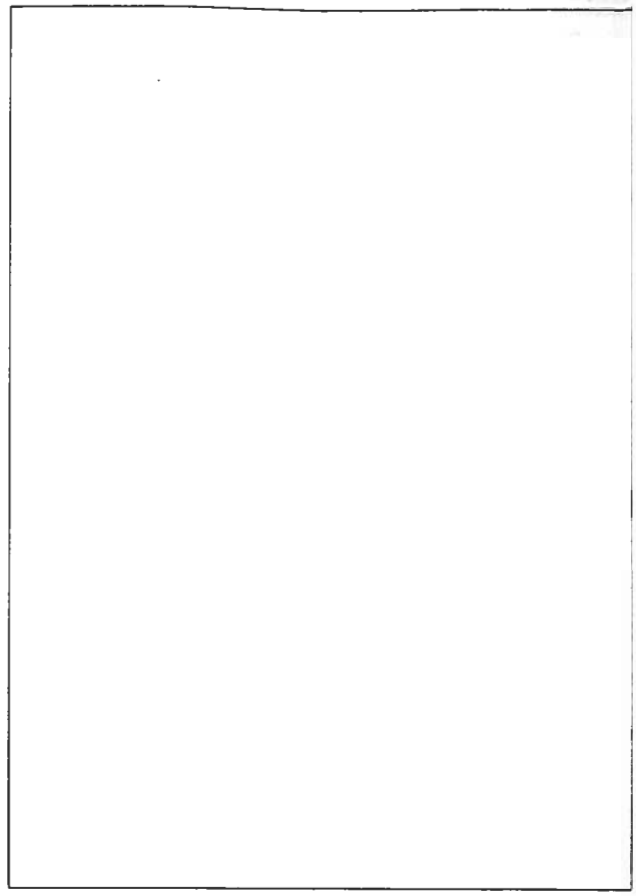

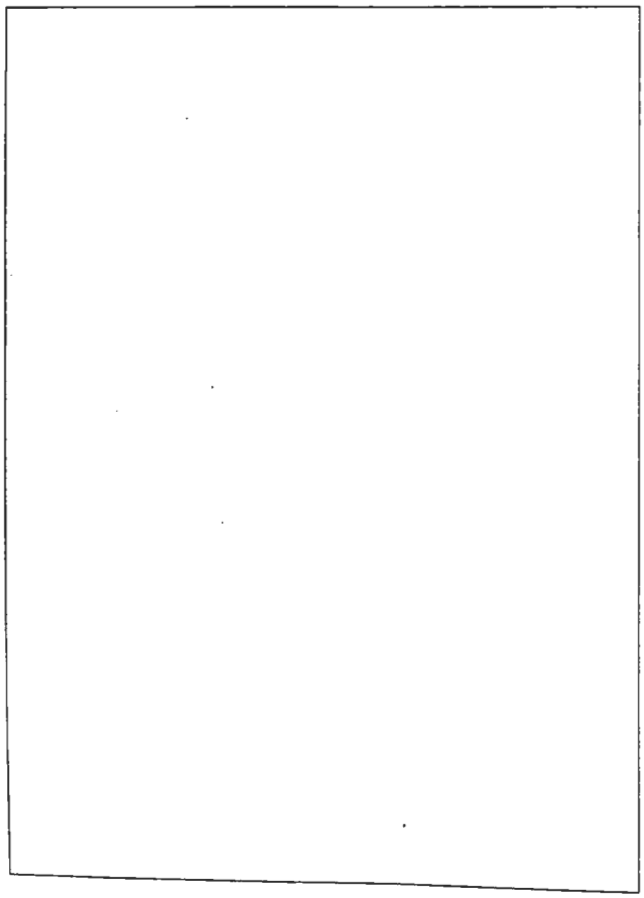

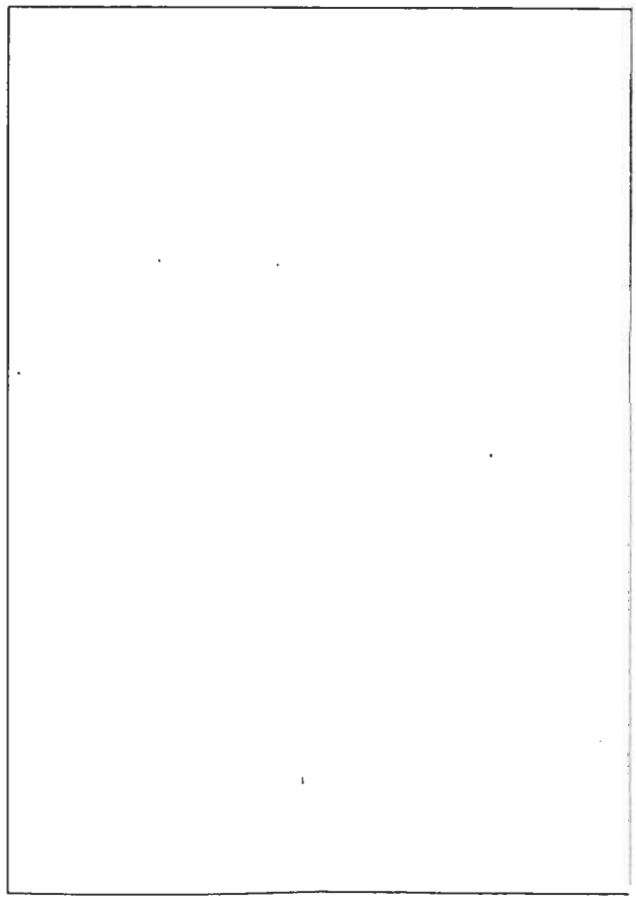

HT17

TECHNICAL INFORMATION EXCHANGE

ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

FOR THE CONTINUED OPERATION OF THE

PANTEX PLANT AND ASSOCIATED STORAGE

OF NUCLEAR WEAPON COMPONENTS

JUNE 25, 1996

EVENING SESSION

BRENDA ROHRS, CSR, RPR

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Portions of the transcripts unrelated to this EIS have been omitted.

levels were compared to the baseline to determine the time and amount of change.

The 1990 census results showed that there were 196,144 persons and 75,067 households residing in the four-county ROI, with more than 95 percent of them being located in the Amarillo metropolitan area.

Further, 96 percent of the Pantex Plant employees also resided within this ROI.

As of July 1st, 1993, there were 204,140 individuals within the ROI, an increase of nearly 8,000 persons from the time of the 1990 census. And this represents a 1.25 percent increase per year.

The projections that we came up with indicated that through the period 2005, the population is estimated to range between 214,353 and 246,464.

This chart summarizes various weapons activity levels within the proposed action at either the 2,000, 1,000, or 500 weapons activity level.

And it shows the employment, earning, personal income, and unemployment rate for each of these weapon activity levels.

Really, the weapons activity levels show the greatest change within socioeconomic. As indicated in the summary and also in the socioeconomic resource section, there is no significant difference between the proposed action, the no action alternative, and the relocation alternative.

One area of interest is the farm economy, based on some of the comments we got. And the regional farm economy is expected to maintain its growth trend.

Since 1950, shortly before the nuclear weapons activity at Pantex began, the value of crops grown and sold within the ROI has increased 151 percent, relative to a 142 percent increase in the Producer Price Index for crude foodstuffs and feedstuffs within this same time period.

This is a breakdown of some of the farm indicators that we looked at, such as the number of farms, the value -- average value of crops, the number of cattle and calves, and then the value of crops sold, and also the value of cattle or calves sold during various time frames from 1950 through 1992.

HT17 (CONTINUED)

and, of course, we are reporting, because the PEIS has the dominant effect in terms of job loss and those types of things in there, because we're still showing a fairly high level of employment out at the plant for our particular scenarios.

But we will try to do maturing with the other documents and clarify that issue, too. George?

DR. PRATT: We thank you for your comments, and we'll certainly try to improve on the final EIS.

MR. MATNEY: Thank you, Mr. Juba.

Are there any other comments from state or city officials on the economic impacts?

Hearing none, we'll now open this issue to the public. Are there any comments or questions from the general public on this particular issue?

Yes, sir. If you would come to the microphone and identify yourself, please.

MR. MARTILLOTTI: Joe Martillotti, Texas Department of Health. The population figures that you just showed on your slides, I

HT17/13 11.039

found on -- in Volume I, on page 4-155.

There's some conflicting population estimate numbers for the Region of Influence given in the section dealing with accident risk estimates and fatal cancer estimates. The numbers that are given there are 267,107 population in the Region of Influence. And I'm wondering what the difference is in those estimates.

HT17/13 11.039 continued

If there are different areas for calculation, I think they need to be clarified.

MR. SIMPKINS: The Region of Influence that we defined were the four counties. The Region of Influence for the risk assessment was a 50 mile radius from the plant. So, they are two different bases.

MR. MARTILLOTTI: They're listed under the same title, so I think you're going to need to drop one of those and reclassify one of those someway.

MS. SIMPKINS: Okay.

MR. MATNEY: Thank you. Any other comments or questions? Yes, sir. Bob.

MR. JUBA: I neglected to mention one aspect that I think should be taken into account

HT17/14 11.040

on all the EIS documents for all sites, and that's the effect on nonprofit agencies that rely on contributions of the employees at the plant.

HT17/14 11.040 continued

You would have a decline in the revenue to those nonprofit agencies; at the same time, you'd have economic hardships, creating a larger need for those services.

And I think that there are -- there is an environmental justice section of things; there probably ought to be an economic justice section, also, because I think those at risk populations would feel the effect of an economic slow down, while at the same time those agencies that help them would really suffer in terms of available funds.

HT17/15 23.042

And that's more of a blanket statement and I don't know if that really falls under what your tasked to do under NEPA, but I think it's a failing not only related to Amarillo, but to all the communities that you all are looking at.

MR. MATNEY: Yes, Ms. Smith?

MS. SMITH: Doris Smith. I think that we felt like that -- especially looking at your view graph here, that you have brought it down

HT17/16 11.041

to within just a four-county area for the Region of Influence.

HT17/16 11.041 continued

And yet for all the other study that was done throughout the document, it is a much wider area, as was noted by Joe Martillotti.

In that case, also, the magnitude of the impact of agriculture was really not addressed and the importance that agriculture has played in this area and the stability of the area.

And when the air base was phased out, it was agriculture that brought this part of the State of Texas -- or that kept it alive and kept it going.

HT17/17 11.042

And the State of Texas, one of every four dollars of cash receipts from the State of Texas in total revenue comes from crops and livestock that are produced in this part of the State of Texas.

Right here in this area that is called the High Plains Trade Area, if these counties were detached from the rest of the State of Texas, this would rank number one in states in the nation in the fed cattle in beef production.

HT17 (CONTINUED)

HT17/17 11.042 continued

These are very important items for this area, because you're right in the middle of a prime agricultural area.

The cereal crops that are grown here are shipped all over the world. For any product that we raise here, if there is the slightest hint of any contamination, that could devastate this total area.

I don't know how many of the other facilities are situated in an area that is a bread basket as much as this area is. I don't think that that was brought out in this document.

I don't think that just using the four counties was an adequate assessment of what agriculture does in this area.

It points out very strongly that the Amarillo economy does depend upon agriculture, but it doesn't show how great agriculture -- the great part that agriculture has played in the area.

HT17/17 11.042 continued

One of four people is employed in an ag-related job in this area. And for anything to happen in agriculture would devastate the area.

We would like to see.a little bit more brought into the document with regard to this. Is there something that can be done?

MS. FOUNDS: Well, I'm assuming that you want to sort of break that down in sort of the overall economy, what percentage, like you were saying one in four, is employed with agriculture, to bring those types of statistics out, is what you're saying.

MS. SMITH: I think that that needs to be brought out, because I think that is extremely important in this area.

And I think that it's extremely important to realize that even for the State of Texas, the importance agriculture plays has a tremendous effect upon the revenue that the State of Texas receives.

HT17/18 11.043

So that even though in this document, which is a nuclear document, it may seem a little strange to address agriculture, I think that a complete risk analysis needs to be done with regard to just exactly what could happen with regard to the future for this area.

MS. FOUNDS: Well, a risk analysis would be very difficult, and we don't do a

market impact analysis in the NEPA.

But in terms of showing the statistics about the overall economy and percentage of agriculture industry and how those things play in an area, I think we can look at those statistics again and bring out the overall economy a little bit better.

MS. SMITH: I would like to think that you could, also. I know that in 1991, when we first began looking at this issue, that the total impact of agriculture in this area was about three billion dollars, and now then that has increased to between five and six billion dollars, and with an economic multiplier that it's in excess of 12 billion dollars.

HT17/18 11.043 continued

So, you're looking at a tremendous figure there that could stand a chance of being hurt in some way. So, we'd like to see that addressed.

DR. PRATT: We'll certainly take those comments into consideration as we go into the analysis for the final EIS and appreciate your comments.

MS. SMITH: Thank you.

MR. MATNEY: Thank you, Ms. Smith.

Are there any other comments on this issue?

Hearing none -- yes. The gentleman right here. If you'll identify yourself, please.

MR. GIDEON: My name is Ross Gideon, and I have some farm land about a mile south of Lee Cockrell's place --

MR. MATNEY: Sir, could you speak a little bit closer to the microphone.

MR. GIDEON: I say I have some land about a mile south of Lee Cockrell's place there on the east side of Pantex where they just drilled the test well out there.

And I'm concerned, as Ms. Smith is, with the threat that I see to the farmer in this community.

HT17/19 06.055

When we see already that some of this stuff has leached down into the Ogallala aquifer, and people, they say -- they keep shooting off them test things out there and all that, and they have all them cracks and stuff in the ground.

And this place does depend on agriculture. If our agriculture goes down, it's

HT17 (CONTINUED)

Comments omitted from intervening pages here do not concern this EIS.

once five minutes is up, I'll hold my hand up.

I'm not going to hold you right to five, but certainly within the next short period of time, if you would conclude your remarks.

And to begin our public comment session, then, we will ask for Mavis Belisle. Ms. Belisle.

MS. BELISLE: Okay. I assure you I'm not going to take five minutes. I only want to make two comments. And one is I guess to express frustration at being in the situation we're in so very often with Pantex and the Department of Energy in general of being asked

HT17/20 23.043

to trust us; the documentation isn't complete, trust us; it's not ready yet, but it will be, trust us; we don't have the cost analysis yet, but it will come, trust us; it's classified, we can't tell you, but we assure you it's okay. And we find ourselves in this position time and time and time again.

And I don't know -- I can appreciate the complexity of dealing with this kind of document and these -- especially in a time of change and flux, when so many other decisions are also pending. But I have to say that it is

continually frustrating.

The other comment has to do with the assumption that in the no action alternative, at the -- when you reach the 12,000 pits, disassembly would have to cease.

It's really hard for me to believe that you don't have more creative minds in the Department of Energy than this.

HT17/21 01.022

If you can justify interim storage of 12,000 pits at Pantex on the basis of an environmental assessment, I would surely think that you could find ways to justify interim storage of pits at other locations until all of the issues that need to be resolved are resolved. Thank you.

MR. MATNEY: Thank you, Ms. Belisle.

Our next speaker is Alan Finegold. Is Mr. Finegold here?

MR. FINEGOLD. The unstated question, of course, is whether or not you're going to attempt to do processing of plutonium in the Panhandle.

HT17/22 01.023

That's the primary reason that I believe most people here are opposed to the storage.

It's not so much the risk of storage, which is, at least to my estimates, not very great, it's the possibility that you will later use the Pantex facility as a staging ground for the processing of plutonium, either taking the contents of the pits and making them into fuel rods or perhaps reprocessing spent fuel rods.

HT17/22 01.023 continued

Unfortunately, until DOE actually addresses this issue publicly, we're pretty much in the dark about the intentions; and, therefore, we're inclined to assume the worst, which is that Pantex will eventually be used for this purpose, and that is why we are adamantly opposed to long-term storage of the pits.

There is some sort of idea that Pantex would have no mission if there was not some kind of reprocessing or dealing with plutonium.

I think this is rather ridiculous. You have a skilled work force, especially with regard to metal working and all kinds of electronics and electrical devices.

The world at this point needs alternative forms of energy, especially solar equipment, and it needs it very badly.

HT17/23 22.019

Eventually we're going to have to

H17 (CONTINUED)

HT17/23 22.019 continued

decide which direction to go, whether we are going to go with nuclear power, and that would eventually involve some considerable reprocessing of plutonium, or whether we will go for other means of electrical generation.

I would like to see the Pantex Plant take the lead in producing alternative methods of generating electricity and not trying to deal with plutonium, which is essentially a waste material of the cold war and the nuclear arms race.

HT17/24 02.021

I would much prefer to see the Nevada Test Site deal with that particular material as the last residue of a very difficult part of this country's history and one which we are better off dispensing with, not continuing into the future.

MR. MATNEY: Thank you, Mr. Finegold.

Our next speaker is Marcia Keevan.

MS. KEEVAN: Thank you for this opportunity to comment. And this time I really, really hope that my comments will make a positive difference. However, I am a realist. I know the difference between hoping for something and actually getting it.

There is no such thing as nonhazardous seismic hazards. My research into the geological aspects of the Pantex Plant have uncovered some alarming assumptions made by past experts under contract for the DOE.

Because a list of specifics is rather long, I have prepared a separate report for your review that will be included in my written comments.

HT17/25 05.022

The 1995 fault study submitted by the DOE basically suggests that local underground erosion is a primary feature at the Pantex Plant and doesn't delve very deeply at all into the primary feature that occasionally rocks with earthquakes three states at a time.

That Pantex is magically divorced from this phenomenon at its property lines and the Whittenburg trial is all but ignored.

Must we teach our children nonsense? Must we not say? Must all the facts be altered to satisfy the latest political whim?

These are science facts we are playing with, people. Are we hoping there will be no impact from the distortions?

Please be aware that definite

impressions are being imprinted upon the still developing young minds of tomorrow's scientists and tomorrow's doctors and tomorrow's risk-takers.

Some of these young minds will inherit all of the risk left over from the cold war while processing mountains of misinformation.

Have any of you ever tried to solve problems when you are given too little information or, worse yet, wrong information?

The time spent clearing up confusion generated from a fact from fiction sort is wasted time.

Education -- educators nationwide are challenged enough in their efforts to prepare students to function in this high tech society; misinformation is not helpful.

And can we expect excellence from our young minds and continue to allow incompetence, encourage incompetence, and reward incompetence, both economically and politically at the highest levels of science?

The scum floating at the top of the lake can sometimes choke out the life beneath it. It's called stagnation.

Take a quick look around this room and ask yourself why, after four years of open recruiting efforts, more young people and their teachers are not interested in these procedures.

Is the subject matter unimportant? Has the subject matter become too controversial?

Has the scum on the top of the lake succeeded in choking out the stirrings of life beneath it? Both anarchy and stagnation are negative social conditions.

It's tragic when good hard work done by graduate students becomes a toy for devious minds to abuse.

I see nothing positive in a situation that asks brilliant minds to be silent or to rework their conclusions to suit the whims of industry.

I salute all those in academia who have not folded to peer pressure, and I abhor all of those who have encouraged or participated in such deceptions.

HT17/26 05.023

The secrets and lies concerning geology, hydrology, past contamination, current

HT17 (CONTINUED)

HT17/26 05.023 continued

contamination, current pathways, future protections continue.

I am willing to go along with the Save the Ogallala Folks, for what good is it to have an unsaved Ogallala, but I'm not going to pretend we have anything even remotely close to a pristine situation at the Pantex Superfund Site.

We are already in a situation where we just have to drink our poison in small amounts and learn to like it.

The massive amount of data contained within the studies done by the Texas Bureau of Economic Geology, the Argonne National Lab, and others prove this.

The recent samples showing RDX hits in the Texas Natural Resource Conservation Commission lab tests prove this.

We would be ignorant to sight future emissions at Pantex without first reviewing the geological hazards truthfully and openly. Thank you.

MR. MATNEY: Thank you, Ms. Keevan.

Our next speaker is Susan Lee. Susan Lee.

HT17/27 02.022

MS. LEE: I co-created the blue (unintelligible) parked outside the museum to end the nuclear age.

I invite you all to tour to see the exhibits on radiation and health at the break, if there is one this evening, or for a short time afterwards.

Hearing tonight about transferring plutonium processing from Rocky Flats, which was judged by a DOE report the site most likely to constitute a threat to human life, a nine on a scale of ten, followed closely by Pantex, which was an eight on a scale of ten, gives me some pause for thought.

Both of those sites were rated ahead as threats to human life over the notoriously contaminated Hanford complex.

HT17/28 14.114

My surveys of radiation and health around several different Texas nuclear facilities have impressed me with the failure of government and industry to study the health effects of such facilities in any meaningful way.

I'm happy to hear that there is another investigation of the Pantex area

HT17/28 14.114 continued

underway this summer by the Texas Department of Health in conjunction with ATSTR, but I believe that we need much more thoroughgoing studies, including door-to-door surveys and follow-ups of former Pantex workers and residents of these counties.

HT17/29 14.115

I found it very instructive to do a simple analysis looking at all cancer mortality before the tritium accident in 1989, in which 40,000 curies were released, compared to the years after, for which I had data at the time I did the analysis.

And there was approximately a doubling of the cancer death rates in Carson County after the accident compared to the four years before.

HT17/30 14.116

A 1979 study by the University of Heidelberg -- a group of University of Heidelberg scientists re-examined the U.S. experiments on which allowable emissions for nuclear facilities were based, and discovered that these -- in looking at the protocols of these experiments, that they were doctored from the beginning.

Soil was cooked so there were no microbes present, so the uptake of plants'

HT17/30 14.116 continued

radionuclides was minimized.

And the plants were -- the radiation was induced just before the plants were harvested, instead of into the soil from the time the plant was a seed, just as an example of the way in which science was acting to obscure the reality of radiation exposure to humans.

The German scientists concluded that the allowable emissions were too high by a factor of 100.

So, I keep that in mind in thinking about the expansion of operations at Pantex.

And as I was looking through files yesterday in preparation to speak, I noticed a study of the area around Rocky Flats by Dr. Carl Johnson of the Jefferson County Health Department, who correlated plutonium levels in the soil with cancer increases around Rocky Flats. It was a very close correlation, which was corroborated later by the DOE's own studies.

HT17/31 14.117

The second article I found worrisome was the contention of the University of Colorado scientist who believes that there is no way you can completely capture fine plutonium particles

HT17 (CONTINUED)

and prevent them from escaping into the air around plutonium processing facilities.

Given that Panhandle agriculture, the Ogallala aquifer, and the health of many area residents who I'm coming to consider close friends is at risk in the event of contamination by plutonium, among other radionuclides that are released in plutonium processing, I would stress that the excess cancers that Dr. Johnson found, which were leukemia, lymph, lung, thyroid, testes, and breast cancers, which paralleled the cancers found in the survivors of the Japanese atom bombs, are of concern.

HT17/31 14.117 continued

And would request that no expansion of Pantex operations be considered until thorough health studies, including door-to-door surveys and follow-ups, be conducted to examine the damage that I believe may have already been done to this area by previous emissions.

And, finally, to suggest that the track record at Pantex does not give us great confidence that an expansion of an extremely dangerous operation could be handled with any more safety than we've experienced in the past.

HT17/32 14.118

Thank you very much.

MR. MATNEY: Thank you, Ms. Lee.

I would like to remind everyone that if you have a question that you would like to present -- we mentioned this earlier -- and you would like to do so anonymously, if you would simply go to the lobby and submit your question to one of the officials or support crew around the room, then it will be delivered here and we'll be glad to read that question.

I know we're in the public comment session, but I was asked to remind everyone that that is certainly a possibility if you would like to do that.

Our next speaker is Gordon Yellowman.

MR. YELLOWMAN: First of all, I'd like to thank the Department of Energy for giving me this opportunity to speak.

I'd like to comment on some mutual concerns that I have on the cultural resource management part.

I am a member of the Cheyenne-Arapaho Tribes of Oklahoma, which is a Federally-recognized tribe.

HT17/33 10.004

I did receive a letter dated September 15th, 1994 in regard to a summary notification

of Native Americans.

They mentioned several tribes on there, and in going through this letter I noticed that the Northern Cheyenne was not on here, neither was the Northern Arapaho Tribe. I would ask that they be included in this Environmental Impact Statement.

HT17/33 10.004 continued

I've been involved with a lot of consultations with different agencies in regards to cultural resource management.

We did form a United Tribe Council in the State of Colorado, and we have consulted with Rocky Flats in regards to their Environmental Impact Statements.

There's a lot of concerns as far as being a member of the Plains Indians Tribes.

This was -- we have a lot of historical and traditional cultural properties related to this area, all the way down -- all the way from the northern Dakotas down to the Palo Duro Canyon.

HT17/34 10.005

So, we do have some sites that are significant to us, and I do -- I am concerned about this.

And I would ask that you continue to

address this on a government to government type basis and consult with the Federally-recognized tribes.

HT17/34 10.005 continued

I would also like to mention that there are other tribes out there that are not Federally-recognized who you might consider consulting with them as well.

HT17/35 10.006

There may be other separate groups or organizations who might have some concerns as well as interests.

There's a lot of other concerns that I have, especially with the vegetation within the area, and also I have some concerns with the potential adverse -- inadvertent discoveries of artifacts or human remains that may be there.

HT17/36 10.007

I am the designated NAGPRA representative for the Cheyenne Tribe. I don't know if any of you are familiar with the Native American Graves Protection and Repatriation Act of 1990.

HT17/37 10.008

And that was one of my other concerns, that I noticed that it was cited inside this study, but it wasn't really in detail.

And I did note -- also notice in this letter that there was scheduled visits to the

HT17/38 10.009

HT17 (CONTINUED)

HT17/38 10.009 continued

tribes, and I would just like to ask if those visits have occurred, and if they have occurred, I would like to request copies of the comments that were received from those tribes.

That's all I have to say at this time. And, once again, I thank you for giving me this opportunity to speak on behalf of my people. Thank you.

MR. HATNEY: Thank you, Mr. Yellowman. Is someone able to answer his question quickly?

MS. FOUNDS: There have been no visits to the tribes. We have sent out various letters and have gotten comments in, and they will be annotated in the comment response document. We can see about giving you the comments that have come in so far.

There -- and, again, in the back of our document, we have sent out letters and asked if there was other types of consultation, and so far we have not gotten any further requests in terms of letters back to us on this -- on this document.

MR. YELLOWMAN: I will submit some written comments on behalf of the tribes.

MS. FOUNDS: Thank you.

MR. YELLOWMAN: Thank you.

MR. HATNEY: Thank you, sir.

Our next speaker is Buddy Seewald.

MR. SEEWALD: Thank you for the opportunity to make comments. Actually, my name in some of this appears as William Seewald.

It seems like our community has been under siege now for five years: On the one hand, set upon by the government grappling with what to do with its bloated nuclear weapons complex, desperately seeking some area they can seduce into taking on their nuclear liabilities; on the other side we face the self-appointed Amarillo business establishment, with the AEDC as their very own Sadie Hawkins, together with a consortium of handmaidens blinded by the Federal dowry.

They have shamelessly pursued a marriage of the Panhandle and plutonium, and it is a shameful project.

Shameful because the taxpayers of this area have been forced to fund an effort that would attempt to convince them that they must trade their long-term safety, as well as the

integrity of our water, land, and crops, for the nuclear debris of the cold war.

Is our future so narrow and bleak that it truly requires this falsity and bargaining to be secure? I think not.

The issues have been so carefully described as a debate about jobs, because that is the only palatable part of the equation.

Many of us will never be willing to trade our safety, our peace of mind, and certainly not our food crops for unreliable government jobs.

In the future created by moving U.S. plutonium operations to the Panhandle, our grandchildren and great grandchildren will probably have few jobs to show for it, but will get to have all forms of new committees and deal with endless numbers of the very same kinds of meetings.

What a legacy to leave them, wondering how in the world the political well and the funding will ever be found to clean up the nuclear waste left in Carson County by Pantex operations that have converted from its historical role into that of a plutonium

processing and nuclear waste handing facility.

This document under review today does not meet the commitments made to the citizens of this area in DOE's agreement two years ago.

The examination of alternative storage

HT17/39 01.024

sites seems halfhearted at best. If the effort is brought short because of the threat to Albuquerque in using the existing Manzano Mountain facility, what are the citizens of Gray and Potter Counties to make of the government's regard for their safety.

What are U.S. taxpayers to make of a process that seems determined to build an expensive new storage facility at Pantex, notwithstanding past assurances that existing facilities are adequate.

When our grandchildren are attending future meetings about the mess at Pantex, would not DOE and our estimable city fathers wish the record to at least reflect an accurate and thorough investigation of the alternatives?

Pantex is a Superfund Site. We now

HT17/40 06.056

have confirmed contamination in the Ogallala Aquifer.

It would seem that before we rush

HT17 (CONTINUED)

HT17/40 06.056 continued

headlong into new missions, bringing new waves of radioactive pollution to this plant, that the document should at least address the efforts to mitigate pollution already on-site. It really doesn't.

Why does it remain silent on what should be one of the most important missions of the plant in the time frame covered by this document?

Could it just be that discussion of pollution unpleasantly colors the picture of jobs, jobs, jobs?

If DOE doesn't wish some of us to assume the worst, then it really must do its work.

This document is the only vehicle with which to assess the cumulative impacts of existing operations and the proposals being quoted.

It doesn't even provide a full description or analysis of the two new facilities that are included in this document.

Perhaps in private briefings DOE has provided its suitors with more complete

HT17/41 01.025

information, but area residents are entitled to

HT17/41 01.025 continued

have a better idea of what the waste handling facility and the pit reuse facility really do imply for our future.

The document does not even begin to address the long-term impact of bringing plutonium processing to Pantex, the waste streams generated, the full extent of processing that will be necessary, or what the ultimate disposition would be for the nuclear waste streams that are generated.

Perhaps this document is adequate in the eyes of those who prefer not to talk about some of the unpleasant realities.

Perhaps it is adequate in the eyes of DOE. They didn't seem to really want to produce it in the first place.

But it will never be adequate in the eyes of many residents until it gives the public a clearer and more detailed picture of the future that awaits all of us during the unholy marriage of plutonium and Pantex. Thank you.

MR. MATNEY: Thank you, Mr. Seewald.

If the gentleman who stood just a moment ago and started to approach the microphone, if you will please go to the lobby

and register, we will be glad to hear your comments.

You may have already done that, but if you haven't, we would ask that you go register.

DR. BOWMAN: My comments are in response to the question raised by Mr. Yellowman.

MR. MATNEY: Yes, fine. Would you approach the microphone and identify yourself and please speak up.

DR. BOWMAN: My name is Allen Bowman. I'm with the Pantex Plant, I'm manager of the EIS support program.

I just wanted to comment that there were a number of Native American tribes for whom we thought there might be interest in the NEPA process at the plant.

These are listed in the EIS, and also in the environmental information document that the plant prepared.

It's my understanding that all these tribes were visited by members of our cultural resources group at the plant. This includes the Cheyenne-Arapaho Tribe of which Mr. Yellowman is a member.

We will see to it that the comments or records associated with those visits are presented to Mr. Yellowman.

The other two tribes that he mentioned, the Northern Cheyenne Tribe and the Northern Arapaho Tribe, are both tribes located primarily in Montana and Wyoming.

And because of their distance, we overlooked those tribes in terms of their interest in the Pantex area.

It's difficult sometimes to know just how distant a tribe might be who has -- who would have an interest in the Pantex Plant, either in terms of ancestral sites or the other primary interest that was brought up in terms of the graves and associated materials that might be found in an area. Thank you.

MR. MATNEY: Thank you, Dr. Bowman.

Our next speaker is Bob Juba.

MR. JUBA: Thank you for the opportunity to speak tonight.

I guess the panel must really enjoy these times when you take public comment and just get arrows shot at you.

I'm going to try to take a little

HT17 (CONTINUED)

different approach and try to look at the big picture.

It's evident from the weight of the comments overall, when you consider the April meeting, the written comments, as well as this meeting, that the people of the Panhandle do support the missions of the Pantex Plant.

Repeated public opinion polling within the whole Region of Influence has shown about an eight -- 80 percent -- or eight out of ten support for Pantex and the missions they do there.

The people of the Panhandle believe that defense needs are important and that Pantex has played an important role in maintaining the defense of our nation.

We're also very, very encouraged at the dismantlement that's taking place and hopefully making the world a safer place.

But I want to remind you back to the comments at the April meeting, because I think those are really in large measure addressed to this EIS, as well as the two PEIS's that were discussed that night.

While we support those missions, we

also, without equivocation, demand that Pantex missions are carried out in an environmentally sound fashion.

We discussed a little bit tonight that like other industries, including the petroleum industry, agriculture, other heavy industries, like other industries, Pantex and the Department of Energy have become better stewards of the environment.

Farmers -- somebody mentioned farmers draining oil on the ground. Well, I'll admit that when I used to change my oil in my car, which was a long way from a farm, in Dallas, Texas, I dumped oil in an alley. Didn't know any better. This was years ago.

We don't do that anymore, I don't, and I hope that most people don't. The City of Amarillo started an oil recycling program years ago with the assistance of the State of Texas.

As individuals have changed their practices in terms of the environment, industries have also. I think that's very important and something people need to keep in mind.

HT17/42 04.008

The tremendous growth of agribusiness,

especially the fed beef industry and beef processing industry in the Texas Panhandle, has occurred during the time span that Pantex has been operating.

HT17/42 04.008 continued

I think that's pretty good evidence that agribusiness and Pantex can coexist successfully on both counts.

I think it's really unfair to couch things as being either pro Pantex or pro agriculture, because they farm on-site at Pantex, they farm around Pantex, there's no problem with the crops that are raised there, and people need to look at the big picture.

It's easy, when you're talking about hundreds of pages of documentation, to get bogged down in the details, but in the big picture, we have no radioactive contamination in the water, there's nothing to do with plutonium in terms of contamination.

We have industrial contamination that might be similar to other industrial sites if they underwent the scrutiny that Pantex goes under because it's a public entity.

We are -- I'm very encouraged by the cleanup of pollution that's taking place at

Pantex, especially in light of the slow pace of cleanup at other DOE sites.

Here instead of continually characterizing and characterizing and characterizing, and holding hearings and tearing down hundreds of acres of forest to print the reports to look at problems, we've actually been cleaning up problems at Pantex. And I think that's a good sign for Pantex and for the Panhandle.

We're also very encouraged to see that the Department of Energy has taken steps, working with the local government of the City of Amarillo and the State of Texas, in reducing the number of aircraft overflights.

HT17/43 15.076

I think that shows their good-faith efforts to try to operate in as safe a manner as possible. We also appreciate the Department of Energy's openness policy.

Again, looking at the big picture, ten years ago we wouldn't be here even discussing these things, because everything out there was classified.

Forty years ago they would have said, we're making soap. That's not the environment

HT17 (CONTINUED)

that we exist in anymore.

And while there's always going to be the need for classification, we appreciate the openness and willingness that the DOE has shown to work with local governments.

And with that, I'll let you all alone.

MR. MATNEY: Thank you, Mr. Juba.

Our next speaker is Trisch Neusch.

MS. NEUSCH: I want to thank you for allowing me to comment tonight. I've basically covered several of my comments that I had, I don't have a formal written statement.

Tonight I just would like to reiterate some of the facts that Doris Smith had mentioned previously and the very real importance of agribusiness to our area, which Bob touched on just now.

We as farmers in the area surrounding the plant continually have been driven by these different regulations and programs with the government.

We strive to follow these to the letter. Sometimes that's not the easiest thing to do, so we can sympathize with some of the

things that you guys have to deal with.

It isn't an easy situation, but we all try to follow these in order to get along and to protect the environment for future generations.

In looking at these aspects, we were discussing earlier the effect -- possibly the health effects on farmers that do farm on the plant site itself, if that has been addressed in this document or not. We would like for it to be.

HT17/44 14.119

I know that my husband has done some farming on the plant site. Just the other day he was combining some wheat on the plant site. That stirs up the dust, it disturbs the soil.

And I realize that some of that in the questionably contaminated areas of the plant, it has been decreased, and some of those areas have been planted back to grass, but someone had to plant that grass and someone has farmed that area in the past. So, we would like these figures to possibly be included in the document.

And then, also, it was very distressful to myself and other people that had noticed that farming and agriculture, as

HT17/45 04.009

important as it is, was basically ignored in a lot of these documents or barely mentioned, possibly four paragraphs, a little over, in this document that I noticed.

HT17/45 04.009 continued

And will state again how very vitally important it is to the Panhandle and the Top of Texas.

And as far as when the base closed and whether Pantex may close, I don't think that's on the table here.

What we all have to address today, according to this document, if I may read the general scope of this EIS, includes the assessment of impacts to each area of the human and natural environments affected by operations performed at the Pantex Plant.

And if I may reiterate some of the comments that I made earlier, I appreciate the fact that some of the things that I mentioned may be covered in other documents, but I believe that this study itself has to deal with those things.

HT17/46 02.023

It will be making some of those decisions in the fact that it does include those other documents, and I feel like it has

inadvertently left out some of those issues, and that that needs to be more carefully addressed.

HT17/46 02.023 continued

And we as farmers and landowners that live across the road from the Pantex Plant, we do have concerns, but you'll notice that not very many of us have shown up this evening.

And it is not because of too little concern, but it's because we are all out in the fields harvesting wheat at the moment or planting milo.

Like my husband is helping a neighbor combine his wheat that don't have combines. It's various things like this that keep them away from the mike.

So, it's not because of a lack of interest or whether they might be pro, con, or whatever, we are all concerned, and I just want to address those comments here, too. Thank you.

MR. MATNEY: Thank you, Ms. Neusch.

Our next speaker is Beverly Gattis.

MS. GATTIS: He just asked me if I wanted to stand up, and I went, yeah, right. My hands will shake and I'll drop my notes.

I know you all were afraid I wouldn't

HT17 (CONTINUED)

talk again. I have kind of a hodgepodge of things that I want to go ahead and share with you, though I will try and do some written comments.

It has been interesting to me to see different aspects of this document, and some of them have quite taken me by surprise.

One small -- no, it's not small, but one sort of succinct thing to deal with is in your cumulative impact sections, where you try to encompass the PEIS's that are floating around out there, when you deal with the storage and disposition PEIS, you describe storage and speak to that.

HT17/47 21.006

And then you describe disposition and characterize it as sort of your bounding case that includes a reactor, and when there's a reactor, there's a MOX fuel site, a processing site, et cetera, et cetera.

I ask you all to rework your storage definition. Storage does not mean that we won't have processing at Pantex. That's a -- that, too, can be the scenario under storage.

So, I need to ask you to look and be sure that just because -- just get with the

disposition guys. Excuse me. Work it out, guys.

HT17/47 21.006 continued

But to have storage set all by itself is inaccurate and it just won't do. And if this document is going to go that path, then I guess it needs to go that path at least that much more accurately.

Another piece, though, that really does trouble me is the lack of context that this document builds.

Jerry Johnson, in his introductory remarks, did more to sort of put the context out when we first started this meeting this morning, when he talked about in '89 it was this, in '91 we were talking about expanding, and by the time we got to '93 we were doing thus and so.

HT17/48 24.003

A few lines, and yet it put far more perspective about what the department had been through, the nuclear weapons program has been through, and what brought Pantex to where we are today.

And that does not happen often enough in this document, and I ask you all to think in more specific terms.

For instance, instead of saying Pantex

used to do staging and now we do storage, I think it would not take many more words to say that Pantex staged plutonium components until 1989, when the Rocky Flats plant closed, and at that time it began to hold them, and then say when storage actually initially began.

HT17/48 24.003 continued

It is much more informative to people and much more helpful when they pick up one thing to try to learn what they think about this plant. To start with, that will help a great deal.

Something that is missing, though, altogether are some of the issues that have come up since the 1983 Site-Wide and that are still pending issues.

There has been considerable concern over the status of how the plant establishes its safety envelope, certain things like safety analysis reports that are being redone at Pantex.

HT17/49 14.120

There is no place, though I have not read absolutely every page of this document, that presents the fact this has been an issue that was raised, it is an ongoing project.

HT17/49 14.120 continued

What is the status of updating the

safety analysis reports so that you establish the safety of work for this plant?

HT17/49 14.120 continued

Also included in that process, I think there needs to be a description of unreviewed safety questions, or unresolved. Forgive me if I'm using the wrong phase there. The kinds of things that this plant is observing. See, we're talking about Pantex.

HT17/50 14.121

I don't think it would hurt at all to have a chart listing what they've been in the past year or two, what are still pending, where we are on that.

The compliance of facilities at Pantex. What facilities are in compliance and which ones aren't with whoever DOE orders.

And if there's been great change in recent history, then, fine, describe that change, that the orders were changed, whatever, that that's caused problems. Give it the context you want, but please give us more of the story to work with.

HT17/51 14.122

There's also been pretty frequent reference -- and this has come up before. I need a formal understanding to be established, if you don't mind.

HT17 (CONTINUED)

I would like to know the legal connection, if any, of the information documents that you all have composed that go along with this Site-Wide.

There are three volumes that you all have worked with, and I would like to know, when you sit down with a Site-Wide, do you really need to sit down with those three documents, too, to look at the whole thing?

HT17/52 23.044

The legal -- or legally does this thing have to stand by itself and are those merely reference documents and they haven't got the same stand-alone right. So, I would appreciate that.

And then in closing, I just have to go to the big picture a little bit. It has been really difficult for me to read things like if we don't get to make certain changes, when we get into -- we have 12,000 pits at Pantex and no other arrangements are made, then dismantlement will stop. It is a real frustration to read a line like that, and it feels very disingenuous.

HT17/53 01.026

One of the reasons that citizens groups such as mine press so hard for this document and work so hard for those issues, is

that we could not believe that the Department of Energy was going to take the posture of we either store them all in one place, we have no backup.

HT17/53 01.026 continued

I cannot believe the Department of Energy has not, as Mavis Belisle said in another instance, that there's not more imagination and more preparation to have a backup plan so that you don't have to stop.

And if I could just try and wrap up here, that is important to us and it just showed how important it was when you all took scoping comments.

In your list of comments, scoping issues that were brought up in this document, you all left off the nonproliferation concerns.

HT17/54 23.045

And if you'll go back to your implementation, you will find out that in scoping, nonproliferation received more comments than human health, socioeconomics, transportation, air quality. It was very nearly at the top of the list.

We are in the business of taking care of things here. We all fullfil different roles in that.

That's what we're here to do. We're here to do it and take care of the people who are doing it, the people who live near it, and the world that is waiting to see that we do it right. Thank you.

MR. MATNEY: Thank you, Ms. Gattis.

Our next speaker is Doris Smith.

MS. SMITH: In our study of this document, we find that it fails to address the magnitude of agriculture in the Pantex ROI.

In this the heart of production agriculture, it is unthinkable for agriculture, the viable, stable, and essential industry of the Texas Panhandle, not to be appraised.

HT17/55 11.044

When considering continued and new missions at Pantex, work with radioactive, toxic, and hazardous materials, omitting a detailed analysis of the agricultural economy, the basis for economic stability in this area, is a significant impropriety.

The good reputation of our agricultural products tainted by the suspicion of nuclear, toxic, or chemical contamination from activities at Pantex can just as easily wipe out Texas farmers and ranchers as a drought

or natural devastation.

The dollar value of the agricultural industry to the Panhandle economy is in excess of six billion dollars, creating a local economic activity in excess of 12 billion per year.

HT17/55 11.044 continued

The secondary impact to this industry in the state and nation is unparalleled. The State of Texas cannot afford a loss in State revenues from High Plains agriculture.

HT17/55 11.044 continued

Not only is this document inadequate in the analysis of environmental impacts on the agricultural economy, there is no recognition that the Ogallala aquifer is the only source of ground water for the entire Texas Panhandle, the South Plains, and parts of seven other Midwestern states.

HT17/56 06.057

The siting of hazardous and radioactive operations over this finite water source is totally unacceptable. There is no substitute for water.

The approach to human health in the draft EIS is flawed. We're being asked to comment on a document which seems to be driven by the goal of reassuring the public that there

HT17/57 14.123

HT17 (CONTINUED)

are no health risks associated with the Pantex Plant.

It uses only optimistic scenarios of exposure, statistical methods that obscure potential risks and problems.

Evidence used is one-sided, a very theoretical presentation which suggests more exactness in scientific knowledge than is supportable and seems designed to lend credibility where it is not necessarily due.

HT17/57 14.123 continued

Moreover, the theoretical approach is difficult to wade through. It obscures and hides assumptions and it is meaningless to public concerns, because it is removed from everyday life experience.

We're forced here to comment on a very narrowly conceived document. We're in a compromise position, because we're forced to play on the agency's ground, with no input into the design of a better draft EIS.

HT17/58 23.046

Again, we're forced to be reactive, rather than to confront these issues up front in a collaborative, proactive manner.

HT17/59 14.124

The data are one-sided. The use of prior studies and data in the draft EIS present

only one side of the scientific debate about the effects of low-level ionizing radiation.

The presentation is very lopsided. Studies not cited suggest health effects including leukemia, thyroid cancer, and multiple myeloma have been found in nuclear workers whose cumulative dose for their total working years was between 2.5 and 5 rem.

On page 4-205, it is reported that the average annual dose of workers at Pantex is 111 millirem.

HT17/59 14.124 continued

If we take a worker who is at the plant for 25 years, then 111 millirem times 25 years is a cumulative dose of approximately 2.775 rem.

This value is within the range for which health effects were observed in these studies.

Moreover, if we take the Pantex control level of 500 millirem per year for most workers, and 900 of workers -- of weapons operation workers, we get cumulative doses over a 25-year working life of 12.5 rem and 22.5 rem respectively.

These values are all much higher than

the levels at which health effects are observed in these studies.

HT17/59 14.124 continued

The agency should reevaluate the risk to workers from low-level radiation exposures using the risk factors reported in these studies.

Moreover, as the scientific uncertainty highlights, the standards used by EPA, NRC, and DOE are not protective standards.

HT17/60 14.125

They are politically negotiated standards that allow workers and communities in the vicinity of a nuclear facility to bear a higher cancer risk for the social benefits that are believed to come from the facility.

These standards should not be used to suggest that there are safe doses of radiation. There are no safe doses of radiation. This is a commonly agreed point at this time among the scientific community.

The Acquavella study referred to, of 1985, relies on a weak methodological approach and data sources that compares workers to the community at large.

HT17/61 14.126

The cancer registry data are not a credible source of data for detecting radiation

effects in the community surrounding nuclear facilities.

HT17/61 14.126 continued

The draft EIS relies on inappropriate data to make risk estimates and comparisons in the communities surrounding the Pantex Plant.

HT17/62 14.127

Again, the most optimistic picture is painted with selective use of evidence and methods. More rigorous studies are needed to more effectively estimate these risks.

And I thank you very much for giving us the opportunity to share with you some of our concerns.

And I do have other issues that I have in my comments and I'll hand them over to you. Thank you.

MR. MATNEY: Thank you, Ms. Smith.

Our next speaker is Don Hancock.

MR. HANCOCK: Well, I'm sure I won't be nearly as eloquent as the last two speakers on either side of me, who I think -- I hope people, regardless of what their view of Pantex might be, listen carefully to both what they said and the spirit in which they gave it.

I want to make some comments about what I view as some deficiencies in the draft

HT17 (CONTINUED)

EIS.

And I'll try to only mention things that haven't been mentioned by a variety of other people today, because a lot of them have already been mentioned.

I guess the first point is to say that in terms of Nan's characterization that the reason to do the no action alternative is to provide a good baseline for what impacts of other alternatives and other actions would be, I think in numerous cases a not very good job was done of doing that.

HT17/63 01.027

In addition to some of those that were already mentioned, let me mention three others.

One is in looking at what the range of activities would be to even continue on with those current missions that are outlined for the next ten years. I really don't think that in that period of time you would think that you wouldn't need to do a number of other upgrades and changes in your facilities besides the six that are specifically mentioned in this document.

HT17/64 03.007

And I think you need to do a much better job of analyzing some of the age of

buildings, the -- how you're going to keep going with continuing operations over a ten-year period of time that you say that this document covers.

HT17/64 03.007 continued

Secondly, I think the document provides virtually no -- none of the analysis that is necessary in terms of looking at the baseline operations of existing pit storage at Pantex.

One of the things -- one of the easy things that should be done, and I was frankly surprised was not done, is taking your two and a half year old EA for pit storage of those pits and looking at what it said the impacts would be of anything other than the aircraft analysis, which seems to be the only thing you've even tried to look at, and saying, okay, over the last two and a half years what does the real data show us in terms of what's actually happened.

HT17/65 23.047

What of those analyses were right, what of them were wrong, what of them were overly conservative, et cetera.

Since, in essence, the most important decision for long-term work at Pantex in a

national context is the decisions about pit storage, you need to do a much better job of talking about what the baseline reality is for that.

Thirdly, I think it is both poor practice and, frankly, hard to -- hard to justify that in terms of looking at the baseline of existing impacts, the document provides no assessment of what the impacts of the operation have been to those nearby surrounding residents to the plant.

HT17/66 23.048

There have been impacts, and they need to be analyzed. They can be; they must be.

It's frankly disgusting that your only charting document of where these surrounding residences even are in the document are wrong, but there's much more wrong with the lack of analysis than that.

Also, thirdly, then, in terms of talking about what the next ten years at Pantex are going to look like, this document -- and Ms. Gattis has already addressed this to some extent, but it's inconceivable that you could be saying that continued storage at Pantex of pits, if that were to happen for the next ten years,

HT17/67 01.028

would be done for that entire time in Zone 4.

HT17/67 01.028 continued

And so you're going to need to look explicitly in this document at the alternative locations for that, the impacts and effects of that, et cetera.

I have a couple more things I'd like to say, I see Paul is trying to cut me off, so what I'd like to do is to stop right now to let other people who might want to testify do so.

The last time I saw the list I was the last one on the list, but if there are other people who want to testify, I certainly want to give them the option.

But I would also like to, with the indulgence of other people, if there are others, talk for a couple more minutes after other people have a chance to finish. Thank you.

MR. MATNEY: Thank you, Mr. Hancock.

There are no others that are registered on our list, but I would ask all of the audience, is there anyone who would like to make a statement? Anyone who would like to make a public comment? Yes, sir. Please remember our five minute limit.

MR. GIDEON: It won't take me but just

HT17 (CONTINUED)

a second to say this.

Several of them mentioned looking at the big picture up here. This gentleman over here was talking about it.

And all I want to say is that if we'd have made a recording of what the mayor of Chernobyl had told his people of what a great deal this atomic outfit coming into their neighborhood was going to be for them and amount to them and what a blessing it was going to be to them, we would have probably heard some of the same things that we've heard here tonight. Thank you.

MR. MATNEY: Thank you, sir.

Do we have others that would like to make a public comment? Anyone else in the audience like to make a comment? Yes, ma'am.

MS. KEEVAN: Is there someone that I can present my written comments to, as well as my research into the fault identification study here tonight, or should I just mail these?

MS. FOUNDS: You can give them to me.

MS. KEEVAN: Okay. And if you'll excuse me, thank you very much.

MR. MATNEY: Thank you. Anyone else?

Then if I could ask the indulgence of everyone, Don will come back and we'll let you complete your statement.

MR. HANCOCK: One other thing that I'm very concerned is going to happen in the final that will not correct the deficiency in this document, it's been pointed out several times that this document intentionally didn't try to deal with the permits that have been issued between the time that the document was being written.

HT17/68 13.018

And he said, you know, it was hard to do that when the permits were in process and whatever, and that's fine.

And it's been stated that the final will include an analysis of those issues, which is also fine.

The concern that I have, however, is to -- that it be explicitly stated, not just in a chart showing the duration of the permits, but explicitly stated that the permits that we're talking about here, the existing permits that you will be talking about, will all be -- need to be renewed, revised during, again, the ten-year time frame of this document.

HT17/68 13.018 continued

And that's a very important issue, as some of the DOE people who were involved, as well as some of the citizens, and the TNRCC people who were involved in the most recent rounds of permits know.

There are -- there is considerable interest in those permits, and I would suggest that it's quite likely there will be again in four or five, six years, when they come up for renewal.

And that needs to be explicitly recognized in the document as well, that there are going to be some real limitations in terms of assuming that your continuing operations are just going to be -- need to be within the bounds of the existing permits.

The last thing that I want to say is maybe a similar but a little different way of talking about that big picture that various people have talked about.

The decision to -- if a decision is made to store 20,000 pits anyplace, that will be the first time that has ever happened in this country.

That's a very significant decision and

one that is good, as several people, including Bob Juba, have said, in terms of the fact that we're dismantling weapons so that we have pits rather than war heads.

But it's a pretty weighty decision, and I'm disappointed that the analysis, neither in this document nor in the disposition PEIS, actually seems to recognize that.

Not only from the aspect of nonproliferation issues that Ms. Gattis has spoken to, but also from a lot of other aspects in terms of health and safety, in terms of public perception, in terms of either the plutonium stockpile capital of the world or the plutonium dump capital of the world, or other characterizations less extreme than those two.

That's going to have a significant effect in a variety of ways, not just the -- what some people would call the soft science of socioeconomics.

And to make no attempt to look at that -- look at that issue at all, I think is a disservice to the public and the department and needs to be corrected, and there are a variety of things that could be done to address it, I

HT17 (CONTINUED)

think.

And if DOE or Tetra Tech people are scratching their heads about how to do that, there are a variety of people around the country and in some other parts of the world who have done some interesting thinking in those regards and should be consulted. Thank you very much.

MR. MATNEY: Thank you, Mr. Hancock.

If there are no other public comments -- someone else? Yes. And, Mary, if you would identify yourself.

MS. SHENNUH: Yes. I'm Mary Shennum, I live here in Amarillo, and my comments won't be technical ones.

HT17/69 06.068

But I understand that we may comment a bit on the cumulative impact from the three PEIS documents, and the Pantex Plant and associated storage of nuclear weapon components PEIS is one that I haven't taken as much note of as the other two PEIS documents, but I understand that

HT17/70 05.024

in this document there is -- there are some omissions which have been brought out.

One of which, it has been noted that there's nothing said about the Superfund Site projects in the study, and it would seem that

HT17/69 06.068 continued

HT17/70 05.024 continued

that might be something important to look at.

All of us around here notice the recognition of the Ogallala aquifer, as it is probably, in the United States, the largest fresh water aquifer.

This indeed needs to be really taken into account. And I know you're hearing this over and over again.

We have the problems that were associated at Rocky Flats continually brought to mind.

I lived in Denver during some of the controversial times there and saw the closure of that plant there because of the proliferation of plutonium -- excess plutonium processing waste, and I wonder what we might do about that if it comes up here.

HT17/71 05.025

It's been said that Pantex is using some open and unlined ditches to dispose of waste water, and that should be addressed. This has been brought out, I believe, publicly here.

The difficulties with making the PEIS documents conclusive have to do probably most with the fact that it's very difficult to know what to do with radioactive materials. And

perhaps an honest admission and an honest assessment of that needs to be made.

Because if we really don't know what to do with these materials, then experimental new research facilities are going to be hard to -- hard to maintain and hard to probably justify at some point.

HT17/72 02.024

If the -- if the nuclear waste that is at such places as Rocky Flats and that has been refused by governors of other states is to be -- is to be brought down here, I assume there will be the same problems as there are at other places, and it probably just needs to be looked at a little bit more carefully. Thank you so much.

MR. MATNEY: Thank you, Ms. Shennum.

Is there anyone else who would like to make some public comments?

Hearing none, then I think we can proceed to close the meeting today.

We began this meeting more than twelve hours ago, and I think that we have had a good exchange of information.

I know that we all want to thank the DOE and Tetra Tech officials, along with state

and city officials.

But most importantly, we thank you, the citizens of this community and area, for your interest in all of these vital issues and for the time you spend on it.

Donna, do we have anything else that we need to do or may we conclude?

Thank you all very, very much, and we will now stand adjourned.

(Meeting adjourned.)

HT17 (CONTINUED)

June 25, 1996

COMMENTS TO THE DOE ON THE SITE-WIDE

BY MARCIA KEEV? N

Thank you for this opportunity to comment, and this time I really, really hope that my comments will make a positive difference. However, ~~and~~ I am realist, and I know the difference between hoping for something versus actually getting something.

THERE IS NO SUCH THING AS NON-HAZARDOUS SEISMIC HAZARDS!

My research into the geological aspects of the Pantex Plant has uncovered some alarming assumptions made by past experts under contract for the DOE. Because the list of specifics is rather long, I have prepared a separate report for your review that will be included with my written comments. The April 1995 "Fault Study" submitted by the DOE basically suggests that "local underground erosion" is the primary feature at the Pantex Plant, and doesn't delve very deeply at all into the primary feature that occasionally rocks (with earthquakes) three states at a time. Pantex is magically divorced from this phenomena at its property lines, and the Whittenburg Trough is all but ignored.

Must we teach our children nonsense? Must we just "not say"? Must all of the facts be altered to satisfy the latest political whim? These are science facts we are playing with, people. Are we hoping there will be no impact from such distortions? Be aware, definite impressions are being imprinted upon the still-developing young minds of tomorrow's scientists, tomorrow's doctors, tomorrow's risk takers. Some of these young minds will inherit all of the risks left over from the Cold War while processing mountains of mis-information. Have any of you ever tried to solve problems when you are given too little information, or worse yet, wrong information?

The time spent climbing out of confusion generated in the fact-from-fiction sort is wasted time. Educators nationwide are challenged enough in their efforts to try to prepare students to function in this high-tech society. Mis-information is not helpful. And, can we expect excellence from our young minds and continue to allow incompetence, encourage incompetence, and reward incompetence both economically and politically at the highest levels of science?

The scum floating at the top of a lake can sometimes choke out the life beneath it. Stagnation. Take a quick look around this room, and ask yourself why, after four years of open recruiting efforts, more young people and their teachers are not interested in these processes? Is the subject matter unimportant? Has the subject matter become too controversial? Has the scum on the top of the lake succeeded in choking out the stirrings of life below?

Both anarchy and stagnation are negative social conditions.

It is tragic when the good, hard work done by graduate students becomes a toy for devious minds to abuse. I see nothing positive in a situation that asks brilliant minds to be silent or to "re-work" their conclusions to suit the whims of industry. I salute all of those in academia who have not folded to "grant pressure", and I abhor all those who have encouraged or participated in such deceptions.

The secrets and lies continue concerning geology, hydrology, past contamination, current contamination, current pathways, and future projections. I am willing to go along with the "Save the Ogallala" folks, as what good is an unsaved Ogallala? But I am not going to pretend we have anything even remotely close to a "pristine" situation at the Pantex Plant Superfund site. We are already in a situation where we may just have to "drink our poison" in small amounts and learn to like it. The massive amount of data contained within studies done by the Texas Bureau of Economic Geology, Argonne National Lab, and others prove this. The recent samples showing RDX hits in the Texas Natural Resource Conservation Commission prove this.

HT17/73 06.123 It would be IGNORANT to site future missions at Pantex without first reviewing the geological hazards truthfully and openly. It would be doubly ignorant to continue trying to hide the contamination facts as they relate to the Ogallala today. The recharge rate is MUCH faster than folks believed it to be a few years ago, and MUCH faster than what is being publically acknowledged today.

Plan on economically compensating our hard working local farmers, our former employees, and the families of Pantex neighbors who have taken ill. America should take care of its own.

Tell the truth, and don't ask our good workers to hide terrible secrets. If these kinds of problems continue, we won't be able to get good workers.

Recognize what horrific damage you are doing "dumbing down" a nation already struggling to educate its students. How will they be able to cope when it becomes their turn to take over?

And Pantex is too on a major fault! I submit my review of the "Fault Identification Study at the Pantex Plant" for your reading.

Thank You

Comments for the
Draft Environmental Impact Statement for
the Continued Operation of the Pantex Plant and
Associated Storage of Nuclear Weapon Components
Amarillo, TX
June 25, 1996
Doris Berg Smith

[illegible] of this document we find that it fails to address the [illegible] of agriculture in the Pantex [illegible]. In this, the heart of [illegible] agriculture, it is unthinkable for agriculture, the [illegible] and essential industry of the Texas Panhandle, not [illegible]. When considering [illegible] and new missions at [illegible] with radioactive, toxic, and hazardous materials, [illegible] a detailed analysis of the agricultural economy, the basis [illegible] in this area, is a significant impropriety.

[illegible] reputation of our agricultural products tainted by the [illegible] of nuclear, toxic or chemical contamination from [illegible] at Pantex can just as easily wipe out Texas farmers and [illegible] as drought or natural devastation. The dollar value of the agriculture industry to the Panhandle economy is in excess of [illegible] a year, creating local economic activity in excess of [illegible] per year. [illegible] The State of Texas cannot [illegible] a loss in state revenues from the High Plains agriculture, [illegible] of every four to five dollars of cash receipts in Texas come from crops and livestock produced in this Panhandle Texas area.

[illegible] this document woefully inadequate in its analysis of [illegible] impacts of the agricultural economy, there is no [illegible] that the Ogallala Aquifer is the only source of groundwater for the entire Texas Panhandle, the South Plains and [illegible] other Midwestern states. The siting of hazardous or [illegible] operations over this finite prime water source is [illegible].

[illegible] approach to human health in the Draft EIS is flawed. We [illegible] to comment on a document which seems to be driven [illegible] the public that there are no health risks [illegible] with the Pantex plant. It uses only optimistic [illegible] exposures, statistical methods that [illegible] potential risks and problems, evidence [illegible], a very [illegible] presentation which [illegible] of scientific knowledge that is [illegible] not protective.

[illegible]

We have many broad concerns with the approach, as I listed above, but we are forced here to comment on a very narrowly conceived document. We are in a compromised position because we are forced to play on the agencies ground, with no input into the design of a better draft EIS. We, again, are forced to be reactive rather than to confront these issues upfront in a collaborative pro-active manner.

2) The data are one-sided. The use of prior studies and data in the draft EIS present only one side of a scientific debate about the effects of low level ionizing radiation. The presentation is very lopsided. Studies not cited suggest that health effects, including leukemia, thyroid cancer, and multiple myeloma, have been found in nuclear workers whose cumulative dose for their total working years was between 2.5 - 5 rem (Geiger et al 1992, Gilbert 1994, Kendall 1992, Kneale 1993, Wing 1991).

On page 4-205 it is reported that the average ANNUAL dose to workers at Pantex is 111 mrem. If we take a worker who is at the plant for 25 years, then 111 mrem * 25 years => a cumulative dose of approximately 2.8 (2.775) rem. This value is within the range for which health effects were observed in these studies. Moreover, if we take the Pantex control level of 500 mrem/year for some workers and 900 mrem/year of weapons operation workers we get cumulative doses over a 25 year working life of 12.5 rem and 22.5 rem, respectively. These values are all much higher than the levels at which health effects were observed in these studies.

The Agency should re-evaluate the risks to workers from low level radiation exposures using the risk factors reported in these studies. Such a reanalysis moreover, would highlight the uncertainties associated with making predictions about the health effects of low level ionizing radiation. The issue of uncertainty in scientific theory is currently glossed by the misleading use of data from only one side of the debate.

Moreover, as the scientific uncertainty highlights, the standards used by EPA, NRC, and DOE are not protective standards. They are politically negotiated standards that allow workers and communities in the vicinity of a nuclear facility to bear a higher cancer risk for the social benefits that are believed to come from the facility. These standards should not be used to suggest that there are safe doses of radiation--there are NO safe doses of radiation. This is a commonly agreed point at this time in the scientific community.

The Aquavella 1985 study relies on a weak methodological approach and data sources (e.g., it compares workers to community at large). The critiques of this study are discussed in more detail in Dead Reckoning by Geiger et al 1992).

2

HT17 (CONTINUED)

3) More about one-sided data. Cancer registry data are not a credible source of data for detecting radiation effects in communities surrounding nuclear facilities (Sagе 19xx). This is a study that was done by Michael Sage, Director of CDC/ATSDR. Cancer registry data in Texas are discussed in the draft EIS on page 4-215.

The draft EIS relies on inappropriate data to make risk estimates and comparisons in the communities surrounding the Pantex plant. Again, the most optimistic picture is painted with selective use of evidence and methods. More rigorous studies are needed to more effectively estimate risks--better exposure assessments, assessment of historical releases, and exposure pathways.

HT17/74
14.164

Without better data from these types of analyses, large uncertainties remain embedded in the draft EIS--and these are not mentioned or addressed. These are different kinds of uncertainties than what I mentioned in #2 above. Those were scientific uncertainties. Now I am talking about uncertainties in the data. A third kind of uncertainties occur in measurements (because of lack of precision in instrumentation).

HT17/75
14.165

There are also inter-individual sensitivity issues to the public. For example, studies (not reported in the draft EIS) have found that pre-natal x-rays, averaging between 20 mr - 400 mr have been found to double the risk of childhood cancer (Stewart and McMahon). Other studies have found effects from low level radiation exposure (e.g., Kerber 1993).

By the way, on page D-4 the Agency states that "since nondestructive examination using x-rays and gamma rays is a well established industrial practice, this contribution to worker risk is negligible." It may be a well established industrial practice, but there are newer studies that suggest the risks of low level exposure from x-rays may not be so benign - they clearly are not safe because, again, there is no safe level of radiation exposure.

HT17/76
14.166

4) The draft EIS uses BEIR III and BEIR V reports (page D-1 D-2). The risk factors derived from these reports are based on the hypothetical man. Thus, they do not adequately account for inter individual sensitivity to exposures of radiation. There is no analysis of inter-individual sensitivity in the draft EIS, except the insufficient claim that conservative numbers and scenarios are used. This is not an analysis of inter-individual sensitivity. It is a way of obscuring uncertainties--again. The DOE should recalculate risk factors using a more sophisticated analysis of inter-individual sensitivity. By the way, this is not just necessary for inter-individual sensitivity among workers and men, women, children--it is also an issue for environmental justice. For exmple, the composition of the workforce at Pantex is 20% minority (see below for more comments about environmental justice).

3

HT17/77
14.167

5) The accident scenarios analysis presents the most optimistic view possible. All administrative control and safety programs are assumed to function properly at all times (e.g., air locks). Numerous examples of malfunctioning or improperly used safety and emergency response equipment and procedures, malfunctioning emergency back-up systems, human errors, etc. have led to accidents in a variety of industries--some of them highly regulated, such as the nuclear power industry, aircraft carriers, offshore oil drilling facilities, airlines, space travel (space shuttle), etc.

In many cases, the failures were of the type that were anticipated but they occurred in sequences or combinations that were not; or the failure rates turned out to be higher than anticipated. Many of the failures can be associated with "human reliability" issues (Tuler et al 1988, Tuler et al 1991, Tuler et al 1992, Kasperson et al 1992); and many many more.

HT17/78
14.168

In the draft EIS there is no way to know how much attention was given to human error/reliability analysis in the evaluation of accident rates or consequences. As I noted above, the document assumes that all emergency response and administrative safety program/control function at 100% at all times.

Can the Agency provide data to support this claim? Do they have data about the rates of incidents--human errors in different tasks that are relevant to this study? What is their definition of "recordable" (i.e., reportable) incidents--what is included in Table 4.14.1.4-1. What are the data for events which did not result in a lost worker day?

HT17/79
14.169

The Agency should describe in detail its safety and emergency response plans and training programs. For on-site employees and for off-site personnel (including those in the transportation system). Have any analyses/evaluations been conducted on the reliability and effectiveness of response? Can they supply data about the failure rates associated with the safety and emergency response elements (mechanical and human)?

HT17/80
14.170

Has the DOE completed task analyses of the high risk tasks--e.g., assembly and disassembly of pits and explosive components?

HT17/81
14.171

Generally, how has the DOE studied and evaluated human error in the tasks done at Pantex?

HT17/82
14.172

In addition, the agency uses a baseline "activity level" of 2000 assemblies, disassembles, testings, etc. per year. They say that the mix does not matter when calculating impacts-- which I presume means risks from exposure from either incident free exposure or accident related exposure (page 3-2)..there must be a failure rate in these tasks. It might be small but it is not zero. They may be initiating events for accidental exposures, or higher than normal "incident free" exposures.

4

HT17/82
14.172
continued

My question is whether there is any reason to believe that failure rates (human errors) in these tasks may be different? Is it "harder" to take a weapon apart than to put it together? I think of a bike or car, where bolts are stripped, pieces stick together, get old, etc. Can this happen? The mix of "activities" will probably change as dismantlement occurs.

Does the Agency have disaggregated failure rate data for the different "activities" included in the operations done at Pantex? Produce the analysis showing that there are no differences in the failure rates associated with the different activities?

HT17/83
14.173

Finally, I began this part by saying that the accident scenarios are all optimistic scenarios in the sense that no (or no significant) exposures result. The Agency should go through the exercise and show us what might be the effects of accidents that are not controlled perfectly--what might be exposure pathways, exposure levels, and health effects of such a scenario? Even if the possibility is small, we would like to see what the consequences are.

HT17/84
14.174

As you say, risk is the product of probability of occurrence and magnitude of consequences. What if worker exposure occurred because contamination did escape from air locks?

HT17/85
14.175

What accidents have occurred at the plant? As shown in Table 4.14.1.4-1., what were these accidents? Can the DOE provide us with descriptions and any results of post-accident evaluations (including the methods of evaluation)? What worked well in containing them--and what did not? In other words, what features of the accident were not anticipated to occur together or with high frequency?

HT17/86
14.176

6) There is no system of community monitoring for contamination off-site? There is an implicit assumption that releases will only occur in controlled areas or that detection devices will observe every possible release. This does not seem to be a valid assumption.

HT17/87
14.177

7) There is no analysis (as far as I remember right now) of synergistic effects among radiation exposures and chemical exposures and among chemical exposures with different types of contaminants.

The DOE should deal with this issue in the EIS, citing and evaluating studies that address synergistic effects of chemical exposures of different types. What analysis have they done to justify a claim that this is not a significant issue?

HT17/88
14.178

8) The DOE only addresses inhalation exposure. But this is a bit confusing. "Inhalation is the only pathway accounted for in the assessment of chemical and radiological AIRBORNE hazards from normal operations" (pg. 4-205).

5

HT17/88
14.178
continued

Does this mean that there are exposure pathways of non-airborne hazards? For example, through groundwater contamination? Are these included in the analysis anywhere?

Likewise, are there other pathways in accidents (non-normal operations)? Are these included in the accident analyses? How?

What data do you have to support the claim that airborne hazards and inhalation exposure is the only significant pathway?

Environmental Justice

HT17/89
17.020

1) The document is designed, again, to reassure. 20% minorities in the workforce is presented as a benefit of good hiring practices, minority populations are assumed to live to far away (17 miles) to have any risk associated with them.

How was inter-individual sensitivity to the worker population assessed in the study? It does not look like it was.

HT17/90
17.021

Do the training programs and safety/information materials to workers and the community account for different literacy rates, primary languages. Does the agency have any data about the extent to which information about the Plant is known or understood, or the effects of radiation exposure are known/understood in the communities (minority and not)?

HT17/91
17.022

2) The agency did not address the issue of radiation exposure to laundry workers, etc. offsite or on site. Often these kinds of exposures are predominantly to minority populations.

HT17/92
17.023

3) How are transportation routes releted to minority communities?

Thank you for the opportunity to comment.

1

CHAPTER 3

Comment Responses

CHAPTER 3
COMMENT RESPONSES

3.1 INTRODUCTION

Chapter 3 provides responses to all comments received during the public comment period.

Section 3.2 below explains how to find information in this chapter. However, the "green" pages at the very front of this volume also provide another, easily located set of instructions for locating documents and comments that are of particular interest.

3.2 ORGANIZATION OF THIS CHAPTER

The comments appearing in this chapter are categorized and organized according to their topic, or resource category. The sequencing of resource categories is as follows:

- Alternatives (01)
- Relationship to other EISs (02)
- Infrastructure (03)
- Land use (04)
- Geology and soils (05)
- Water resources (06)
- Air quality (07)
- Acoustics (08)
- Biotic resources (09)
- Cultural resources (10)
- Socioeconomic resources (11)
- Intrasite transportation (12)
- Waste management (13)
- Human health (14)
- Aircraft crash (15)
- Intersite transportation (16)
- Environmental justice (17)
- Irreversible and irretrievable commitment of resources (18)
- Unavoidable adverse environmental impacts (19)
- Relationship between short and long term effects (20)
- Cumulative impacts (21)
- DOE policy (22)
- NEPA process and procedures (23)
- Miscellaneous (24)

The parenthetical code after each of the above categories comprises the first two characters of comment numbers for that topic category. For example, all comment numbers relating to water resources begin with "06".

It should be noted that during the public hearings, DOE pursued a policy of suggesting, but not requiring, people to identify themselves whenever they made a comment. Whenever a person identified himself or herself, that identification was made in the record of the hearing. When the person did not identify himself or herself, an anonymous identification (such as unidentified speaker) was entered into the transcript. This policy allowed a person to choose whether he or she wished the public record to identify himself or herself with the particular comment. In addition, some of the postcards submitted had illegible signatures. Thus, for these two reasons, there are numerous comments attributed to unidentified commentors.

3.3 COMMENTS AND RESPONSES

In the following subsections, the comments and their responses are placed in Comment Number sequence as shown in the marginal code labeled "RC", for resource category. Thus all comments pertaining to alternatives (resource category "01") are listed together. Following them are the comments pertaining to the relationship of this EIS to other EISs (resource category 02), etc.

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3.1 Alternatives

RC: 01.001
Doc: HT11/16

[At]...Kirtland Air Force Base...they already have how many [plutonium pits] stored...in the Manzano Mountains?... Because I've been told otherwise that there [are] a lot of pits stored in the Manzano Mountains.

Response:

In confirmation to the response given at the public hearing, there are no pits stored in the Manzano Mountains as identified in volume I, section 5.5. The Manzano Weapon Storage Area was deactivated by the Department of Defense in June 1992, including deactivation of the Perimeter Intrusion Detection and Alarm System. Since 1990, intersite transportation of pits to Rocky Flats has discontinued. Pantex Plant remains the primary location for interim pit storage. The Manzano Weapon Storage Area is only being considered as an alternate interim pit storage facility. Selection of this site as an alternative is discussed in volume I, section 3.1.4.

RC: 01.002
Doc: HT11/17

So starting in the P-tunnel [NTS], would that mean that you'd be opening it up where those tests happened and taking the pits into the assembly?

How far away from the actual tests are they stored from the sealed area?

Response:

Test areas at NTS would remain sealed and would not be disturbed. The side tunnels used for previous nuclear tests are all permanently sealed off. These areas are not expected to affect pit storage activities. Further, the Defense Nuclear Agency (DNA) nuclear explosives program has been suspended. Should the tunnel be used for pit storage and the DNA nuclear explosives program resume, a new tunnel could be created for that program.

RC: 01.003
Doc: HT11/18

How about the device assembly facility, what kind of place is that where the other pits are [stored]?

Response:

The following detail is provided in addition to the response given at the public hearing. The Device Assembly Facility (DAF) was constructed to perform assembly and disassembly of nuclear test devices and as a backup nuclear weapon assembly/disassembly facility to Pantex Plant. It is constructed with assembly cells and bays which could be used for pit storage. No pits are currently in storage at this facility.

RC: 01.004
Doc: HT11/28

What's the difference between continuing the current mission and no action?

Response:

To reiterate the response given at the public hearing, there is no difference. The current mission is the No Action in this EIS.

RC: 01.005
Doc: HT14/1

Any plutonium or special nuclear material storage disposal program must be compatible and integrated with the Tri-Party Agreement commitments and

milestones and should not affect the rate or funding of cleanup. The program would have the safe disposition of plutonium as a priority.

Response: *The Hanford Site Tri-Party Agreement is an agreement among the U.S. Environmental Protection Agency, Washington State Department of Ecology, and DOE for achieving the compliance with the remedial action provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and with treatment, storage, and disposal unit regulation and corrective action provisions of the Resource Conservation and Recovery Act (RCRA). Pit storage operations are regulated by the Atomic Energy Act.*

RC: 01.006
Doc: HT05/8

From an environmental standpoint, what changes when you go from 12,000 pits to 20,000 pits? You seem to have made a fairly substantial deal out of going from 12,000 to 20,000 [pits]. And I wondered if there was anything more to it than what you've just said. What should those of us concerned about the environment worry about going up to 20,000 pits?

Response: *To elaborate on the response given at the public hearing, no new construction of pit storage magazines would be required at Pantex as a result of increasing interim storage to 20,000 pits. Therefore, little to no changes in plant facilities and infrastructure, land resources, geology and soils, water resources, air quality, acoustics, biotic resources, cultural resources, socioeconomics, waste management, and environmental justice are expected.*

Pit storage itself has no impact on the environment other than a small amount of radioactive exposure to workers, and should an accident occur, to the public. As Pantex Plant interim pit storage increases from 12,000 to 20,000, a person in the vicinity of Pantex Plant has a slight increase in fatal cancer risk (4.3×10^{-12}) from potential aircraft crash plutonium dispersal accidents compared with the baseline annual cancer risk of 1.7×10^{-3}.

Clarifying language regarding pit storage activities has been added to intrasite transportation and human health sections as Pantex Plant increases storage from 12,000 to 20,000 pits.

The commentor is referred to volume I sections on Impacts of Proposed Action (4.3.2, 4.4.2, 4.5.2,... 4.16.2) for additional information.

RC: 01.007
Doc: HT13/1

The document talks about the 120-odd bunkers and then it talks about the 41 [magazines] that are actually in the mountain, and on [page] 5-55, it says that more than 30 of these 41 magazines have a minimum overburden of 9 meters, and six pages later, it says 35, so I just first want to get some clarification about the bunkers that we are talking about.

How many are there, and is the position—and Nan may be able to answer this as well as the Major, is the position [such] that if storage happened at Manzano, only the bunkers with at least the minimum 9-meter overburden would be used?

So how many of the 41 [magazines] actually meet that standard?

Response: *Volume I, section 5.5, has been clarified to discuss only the 35 magazines with a minimum overburden of 9 meters (30 feet).*

For the 20,000-pit storage option, approximately 25 of the 35 Type D magazines would be utilized. For the 8,000-pit storage option, approximately 10 of the 35 Type D magazines would be utilized.

The minimum 9-meter (30-foot) overburden was used to reasonably assess impacts for comparison purposes with the other interim storage alternatives. Volume I, section 5.5.1, discusses and analyzes the impacts of storage at Manzano.

RC: 01.008
Doc: HT13/6

I am interested in knowing, since there are 41 identified bunkers in the mountain, and 20 or so, up to 25 could be used if all 20,000 pits would come, what is the present and continuing mission for the other nearby bunkers? What would be in them? What would happen to them? What effect does storing pits have on those bunkers that could affect the mountain and the pit storage?

Are they going to be answered in the context of between now and the time of the final EIS?

Response: *To elaborate on the response given in the public hearing, the storage of pits in certain bunkers is not expected to impact the continuing mission of the other nearby bunkers. At Pantex Plant Zone 4, multi-purpose operations (i.e., storage of weapons, pits, components, high explosives, wastes, environmental monitoring supplies, maintenance equipment) all occur within the same area as pit storage without any problems. The storage of other materials in the remaining 81 bunkers at Manzano would continue. The "Phase I Environmental Baseline Survey—Manzano Weapons Storage Area" contains brief descriptions of the storage activities at Manzano.*

The environmental impacts of interim storage of pits at Kirtland Air Force Base are discussed and analyzed in volume I, section 5.5.

RC: 01.009
Doc: HT13/23

Does anybody else want to jump in before I go into some other things? How did the 20,000 number get established, 20,000 pits?

Why is that the bounding number since when we started dismantlement, we had considerably more warheads than that?

It is a public number that the United States in the '80s had well over 25,000 nuclear weapons. It is also a well-established number in the START II treaty, which has been ratified by the senate of the United States, that the goal would be down to 3,500 warheads. So on the face of it, we would dismantle more -- from dismantlement, we would have more than 20,000 pits.

Let me ask the question [a] little differently. Isn't it true that the 20,000 number was first used by the Department of Energy in an Environmental Assessment done three years ago, more or less, at Pantex, which was an environmental assessment that said, "Let's do this interim storage of 20,000 pits at Pantex?"

That is the first place that I am aware of that the Department used that number. Is that not true?

That number is a pre-START II ratification number, and it appears to me it is a pre-START II number in any case, and the real question is to put it in the context of the sitewide. The sitewide says there is the potential of handling up to 2,000 weapons a year in terms of the analysis of the operation at Pantex, it talks about up to 2,000 a year, although it assumes that a more likely number is 1,000 a year during this ten-year time frame.

Isn't it the case,...in terms of Pantex and the numbers of pits, that during the next ten years, there could be more than 20,000 pits?

Response: *Regardless of the number of operations per year, interim storage of up to 20,000 pits would be consistent with dismantlement to START II stockpile levels. The EIS analysis assumes that combined activities of assembly, disassembly, and modification would not exceed operations on 2,000 weapons per year. For assessment of environmental impacts, the EIS examines impacts across a reasonable range of activity levels by assessing impacts of activity levels for operations on 2,000, 1,000, and 500 weapons per year.*

Operations on these numbers of weapons per year represent a reasonable, but conservative estimate of work that may be required at the plant, based on current policy directives, and allow a set of defined tasks to be accurately analyzed. The operations on each of the weapons in these defined sets are assumed to be extensive (representative of full assembly or disassembly). Actual workload and range of tasks are well understood, and impacts of actual operations are expected to be encompassed by this conservative analysis. Accordingly, over 2,000 weapons per year may be worked on at Pantex Plant without exceeding the environmental impacts identified in this conservative bounding analysis. The 2,000, 1,000, and 500 weapons activity levels should not be considered specific limits.

RC: 01.010
Doc: HT13/24

Is 20,000 pits for interim storage actually a bounding number or, within the next ten years, could the number actually be higher than that? [This] is the specific issue I would like to see addressed [in the final EIS].

Response: *See discussion in section 1.3.1 of this volume regarding the basis for 20,000 pit storage limit. The number of pits stored at Pantex Plant would not exceed 20,000 without appropriate NEPA review.*

RC: 01.011
Doc: HT13/25

Two questions in that regard: one is that if, in fact, the Department is taking the position that they would have to somehow supplement this or some other NEPA document before they completed 20,000, that should be expressly stated, and if that is not the Department's position, that specific statement needs to be made in this document and in the ROD.

Related to that, I would also request that the document analyze where the 20,000 number came from and how that would relate specifically to less than START II levels of dismantlement.

Response: *DOE may supplement or revise the Pantex EIS as a result of changes other than interim storage issues. However, DOE expects to review the environmental impact analysis contained in the Pantex EIS before the year 2007 as part of the agency's ongoing compliance responsibilities under NEPA, regardless of the number of pits placed into storage. In regard to the 20,000 storage level, see response to comment 01.009.*

RC: 01.012
Doc: HT13/26

I am going to throw out something, that you drop [Manzano] from this project because it is not going to be a permanent storage [site]. You should get your act together and put [plutonium] where it is finally going to be. Put [plutonium] at one of the places that will be a permanent storage because of the fact that you, yourself, have said [Manzano] is only considered able to handle the plutonium and not others, and this is only interim. Well, just wait and put [plutonium] where it is finally going. Get your other plan together, decide it, pick a site and hold onto it until then.

Response: *See discussion in section 1.3.1 regarding site selection process and section 1.3.2 in this volume regarding site attributes.*

RC: 01.013
Doc: HT13/31

How many bunkers are required for 20,000 pits?

Response: *Approximately 25 Type D magazines are required for interim storage of pits at Kirtland Air Force Base. At Pantex, 18 Modified Richmond magazines and 42 Steel Arch Construction magazines have been identified for storage of pits. Structures other than magazines would be used at other sites.*

RC: 01.014
Doc: HT13/42

Is there a justification for continued exploration and alternative forms of high explosives [HE] at this point in time that would justify the health and environmental risk?

Response: *To elaborate on the response given at the public hearing, high explosives research and development, including testing, is an essential part of stockpile maintenance. As long as there is a stockpile, this function must be performed. The original Notice of Intent for the Pantex Site-Wide EIS (59 FR 26635) included the possibility of relocating some or all of Pantex Plant operations as part of the Relocation Alternative, including HE operations. Upon further review, it was determined that the relocation of operations, including high explosive operations, from Pantex Plant within the time period of this EIS does not meet the purpose and need for DOE to maintain minimum disruption of weapon disassembly operations. The commentor is referred to volume I, chapter 2, Purpose and Need for Action, for additional information. The Stockpile PEIS assesses alternatives for the explosive operations at Pantex Plant.*

RC: 01.015
Doc: HT13/79

As I imagine the process then, they go through a series of disassembly of the can subassembly to separate the different layers of metal, et cetera, so the final storage of the can subassemblies, is that considered anywhere?

Response:

The Disposition of Surplus Highly Enriched Uranium Final Environmental Impact Statement discusses and analyzes the disposition of surplus canned subassemblies of highly enriched uranium (HEU) at Oak Ridge Reservation (ORR).

Only the transportation of HEU and depleted uranium components from Pantex Plant to ORR for storage, processing, and staging is addressed in this EIS.

RC: 01.016
Doc: HT13/87

Pantex has a high degree of public support in the region. In repeated polling, it has registered over 80 percent for continued operation of the plant. The discussions here tonight about the deficiencies in the high explosives program, I think, are misguided, and Pantex should be selected as a preferred alternative in the other PEIS, the SS&M PEIS, for continuation of high explosives.

I make those comments on the record as Bob Juba with the Amarillo Economic Development Corporation speaking with the endorsement of the city government of Amarillo.

Response:

The original Notice of Intent for the Pantex EIS (59 FR 26635) included the possibility of relocating some or all of Pantex Plant operations as part of the Relocation Alternative. Upon further review, it was determined that the relocation of operations, including high explosive operations, from Pantex Plant within the time period of this EIS does not meet the purpose and need for DOE to maintain minimum disruption of weapon disassembly operations.

Programmatically, for the longer term, consideration of the attributes of Pantex Plant's high explosive capabilities, as well as each of the alternatives considered for siting high explosive operations, would be part of the decision process in the SSM PEIS.

RC: 01.017
Doc: HT13/80

I wouldn't be incorrect in assuming that there is much more processing of a can subassembly that has to go on before it is ready for some sort of storage and the processing involved in the plutonium pit once it is removed? Is that correct?

Response:

The Disposition of Surplus Highly Enriched Uranium Final Environmental Impact Statement analyzes the disposition of canned subassemblies of HEU at Oak Ridge.

RC: 01.018
Doc: HT12/26

I'm curious [about] what's being done to upgrade and correct that before you talk about putting more there. Also, I have the general comment that storage at Pantex is, like a lot of other DOE programs..., really...only interim action. It really doesn't lead to anything. These pits eventually are either going to be in the strategic reserves, stockpile management program or the disposition program, and really you're a lot better off with bringing them...to Savannah

River where you get this energy of feeding into other programs because Pantex is not an operating plutonium site. ...You just say, well, we don't really have nuclear facilities, we really don't have plutonium facilities. To do these other missions you need those. So my general comment is that you ought to look at putting them [the pits] at a functional plutonium site, [of] which there really only happens to be one.

Response: *The scope of the Pantex Plant EIS encompasses the ongoing operations, including interim pit storage, transporting pits to and storing on an interim basis at an alternative site (e.g. Savannah River Site), and transporting classified components between Pantex Plant and other sites. Pantex Plant already has capabilities to perform all these missions.*

In addition, see discussion in section 1.3.2 of this volume regarding site attributes.

RC: 01.019
Doc: PC-006/1

Pits at Pantex are managed in facilities and operations [that] do not meet any of the DOE's standards for design and operation of nuclear facilities. Doubling the storage of pits under substandard conditions should not be considered a reasonable alternative.

Response: *Pit storage activities are not considered a high hazard operation as defined by the term "nuclear facility" in appropriate DOE standards. Storage magazines are defined as category 2 "non reactor nuclear facility." After repackaging of pits into AT-400A containers, the moderate hazard designation is further reduced.*

DOE disagrees with the commentor that current pit management operations are substandard. The Pantex safety record is excellent. The environmental impacts of interim pit storage at Pantex have been discussed and analyzed, including potential Human Health impacts due to accident scenarios, in this EIS.

RC: 01.020
Doc: PC-024/3

P. S-7, left column, "No Action Alternative," 2nd paragraph, 5th line. The construction of the Hazardous Waste Treatment and Processing Facility should not be excluded under this alternative. Proposals, which make the No Action Alternative unreasonable under NEPA, should not be included.

Response: *In the March 1996 Draft version of the Pantex Plant EIS, the proposed construction of the Hazardous Waste Treatment and Processing Facility (HWTPF) was considered necessary for enhancing waste operational efficiency and safety and meeting regulatory requirements established in the Agreed Order. With offsite disposal shipments of mixed waste in 1994 and two shipments in 1996, as noted in volume I, section 4.13.2.3, and changes contained in the August 1996 FFCA Compliance Plan Annual Update document, construction of the HWTPF is no longer considered a regulatory requirement. However, without the HWTPF, waste treatment and processing capabilities remain greatly limited and do not meet the Department's purpose and need. This information has been incorporated throughout volumes I and II, as appropriate.*

In response to Item 2: DOE recognizes that all its facilities and all its hazardous materials, including plutonium, require varying levels of environmental controls [illegible] *DOE continues to work with* [illegible] *related to the general public* [illegible] *facilities and all hazardous materials.*

RC: 01.021
Doc: HT16/40

...my specific question relates to appendix H-14, where on the pit reuse facility it talks about the glovebox type operations and the glovebox layout that would be included in this facility. I guess I have a couple of questions related to that. How many glovebox type enclosures are currently operating at Pantex?

Response: *There were 9 gloveboxes in use at Pantex Plant in August 1996.*

RC: 01.025
Doc: HT17/41

...area residents are entitled to have a better idea of what the waste handling facility and the pit reuse facility really do imply for our future.

Response: *The comment* [illegible] *proposed waste handling facility* [illegible] *enable fulfillment of the* [illegible] *Order (Federal Facility Agreement) with the State of Texas. The pit reuse facility* [illegible] *plutonium* [illegible] *operations on the surface of the pits.*

RC: 01.022
Doc: HT17/21

The other comment has to do with the assumption that in the no action alternative,...when you reach the 12,000 pits, disassembly would have to cease. It's really hard for me to believe that you [do] not have the creative minds at the Department of Energy that can justify interim storage of 12,000 pits at Pantex [illegible] I would surely think that you could find ways to justify interim storage of pits at other locations until all of the issues that need to be resolved are resolved.

Response: *See discussion in section 1.3.1 of this volume regarding the basis for 20,000 pit storage limit and section 1.3.2 of this volume regarding the relationship between the other EISs.*

RC: 01.026
Doc: HT17/53

It has been really difficult for me to read things like...we have 12,000 pits at Pantex and no other [if] arrangements are made, then dismantlement will stop. It is a real frustration to read a line like that, and it feels very disingenuous. One of the reasons that citizens groups such as mine press so hard for this document and work so hard for those issues, is that we could not believe that the Department of Energy was going to take the posture of we either store them all in one place, we have no backup.

Response: *The No Action Alternative describes the conditions that would result if the Department should not make any changes in the status quo. The No Action Alternative does not have to be reasonable, and frequently is not. Rather, the No Action Alternative is intended to provide a baseline for comparison. Frequently, as in this case, the consequences of continuing the status quo also serve to point out quite clearly that an action is needed. In the case of this EIS, the Department has a Proposed Action to put up to 20,000 pits in storage at Pantex Plant, and an alternative of relocating up to 20,000 pits to one of four other sites for interim storage. The Department will not store pits at Pantex Plant beyond the current 12,000-pit level without examining the environmental impacts of storing an additional 8,000 pits. This EIS has been prepared in accordance with requirements of NEPA and CEQ Regulations specifically to allow the Secretary of Energy to make decisions that* [illegible] *weapons retired from the stockpile* [illegible] *plant.*

RC: 01.023
Doc: HT17/22

The unstated question, of course, is whether or not you're going to attempt to do processing of plutonium in the Panhandle. That's the primary reason that I believe most people here are opposed to the storage. It's not so much the risk of storage, which is, at least to my estimates, not very great. It's the possibility that you will later use the Pantex facility as a staging ground for the processing of plutonium, either dissolving the contents of the pits and making them into fuel rods or perhaps reprocessing spent fuel rods.

Response: *The Proposed Action and alternatives for the Pantex EIS do not involve processing of pits into any other form. Nor do the alternatives of this EIS analyze a proposal for Pantex to reprocess spent fuel rods. In addition, see discussion in section 1.3.2 of this volume regarding the relationship of the S&D PEIS.*

RC: 01.024
Doc: HT17/39

This document under review today does not address the commitments made to the citizens of this area in DOE's agreement years ago. The examination of alternative storage sites [illegible] If the effort is brought short because of the threat to Albuquerque in using the existing Manzano Mountain facility, what are the citizens of [illegible] Gray and Potter Counties to make of the government's regard for their safety.

RC: 01.028
Doc: HT17/67

...it's inconceivable that you could be saying that continued storage at Pantex of pits, if that were to happen for the next ten years, would be done for that entire time in Zone 4. And so you're going to need to look explicitly in this document at the alternative locations for that, the impacts and effects of that, et cetera.

Response:

At Pantex, 18 Modified Richmond magazines and 42 Steel Arch Construction magazines have been identified for storage of pits. No new facilities are required to store up to 20,000 pits. Environmental impacts at the alternative sites have been discussed and analyzed in volume I, chapter 5.

New pit storage facilities and upgrades to existing pit storage facilities are within the scope of the S&D PEIS and SSM PEIS.

RC: 01.029
Doc: FG-003/1

The DEIS makes reference to "interim storage" of plutonium pits at three DOE sites (Nevada; South Carolina; Washington State) and a Department of Defense site at Kirtland Air Force Base, New Mexico. However, the DEIS did not define what constitutes "interim storage," either a fixed period of years or decades, or until a permanent storage facility is approved, upgraded or built. If possible, the Pantex FEIS should define the minimum and maximum time limits expected by DOE for "interim storage" (we recognize the difficulty in this because nuclear storage projects often run into problems that delay their proposed timeliness).

Response:

Interim storage refers to the time period until the long-term storage decisions are made and implemented.

RC: 01.030
Doc: FG-003/3

It would be helpful if the Final EIS could provide the tonnage of the 8,000 to 20,000 pits that would be relocated under the interim pit storage alternative. If allowable under the national security considerations, it is recommended that the FEIS quantify the weight in terms of plutonium [Pu], other nuclear material, and other constituents such as *Resource Conservation and Recovery Act* (RCRA) regulated hazardous waste.

Response:

The actual amount of plutonium contained in a pit is classified. Because of this, it is DOE's policy to present the amount of Pu at Pantex in terms of the number of pits. The composition of other nuclear material, metals, and other constituents in a pit is classified. However, there are no RCRA regulated wastes in the pit form.

RC: 01.031
Doc: MG-002/3

There is information that leads Clark County to question the intent of DOE to actively pursue action alternative of storage of pits at the Pantex Plant. The DEIS makes reference to extensive restoration work that is being planned or is in progress at the Pantex and Hanford sites. We question whether it is sound policy to conduct such environmental restoration work at Pantex, a majority [of] which will be completed by 2000, and then store the plutonium pits on site, even for the short term. Given this, it would appear the pit storage relocation alternative may be more attractive than is presently represented in the DEIS. And, the NTS may emerge as the most feasible site for such relocation, since it

is relatively close to the Pantex Plant, there are minimal environmental restoration plans for the NTS [as compared to other candidate sites] and there are frequent mentions of the NTS as a disposal or storage site in other DOE EISs. For example, the Stockpile Stewardship and Management PEIS includes an alternative which describes the complete closing of the Pantex Plant with its capabilities relocated to NTS, Los Alamos and Lawrence Livermore facilities. The Pantex EIS does not address the implications of this alternative. This issue should be addressed in the final EIS and the Record of Decision.

Response: *Storage of pits does not generate environmental contamination. Environmental restoration activities are independent of the pit storage decision. These activities will continue whether pits are stored at Pantex Plant or not. DOE recognizes that all its facilities and all its hazardous materials, including plutonium, require varying levels of operational and environmental controls to protect the workers, the public, and the environment. DOE continues to work with EPA, states, employees, unions, stakeholders, and the general public to develop programs and commitments to better manage its facilities and all hazardous materials. In addition, see discussion in section 1.3.2 of this volume regarding Site Attributes.*

Cumulative impacts related to changes in Pantex Plant operations from decisions resulting from the SSM PEIS, the S&D PEIS, and the WM PEIS are presented in the Pantex Plant EIS.

RC: 01.032
Doc: PC-031/1

The promised analysis of alternative DOD storage sites looks only at the Manzano Weapons Storage Facility at Kirtland Air Force Base and seems to reject it since it is not included in the Storage & Disposition PEIS. As the facility is deemed technologically adequate, we may only conclude by inference from the very words of the document that the DOE takes a more cavalier attitude toward the safety of Panhandle residents than people who live in Albuquerque. The fact that more people would be threatened in the Albuquerque area in no way justifies placing that liability just 17 miles east of the city of Amarillo in the middle of such a highly productive agricultural area [that] is the beginning of a food chain reaching across the world. Those who assert otherwise are more persuaded by convenience or dollars than reality. Is DOE so awash in funds that it can afford building new facilities when Manzano Mountain is more than adequate? Taxpayers as well as local residents deserve a better explanation than exists in this document.

Response: *In response to Item 1: As described in volume I, section 3.1.4, 60 DOD installations were screened by the Nuclear Weapons Council staff. With the exceptions of the Manzano Weapon Storage Area, located on Kirtland Air Force Base and Seneca Army Depot, the Council staff determined that none were feasible. In addition, see discussion in section 1.3.1 regarding the Site Selection Process.*

In response to Item 2: DOE recognizes that all its facilities and all its hazardous materials, including plutonium, require varying levels of operational and environmental controls to protect the workers, the public, and the environment.

DOE continues to work with EPA, states, employees, unions, stakeholders, and the general public to develop programs and commitments to better manage its facilities and all hazardous materials.

RC: 01.033
Doc: PC-025/7

The first two bullets in the second column on page 3-3 [volume I, section 3.1.1]. Where are security and nonproliferation activities? They are routine correct?

Response:

Security and nonproliferation activities are part of the routine activities performed by the plant along with waste management, infrastructure and building maintenance, etc., in the bullet addressing "continuing routine Pantex Plant activities.

RC: 01.034
Doc: PC-025/8

On Page 3-7 in second column in the second paragraph. It appears a loop hole exists for DOE in dealing with the backlog of stored pits. If a container availability problem exists (like the FL container problem on F-2) DOE could store 20,000 pits without shipping one pit and not violate this EIS. What would be the hard number before DOE would stop dismantlement to put pressure on the transportation end? Lacking cans for shipment seems to make relocation alternatives unreasonable and thus not meeting the intent of NEPA, please provide technical justification. This EIS is flawed because the alternatives are not "technically mature" to use a DOE phrase found in SSM and S&D for rejecting analyses of alternatives. Lack of cans appears to be a reasonably foreseeable impact, please assess. The 12,000 alternative is not possible under this EIS.

Response:

Under the Pit Storage Relocation Alternative, the number of pits in interim storage at Pantex Plant could be greater than 12,000 pits for a temporary period until enough of the planned new transportation containers are available. This is not a loophole since the impact analysis considers the bounding effects of having up to 20,000 pits at the Pantex Plant. DOE's stated Preferred Alternative is the Proposed Action to retain the interim storage for up to 20,000 pits at Pantex Plant.

DOE would not stop weapons disassembly under the Relocation Alternative even in the case that there would not be enough transportation containers available at any particular point in time. The reason for this is that the exact timeframe within which any of the candidate sites could be made ready and the 8,000 or 20,000 pits transferred can not be precisely determined. The need to continue the weapons operations at Pantex is independent of the interim storage issue. Therefore, the disassembly of weapons has not been tied to the pit relocation schedule and under the Pit Storage Relocation Alternative all weapons operations (e.g., disassembly, assembly, etc.) would continue to be performed at Pantex Plant.

The Pit Storage Relocation Alternative is reasonable under NEPA in that the technology for the storage containers is mature. DOE has the knowledge to build the containers and in fact has already built the test models. Furthermore, the Department already has a properly certified Type B container (the FL

container), which could be produced if technical difficulties with the AT–400A certification should arise. The impact of any delay in completing the required testing of the container and beginning manufacture would only be relevant if Pantex Plant did not have the capacity for interim storage of the number of pits which could accumulate while the plant waited for the containers to be manufactured. Since Pantex Plant has the capacity to safely store all 20,000 pits, there is no problem if there is a delay in receiving certified containers.

The only difference between the Pit Storage Relocation Alternative and the Proposed Action is the potential interim storage of pits at a site other than Pantex Plant. The impacts of the Pit Storage Relocation Alternative consist of those described for the Proposed Action plus those associated with the transfer operations. In other words, the impacts of the Pit Relocation Alternative include the impacts from the possible storage of up to 20,000 pits, and therefore, bound the impacts of the case where containers do not become available. The 12,000 pit limit only applies to, and is discussed under, the No Action Alternative. Under the No Action Alternative DOE would cease dismantlement once the interim storage level of 12,000 pits was reached.

RC: 01.035
Doc: PC-025/9

On Page 3-8 last bullet of page. If shipping cans are lacking, why is 8,000 considered reasonable?

Response:

As stated in volume I, section 3.1.3, the availability of shipping containers affects only the schedule of shipments, not the feasibility of the alternative.

RC: 01.036
Doc: PC-025/11

Three bullets in second column of page 3-8. The rationale contains several fatal flaws. The ability [that] includes past performance in securing pits, nonproliferation, and a safe and reliable stockpile should have been considered in qualifying the sites. Please reassess sites based on these new criteria. Please remember when addressing this comment DOE stated to great length how vital DOE's missions regarding nonproliferation, security, and a safe and reliable stockpile were. What is the National Academy of Sciences' position on plutonium storage?

Response:

The DOE disagrees with the commentor that the alternative storage site selection process including Department of Defense facilities contains flaws or was not reasonable. Current Pantex pit storage operations were used as a baseline for comparison purposes. Security and nonproliferation activities are part of routine activities performed by Pantex Plant. Pit storage is a relatively simple function to perform—unlike manufacturing or chemical processing operations involving nuclear materials. All sites evaluated in this document currently perform, or have performed security functions for either similar materials or materials with similar security needs. All sites considered as alternatives would be capable of securely and safely storing pits and could accommodate nonproliferation objectives. The National Academy of Sciences has not addressed interim storage.

For an expanded discussion of the Pantex Plant Safeguards and Security Program, the commentor is referred to the Pantex Programmatic Information Document (Pantex 1996b).

RC: 01.037
Doc: PC-029/2

Taking nuclear weapons apart at Pantex may make sense, but surely a better site for storage can be found. What do you think? I look forward to the seeing the better alternatives in the final Environmental Impact Statement.

Response:

See discussion in section 1.3.1, regarding the site selection process.

RC: 01.038
Doc: PC-027/1

Your glossy presentation books don't actually offer much choice or many alternatives. In fact, the choices and alternatives are very limited.

Response:

See discussion in section 1.3.1, regarding the site selection process.

RC: 01.039
Doc: PC-027/3

Regarding your proposal to use Kirtland Air Force Base/Albuquerque as a pit storage site. Albuquerque is the largest city in our state. It is close to Kirtland AFB—they are separated only by a gate guard—a person can place one foot in Albuquerque and the other on Kirtland Air Force Base. It's like storing nukes in the middle of a city. The highways are busy and prone to accidents. The airport is busy too. One accident and you've lost a major population center. Your publication gives the impression that there is more separation than there actually is between the base and the city. It takes only a few minutes to drive from the city to the Manzano site on the base. Many people work on the base, it is a large local employer. The city and the base actually touch and the city grows every day. Albuquerque may have been a small town when the bomb was developed 50 years ago. It isn't small anymore.

Response:

In response to Item 1: The locations of Kirtland Air Force Base and the Manzano Weapon Storage Area in relationship to the City of Albuquerque are properly depicted in the Pantex Plant EIS.

In response to Item 2: The EIS, in volume I, section 5.5.1.12, discusses and analyzes an aircraft accident at Kirtland Air Force Base Manzano Weapon Storage Area. With the minimum cover of 9 meters (30 feet) of overburden, the aircraft impact analysis shows potential accidents even with military aircraft carrying conventional bomb loads, not a credible threat to pit storage at the Manzano Weapon Storage Area.

In response to Item 3: DOE recognizes that all its facilities and all its hazardous materials, including plutonium, require varying levels of operational and environmental controls to protect the workers, the public, and the environment. DOE continues to work with EPA, states, employees, unions, stakeholders, and the general public to develop programs and commitments to better manage its facilities and all hazardous materials.

RC: 01.040
Doc: SG-003/23

Page 3-2, Section 3.1.1 Proposed Action: Care should be taken to ensure that the continued operation of Pantex Plant activities including "quality assurance

testing of weapon components and the research and production of weapon components" is conducted in a fashion that will not increase DOE' s liability for injury to natural resources.

Response: *DOE recognizes that all its facilities require varying levels of operational and environmental controls to protect the workers, the public, and natural resources. DOE continues to work with EPA, states, employees, unions, stakeholders, and the general public to develop programs and commitments to better manage its facilities and natural resources. Nothing was found which would inhibit Pantex Plant from performing the missions stated in the Proposed Action.*

RC: 01.041
Doc: PC-028/1

Page 5-7, 2nd column, 2nd para - It is not correct to state "and KAFB, near Albuquerque New Mexico-" Comment: KAFB is the southern boundary of Albuquerque, it is a joint use airport, (part of the city) - it is a part and adjacent to Albuquerque. Albuquerque is a major sized city, while the other candidate sites are located away from major cities. You should give major consideration to either keeping Pantex as the only site, or consider the other two choices.

Response: *KAFB adjoins the city limits of Albuquerque, but is not part of the city. A portion of the airport is under control of the city, but not all of the airport facilities are. See discussion in sections 1.3.1 and 1.3.2, of this volume.*

RC: 01.042
Doc: CO-007/2

With all of the research, development, manufacturing and deployment poured into bomb-making, we are very short on environmentally sound methods for storage and disposition. Instead of the euphemistically named and costly program that is before us, we should be considering a "green" Manhattan II. The requirements for dismantlement should be to: 1) dispose of the components in such a way that they are not and could not be used in a bomb again, and 2) minimize, rather than contribute to, or perpetuate the waste stream of radioactive materials.

Response: *In response to Item 1: The Atomic Energy Act requires DOE to sanitize weapon components that are no longer needed through a process of destroying or removing classified or other controlled matter and to demilitarize weapon components through a process that results in an irreversible modification or destruction of a weapons component or part of a component to the extent required to prevent use in its original weapon purpose.*

In response to Item 2: The Pantex Plant Pollution Prevention/Waste Minimization Program originally implemented in 1991 has significantly reduced waste volumes. The success of the program was instrumental in being awarded the President's Closing the Circle Award.

Final disposition of weapon-usable surplus plutonium is within the scope of the S&D PEIS.

RC: 01.043
Doc: CO-005/10

The Agency should re-evaluate the risks to workers from low level radiation exposures using the risk factors reported in these studies. Such a reanalysis

would highlight the uncertainties associated with making predictions about the health effects of low level ionizing radiation. The issue of uncertainty in scientific theory is currently glossed by the misleading use of data from only one side of the debate.

Response: *See response to comment 14.129. The DOE understands that uncertainties exist in the methodology for evaluating human health risks. As discussed in volume II, appendix D.6 a degree of conservatism has been introduced to the calculations as a result of these uncertainties. However, DOE believes that the analysis presented in this EIS is reasonable for evaluating environmental impacts of the alternatives.*

RC: 01.044
Doc: PC-033/3

Page 5-55, Kirtland Air Force Base. Under the Pit Storage Relocation Alternative (section 3.13) the pit storage function currently carried out at Pantex Plant would be transferred to another site. The Manzano Weapons Storage Area (WSA) is the candidate storage site at the Kirtland Air Force Base. After reviewing pages 5-55 through 5-75, I believe that the Manzano WSA would be the ideal location for the storage of the plutonium pits. The Manzano Mountain facility has the structure in place (storing office furniture at present); security is available; aircraft seem not to fly in a direct pathway to the WSA; water, air, and soil should not be adversely affected; and the local population should be better protected from accidental releases in this type of facility with the 30 foot coverage and better structure of the magazines. Some of the magazines at Pantex are 40 years old and have been proven to be unreliable for plutonium storage. I am referring to the heat build up in some of the magazines this past year and the installment of air conditioning units. Protection from aircraft intrusion is not as great at Pantex, or terrorist missiles and/or bombs. Security has been proven to be very lax at times at Pantex and the proximity of the plant to the Amarillo International Airport (which is also used for military training flights), is also a concern. What are the reasons for not choosing Manzano WSA over Pantex if that is a reality? If the DOD enters into a Memorandum of Understanding (MOU) with the DOE and Manzano is used for pit storage, would the employees in charge of the Manzano WSA be employees of DOE or DOD?

Response: *See discussion in section 1.3.1, regarding site selection process.*

DOE is currently studying the air conditioning option in four pit storage magazines. By providing air conditioning, DOE seeks improved climate control through reduction in the range of seasonal and daily temperature fluctuation. DOE may choose to provide air conditioning to all pit storage magazines based on these test results. DOE is fully committed to improve Pantex Plant's safe and reliable pit storage operations. Like the recent Stage Right storage configuration enhancement and the proposed AT-400A pit storage container project, the air conditioning option is expected to enhance storage operations. The fundamental safety design of the magazines is the physical structure of the magazines not air conditioning, Stage Right, or AT-400A containers. These

enhancements are improvements to a sound pit storage management at Pantex Plant. Expect DOE to continue increasing the safety envelope.

The DOE and Pantex Plant take security issues very seriously. Please note the numerous safeguard and security enhancement projects listed in appendix D of the Pantex Plant Programmatic Information Document (Pantex 1996b).

The risks associated with aircraft accidents have been discussed and analyzed in volume I, section 4.15.

If Manzano is selected to conduct interim pit storage activities, the pits would remain under DOE control.

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3.2 Relationship to Other Environmental Impact Statements

RC: 02.001
Doc: HT02-08/4

The agreement to evaluate alternative storage sites for pits, specifically Department of Defense sites, seems to have been an insubstantial one since that site is not included in the actual storage EIS. If, as implied in the analysis, Manzano mountain becomes ineligible because of the threat such a facility represents to Albuquerque, what are we to make of the government's concern for the residents of the Panhandle?

Response:

As described in volume I, section 3.1.4, 60 DOD installations were screened by the Nuclear Weapons Council staff. With the exceptions of the Manzano Weapon Storage Area, located on Kirtland Air Force Base (at Albuquerque, New Mexico) and Seneca Army Depot (at Romulus, New York), the Council staff determined that none were feasible. Subsequently, it was determined that Seneca Army Depot would not be available as a candidate site for pit storage. In addition, see discussion in section 1.3.1 in this volume, regarding the site selection process.

For a discussion on the selection process for long-term storage of plutonium the commentor is directed to chapter 2 of the S&D PEIS.

DOE recognizes that all its facilities and all its hazardous materials, including plutonium, require varying levels of operational and environmental controls to protect the workers, the public, and the environment. DOE has worked with EPA, states, employees, unions, stakeholders, and the general public to develop programs and commitments to better manage its facilities and all hazardous materials. All of these plans and commitments have been reviewed to determine if there are any conflicts or restrictions which would inhibit the Pantex Plant from serving as a good location for the facilities proposed in the EIS. Nothing was found which would inhibit the Pantex Plant from performing the missions stated in the Proposed Action.

RC: 02.002
Doc: HT14/5

A systems analysis approach should be utilized to select the most effective method for processing [of plutonium] and interim storage [of pits]. This analysis should adequately address public and worker health and safety and environmental issues.

Response:

Processing of plutonium is not within the scope of the Pantex Plant EIS. The systems analysis approach is typically utilized in obtaining licenses, permits, and compliance assurance certification prior to operation of facilities. The systems analysis approach is not typically used in NEPA analysis. The Pantex Plant EIS has addressed public and worker health and safety and environmental issues. Moreover, the focus of the decision in this EIS is the location of the interim storage not the method. A standardized storage method (Stage Right) is evaluated in this EIS in order to compare the impacts at different candidate sites.

RC: 02.003
Doc: HT01-05/1

Based upon these reasons, I respectfully urge DOE to designate Pantex as the preferred alternative site for all existing and new stockpile management and

help limit the number of personnel occupational exposures and public/environmental exposures to radioactive material. The majority of Pantex Plant workers receive no radiation exposures (zero dose) during normal operations.

stewardship functions as well as consolidation of all plutonium storage a disposition and any related functions.

Response: *DOE Order 5480.11 and 10 CFR 835 specify a limit of 5 regarding the relationsh occupational workers.*

See discussion in section 1.3.2 in this volume, regarding the relationsh between the PEISs and the Pantex Plant EIS.

RC: 02.004
Doc: HT01-04/2

DOE recognizes to meet interim storage requirements, pits currently in storage at Pantex Plant would require workers to handle radioactive materials including Zone 4 and Zone 12 pit transfers. This exposure has been discussed and analyzed in the EIS. DOE's commitment to reduced exposures, includes the improved pit storage capabilities with the Stage Right automated pit storage system. When fully implemented this year, this system will significantly reduce Zone 4 worker exposures. The Stage Right system uses a remote-controlled forklift to retrieve, place, and inspect Pantex Plant pit storage facilities, thus reducing hands-on radioactive material management.

The EIS that deals with missile materials, storage, and disposition is one that have spent a good deal of time with. On the topic of storage, I feel like th we're seeing that Pantex in its current role is ideally sited for storage o plutonium pits. If it is anticipated that storage would continue to be in tha form, I don't think there's any question that Pantex, which is alread contemplated to have...or will have 21,000 pits in storage. But certainly th vast majority of the pits in storage at Pantex, it makes sense to continue tha function in that location.

Response: *See discussion in section 1.3.2 in this volume, regarding the relationship between the PEISs and the Pantex Plant EIS.*

RC: 02.008
Doc: HT13/27

I have a question or statement relating to how the sitewide and the two PEISs, the [storage] and disposition and the stockpile stewardship PEIS, are relating.

RC: 02.005
Doc: HT07/1

We just spent a lot of time working on bringing people from all over the state to the stockpile stewardship hearings, and the main topic of discussion is plutonium pit fabrication at Los Alamos, and here we are talking about thousands and thousands of plutonium pits being dismantled.

I just want to follow up and get the distinction, then, that the storage of up to 20,000 pits, those pits are what I'm going to call sealed, but you're talking about material that won't be sealed or will be packaged in some other fashion?

Response: *To elaborate on the response given at the public hearing, each pit is hermetically sealed inside a protective cladding which is bonded to the plutonium. In the future, these pits will be stored in containers known as AT-400A. AT-400A storage configuration provides double shell container protection or, in the words of the commentor, a "sealed" package. Currently, pits are stored in AL-88 containers. Pits are encased by metal. For weapons-usable fissile materials not in pit form, DOE would require similar multi-layer "sealed" package containment. DOE recognizes that all its hazardous materials, including plutonium, require proper packaging to protect the workers, the public, and the environment.*

It seems to me like the left hand doesn't know what the right hand is doing. One hand is trying to figure out what to do with pits, and the other hand is creating storage. Is that something that can in some way be tied in...if we have...pits, it seems to me confusing that we would need to refool them to different specifications.

Response: *See discussion in section 1.3.2 in this volume, regarding the relationship of the PEISs and the Pantex Plant EIS. For the purpose of clarification, weapons are dismantled, not pits. The intact, encased plutonium, or pit, from a dismantled weapon is placed in storage.*

RC: 02.006
Doc: HT13/15

Is there a reason why it is only being looked at as interim and not long term, o why is it suitable for one and not the other?

Response: *See discussion in section 1.3.2 in this volume, regarding the relationship of the S&D PEIS and Pantex Plant EIS.*

RC: 02.009
Doc: HT13/29

Two points I want to make are, one, the fact that we have such difficulty in figuring out what to do with 20,000 pits, which I certainly do and would hope that everybody here is, on the one hand, glad that we are getting 20,000 pits out of bombs. That is a good thing, but the fact that what comes from the good thing of having fewer warheads armed and able to destroy the world several times over is another problem, which is what to do with the 20,000 pits.

RC: 02.007

You may not want to talk about this, but it seems like the Department is taking

stewardship functions as well as consolidation of all plutonium storage and disposition and any related functions.

Response: *See discussion in section 1.3.2 in this volume, regarding the relationship between the PEISs and the Pantex Plant EIS.*

RC: 02.004
Doc: HT01-04/2

The EIS that deals with missile materials, storage, and disposition is one that I have spent a good deal of time with. On the topic of storage, I feel like that we're seeing that Pantex in its current role is ideally sited for storage of plutonium pits. If it is anticipated that storage would...continue to be in that form, I don't think there's any question that Pantex, which is already contemplated to have...or will have 21,000 pits in storage.... But certainly the vast majority of the pits in storage at Pantex, it makes sense to continue that function in that location.

Response: *See discussion in section 1.3.2 in this volume, regarding the relationship between the PEISs and the Pantex Plant EIS.*

RC: 02.005
Doc: HT07/1

I just want to follow up and get the distinction, then, that the storage of up to 20,000 pits, those pits are what I'm going to call sealed, but you're talking about material that won't be sealed or will be packaged in some other fashion?

Response: *To elaborate on the response given at the public hearing, each pit is hermetically sealed inside a protective cladding which is bonded to the plutonium. In the future, these pits will be stored in containers known as AT–400A. AT–400A storage configuration provides double shell container protection or, in the words of the commentor, a "sealed" package. Currently, pits are stored in AL–R8 containers. Pits are encased by metal. For weapons-usable fissile materials not in pit form, DOE would require similar multi-layer "sealed" package containment. DOE recognizes that all its hazardous materials, including plutonium, require proper packaging to protect the workers, the public, and the environment.*

RC: 02.006
Doc: HT13/15

Is there a reason why it is only being looked at as interim and not long term, or why is it suitable for one and not the other?

Response: *See discussion in section 1.3.2 in this volume, regarding the relationship of the S&D PEIS and Pantex Plant EIS.*

RC: 02.007
Doc: HT13/22

You may not want to talk about this, but it seems like the Department is taking the position that these workers' doses that we just talked about are inevitable, because even if the pits stay at Pantex, they will still have to be loaded out of Zone 4 and moved again, because the disposition PEIS says even if they all stay at Pantex, they would be loaded into Zone 12, is that correct?

Response: *To elaborate on the response given at the public hearing, the Department of Energy, through its contractor Mason & Hanger Corporation, is fully committed to the As Low As Reasonably Achievable (ALARA) program at Pantex Plant to*

help limit the number of personnel occupational exposures and public/ environmental exposures to radioactive material. The majority of Pantex Plant workers receive no radiation exposures (zero dose) during normal operations. DOE Order 5480.11 and 10 CFR 835 specify a limit of 5 rem per year for occupational workers.

DOE recognizes to meet interim storage requirements, pits currently in storage at Pantex Plant would require workers to handle radioactive materials including Zone 4 and Zone 12 pit transfers. This exposure has been discussed and analyzed in the EIS. DOE's commitment to reduced exposures, includes the improved pit storage capabilities with the Stage Right automated pit storage system. When fully implemented this year, this system will significantly reduce Zone 4 worker exposures. The Stage Right system uses a remote-controlled forklift to retrieve, place, and inspect Pantex Plant pit storage facilities, thus reducing hands-on radioactive material management.

RC: 02.008
Doc: HT13/27

I have a question or statement relating to how the sitewide and the two PEISs, the [storage] and disposition and the stockpile stewardship PEIS, are relating. We just spent a lot of time working on bringing people from all over the state to the stockpile stewardship hearings, and the main topic of discussion is plutonium pit fabrication at Los Alamos, and here we are talking about thousands and thousands of plutonium pits being dismantled.

It seems to me like the left hand doesn't know what the right hand is doing. One hand is trying to figure out what to do with pits, and the other hand is creating more. Is that something that can in some way be tied in...if we have...pits, it seems to me confusing that we would need to retool them to different specifications.

Response:

See discussion in section 1.3.2 in this volume, regarding the relationship of the PEISs and the Pantex Plant EIS. For the purpose of clarification, weapons are dismantled, not pits. The intact, encased plutonium, or pit, from a dismantled weapon is placed in storage.

RC: 02.009
Doc: HT13/29

... Two points I want to make are, one, the fact that we have such difficulty in figuring out what to do with 20,000 pits, which I certainly do and would hope that everybody here is, on the one hand, glad that we are getting 20,000 pits out of bombs. That is a good thing, but the fact that what comes from the good thing of having fewer warheads armed and able to destroy the world several times over is another problem, which is what to do with the 20,000 pits.

It is even more complicated because, as has already been stated, it would be one thing to say we know what to do with the 20,000 pits in the short term because we know what it do with the 20,000 pits in the long term. We know what the disposition is. In fact, we don't know what the disposition is.

I have talked about it in another context, so I will just summarize, I have no confidence that the disposition PEIS in fact is adequately analyzing or is going to come up with a possible reasonable solution for longer term what to do with

those 20,000 pits. So I think it is something that some of us in the public and hopefully people in the federal government will pay a lot more attention to in the future.

Response: *See discussion in section 1.3.2 in this volume, regarding the relationship of the PEISs and the Pantex Plant EIS.*

RC: 02.010
Doc: HT13/81

Have they decided what they are going to be doing with the metal components from Oak Ridge once they have disassembled the secondaries to the point that they could go into storage that is equivalent to what the plutonium storage would be, and would these sites possibly be considered in the future for storage of components of the secondaries the way we are currently looking at storage of the primaries?

Response: *The Disposition of Surplus Highly Enriched Uranium Final Environmental Impact Statement discusses and analyzes the disposition of surplus HEU at Oak Ridge. In addition, see discussion in section 1.3.2 in this volume, regarding the relationship of the PEISs and the Pantex Plant EIS.*

RC: 02.011
Doc: HT13/82

They were not planning on shipping any of those components that are disassembled from the secondaries back to Pantex or Albuquerque...—it is all going to stay at Y-12 and Oak Ridge?

Response: *See response to comment 02.010.*

RC: 02.012
Doc: HT13/83

You understand my general concern is, you develop a bunker that can store a pit in a storage vessel, then you have got a bunch of spherical uranium or plutonium in the secondary components that need to go in at some point in a storage bunker inside a container format. Wouldn't we be looking at the potential of once we put, for example, an Albuquerque bunker system into process, we'd be looking at potential in the future getting more than just primary pits and looking at potentially getting a variety of others?

So the can subassemblies would be going into underground storage at Oak Ridge?...

Response: *See response to comment 02.010.*

RC: 02.013
Doc: CO-010/1

... We do not believe that the community and stakeholders would support such an action by the Department unless the site were also to be utilized for the processing of the plutonium to a stable form for safe interim storage. Hanford would also be an ideal site for the processing of the excess plutonium either for vitrification of fabrication into reactor fuel for irradiation prior to disposal.

The site has the capability by operation of either or both the Fast Flux [Test] Facility (FFTF) and the WNP-2 Nuclear Power Plant on mixed oxide cores to dispose of a substantial portion of the excess plutonium within the foreseeable future. This capability when coupled with the available mixed oxide fuel fabrication capabilities of the Fuel and Materials Examination Facility (FMEF)

offers a single site processing and irradiation for disposal capability not found at other potential storage sites. We believe that the Draft EIS should be revised to objectively evaluate this option in conjunction with the excess weapons disposal Draft EIS.

This area would be expected to be supportive of an excess plutonium storage and disposal mission provided that the related processing and fabrication tasks were also assigned here. Submitted herewith for the record is a position statement recently adopted by the Hanford Advisory Board [that] relates to the disposal of excess weapons materials by irradiation in the FFTF. The Hanford Advisory Board is a DOE sponsored stakeholder group representing various interests in the states of Oregon and Washington. This statement is consistent with the position we have stated above on this subject.

Although the storage of excess weapons plutonium at Hanford in available facilities without further processing or utilization is probably significantly more economical than the construction of new facilities at other sites, we do not feel that this is in the best interests of the community unless a concurrent processing mission was assigned to the site. A single purpose storage mission would be opposed due to the potential conflict of other diversification initiatives.

Response: *DOE believes the interim storage alternatives covered under the Pantex EIS are a reasonable management course for plutonium in pit form. In addition, see discussion in section 1.3.1 in this volume, regarding the site selection process, and section 1.3.2 regarding the relationship between S&D PEIS and Pantex Plant EIS.*

RC: 02.014
Doc: PC-024/5

Page S-10, right column, "Related National Environmental Policy Act Studies" The Pantex FEIS should reflect delays in other EIS such as the SS&M PEIS and the NTS EIS.

Response: *The purpose of the summary is to inform the public that several NEPA documents, including SSM PEIS and NTS EIS, are ongoing and could have impacts at Pantex Plant. The schedule of decisions in those documents does not impact the assessments contained in the Pantex Plant EIS. Cumulative impacts related to changes in Pantex Plant operations from decisions resulting from the SSM PEIS, the S&D PEIS, and the WM PEIS are presented in the Pantex Plant EIS.*

RC: 02.015
Doc: PC-024/6

Page S-13, left column, boldface. The title and the DOE control number for the NTS EIS should be corrected to reflect changes that were made over six months ago.

Response: *The section has been corrected.*

RC: 02.016
Doc: PC-024/7

Page S-13, right column last three lines. This statement should indicate more than the existing waste connection. It should mention the proposals to store plutonium-239 pits there.

Response: *Consideration of interim storage and long-term storage of pits is not within the scope of the NTS Site-Wide EIS. See discussion in section 1.3.2, in this volume.*

RC: 02.017
Doc: PC-024/11

Page 5.6, left column, 3rd paragraph. It mentions that "[t]he P-Tunnel is also being proposed for the long-term storage and disposition of weapons-usable fissile materials." The folks at the NTS are trying to sell the use of limited tunnel space for two different purposes at the same time. It is unlikely that it will be used for both purposes and therefore the competing EIS purposes need to be addressed.

Response: *One of the alternatives in the S&D PEIS is long-term storage and disposition of weapons-usable fissile material in the P-Tunnel at NTS. The 20,000 pits that are addressed for interim storage in the Pantex Plant EIS are part of the inventory of weapons-usable fissile material in the S&D PEIS. Selection of P-Tunnel for interim storage of pits and long-term storage of weapons-usable fissile material would not be using limited tunnel space for two different purposes, but rather for the same purpose.*

RC: 02.018
Doc: CO-006/2

In the Draft S&D PEIS, DOE characterizes Pantex as having the "greatest potential" to experience adverse cumulative impacts from an increased role in plutonium storage and disposition.... These conclusions also totally contradict those contained in the SWEIS which characterize the impacts as "minimal" and "negligible." It is imperative that DOE correct the inaccurate mischaracterizations before making its final decisions for plutonium storage and disposition missions.

Response: *Environmental impacts associated with interim storage of pits are within the scope of the Pantex Plant EIS. Environmental impacts associated with long term storage and disposition are within the scope of the S&D PEIS. The analyses presented in the two EISs are both correct since disposition would introduce plutonium processing not currently done at Pantex.*

RC: 02.019
Doc: HT16/7

I really would like to understand why you [have] all...those cumulative impacts in here like you have, for instance, on...page 4-239, where you're talking about the Storage and Disposition PEIS. And the last sentence in there is: All doses would be within radiological limits and well below levels of natural background radiation, et cetera.... This document has consistently referred back to the three PEISs and made...statements about impacts that it doesn't seem to me [that] this document has the information to do. Can you...talk to me a little bit about that? It [the EIS] gives the impression you're making solid judgments that I don't think the information is sufficient to do.

Response: *The Pantex Plant EIS has detailed information on the impacts of continued operations at Pantex Plant. Each PEIS has detailed information about the impacts of its subject programs. The cumulative impact sections in the Pantex EIS incorporates the information from the PEISs by reference and presents the total cumulative impact. Incorporating information by reference is part of the NEPA analysis process. The "Cumulative Impacts" sections of this EIS address*

to the extent possible information relevant to Pantex Plant. For detailed discussions of environmental impacts evaluated in the other PEISs, the commentor is referred to those documents.

RC: 02.020
Doc: HT16/9

The second issue I raise, though, is, for a number of the types of operations that are being talked about for the future—plutonium conversion facilities, plutonium processing facilities, MOX fuel facilities, a new revolutionary [evolutionary] light water reactor—there really [is] no history. There [is] no good history to go on in terms [of] what the actual releases are. So you're basing your analysis on what the current or assumed regulatory levels are going to be, [not] on, in fact, historic performance. And so the point is that you should be quite clear about that, which I think, in some cases, it's really not. For example, on page 4-239 that Ms. Gattis just mentioned to you, I think it would be very helpful if you would just say, in terms of some of these facilities, there isn't historic data to base it on, so we are basing our analysis on these plants [that] are assumed to operate within the applicable regulatory limits.

Response: *See response to comment 02.019.*

RC: 02.021
Doc: HT17/24

I would much prefer to see the Nevada Test Site deal with that particular material [plutonium] as the last residue of a very difficult part of this country's history and one [that] we are better off dispensing with, not continuing into the future.

Response: *See discussion in section 1.3.2 in this volume, regarding site attributes.*

RC: 02.022
Doc: HT17/27

Hearing tonight about transferring plutonium processing from Rocky Flats, which was judged by a DOE report the site most likely to constitute a threat to human life, a nine on a scale of ten, followed closely by Pantex, which was an eight on a scale of ten, gives me some pause for thought. Both of those sites were rated ahead as threats to human life over the notoriously contaminated Hanford complex.

Response: *See response to comment 02.001, regarding hazardous materials.*

RC: 02.023
Doc: HT17/46

...I appreciate the fact that some of the things that I mentioned may be covered in other documents, but I believe that this study itself has to deal with those things. It will be making some of those decisions in the fact that it does include those other documents, and I feel like it has inadvertently left out some of those issues, and that needs to be more carefully addressed.

Response: *See response to comment 02.019.*

RC: 02.024
Doc: HT17/72

...if the nuclear waste that is at such places such as Rocky Flats and that has been refused by governors of other states is to be...brought down here, I assume there will be the same problems as there are at other places, and it probably just needs to be looked at a little bit more carefully.

Response: *The WM PEIS addresses DOE programmatic waste management issues and alternatives. In addition, see response to comment 02.001 regarding hazardous materials.*

RC: 02.025
Doc: PC-017/12

Page 4-82 states that pit reuse is not a current activity at Pantex Plant. Can you assure us that the reuse will never become an activity at Pantex? Is reprocessing, MOX, or other potential pit activities ever to be an activity at Pantex? If so, should not those issues be considered and studies on their effects on health and safety for workers, neighbors, and agricultural workers, the potential contamination of our water, air, and agricultural activities and products be addressed before the future at Pantex is determined?

Response: *Noninvasive activities connected with pit reuse are part of the Proposed Action. See the discussion in section 1.3.2 in this volume, for further discussion of the plutonium activities addressed in the S&D PEIS.*

RC: 02.026
Doc: SG-012/9

One alternative considered in the DEIS could have been placing plutonium in a permanent disposal, deleting interim storage (especially at Manzano WSA) as an alternative.

Response: *See discussion in section 1.3.2 in this volume, regarding S&D PEIS. In addition, see response to comment 02.001 regarding site selection.*

RC: 02.027
Doc: MG-002/4

For example, the Stockpile Stewardship and Management PEIS includes an alternative which describes the complete closing of the Pantex Plant with its capabilities relocated to NTS, Los Alamos and Lawrence Livermore facilities. The Pantex EIS does not address the implications of this alternative. This issue should be addressed in the final EIS and the Record of Decision.

Response: *See discussion in section 1.3.2 in this volume, regarding SSM PEIS.*

RC: 02.028
Doc: SG-003/11

In the Summary, page S-11, right column, the discussion on Stockpile Stewardship and Management Draft PEIS omits the "Downsize Pantex with transfer of HE Operations" option briefed as a preferred alternative at the April 22-23, 1996 meetings. The Stockpile Management Preferred Alternatives Report, pages 17 through 20 discusses fiscal impacts related to the transfer of HE operations for fiscal years 1996 through 2020. If this issue is anticipated to impact the Texas Panhandle during the tenure of the Pantex SWEIS, the effect of transporting a large number of HE components over the roadways needs to be included.

Response: *See discussion in section 1.3.2 in this volume, regarding the SSM PEIS.*

RC: 02.029
Doc: SG-003/12

In the Summary, page S-12, right column, the Light Water Reactor disposition alternative from the Storage and Disposition of Weapons-Usable Fissile Materials PEIS has not been removed, although it was indicated in the April

meetings that the [Light Water Reactor] (LWR) was no longer being considered for Pantex. This issue requires clarification.

Response: *Final disposition of plutonium alternatives are within the scope of the S&D PEIS. Since the Record of Decision on this PEIS has not yet been announced, LWR continues to be discussed in the cumulative impact section of this EIS.*

RC: 02.030
Doc: SG-010/1

In reference to interim storage of plutonium pits at Pantex, Nevada's position on this issue continues to be that DOE should adopt a proposed action for the permanent disposition of surplus plutonium pits before selecting new interim or long-term storage sites for this long-lived material. In addition, to reduce duplication in storage, transportation, and security costs and to address risks associated with the proliferation of weapons-grade plutonium, DOE should consider adopting a program that combines materials disposition (e.g., plutonium vitrification) with long-term plutonium storage.

Implementing the Proposed Action as defined in the DEIS would enhance such a program; it would also help prevent redundant shipping campaigns of plutonium bearing material on public roads and highways. This is important since excessive transportation of plutonium on public roads remains controversial and is generally unacceptable to the public. For all of these reasons, officials in Nevada have long stated that "DOE should link long-term materials consolidation and management with options for final materials disposition."

Response: *A description of the transportation of pits and the expected increase in risk is presented in volume I, section 4.16.*

RC: 02.031
Doc: SG-010/4

As previously suggested, State officials in Nevada believe that DOE should link long-term fissile materials consolidation and storage with options for final materials disposition, and we believe the proposed action presented in the Draft EIS for Pantex supports this concept. As such, we continue to advocate a strategy that would bring together long-term pit storage with one or more of the plutonium disposition treatment options being considered in DOE's Storage and Disposition PEIS.

Response: *See discussion in section 1.3.2 in this volume, regarding S&D PEIS.*

RC: 02.032
Doc: PC-030/1

While I am reasonably comfortable with interim storage of plutonium pits, I believe that facilities for long-term storage should not be constructed at Pantex or any other site when there is already an adequate facility at the Manzano Weapons Storage Facility at Kirtland AFB in Albuquerque.

Response: *See discussion in section 1.3.2 in this volume, regarding S&D PEIS.*

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3.3 Facilities and Infrastructure

RC: 03.001
Doc: HT13/3

The document [page 5-55] also says that construction began June, '47, and became operational in April of '50, so that would essentially say that the bunkers we are talking about are more than 45 years old. My specific question is, what is the design life of those bunkers?

Response:

Design life is a construction criteria specification rather than an operational capability criteria. More appropriately, the remaining life cycles of the bunkers, like those magazines currently at Pantex, are typically greater than 30 years. Design life of facilities can be extended with routine maintenance. The Nuclear Weapons Council Staff, using DOE Site Screening criteria, determined the degree of construction required to adapt existing Manzano facilities for the pit storage mission as feasible. Although Manzano is not the preferred alternative, if selected and prior to the operation of pit storage activities, DOE would complete a Safety Analysis Report and Operation Readiness Review to further document the safety of the facilities.

RC: 03.002
Doc: HT13/5

... The design question is an important one, I think, from a variety of standpoints. So my request would be that we get some more detailed design and engineering analysis of the bunkers in terms of design life, design capability. The major had said some of them [the bunkers] need to be upgraded. It seems to me we need to have more specific information on those things.

I didn't see any references in the document that give me that kind of detail, so if I have missed it, I'd like somebody to tell me if there is a document that describes it. I'd like to know what it is. If there isn't a document that describes it, I'd like to know how that information is going to be presented.

Response:

See response to comment 03.001. During the selection process, as discussed in volume I, section 3.1.4, several of the magazines at Manzano were visually inspected and found to require only very minor work, such as adjustments or replacement of doors. The great majority of any upgrades that would be needed to use the Manzano Weapons Storage Area is actually not to the magazines themselves, but to reactivate the security fence sensor system. While the fence itself is intact, the computer and sensors used to detect intrusion would need upgrades. The selection process documentation is available upon request.

RC: 03.003
Doc: HT12/20

Does Pantex conduct a plutonium storage operation in facilities that are considered to be nuclear facilities, rated nuclear facilities, and...that conform to the DOE orders for nuclear facilities 6431A, for instance?

Response:

Yes, pit storage magazines are defined as Category 2 "non reactor nuclear facility" in appropriate DOE standards. In addition, see response to comment 01.019.

RC: 03.004
Doc: PC-024/9

P. 5-3, left column, last line. The Final Pantex EIS should clearly explain the real reasons for the existence of the DAF and the P-Tunnel complex. The $100 million Device Assembly Facility was designed and constructed in anticipation of an expanded nuclear explosive testing program at the [Nevada Test Site (NTS)]. It was intended to be the assembly point for the nuclear explosive devices. Since our nuclear test moratorium went into effect in 1992, its primary mission ended about 3.5 years before it was completed. It is now being used to assemble nuclear and nonnuclear devices which involve large amounts of high-explosives. The Pantex DEIS does not address any compatibility problems associated with pit storage and high-explosive assembly work at the DAF.

Response:

The selection of site alternatives for interim pit storage was accomplished by developing site suitability criteria, applying the criteria to candidate sites, and determining the best sites to represent the range of reasonable site alternatives. The selection of site alternatives is discussed in volume I, chapter 3. The Pantex Plant has been identified as the preferred alternative.

Volume I, section 5.2 discusses the DAF's original mission and notes the design of the DAF was based on the Pantex Plant designs for nuclear explosive operations. The original design of the DAF includes both nuclear explosive operation and a pit storage capability.

The current mission of the DAF is to maintain readiness to resume nuclear testing, if required, for national security. Only a portion of the DAF will be dedicated to that mission. The remainder could be made available for storage of up to 8,000 pits. Long term nuclear explosive contingency operations and NTS alternatives are within the scope of the SSM PEIS.

Volume I, section 5.2 also discusses the P-Tunnel's original mission and design.

RC: 03.005
Doc: PC-024/10

The P-Tunnel complex was constructed for the Defense Nuclear Agency's (DNA) nuclear explosive test program which also ended in 1992. The tunnel complex was an alternate, and often much more expensive, way of performing underground nuclear explosion tests. Cost per test were often in the range of many tens of millions of dollars. Several DNA nuclear explosives test were conducted in this tunnel complex. Page 5-7, Figure 5.2.3.--Layout of P-Tunnel at the Nevada Test Site., contains a drawing of the existing complex. This map drawing should point out the locations and names of the nuclear test waste cavities. This, or a updated version of this map, should indicate where, in the vast tunnel complex, the proposed pit storage would take place. The Pantex DEIS makes no mention of where, in the many miles of tunnels, the pits might be stored, The NEPA FEIS should provide such information.

The DNA's nuclear explosive program has been suspended.

The side tunnels used for previous nuclear tests are all permanently sealed off. Disclosure of their location on the map is not necessary since they would not have any effect upon pit storage (in the main tunnel) or on the Stage Right equipment and operators. For pit storage, P-Tunnel would require minimal

facility upgrades (primarily the installation of guide rails for a Stage Right forklift). The P-Tunnel alternative is well suited for the Stage Right equipment and techniques successfully implemented at Pantex.

In addition, see response to comment 03.004.

RC: 03.006
Doc: PC-023/5

I hope that the Department of Energy has thoroughly inspected buildings on site [that] have been subjected to such energy from explosive testing over many years of Pantex Plant operations. Structural integrity of Pantex Plant facilities, especially storage locations for plutonium pits, is extremely important to the safety of Pantex employees and area residents.

Response:

Volume I, section 4.3 discusses and analyzes environmental impact alternatives on plant facilities and infrastructure. Pantex Plant annually publishes a Capital Assets Management Process Report which includes rating each facility's condition and remaining lifecycle. Pantex Plant facilities and infrastructure are subject to numerous internal and external audits, inspections, reviews, and surveys on an annual basis. DOE understands and is committed to the safety of Pantex employees and area residents.

RC: 03.007
Doc: HT17/64

... In looking at what the range of activities would be to even continue on with those current missions that are outlined for the next ten years, I really don't think that in that period of time you would think that you wouldn't need to do a number of other upgrades and changes in your facilities besides the six that are specifically mentioned in this document. And I think you need to do a much better job of analyzing...the age of buildings...[if] you're going to keep going with continuing operations over a ten-year period of time that you say that this document covers.

Response:

DOE considers sitewide NEPA documentation to be living documents requiring periodic review and updates as appropriate. Tiered NEPA documents may also be needed. DOE has an established NEPA program to handle issues regarding routine upgrades and maintenance of DOE facilities. Since 1990 Pantex Plant, has initiated 354 environmental checklists and NEPA related documents. 206 of the 354 were identified as upgrades, repairs, improvements, and maintenance related activities. Additional language has been added to volume I, section 4.3.1.

Most projects for upgrades, repairs, improvements, and maintenance are relatively small in size and scope and do not require performance of an Environmental Assessment or EIS. Larger projects, such as the six evaluated in this EIS must proceed to the conceptual design phase before sufficient information is available for adequate analysis. The six facilities evaluated in this EIS, represent the only foreseeable major projects that currently have sufficient maturity of conceptual design to allow assessment of environmental impacts.

RC: 03.008
Doc: PC-025/3

Why is infrastructure included in environmental impacts and as an additional consideration? Like my comments on SSM and S&D, if national security and nonproliferation [are] so important, why aren't the environmental impacts discussed in the infrastructure section as a capability, assets, problem, etc. in this document?... Does Pantex out perform its alternative sites on these issues? If so, the decision maker needs to know to make a reasonably informed decision.... Why isn't security capabilities addressed in infrastructure impact analysis so impacts can be reviewed and decide a true course of action? DOE should consider redoing infrastructure analysis to include security related environmental impacts.

Response:

In determining reasonable relocation alternative sites, as discussed in volume I, section 3.1.4, the DOE Site Screening Committee and the Nuclear Weapons Council Staff screening methodology included assessment of the degree of construction required and the degree of isolation. Thus, the security capabilities were assessed. Current Pantex pit storage operations were used as a baseline for comparison purposes. Security and nonproliferation activities are part of routine activities performed by Pantex Plant. All sites considered as alternatives would be capable of securely and safely storing pits.

Volume I, sections 4.3.2, 5.2, 5.3, 5.4, and 5.5 discuss and analyze alternative site facilities and infrastructure including security assets (e.g., material access control) in the EIS.

For clarification, the phrase "... national security, and infrastructure." has been changed to "... national security, and site specific factors (e.g., local and political support, intellectual and technical competencies).

An expanded discussion of the Pantex Plant Safeguards and Security Program is available in the Pantex Plant Programmatic Information Document (Pantex 1996).

RC: 03.009
Doc: PC-025/12

On Page 4-11. What level of security is the burning ground, zone 10, and firing sites under? The nonshaded area of DOE owned property is under what level of security? The DOE leased property shading is not found in the legend—what level of security is this?

Response:

DOE cannot disclose levels of security involving nuclear weapons sites or facilities.

RC: 03.010
Doc: PC-025/13

Page 4-16. Should it be waste management activities' utilities?

Response:

Yes, the word utility has been made plural.

RC: 03.011
Doc: PC-025/14

Page 4-18. Why Pit Storage Activity? Section 4.4, 4.5, etc. use Activities. In Waste Management Activities. Why no discussion about RCRA Closures?

Response:

The section title has been changed to "Pit Storage Activities." RCRA Closures are included in volume I, section 4.3.2.1, Environmental Restoration.

RC: 03.012
Doc: PC-025/15

Page 4-18. Why Environmental Management? Section 4.4, 4.5, etc. call it Environmental Restoration?

Response:

The title and introductory sentence have been changed to read "Environmental Restoration" to be parallel with sections 4.4 and 4.5 of volume I.

RC: 03.013
Doc: PC-025/16

Page 4-16 uses Environmental Restoration. Should page 4-18 include closures, page 4-16 does.

Response:

See response to comment 03.012. The text on page 4-18 of volume I of the Draft EIS states that the impacts are the same as those described on page 4-16. No change was made to the EIS.

RC: 03.014
Doc: PC-025/17

General comment in section 4.3. ...Why isn't more presented about nonproliferation and sanitization and demilitarization in this section? Please include environmental impact analysis of these issues in the infrastructure section based on methodology definition on page 4-3 as a support requirement and SSM & S&D emphasis to the issues. How are nonproliferation and sanitization and demilitarization infrastructure effected by the varying levels of activities as required by methodology on page A-l? Is there a backlog? What are the environmental impacts?

Response:

The environmental impacts from sanitization and demilitarization operations have been incorporated into impacts addressed in Air Quality and Waste management. Sanitization and demilitarization operations of high explosives at the Burning Ground are included in the air quality modeling. Solid wastes generated in the sanitization and demilitarization of weapon components are included in the waste volume projections for the three levels of weapon activities. To account for fluctuations in waste generation rates a 10% margin was used in the analysis.

RC: 03.015
Doc: PC-028/10

Page 5-58, para. 5.5.1.1. The recommendation to utilize the Manzano WSA facilities ignores a very real condition. The Manzano WSA was built in the mid 40's to 50's. Much of the facilities have not been improved over the years. The major plants have water leakage problems along with the storage magazines. The electrical system is outdated and has chronic problems, the fence security system and fence are in need of major repair and upgrade. The facilities infrastructure, except for the Phillips Lab R&D facility at Manzano, [has] been economically neglected and this is why Manzano WSA is not being utilized at historical or design levels. There will be significant cost, overlooked in the Draft EIS, in putting a pit storage area on KAFB.

Response:

The conditions described apply to Plants 1 and 2 and their associated tunnels which would not be used for pit storage. The magazines that would be used for pit storage are not connected to those problem facilities and are, in fact, in excellent condition. See response to comment 03.002 regarding the upgrade to the fence.

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3.4 Land Resources

RC: 04.001
Doc: HT02-08/3

There is again no consideration of the most basic industry of the Panhandle, agriculture.

Response:

The EIS has been revised to expand the discussion on agriculture in sections 4.4, 4.5, 4.6, 4.9 and 4.11 in volume I of this EIS. Additional information on these sections is provided in the Land Resources section of the Pantex Plant's Environmental Information Document (Pantex 1996). The proposed action is not expected to adversely impact the agricultural industry of the Panhandle.

RC: 04.002
Doc: CO-008/36

Page 4-40, Paragraph 1, "By virtue of 30 TAC 335.557 (3), the future land use designated at Pantex Plant is nonresidential." How are current agricultural activities on DOE owned land classified?

Response:

DOE owns approximately 2,596 hectares (6,421 acres) of land currently used for agricultural purposes within the combined Main Plant and Pantex Lake areas. These areas are managed by Texas Tech University (TTU) through a service lease agreement with DOE. TTU in turn subleases to local farmers. These local farmers can produce crops or raise cattle. Agricultural activities on DOE property can be limited to the extent necessary to meet Pantex Plant mission needs.

The classification of future land use is a process related to the environmental restoration process as it relates to clean-up levels. This comment specifically addresses the soil and sediment quality at solid waste management units on Pantex Plant, as discussed in volume I, section 4.5.1.3 of this EIS. Neither RCRA nor CERCLA govern agricultural activities at Pantex Plant. However, both RCRA and CERCLA drive environmental restoration activities on DOE property. Both have provisions to protect natural resources at Pantex Plant.

RC: 04.003
Doc: HT12/3

Today at SRS we have a good future use plan. I am concerned that all of the other sites might not have a similar plan. Our SRS future use plan is an effort to ...maintain the largest national wildlife research area in America. I hope the undeveloped areas at all of the sites have that same protection for their wildlife. With SRS's future use plan, all future development is restricted to only areas that have had prior development. No undisturbed areas are to be developed.

I wish that DOE would make this a DOE-wide policy. I know how developers prefer to build on undeveloped land and are reluctant to take land previously used and reclaim it for new development. Future development on all DOE sites start the trend in America to build new on old abandoned sites.

Response:

The DOE Land and Facility Use Planning process (DOE P 430.1) outlines future site development and reuse based on the shared long-term goals of the Department, the sites, and the stakeholders. Pantex Plant has a Multiple-Use Land Plan which addresses continued land-applied chemical use and grazing in sensitive areas of the Plant as well as a Site Development Plan (DOE 1995j)

which addresses the present and future framework for site operations. Four of the playa lakes at the Pantex Plant Site and Pantex Lake have been designated as wetlands. These areas are intended to protect and/or ensure surface water quality and allow compliance with applicable air, water, and other natural resources quality requirements, as well as protecting historical and archaeological sites and ecological resources. The facility construction and modifications presented in the Proposed Action alternative all occur on previously disturbed areas within Zones 11 and 12.

RC: 04.004
Doc: HT12/5

This has to do with the future use of SRS. ...by the way, I just wrote a book on environmental uses of the Savannah River Site.... So I've done a little research, it's just not off of the top of the head sort of thing. But what I want you all to keep in mind is that if we look at a primary use which is industrial,...nuclear or non-nuclear, you can do a lot of things using the land use concept and multiple use, okay? You've got the primary use right here [that] would be the project that you all are talking about now. And as you go out from this primary area the protection increases.

Are you all aware of this Land-Use Baseline Report that was put out? Well, I want to submit that for you all to look at and read, okay. ...It's a synopsis of what the attributes of the Site are.

Response:

The potential interim storage of pits at Savannah River Site (SRS) is in accordance with the Land Use plans at the site. DOE has reviewed and considered the Land Use Baseline Report in evaluating the impacts.

RC: 04.005
Doc: HT12/37

Savannah River can take these projects and it won't affect the environment. As a matter of fact, if you use a careful planning you can take these projects, put them in the core, we've got 310 square miles, put them in the core and even increase environmental activities in these four or five areas. Does that help?

Response:

The Pantex EIS concluded that use of this federal facility will not affect current missions at SRS, nor will it affect the multiple environmental uses of the site.

RC: 04.006
Doc: PC-024/8

Page 5-3, left column, "The Nevada Test Site," 3rd line. Change the word "owns" to "operates". Change 350,000-hectare to 322,195-hectare and change 864,000-acres to 796,160-acres—the later values are the legal values.

Response:

Text and land area in section 5.2 have been changed in the final EIS with data from the Draft Environmental Impact Statement for the Nevada Test Site and Off-site Locations in the State of Nevada (DOE 1996c). We now state that NTS encompasses approximately 3,500 square kilometers (1,350 square miles) of land area reserved to the jurisdiction of the DOE.

RC: 04.007
Doc: PC-024/16

And finally, I should mention that all the maps of the Nevada Test Site, that are presented in this document, need to be corrected before the Final Pantex EIS is issued. The maps should show the block of land that was withdrawn under Public Land Order 1662, that was to be used in connection with the NTS (23FR

4700). A proper map of the test site can be found on page 4-10 of the "Draft Environmental Impact Statement for the Nevada Test Site and Off-site Locations in the State of Nevada," January 1996 (DOE/EIS 0243).

Response: *The NTS maps have been corrected to include the block of land withdrawn under Public Land Order 1662.*

RC: 04.008
Doc: HT17/42

The tremendous growth of agribusiness, especially the fed beef industry and beef processing industry in the Texas Panhandle, has occurred during the time span that Pantex has been operating. I think that's pretty good evidence that agribusiness and Pantex can coexist successfully on both counts. I think it's really unfair to couch things as being either pro Pantex or pro agriculture, because they farm onsite at Pantex, they farm around Pantex, there's no problem with the crops that are raised there, and people need to look at the big picture.

Response: *This EIS is being prepared in response to the National Environmental Policy Act, which requires a thorough assessment of any Federal undertaking that may significantly impact the environment, the populace and the local area. Serious consideration is given to existing and potential impacts to all areas, including agriculture, prior to making a decision on a proposed action. This is a method of looking at the "big picture" through documented, and comparative, research and analysis.*

RC: 04.009
Doc: HT17/45

...it was very distressful to [me] and other people that had noticed that farming and agriculture, as important as it is, was basically ignored in a lot of these documents or barely mentioned, possibly four paragraphs, a little over, in this document that I noticed.

Response: *Agriculture is discussed in volume I, sections 4.4, 4.5, 4.6, 4.9 and 4.11 of this EIS. These sections have been updated with additional information concerning the region's agricultural base.*

RC: 04.010
Doc: PC-025/18

... Is Pantex zoned for agriculture, ranching, water utility, irrigation, treatment, disposal, industrial, residential...? Please analyze the above operations for zoning compatibility including this example: If the plant is not zoned for residential use, does the fire department qualify as residential?

Response: *Zoning is characteristically done in municipalities. Pantex is not inside the boundaries of a municipality. The Pantex Plant is not a residential area. The Plant has a fully staffed fire department located in Zone 12 North. See discussion in section 1.3.3 in this volume.*

RC: 04.011
Doc: PC-025/19

On page 4-22. Recommend detailing the location of schools and elderly meeting places including elderly care facilities. It seems to me children and elderly are sensitive areas.

Response: *Because the impacts to the baseline population as a whole are so minute, looking at individual populations is not warranted. However, the 134 primary and*

secondary schools and the 6 institutions for higher education in the region of influence together with the 27 nursing/convalescent homes in the 9 county region have been included in section 4.4.1.2. in volume I.

RC: 04.012
Doc: PC-025/90

Land Resources assessment methodology is flawed because it does not assess decontamination and decommissioning programs, as stated. There is a flaw since no zoning analysis exists in the analysis to prove or disprove incompatibility. [Where] is an analysis of the Deed?

Response:

At this time no plans have been finalized for the decommissioning of any facilities at Pantex Plant. The designation of facilities is pending decisions regarding the future of Pantex Plant being made in the SSM PEIS. Legal documents concerning land rights were examined and are mentioned in volume I, the summary, chapter 1 and section 4.4.

RC: 04.013
Doc: CO-008/37

Agricultural activities are one aspect of the Pantex Plant. These agricultural operations impact Pantex Plant's natural resources [considerably] and yet have received only cursory mention in various sections in the [EIS]. Because agricultural activities have not been detailed in the document as a continuing operation of Pantex, are agricultural activities not to continue on the public's Federal land, or has the public subtly been denied the opportunity to comment on this use?

Response:

DOE owns approximately 2,596 hectares (6,421 acres) of land currently used for agricultural purposes within the combined Main Plant and Pantex Lake areas. These areas are managed by Texas Tech University (TTU) through a service lease agreement with DOE. TTU in turn subleases to local farmers. These local farmers can produce crops or raise cattle. Agricultural activities on DOE property can be limited to the extent necessary to meet Pantex Plant mission needs. However, at this time there is no documentation that suggests that agricultural activities on Pantex Plant will be discontinued. For the impact of this agriculture to soils at Pantex see volume II, appendix I. For impacts to water usage see the discussion in volume I, section 4.1.6.1.

RC: 04.014
Doc: PC-027/5

Before planning to use the Manzano area as a "pit storage" site, coordinate with the base tenants to include Phillips Laboratory. The Manzano area is used for some research and development which may or may not be compatible with the your proposed nuclear pit storage.

Response:

The tenants that will be affected by the interim storage of pits at the Manzano WSA have been considered throughout the EIS process (refer to volume I, section 5.5). Further coordination with these tenants will be initiated if interim storage at this facility is chosen in the Record of Decision. See also response to comment 04.015.

RC: 04.015
Doc: PC-028/3

Page 5-58, 2nd column, para 5.5.1.2. The statement that Manzano WSA is currently being used, in part, [to store] furniture and documents is entirely

misleading. Phillips Lab has a major R&D operation in the WSA. The addition of a pit storage facility will have a major impact on access to R&D operations and dramatically change the security posture within WSA.

Response: *The discussion cited focused only on the current uses of the magazines that would be potential locations for pit storage. There are other facilities in Manzano WSA, as the commentor states, but those facilities would not be used for or affected by pit storage.*

RC: 04.016
Doc: SG-010/3

In an unrelated issue, we note that the Nevada Test Site is described in the DEIS as a "government owned, contractor-operated facility, currently managed by Bechtel Nevada [and] DOE owns the 864,000 acre site in Nye County, Nevada." This statement is incorrect. DOE does not "own" the Nevada Test Site. The Test Site occupies public lands that have been withdrawn for nuclear testing purposes only. The Final EIS for Pantex must acknowledge that the Public Land Orders for the Test Site do, in fact, limit the use of the site to weapons testing and related research and development facilities only. Moreover, when the Nevada Legislature ceded its jurisdiction to the public lands that now comprise the site, it did so on the basis of certain stipulated uses (i.e., nuclear testing) as defined in the Public Land Orders. Thus, while many believe the lands comprising the Nevada Test Site are federal lands, they are in fact public lands that have been withdrawn for a specific national defense purpose, and that purpose does not include long-term storage of fissile materials, [nor] development of any major disposition technologies such as plutonium immobilization.

Response: *The suggested change was incorporated into volume I, section 5.2.*

RC: 04.017
Doc: CO-005/2

In analyzing impacts in this document, the most important issue has to be the region in which the Pantex Plant is located. With the mission of Pantex and related activities being conducted in the heart of production agriculture and the beginning of the food chain, the presumption that these activities do not impact agriculture must be fully assessed.

Response: *See response to comment 04.009.*

RC: 04.018
Doc: PC-033/6

I would suggest that the DOE investigate this area further and include more in depth information in the final [EIS], (i.e., land devaluation in the immediate vicinity of the Pantex Plant, comparing past land values to current values and then future approximate values if various facilities/functions are located here; land use or crop restrictions; monitoring information of the offsite vegetation and soils; and possible additional land use requirements/acquirements for various facilities if located here). I have enclosed a DOE generated land use map of the Pantex Plant for your reference.

Response: *NEPA does not require, nor is it customary for NEPA documents to include market analyses. The land use associated with the new facilities proposed in this EIS are discussed in volume I, section 4.4. Additional information about*

3.5 Geology and Soils

griculture in the region has been added to this and other sections. Inform from soil monitoring activities can be found in volume I, section 4.5. Lan requirements/acquirements for future Pantex Plant facilities are performe needed when projects or facilities are projected.

RC: 05.001
Doc: CO-008/32

Pages 4-38 and 4-39. These pages show that soil quality in many sites has been affected. How much soil has been affected? For example, table 4.5.1.3-1, page 4-38, lists 37 sites that have been affected by "burning ground." What is the size of each of these sites?

Response:

Details about each site at Pantex Plant are not included in the EIS. Each grouping of sites is described in general. The decisions being evaluated in this EIS neither affect nor are affected by the environmental restoration program that is addressing the contamination at these sites. The RCRA Facility Investigation (RFI) reports that are being drafted concerning these sites will include tremendous detail concerning these sites. These reports will be available to the public after approval by TNRCC. The amount of detail requested by the commentor is inappropriate to include in the EIS for each group of sites. The information is provided below in response to the comment but will not be included in the main text.

The Burning Ground Assessment includes the Burn Pads (SWMUs 14-27), the Burn Trays (SWMUs 28-36), Landfills (SWMUs 37-44), the Burn Cages (SWMUs 45-46), the Solvent Pit (SWMU 47), the Solvent Pans (SWMUs 48-51), the Burn Rack, and Flashing Pits (SWMU 52). The individual Burn Pads were constructed of a 1-foot thick clay layer over an approximate 15 by 15 feet area, and are approximately 75 feet apart. The Burn Trays are approximately 75 feet long by 10 feet wide by 1 foot deep, and are raised 2 feet above the ground. The landfills associated with the Burning Ground exist as cells, and are approximately 100 to 200 feet long by 20 to 30 feet wide and range from 6 to 23 feet deep. Per the RFI, report the estimated volume of soils that have constituents above the decision criteria set forth for Risk Reduction Standard 2 is approximately 86,000 cubic yards. (Risk Reduction Standard 2 requires removal and/or decontamination of all waste, waste residues, leachate, and contaminated media to standards and criteria such that any substantial present or future threat to the human health or environment is eliminated.) The area of soils around the Burn Pads, Burn Cages, and Burn Racks with the constituents potentially above the decision criteria was defined by a 40 feet radius. The distribution of contaminants present at the Burning Ground vary to depths greater than 20 feet below ground surface.

RC: 05.002

Page 4-41, Paragraph 2. This paragraph states that the soil had been [illegible]terminated to a depth of 20 feet. It would be very useful for the report to

contaminants of potential concern (COPCs) and their degradation products, vertical migration of the COPCs in soils and sediments identified at the Burning Ground can be expected to be limited. It is unlikely that COPCs will migrate laterally or vertically much farther than the current extent. With recharge up to 3.24 in/yr possible below playas, from an annual precipitation of 19.1 inches near Amarillo, RDX would travel approximately 27 feet per 100 years. Considering the above playa infiltration rate exceeds the higher-ground recharge rate, migration could be expected to be even less in nonplaya areas. Biodegradation will lessen transport of the organic COPCs as well. Present conditions affirm the fact that contaminants have not typically traveled more than 10 or 20 feet from their source, and they have had up to 45 years to migrate.

RC: 05.003
Doc: CO-008/34

Page 4-41, Paragraph 2. There was no mention of soil remediation processes. Please describe the number of processes that have been undertaken, or planned, for soil remediation that could be used to enhance the natural degradation processes of the contaminants present in the soil. Although extensive monitoring has occurred there seems to be a minimum number of restoration studies.

Response:

The environmental restoration process at Pantex Plant is still mostly in the investigation phase. Subsequent to this phase would be the remediation phase. Currently, potential remediation activities are being developed and recommended to TNRCC, which has the approval authority.

RC: 05.004
Doc: CO-008/35

Page 4-29, Paragraph 1. Please provide a citation for "Caprock Caliche."

Response:

The citation to the reference (Pantex 1996) has been added to volume I, section 4.5.1.

RC: 05.005
Doc: CO-008/71

Page 4-37, Paragraph 2. The letters from EPA and TNRCC documenting their approval for the RCRA methodology undertaken by Pantex Plant should be cited.

Response:

The approval of the methodology is through the issuance of the hazardous waste permit. This language has been incorporated into volume I, section 4.5.

RC: 05.006
Doc: CO-008/72

Page 4-41, Paragraph 2. Please correct typographical error, next to last sentence: "Phase II characterization data is (are)..."

Response:

Correction has been made.

RC: 05.007
Doc: CO-008/73

Page 4-42, Paragraph 3. "The OSTP received waste water from Amarillo Air Force Base and Pantex Plant." Did it also receive waste water from Bell helicopter and the Amarillo Airport?

Response:

The Old Sewage Treatment Plant (OSTP) did receive wastewater from both Bell Helicopter and the Amarillo Airport. The sewer pipeline was then cut so that

effluent from the Amarillo Airbase complex flowed into Playa 5. A pump or lift station sent the wastewater on to the OSTP. This continued until approximately 1987 when the newer Wastewater Treatment Plant was brought on-line and the previous agreement maintained by the DOE with the City of Amarillo was discontinued. The EIS has been amended to include this information.

RC: 05.008
Doc: CO-008/74

Page 4-43, Paragraph 2. Potential sources of contamination to Zone 12 groundwater includes the Burning Ground. It would seem that the Burning Ground is too distant to the Zone 12 groundwater location. Please clarify.

Response:

The Draft RCRA Facility Investigation Report for Groundwater in Zone 12 at the DOE Pantex Plant identified the Burning Ground as a potential source of contamination to Zone 12 Groundwater. This is based on the presence of contaminants at depth in soil borings which potentially could leach into the perched aquifer with time. However, to date, groundwater investigations as discussed in volume I, section 4.6, Water Resources, indicate that there is no evidence of hydraulic connection between the perched aquifer in the vicinity of the Burning Ground and the perched aquifer under Zone 12.

RC: 05.009
Doc: CO-008/75

Page 4-43, Paragraph 3. Please provide a map of the landfills locations. Please correct typo in sentence "Characterization data indicates (indicate)..."

Response:

A map of landfill locations has been provided in volume I, section 4.5.1. The typo has been corrected.

RC: 05.010
Doc: CO-008/76

Page 4-43, Paragraph 3. "However, maintenance caps will be placed as needed over selected landfills as a voluntary measure to prevent potential water infiltration." If they are needed, would it be voluntary?

Response:

The term "voluntary" has been replaced by the term "proactive" to clarify that these actions are taken in advance of any possible direction from the regulator.

RC: 05.011
Doc: CO-008/77

Page 4-43, Paragraph 4. Inaccurate descriptions should be corrected: "The ditches also receive untreated industrial waste waters from Zones 11 and 12."

Response:

All available references state that only treated wastewaters for Zones 11 and 12 are placed in the ditches.

RC: 05.012
Doc: CO-008/78

Page 4-43, Paragraph 4. Inaccurate descriptions should be corrected: Playa 4 also receives industrial and storm water effluent from Zones 11 and 12. Playa 2 receives industrial and storm water effluent from Zone 11. All of the playas receive storm water from agricultural areas.

Response:

Pantex Lake and Playa 4 do not currently receive industrial wastewater discharges nor does Pantex Lake receive storm water runoff from Pantex Plant.

RC: 05.013
Doc: CO-008/79

Page 4-44, Table 4.5.1.3-2. Inaccurate descriptions should be corrected:

Flow system 1 consists of Playa 1 and the unlined man-made ditches that direct runoff and waste water discharge away from Zones 4, 11, and 12 to this playa.

Flow system 4...away from Zone 11 and Zone 12 south (insert) to playa 4.

Flow system 5 also includes Pantex Lake (which received effluent from OSTP via pipeline in prior years).

Response: *According to the September 1995 Ditches and Playas RFI (USCOE 1995f), Flow System 1 does not include direct runoff from Zone 4. The inconsistency of not stating that the ditches are man-made and that they direct runoff and wastewater discharge away from Zones 11 and 12 has been corrected. In regard to Flow System 5, page ES-3 of the September 1995 Ditches and Playas RFI indicates that Pantex Lake is a part of Flow System 5. This has been added to volume I, Table 4.5.1.3-2.*

RC: 05.014
Doc: CO-008/80

Page 4-45, Paragraph 3. Statements are not clear. "Characterization data indicated that contaminant levels were below remediation goals for all but two sites." Does this refer to 2 of the 12 sites in the AL-PX-11 group, or 2 locations within the HE burn site discussed in greater detail? If the 2 sites excepted are indeed 2 of the 12 sites, then they should be described and discussed, at least in the same detail as was the HE burn site.

Response: *This reference is to 2 of the 12 sites in the AC-PX-11 grouping. Additional discussion of the status of these 2 sites has been added to volume I, section 4.5.1.*

RC: 05.015
Doc: CO-008/81

Page 4-45, Paragraph 4. Please correct typo. "Characterization data is (are)..."

Response: *Correction has been made.*

RC: 05.016
Doc: CO-008/82

Page 4-45, Paragraph 4. What location was selected for environmental sampling for the DDT spill? At the building or at the playa?

Response: *According to Figure 25-1 of the August 1995 Miscellaneous Chemical Spills and Release Sites RFI (USCOE 1995e), samples for the Building 12-35 DDT release were taken to the north and west of the building, and not at the playa.*

RC: 05.017
Doc: CO-008/83

Page 4-46, Paragraph 1. Where is "the denuded [area] near Playa 1" located and what is the cause of its being denuded?

Response: *The denuded area is the former location of an electrical transmission line pole, where annual hand-applied herbicides were reportedly applied for weed control. The site is circular in shape and covers an area of approximately 0.90 acres. The term "denuded" has been clarified by replacing it with "a somewhat barren area where herbicides were applied".*

RC: 05.018
Doc: CO-008/84

Page 4-47, Table 4.5.1.3-3. Under SWMU #143 Recommendations: "This area has not been characterized to background for several analytical groups,

including pesticides, PCBs, and metals." Please clarify. Does this mean that sampling and analyses have not disclosed concentrations that are consistent with background concentrations (i.e., have exceeded background values), or that sampling and analyses have not been done for these groups of constituents?

Response: *According to page 6-18 of the August 1995 Miscellaneous Chemical Spills and Release Sites RFI (USCOE 1995e), the nature of contamination has been identified on the basis of detected constituents and Risk Drivers. However, the extent of contamination has not been fully defined. Data collected during the RFI indicate that concentrations are now below their Practical Quantification Limits (PQLs). This conflicts with the results of past investigations. It is for this reason that further sampling is recommended to define the extent of constituents identified as contaminants of concern.*

RC: 05.019
Doc: CO-008/85

Page 4-49, Table 4.5.1.3-3. Under AOC #15, DDT release at Bldg. 12-35, exactly where did the sampling take place?

Response: *According to Figure 25-1 of the August 1995 Miscellaneous Chemical Spills and Release Sites RFI (USCOE 1995e), samples for Building 12-35 DDT release were taken to the north and west of the building.*

RC: 05.020
Doc: CO-008/86

Page 4-49, Table 4.5.1.3-3. Please correct typo, Building 12-5 sump Recommendations: "Additional data is (are)..."

Response: *Correction has been made.*

RC: 05.021
Doc: HT13/4

In the EIS, it doesn't show that there are the three faults that go through this stupid mountain, and yet, it is well documented on many geologic reports that there are three major faults that go through the Manzano weapons storage facility.

My question...is if these facilities are 45 years old, they obviously were not built with the current technological skills that go along with earthquake-type design. To me, that is a major concern.

Response: *According to our references, there is no evidence that indicates that any of the three faults in the vicinity of the Manzano Storage Facility are capable faults. A capable fault has one or more of the following characteristics (c.f., 10 CFR 100 Part A): 1) Any movement in Holocene time in the last 10,000 years, 2) more than one movement in the last 500,000 years, 3) demonstrably associated with seismic activity, and, 4) structural relation to another structure shown to be capable.*

RC: 05.022
Doc: HT17/25

There is no such thing as nonhazardous seismic hazards. My research into the geological aspects of the Pantex Plant have uncovered some alarming assumptions made by past experts under contract for the DOE. Because a list of specifics is rather long, I have prepared a separate report for your review that will be included in my written comments. The 1995 fault study submitted by

the DOE basically suggests that local underground erosion is a primary feature at the Pantex Plant and doesn't delve very deeply at all into the primary feature that occasionally rocks with earthquakes three states at a time. That Pantex is magically divorced from this phenomenon at its property lines and the Whittenburg trough is all but ignored.

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.023
Doc: HT17/26

The secrets and lies concerning geology, hydrology, past contamination, current contamination, current pathways, future protections continue. I am willing to go along with the Save the Ogallala Folks, for what good is it to have an unsaved Ogallala, but I'm not going to pretend we have anything even remotely close to a pristine situation at the Pantex Superfund Site. We are already in a situation where we just have to drink our poison in small amounts and learn to like it. The massive amount of data contained within the studies done by the Texas Bureau of Economic Geology, the Argonne National Lab, and others prove this. The recent samples showing RDX hits in the Texas Natural Resource Conservation Commission lab test prove this. We would be ignorant to sight future emissions at Pantex without first reviewing the geological hazards truthfully and openly.

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.024
Doc: HT17/70

... I understand that we may comment a bit on the cumulative impact from the three PEIS documents, and the Pantex Plant and associated storage of nuclear weapon components PEIS is one that I haven't taken as much note of as the other two PEIS documents, but I understand that in this document there...are some omissions [that] have been brought out. One of which, it has been noted that there's nothing said about the Superfund Site projects in the study, and it would seem that might be something important to look at. All of us around here notice the recognition of the Ogallala aquifer, as it is probably, in the United States, the largest fresh water aquifer.

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.025
Doc: HT17/71

It's been said that Pantex is using some open and unlined ditches to dispose of waste water, and that should be addressed.

Response: *The use of unlined ditches and the impacts to the soils and groundwater are discussed, respectively, in volume I, sections 4.5.1 and 4.6.1.*

RC: 05.026
Doc: FG-003/10

A number of contaminants have been identified in the soil and groundwater (table 4.5.1.3.3-3) at the existing site. The Final EIS should document what measures have been taken to avoid potential contamination by the sources identified.

Response: *The sources identified in the subject table are solid waste management units (SWMUs). Under RCRA most SWMUs are inactive sites and are not, therefore,*

active sources. However, contamination in the soil could act as a source for groundwater contamination. Therefore, these sites are under the environmental restoration program's scrutiny. See discussion in section 1.3.4 in this volume.

Recommendations have been made to the regulator as to potential remedial actions. These recommendations have been summarized in volume I, section 4.5.1. These recommendations are still in draft stage and have not been approved by the regulator. Active sources operate under permits and are monitored for compliance.

RC: 05.027
Doc: FG-003/12

The DEIS (volume I, p.5-16) states that earthquakes pose the greatest natural threat to storage of plutonium pits at NTS. The Cane Springs Fault was identified as the most significant seismic risk. However, the DEIS indicates that four faults in the NTS vicinity (Mine Mountain Fault) "are capable of generating earthquakes of up to 0.85g," which is an 8.5 quake on the Richter scale. According to the Tritium FEIS (volume I, p. 4-117), the maximum credible earthquake on the Cane Springs Fault is three to five miles from the Device Assembly Facility.

The FEIS should recognize that the P-Tunnel at the NTS is due west of two parallel faults, the Carpetbag Fault approximately five miles away and the Yucca Fault approximately seven to ten miles away. The Tritium FEIS (volume I, p. 4-117) describes both the Yucca and Carpetbag Faults as "capable faults," as defined by the Nuclear Regulatory Commission regulations 10 CFR Part 100, Appendix A. However, the Tritium FEIS reported that the "possible magnitude, intensity, and acceleration of earthquakes along the Yucca and Carpetbag faults have not been estimated." The DEIS gives the impression that quakes along any of the four faults in the NTS area could have an 8.5 magnitude on the Richter scale (volume I, p. 5-16).

Response:

When a facility specific study of all faults in the region has not been made, the DOE Standard for Natural Phenomena Hazards Design and Evaluation Criteria for DOE Facilities (DOE 1994u) dictates using the largest earthquake expected in the region and assume it can happen anywhere in the region.

RC: 05.028
Doc: PC-025/21

On page 4-39. Drop figure and place more detailed maps in appendix. Recommend using an example map in its place and refer to the appendix. The figure is silly. Otherwise include the location of the ditches and groundwater for completeness. Where is a comprehensive list of titled SWMUs in this EIS?

Response:

A figure detailing the ditches and playas flow system at Pantex Plant has been added to volume I, section 4.5.1, for completeness. A comprehensive listing of titled SWMUs is located in the Pantex Plant Environmental Information Document (Pantex 1996).

RC: 05.029
Doc: PC-025/22

On Page 4-51, Environmental Restoration Activities. Question, "completed by 2000" is not consistent with other statements in the document.

Response: *The year 2000 is correct and has been made consistent throughout the document.*

RC: 05.030
Doc: PC-025/23

On Page 4-51, Waste Management Activities. The burning ground is an open area where fumed materials including metals, radioactive elements, etc. are released to the atmosphere and settle to the ground in the form of dust, water vapor, etc. and you state you do not expect impacts to the soil. How can that be...?

What is the representative contaminant deposition rate to the playas and burning ground?

Does HE explode while being burned and chunks of things get spread about?

Is it possible pieces sit around for years?

Further, you state on page 4-52 the material is typically nonhazardous, how did the burning ground get contaminated? Please state you do not know or what the facts are.

Page 4-52, what is the source of the table?

Response: *Volume I, section 4.2, where the assessment methodologies for Geology and Soils are discussed, has been clarified to better illustrate how impacts to geology and soils were assessed. Geological impacts consist of impacts to geological features from plant operations and impacts to the plant operations from geological conditions or events. The search for geological features that could have been affected by plant operations identified only surface water and groundwater. These are discussed in volume I, section 4.6, Water Resources. Seismic events and salt dissolution are the only identified geologic features that could affect plant operations. These issues are discussed in volume I, section 4.5, Geology and Soils. Discussion of soils includes impacts to the soil and impacts to humans from the soil. Potential impacts to the soil included any activities that would result in erosion or removal of valuable soils from agricultural production. These issues are discussed in volume I, section 4.4, Land Use. Impacts from contaminated soil included potential affects on human health.*

Contaminated soil within the Burning Ground is discussed in volume I, section 4.5.1.3. There are three potential pathways for any contamination in the soil to affect human health: getting into groundwater, blowing as dust, and uptake by crops. Volume I, section 4.6, Water Resources, describes contaminated groundwater, and volume I, section 4.7, Air Quality, describes the levels of contaminants detected. Crops outside the Burning Ground have shown no contaminants at or above levels of concern. No crops are grown on the Burning Ground.

Contaminant deposition rates were not modeled. The air quality modeling of Pantex Plant activities, including the Burning Ground, was performed to

evaluate inhalation which is the overwhelmingly risk-significant pathway. Please refer to volume I, section 4.7, Air Quality, for further information.

When high explosives (HE) is burned it does not generally explode; however, it is known to happen. Safety procedures at the Burning Ground take the risk of explosion into account. When the HE does explode some chunks can get dispersed within the Burning Ground.

The statement made on page 4-52 was incorrect. This section has been modified to read, "These wastes include treated wastewater from the Wastewater Treatment Facility, and construction debris located onsite in a Class 3 landfill. Residuals from the Burning Ground are disposed of in accordance with the specifications of the hazardous waste permit."

The source for each facilities area (PC 1995g) is given in volume I, Table 4.4.2.2–1. Additionally, this source has been added to the table.

RC: 05.031
Doc: PC-025/91

Geology and soils methodology is flawed since it does not describe what the assessment process is for the assessment. The section dictates what the impacts are. Thus DOE has prejudged the results. The assessment does not address the decontamination and decommissioning program, as stated.

Response:

See response to comment 05.030. At this time no plans have been made for the decommissioning of any facilities at the plant. Any future plans would have to undergo cultural resource and NEPA review before implementation. More detail can be found in volume I, section 1.2.2.1.

RC: 05.032
Doc: PC-016/1

In April of 1995, a study concerning fault identification at the Pantex Plant was sponsored by Mason & Hanger-Silas Mason Co., Inc. (M & HSM), a contractor for the Department of Energy (DOE), in order to satisfy a Note of Deficiency pertaining to a hazardous waste permit application for the Pantex Plant located near Amarillo, Texas. Unfortunately, because this study was under an important deadline to satisfy a requirement of a vital permit for continuing operations, it lacks the benefit of having undergone critical peer review. The data is interpreted and a conclusion is drawn using the opinion of only one expert: Daniel McGrath. The other experts mentioned in reference are not on record as sharing the conclusion he reaches. In fact, one of the geologists mentioned in reference has gone on public record supporting a totally opposite conclusion from the one reached in this study. The DOE fault study is also: incomplete, poorly argued, erroneously formatted, concluded in haste, and thus; invalid.

The Fault Study contains multiple references to an investigation carried out by a team from the Argonne National Lab. The use of references attempts to support the conclusion that Pantex does not sit on top of a fault. Yet, in an apparent contradiction, the Draft RCRA Zone 12 Groundwater Assessment, dated November 1995, and prepared by Argonne, clearly addresses the existence of a major fault beneath the Pantex Plant. The Argonne report includes a powerful [visual] aide that depicts a deep, substantial fault they identify as the Whittenburg Trough. It would seem to be obvious even to the most uninformed

person that the experts from Argonne wished to draw attention to this feature. The expert for the DOE correctly states that hydrogeological characterization studies conducted by the Texas Bureau of Economic Geology (TBEG) have focused on mechanisms that would allow for rapid transport of contamination to the Ogallala aquifer. He also includes the fact the faults would provide such a mechanism for the rapid transport of water. But the TBEG reports are oddly silent concerning the word faults, and do not directly address any argument for or against the existence of a fault at Pantex.

Do we have movement in the Holocene time in the last 10,000 years? Answer: Yes. "Holocene faulting has occurred on one portion of the Amarillo Uplift-Wichita Uplift structure and may have occurred on another part of the same structure in Potter County." And: "USR/Blume (1976) cite a Holocene (last 10,000 years) fault scarp 4 miles long, 20 miles northwest of Pantex Plant, on the Amarillo Uplift. Where the Amarillo Uplift extends into Oklahoma, about 150 miles from Pantex Plant, the Meers Fault also has a Holocene scarp. These two examples of Holocene faulting along the Amarillo Uplift structure show the presence of some level, although clearly not intense, of the tectonism along this Paliozoic uplift."

Do we have more than one movement in the last 500,000 years? Answer: Yes. As stated above, "...a Holocene fault scarp 4 miles long, 20 miles northwest of the Pantex Plant, on the Amarillo Uplift...within the last 10,000 years..."

Do we have demonstrated associated [seismicity]? Answer: Yes. "...recent 11-year span, from January 1, 1977 to March 31, 1988, more than two dozen quakes measuring 2 or higher on the Richter scale were detected in the Texas Panhandle and South Plains, Oklahoma Panhandle and far Western Oklahoma, and the southernmost strip of Kansas...quakes estimated to be 4 to 4.5 on the Richter scale occurred on March 27, 1917; July 30, 1925; July 20, 1996; February 20, 1974;...and others during 1934, 1948, and 1959..." And: "... Since local records began in 1882, there have been four earthquakes in the Plant area. These occurred on March 27, 1917; July 30, 1925; June 19, 1931; and July 20, 1966..."

Do we have a structural relationship to another structure that has been shown to be capable? Answer: Yes. "... Holocene faulting has occurred on one portion of the Amarillo Uplift...and may have occurred on another part of the same structure in Potter County." And: "An assessment of natural hazards at Pantex Plant (Jacobs 1993) lists "three major subsurface faults and minor surficial fault" in the area of the Plant, as follows: (1) 155 miles long, about 25 miles north of site, (2) 43 miles long, [about] 5 miles [south] of site, (3) 40 miles long, about 7 miles north of site, (4) 4 miles long, about 20 miles northwest of site, surficial, USR/Blume (1976) have suggested that faults (3) and (4) may connect."

If a capable fault must show one or more of the above [characteristics], and we have just shown that all four characteristics are demonstrated, then it stands to reason that we have a capable fault. Fortunately for all of us, recent seismic

activities at and near Pantex have been light to moderate. Pantex is currently classified as being in Earthquake Zone Number 1. Ponder the very wise message contained within the following quote: "Seismic hazards, most notably active faults, are considered unacceptable for [nuclear] facilities such as the Pantex Plant"- Daniel McGrath, Soil Scientist April 1995.

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.033
Doc: PC-016/2

"Do we have earthquakes here?" Answer: Yes. (Page 3.)

"Do our core samples at the Pantex Plant show contrasting vertical and horizontal layers?" Answer: Yes. (TBEG, Argonne, McGrath.)

"Do we have evidence that the Pantex Plant is near an epi-center for earthquakes?" Answer: Yes. The only local quake on record during this century that successfully damaged a man-made structure occurred in Panhandle, Texas. Panhandle is the closest town to Pantex. The strongest local quakes occurring during this century are said to have had epi-centers located about 10 to 20 miles from the Pantex Plant. (Page 3.)

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.034
Doc: PC-016/3

"Do we have groundwater samples showing differences that can sometimes indicate a fault?" Answer: Yes. According to the DOE expert, water in the [Dockum] group beneath the Pantex Plant is significantly better than the water found in other area [Dockum] wells. This fact indicates that the Ogallala aquifer is not a confined aquifer. The Ogallala aquifer may be contributing to a more rapid recharge to the [Dockum] waters beneath the plant due to a fracture or fault. The TBEG report of May 1995 describes a large "channel" that is allowing water to flow faster near the top of the "middle Ogallala perching horizon." Further studies would tell us more about the lower horizons.

Response: *Though the water quality in the Dockum Group aquifer beneath the Pantex Plant is relatively good, this does not necessarily indicate a fault, but it points to the intermixing of waters from the Ogallala aquifer and the Dockum Group aquifer. This intermixing could result from the movement of water as it is pumped from the Ogallala aquifer. For more detail about the faults see discussion in section 1.3.4 in this volume.*

RC: 05.035
Doc: PC-016/4

"Did the 'ground radar' type of studies confirm that we have sharply tilted vertical soil layers beneath the Pantex Plant?" Answer: Yes. And further study would provide more description of these layers.

Response: *This does not necessarily mean that there is a fault or tectonic activity. Subsidence can cause deformation below the surface of the strata layers which can complicate reaching conclusions about tectonic deformation. The commentor suggests further study of the deformation to further define the seismic risk to Pantex Plant. DOE's current conservative assessment of seismic*

risk does not require this specific information. The current risk assessment is discussed in volume I, section 4.14, Human Health.

RC: 05.036
Doc: PC-016/5

"Do we have sink spots (subsidence) at the Pantex Plant?" Answer: Yes. The playas at Pantex are "sinks". Subsidence has influenced the development of many of the larger playa basins at the Pantex Plant.

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.037
Doc: PC-016/6

"Did the expert for the DOE overlook the fact that he proved the case demonstrating the characteristics of a capable fault?" Answer: Yes. Unfortunately, when scientific papers are not shared with other experts, even a good scientist can make a big mistake. A process called "peer review" involves many experts getting together to see if somebody's idea is right or wrong. "Peer review" is pretty important to scientists, because they can look [a little] silly if they go on record with bad information or wrong ideas. Because we cannot control earthquakes, experts try to look very hard to identify the safest places to build important buildings such as the ones at the Pantex Plant. Experts agree that geological faults are not the safest places to build important buildings on. Buildings that handle very dangerous nuclear materials and hazardous chemicals are not supposed to be built on a capable fault.

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.038
Doc: PC-016/7

"Do we have experts who have indicated that the Pantex Plant was built on a geological fault?" Answer: Yes. On January 8,1994, a [petroleum] geologist named Greg Wilson talked about his studies into the High Plains area. He indicated that Pantex was on a fault, and thought more studies should be done to prove this. Other experts from the Argonne National Lab have included maps in their studies that show a picture of a deep fault beneath the Pantex Plant. An expert from TBEG has shown that subsidence has played a part in the formation of playas on the High Plains. Some experts use very clear language to explain their positions, and some do not. Sometimes experts like to use very big, difficult words if they don't want to answer a question. We need to be careful about becoming confused when experts talk, and learn to look more carefully at the facts.

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.039
Doc: PC-016/8

A hard look at the facts concerning the sub-surface surface conditions at the Pantex Plant, in the present (here and now) time is in order. Nearly every branch of specialized investigation is required to do this. Capable engineers, physicists, geologists, hydrologists, chemists, biologists seismologists, and [historians] all need to be consulted to clarify the current situation.

If academia chooses to mismanage the vast body of information that has been generated in recent investigations into the Pantex Plant, and deliberately presents a false model of the circumstances beneath the Pantex Plant, then they

will also predict a false outcome. Anticipating change and predicting outcomes was once solely the responsibility of "seers" and prophets. But science, of its own [curiosity], evolution, and arrogance now shares a responsibility for predicting accurate outcomes. The genie cannot be put back into the bottle, but perhaps the genie can be better understood and better [disciplined]. If each branch of the sciences now met openly to discuss and review the current information generated by the investigations conducted recently at the Pantex Plant, a more useful "band-aid" might be applied to the wound.

Neither the expert or the non-expert should become "lulled into complacency" just because the strength of local earthquakes during this century have been light to moderate. Geological fault-science has proven that the ground shakes hardest along fault lines. Although new or unknown faults can also surprise experts by suddenly becoming seismically active, known faults simply should not be ignored. If the tectonic activity continues to increase substantially along the Pacific Rim, it could affect tectonic activity as far away as places like the Panhandle of Texas. Assessing geological sensitivity for the purpose of siting work with dangerous actinides is urgent and vital. Earthquake activity both at and around the Pantex Plant has been fairly consistent since records started a century ago. Not a single decade has passed in the Panhandle that some amount of seismic activity has not occurred. Above all, the contamination concerns may become secondary to criticality concerns, as a chain reaction in a geological setting would generate radiation and extreme heat in addition to releasing fission product contamination. As some experts very well know, it only takes small amounts of certain actinides suspended in water to achieve criticality. Because of the instability of the Amarillo Uplift/Whittenburg Trough/Potter County Fault connection to the Pantex Plant, and the threat the surface and groundwater may present to certain actinides indicated to already be trapped in the soil, appropriate actions need to be taken promptly.

Response: *The EIS has examined the affected environment and the environmental consequences at Pantex Plant. This examination was completed by a broad range of professional disciplines (please see volume I, chapter 8, List of Preparers, for further information).*

RC: 05.040
Doc: SG-003/25

Page 4-3, section 4.2, Impact Assessment Methodologies, geology and soils: Impacts should be assessed on the destruction of any geologic feature, not just those specified unique.

Response: *The Impact Assessment Methodologies for Geology and Soils has been clarified. The uniqueness of a feature is taken into account in assessing the significance of any potential impacts. See response to comment 05.030.*

RC: 05.041
Doc: SG-003/65

Sections 4.5 and 4.6, which describe water resources and geology and soils, do not provide sufficient information for the reader to determine if environmental impacts could result from continued operations and storage of nuclear weapons at Pantex.

Response: *Sections 4.5 and 4.6 in volume I have been updated with additional data, new permit requirements, and descriptions of corrective action measures.*

RC: 05.042
Doc: SG-003/67

Some of the maps in this document are used without referencing or obtaining permission of the author. Figure 4.5.1.2-1 was published by Gustavson (1981), but attributed to DOE (1981). Figure 4.5.1.2-2 was prepared by Davis, Pennington and Carlson (Davis 1989), but attributed to DOE 1995.

Response: *The citations for both figures have been revised to give credit to the primary authors.*

RC: 05.043
Doc: SG-003/68

Page 4-27, Geomorphology, para. 1, ln 13. It is inaccurate to state that playa could play a role in the contamination of groundwater at Pantex Plant. Playa basins and ditches have been shown to be the sites where contaminated surface water is recharged to the subsurface (Gustavson and others, 1995).

Response: *The sentence in question has been revised in volume I, section 4.5.1.1. Neither the original nor the current statement implied that contaminated surface water is recharged to the subsurface. However, noncontaminated water applied over areas of contaminated soil have the potential to pick-up contamination from the soil and transport the contamination to groundwater.*

RC: 05.044
Doc: SG-003/69

Page 4-27, Stratigraphy. para. 1, ln 4. The Blackwater Draw and Ogallala Formations beneath the Pantex Plant are not lithified and therefore are not rocks. The correct term is sediments. Rephrase sentence to "The stratigraphy of the sediments and rocks..."

Response: *Sentence has been modified to read: "The stratigraphy of the sediments and rocks beneath Pantex Plant is discussed in descending chronological order from more recent layers (surface deposits) to Permian -age layers (salt deposits)."*

RC: 05.045
Doc: SG-003/70

Page 4-27, Stratigraphy, para. 2, ln 6. The upper unit of the surface Soil (Pullman clay loam) of the Blackwater Draw Formation is the A horizon and it contains no caliche. The first soil carbonate is found at a depth of about 24 inches in the upper part of the B horizon (US Department of Agriculture, Soil Conservation Service, 1972, Pullman Series: Established Series, 4 p).

Response: *The information has been incorporated into volume I, section 4.5.1, and the sentences have been revised accordingly.*

RC: 05.046
Doc: SG-003/71

Page 4-29, Stratigraphy, para. 1. The variable lithologies of the Ogallala and Blackwater Draw Formations are not described. These descriptions should include a brief discussion of the complex heterogeneity of the Ogallala and Blackwater Draw because the variation in sediment types controls groundwater flow in the formation.

Response: *A more detailed discussion of the variable lithologies of the Ogallala and Blackwater Draw Formations has been incorporated into volume I, section 4.5.1.*

RC: 05.047
Doc: SG-003/72

Page 4-29. Sentence describing the lower part of the Ogallala implies that the fine-grained zone is the base of the lower Ogallala and generally confuses channel deposits above the fine-grained zone (which actually falls within the middle part of the Ogallala) with predominantly fluvial Ogallala sediments within the lower part of the Ogallala [from] below the fine-grained zone.

Response: *See response to comment 05.046.*

RC: 05.048
Doc: SG-003/73

Page 4-29, Stratigraphy, para. 1, ln 29. The fine-grained zone is not a sandstone. Limited available core from the fine-grained zone shows interbedded sands, silty sands, and muds. Because of the variability of sediments in this unit, the vertical hydraulic conductivity varies by 3 orders of magnitude. Geophysical logs and core show that at least part of the fine-grained zone consists of fining upward sequences of fine sand, silty to clayey sand, and mud. Furthermore, these sediments are not lithified; thus, they are not sandstones.

Response: *See response to comment 05.046*

RC: 05.049
Doc: SG-003/74

Page 4-30, Figure 4.5.1.1-2. Well PXSB-03 is not just coarse sand. There are about 50 feet of sand and gravel near the bottom of the well.

Response: *This map has been deleted. A sentence has been added which refers readers to Figure 4.6.1.2–3 in volume I, section 4.6.1. This figure is a geologic cross-section of the lithology beneath Pantex Plant.*

RC: 05.050
Doc: SG-003/75

Page 4-31, para. 3, ln 1. Salt dissolution and accompanying subsidence or collapse are rapid processes on a human time scale. More than 2,000,000 tons of salt are dissolved each year along the eastern margin of the High Plains in the Texas Panhandle. Furthermore, about 2 years ago a very large sinkhole (250 ft wide and more than 60 ft deep) formed in northeastern Hall County, which like the Pantex Plant lies in the salt dissolution zone shown in figure 4.5.1.2–1. Development of this sinkhole was described in the Amarillo newspaper.

Response: *Estimates of salt dissolution rates along the eastern escarpment of the Southern High Plains were tabulated in Regional Dissolution of Permian Salt in the Anadarko, Delhart and Palo Duro Basins of the Texas Panhandle (Gustavson, et al, 1980). Although no estimates were provided for Carson County, mean salt dissolution rates ranged from 1.0312 x 10^{-5} feet per year for a site in Potter County to 5.6674 x 10^{-5} feet per year for a site in Armstrong County. Assuming that this range is applicable to salt dissolution rates at Pantex Plant, then approximately 0.002 to 0.006 of one inch of salt dissolution would occur during the entire 10-year time frame covered by this site-wide EIS. For additional discussion of salt dissolution, please refer to section 1.3.4 of this volume.*

RC: 05.051
Doc: SG-003/76

Page 4-31, para. 3, ln 1. No attempt is made to describe the role of salt dissolution and subsidence in the formation of playa basins. High solute loads in streams draining the region indicate that these processes are active regionally. No mention is made of the potential effects, if any, of dissolution-induced subsidence at the plant.

Response:

See discussion in section 1.3.4 in this volume.

RC: 05.052
Doc: SG-003/77

Page 4-31, para. 3, ln 11. While it is true that sinkholes or fractures associated with salt dissolution have not been described in Carson County, several playas on or near the Pantex Plant have been associated with dissolution induced subsidence. Furthermore, sinkholes or fractures have been identified in adjacent Armstrong and Donley Counties to the south, in Potter County to the west, and in...

Response:

See discussion in section 1.3.4 in this volume.

RC: 05.053
Doc: SG-003/78

P. 4-32, Figure 4.5.1.2-1. Gustavson (1981) who compiled the information on which this map is based, showed that sinkholes or fractures have been recognized in Oldham, Potter, Donley, Briscoe, Motley, and Dickens Counties in addition to the counties shown here.

Response:

The referenced figure, Figure 4.5.1.2–3 (formerly Figure 4.5.1.2–1 in the Draft EIS) "Zones of Active Salt Dissolution and Counties in which Sinkholes and Fractures Were Identified (DOE 1981)", was checked for accuracy against the original figure contained in the reference document, "Impact of Evaporite Dissolution and Collapse on Highways and Other Cultural Features in the Texas Panhandle and Eastern New Mexico (Gustavson 1981)." There were no mistakes in the translation of this figure. Another figure in this reference cites that there are no sinkholes, collapse depressions, or fractures/faults in Donley, Motley, or Dickens counties. This document did not contain additional information in the text to say that there were sinkholes or fractures in any of the counties mentioned in the comment (i.e., Oldham, Potter, Donley, Briscoe, Motley, and Dickens counties).

RC: 05.054
Doc: SG-003/79

Page 4-33, para. 2. Davis, Pennington, and Carlson (1989) reviewed in considerable detail the history of earthquakes in the Texas Panhandle. Events are shown using the Richter scale.

Response:

The commentor is correct when citing that Davis, Pennington, and Carlson (1989) reviewed the history of earthquakes in the Texas Panhandle in detail. These authors wrote a document, "A Compendium of Earthquake Activity in Texas," which was referenced in the Pantex Plant Environmental Information Document (Pantex 1996).

RC: 05.055
Doc: SG-003/80

Page 4-33, Soil Types, para. 2 or 3. No attempt is made to point out that Randall clay soils are Vertisols and that deep desiccation cracks and root tubules, which

are potential pathways for recharge, are characteristic of these soils. Furthermore, these soils have a udic moisture regime, which means that water moves down through the soil at some time in most years. That is, recharge occurs through even these clay soils.

Response: *Further detail on Randall and Pullman soils has been incorporated into volume I, section 4.5.1. The following text has been added about Pullman soils, "This soil is classified as a Mollisol, which is noted by wide deep cracks throughout the year. These cracks aid in groundwater recharge. The major uses for these soils are grazing and dryland farming." The following text has been added about Randall soils, "This soil is classified as a Vertisol, which contains a large amount of clay and has cracks at some time of the year."*

RC: 05.056
Doc: SG-003/81

Page 4-33, Soil Types. In the discussion of soil sampling activities, there is no mention of the preliminary soil sampling that took place as a result of the May 1989 tritium release. This is a significant problem resulting from this omission for two reasons. First, there is no mention of this event or the known areas of contamination within these report. Second, there have still not been any characterization efforts completed beyond the initial preliminary assessment, to determine the amount of contamination from this tritium release. This lack of characterization continues despite, at least using one data set, the apparent increasing tritium levels in perched groundwater in the area of playa 1.

Response: *Soil sampling took place as the result of the tritium release at cell 12-44-1. This sampling was nonroutine and was reported in the Annual Site Environmental Reports (ASERS).*

This incident is not discussed in the Geology and Soils section, but it is discussed in the Human Health section.

There have been three types of prior evaluations of cell 12-44-1 and its releases. The first evaluation was to calculate offsite doses to a maximally exposed individual, as required by both DOE 5400.1 and 40 CFR 61. The second type of evaluation was to characterize the contamination of the cell to plan for radiation protection measures during decontamination activities. The third type of evaluation was to implement routine air monitoring and conduct special purpose soil and vegetation sampling in the vicinity of cell 12-44-1.

Volume II, appendixes C and I incorporate water and soil sampling information. For more information regarding radionuclide sampling, please see these sections.

RC: 05.057
Doc: SG-003/82

Page 4-35, Figure 4.5.1.2-2. Pantex is incorrectly located on the map. The correct location is approximately 1/4-inch to the northeast of the center of the black square or immediately adjacent to the system of faults and earthquake locations that mark the buried Amarillo Uplift. The city of Amarillo is not located on the map.

Response: *Corrections have been made to volume I, Figure 4.5.1.2–2.*

RC: 05.058
Doc: SG-003/83

Page 4-50. The statement is made that there is no surface expression of sinkholes or fractures associated with salt dissolution in Carson County. We argue that, based on seismic data at the plant, the playas themselves are a sinkhole-like expressions of salt dissolution.

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.059
Doc: SG-003/84

Page 4-50, [Weapons] Related Activities, para. 2, ln 2. The statement is made that the "potential impacts due to subsidence (resulting in sinkholes and/or surface rupture) are considered negligible because salt dissolution is a slow process relative to human activities." While the rate of salt dissolution may be slow relative to geologic time, the surface expression of salt dissolution can be catastrophic and result in the loss of life and property. Another inaccurate statement in this same paragraph refers to the absence of sinkholes in Carson County. Paine (1994) demonstrated that many playa basins in the vicinity of the Pantex Plant formed as a result of surface subsidence over areas of salt dissolution. In this context playa basins are similar to sinkholes found elsewhere in the salt dissolution zone. Thus, it is inaccurate to imply that there are no subsidence features in Carson County by simply stating that there are no sinkholes. A better approach would be to explain that sinkholes are the product of catastrophic, rapid collapse into an underground cavern. Playa basins on-the-other-hand formed in part as the result of relatively slower surface subsidence over areas of salt dissolution.

Response: *See discussion in section 1.3.4 in this volume.*

RC: 05.060
Doc: PC-030/4

The contaminated soil should be cleaned as soon as possible to mitigate flushing caused by storm run-off.

Response: *Investigations of the ditches and playas, related to the potential for contamination, and the development of remediation plans are ongoing through the Pantex Plant environmental restoration (ER) program (Pantex 1996: 5.2). Volume I, section 4.5.1.1, has been revised to incorporate this information.*

RC: 05.061
Doc: PC-033/4

In the Draft [EIS] I did not find the impact on area farmers when they are plowing, planting, or harvesting the crops in the possibly contaminated soils of the Pantex Plant property. If this information is available, I would like a copy please, and if it is not, I would like to have this included in the Final EIS.

Response: *Volume I, section 4.5.1.3 discusses the soil and sediment quality as a result of the sampling at the Pantex Plant. The sampling that took place occurred on the property belonging to the Pantex Plant not Texas Tech University. Agriculture activities, as related to soil quality, would not impact the health of the farmers who work the land.*

3.6 Water Resources

RC: 06.001
Doc: HT11/26

Can you talk at all about water usage...for the dismantlement of the 20,000 pits at Pantex?

Response:

To elaborate on the response given at the public hearing, this information on weapons dismantlement is summarized in volume I, section 1.2.2.1. Volume I, section 4.6.2.3, has been modified to include this detailed information for clarification purposes.

RC: 06.002
Doc: HT11/27

But the Pantex Plant feels that there is enough water to disassemble the entire 20,000?

Response:

Yes, groundwater resources are available for continued operations at Pantex Plant. The plant uses only a small percentage of the groundwater resources of Carson County. See discussion in section 1.3.5 of this volume for details.

RC: 06.003
Doc: HT05/1

On page 4-13 it's stated, and I quote, that the City of Amarillo has pledged 5,526 million liters of water, or 1.6 million gallons per year as a potential part of the Pantex expansion.

a. All my questions are [on] the disposition issues considered expansion missions and,

b. Where is the City of Amarillo planning to withdraw that amount of water from?

Response:

To elaborate on the response given at the public hearing, the City of Amarillo pledged 5,526 million liters of treated wastewater per year for the tritium supply mission, which required large quantities of water in excess of the plant's production capacity. However, the decision has been made not to locate the mission to Pantex Plant. The tritium supply mission has since been assigned to the Savannah River Site.

a. Disposition missions were not part of the tritium supply mission for which the pledge was made. However, the City of Amarillo would likely extend the same pledge for any new, large missions that might need such quantities of water. The continued operations discussed in the Pantex EIS would not require the quantities of water discussed for the tritium supply alternative and, therefore, would not require the use of the pledged water.

b. If there were a mission that required large quantities of treated wastewater, the City would develop reclaimed wastewater from the City of Amarillo Hollywood Road Wastewater Treatment Plant. The use of reclaimed wastewater could curtail the annual withdrawal rate from the Ogallala aquifer.

RC: 06.004
Doc: HT05/2

And, if...[pledged water] were to come from Carson County, where we already experience significant groundwater declines, it would mean that, if this total

amount was used,...a 23 percent increase in groundwater withdrawals from that area.

Response: *The pledged water would come from treated wastewater, not groundwater. See response to comment 06.003 for additional details.*

RC: 06.005
Doc: HT05/3

I know the City has extensive groundwater rights. My main question is whether and what criteria and how long is the pledge good for and those kind of things?

Response: *See response to comment 06.003.*

RC: 06.006
Doc: HT05/4

So it's an ongoing offer? So there's no time frames?

Response: *See response to comment 06.003. We understand that the offer is only contingent upon new work (jobs) being brought to the plant.*

RC: 06.007
Doc: HT05/5

... I think it's...a typographical error or something. But, in reading on Page 4-78, it was going into the agricultural uses in Carson County. And they had stated in that that there [were] 8,550 acres of irrigated agriculture in Carson County.

And a check with the Farm Service Agency, which is a Federal regulatory agency, on the amount of acres in 1995 was 63,500 acres. Your withdrawal figure seems to be somewhat within range, but your acres are quite a bit off.

It's the Farm Service Agency [that] used to be ASCS. It's the government's regulatory agency for the Federal Farm Program. And they keep it down to the 10th of acres, so I know that they're correct.

Response: *On May 30, 1996, we received updated (1995) data from the Panhandle Ground Water Conservation District (PGWCD) and the Farm Service Agency, which reported a total of 63,629 acres were irrigated in Carson County in 1995. PGWCD estimated a corresponding total irrigation pumpage of 81,702 acre-feet (26.6 billion gallons) in Carson County in 1995. Volume I, section 4.6.1.2, has been updated with this information.*

RC: 06.008
Doc: CO-008/62

Page 4-234, Paragraph 4. In light of the BEG study, please define the statement, "hypothetical plutonium dispersal accident does not pose a significant threat to the Ogallala aquifer."

Response: *Accident scenarios meet the risk limitation criteria discussed in volume I, section 4.14. The source of the referenced Bureau of Economic Geology (BEG) study are stakeholder comments, submitted by BEG through the State of Texas (February 25, 1993), in an Environmental Assessment describing current weapon staging and proposed component interim storage operations in Zone 4 of Pantex Plant and a related supplemental report entitled "Potential Ogallala Aquifer Impacts of a Hypothetical Plutonium Dispersal Accident in Zone 4 of the Pantex Plant" (LANL 1992). The Los Alamos National Laboratories (LANL)*

report assumed an average recharge rate of 3 centimeters per year. In their stakeholder comments on the LANL report, BEG commented that recharge rates ranging from 1.3 to 8 centimeters per year may be more applicable for the LANL study. BEG also raised additional questions regarding travel time estimates calculated in the LANL study including, the effects of focused recharge, recharge rate estimates of 15.2 to 63.3 centimeters per year based on dating tritium concentrations in groundwater, and calculation of a "conservative" velocity for determining contaminant transport. DOE's responses to BEG's and other stakeholder comments are provided in the "Environmental Assessment for Interim Storage of Plutonium Components at Pantex and DOE Response to Comments on the Pre-approval Environmental Assessment and the Revised Pre-approval Environmental Assessment and Public Meeting," volume I, section E, (DOE 1994w). This document is available for review in area public reading rooms.

RC: 06.009
Doc: CO-008/87

Page 4-55, Paragraph 6 (last paragraph and continuation on page 4-57). Treated and untreated industrial discharges and stormwater, from both agricultural and industrial areas, are directed to Playas 1, 2, and 4. [See Table 4.6.1.1-2 page 4-59....]

Response:

According to the 1995 Environmental Report for Pantex Plant (DOE 1996f:111), all effluents from plant operations are treated and, along with some noncontact industrial discharges (e.g., steam condensate), are directed into ditches that drain to Playas 1, 2, and 4. Runoff from the southern portions of Zones 11 and 12 flow into Playa 4. Volume I, section 4.6.1.1, and volume I, Table 4.6.1.1–2, have been modified to reflect this updated information.

RC: 06.010
Doc: CO-008/88

Page 4-56, Figure 4.6.1.1-1. Please check figure for Pantex Lake. The figure provided does not appear to be Pantex Lake. Please show full extent of Pantex Lake.

Response:

The referenced figure includes only the western portion of the Pantex Lake floodplain, set to scale. There are no current or proposed activities to be conducted at Pantex Lake. Therefore, the full extent of Pantex Lake was not included in the figure in the Draft EIS. Figure 4.6.1.1–2, showing the full extent of Pantex Lake, has been added to volume I, section 4.6.1.1.

RC: 06.011
Doc: CO-008/89

Page 4-57, Paragraph 5 "Flow from the WWTF is small but continuous." What quantity is "small?" This term seems inappropriate and subjective. Please quantify.

Response:

The National Pollutant Discharge Elimination System (NPDES) Permit (No. TX-0107107) specifies a 0.65 million gallons per day daily average discharge limitation for Outfall 001. This permitted average daily discharge has been included in volume I, section 4.6.1.1.

RC: 06.012
Doc: CO-008/90

Page 4-60, Paragraph 2. At what cost is potable water provided to TTU?

Response:

The Pantex Plant provides Texas Tech University (TTU) with water for grazing cattle under a service agreement with TTU. Water is sold to TTU at a negotiated price per the interagency agreement between DOE/AAO and TTU.

RC: 06.013
Doc: CO-008/91

Page 4-61, Paragraph 6. Requirements provided for the "TNRCC draft permit" seem unusually similar to the current permit. Please provide updated permit information.

Response:

A summary of requirements of the Final NPDES Permit (No. TX-0107107) have been discussed in volume I, section 4.6.1.1, and are provided in volume II, appendix C.

RC: 06.014
Doc: CO-008/92

"As discussed in section 4.6.1.1, surface water discharge permits have been in effect since the late 1980's..." According to information you provided, a permit was first issued in 1980 (which is not "late").

Response:

The sentence has been modified to state, "surface water discharge permits have been in effect since 1980...".

RC: 06.015
Doc: CO-008/93

Page 4-58, Table 4.6.1.1-1. Why were Burning Ground structures not considered?

Response:

The Natural Phenomena Hazards Modeling Project: Preliminary Flood Hazards Estimates for Screening Department of Energy Sites: Albuquerque Operations Office, (LLNL 1988), states that there are no structures located near Playa No. 3. Structure elevations are not referenced in the Pantex Plant Floodplain Delineation Report (DOE 1995c). Although the elevations of Burning Ground structures were not included in these floodplain studies, they have been added to volume I, Table 4.6.1.1–1, as requested. The only structures that currently exist above ground at the Burning Ground are the Explosive Burn Trays. These structures have a height of 2 feet above ground surface and an approximate surface elevation of 3,572 feet above mean sea level. The Explosive Burn Trays are outside of the 100- and 500-year delineated floodplains for Playa 3, and are therefore in compliance with 40 CFR 264.18, location standards for floodplains.

RC: 06.016
Doc: CO-008/94

Page 4-13, Paragraph 4, "The City of Amarillo has pledged 5,526 million liters per year (1,460 million gallons per year) as a part of potential plant expansion." Are disposition missions considered expansion?

Where is the City planning to withdraw this amount of water? If it were to come from their Carson County Well Field, it would be a 23 percent increase in current pumping and would significantly add to the excessive drawdown problem in that area.

What are the timeframe and conditions of the pledge?

Response: *See response to comment 06.003.*

RC: 06.017
Doc: CO-008/95

Page 4-78, Paragraph 2. "In 1989, 760 irrigation wells in Carson County pumped 115 billion liters (30.5 billion gallons) to irrigate approximately 3,460 hectares (8,550 acres). This is incorrect. A check of Farm Service Agency irrigated acres in Carson County revealed 63,500 acres in 1995.

PGWCD estimated irrigation pumping of 26.3 billion gallons of water pumped in 1995.

Response: *See response to comment 06.007.*

RC: 06.018
Doc: CO-008/96

Page 4-78, Paragraph 4. "Pantex Plant is located [in] Panhandle Groundwater Conservation District No. 3, which has the authority to require permits and limit the quantity of water pumped. Presently, the Panhandle Groundwater District does not limit the quantity of water pumped." That statement is true for wells drilled and in use prior to July 19, 1995. For new wells, drilled after July 19, 1995, a landowner whose well produces annually more than 350,000 gallons of water per acre owned, on a section by section basis, will be required to obtain a High Production Permit from the District.

Response: *The sentence, "Presently, the Panhandle Groundwater Conservation District does not limit the quantity of water pumped" has been modified to state, "Historically, the Panhandle Groundwater Conservation District...". Another sentence has been added that states, "However, for new wells drilled after July 19, 1995 that produce annually more than 1.3 million liters (350,000 gallons) of water per acre owned, on a section by section basis, landowners will be required to obtain a High Production Permit from the Panhandle Groundwater Conservation District."*

RC: 06.019
Doc: CO-008/97

... Please define the extent and migration of the contamination. More information is needed to define the extent of the perched aquifer and whether it is in communication with the Ogallala aquifer.

Response: *Discussion of the extent and migration of contamination in the perched aquifer has been updated to reflect the most recent data available at the time of publication. Additional information, discussed in section 1.3.5 of this volume, has also been included in volume I, section 4.6.1.2.*

RC: 06.020
Doc: CO-008/98

... Are fissures present that would allow movement of the perched water to enter the Ogallala aquifer?

Response: *The term "fissure" refers to cracks, breaks, or fractures in rock. The Ogallala aquifer consists primarily of unconsolidated sand, silt, clay, and gravel. Unconsolidated materials are not prone to the development of fissures. However, there is the potential for groundwater from the perched aquifer to move downward toward the Ogallala aquifer through voids between*

unconsolidated sand, silt, clay, and gravel particles. Coarse-grained gravels and sands transmit water faster than fine-grained silts and clays. Fine-grained material creates localized perching zones that limit the downward vertical movement of infiltrating groundwater, as discussed in volume I, section 4.6.1.2.

RC: 06.021
Doc: HT02-04/4

Records show that Pantex is monitored for some 160 different contaminants. And why is it being monitored for these contaminants? Because they didn't know it, but they sent it into the groundwater. And I am addressing you as Pantex, but this forum also needs to address the fact that these discharges are only monitored, contaminant by contaminant.

Response:

Pantex Plant has several ongoing routine and non-routine monitoring programs to identify the contaminants of air, soil, surface water, and groundwater.

Volume I, section 4.5.1.3, and volume II, appendix I, discuss the surveillance programs for soil and environmental restoration activities. Volume I, Table 4.5.1.3–3, and Table I.1.2.1–3, volume II, Table I.1.2.1–3 characterize the soil contaminations and quantify them.

Volume I, sections 4.6.1.1 and 4.6.1.2, and volume II, appendix C, discuss and quantify the chemical constituents that exceed surface water and groundwater quality decision criteria.

Ambient air quality is described in volume I, section 4.7.1.3 and volume II, appendix B. Volume I, Tables 4.7.1.3–4 and 4.7.2.1–2, identify the air pollutants emitted from site-wide Pantex Plant operations and quantify them, contaminant by contaminant.

RC: 06.022
Doc: CO-008/99

Page S-15, Table S-1. The table on page S-15 should show percentages, to give the reader perspective on water use.

Example:

a. Plant used 230 million gallons in 1995.

1. Texas Tech Farms used 66 million gallons (29%) of the total usage.

2. Nuclear weapons operations used 163 million gallons (71%).

b. City of Amarillo consumed 16 billion gallons of water in fiscal year 1995.

c. Pantex Plant including Texas Tech Farms used 1.4% as much as the City of Amarillo and 1% of water use went for nuclear weapons.

d. Considering the water also used for irrigation, the plant withdrew 0.6% of the regional withdrawal from the Ogallala aquifer. Nuclear weapons operations consumed 0.43% of the regional withdrawal.

Pantex 1995 Water Usage, Reference: Draft EIS for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components, March 1996, page S-15.

Response: *Table S–1 is intended to be a summary comparison of environmental impacts at Pantex Plant. It is not a summary of baseline conditions for the various resource areas. As a result, the recommended change to Table S–1 is not applicable to the intended purpose of the table. However, this recommendation has been applied to the information presented in volume I, Table 4.6.1.2–3. Information in volume I, Table 4.6.1.2–3, has been updated with available data and percentages for 1995.*

RC: 06.023
Doc: CO-008/100

Page 4-63, Figure 4.6.1.2-1. Why are drinking water sampling locations (at the tap) provided on a figure titled to depict monitoring wells?

Response: *Drinking water locations have been omitted from the referenced figure (Figure 4.6.1.2–2) in volume I. In addition, this figure has been retitled, "Groundwater Monitoring Locations, Pantex Plant Site".*

RC: 06.024
Doc: CO-008/101

Page 4-65, Paragraph 2. "The complete lateral and vertical extent of perched aquifers are being defined." Please clarify.

Response: *The "lateral and vertical extent" refers to the aquifer's location, shape or geometry, and depth. An expedited site characterization for the Pantex Plant Zone 12 groundwater was conducted to develop a working model of the perched aquifer. Specific objectives included characterizing the extent of the perched aquifer, nature of groundwater recharge, direction of groundwater flow, groundwater contamination, and identification of potential receptors. The findings of the expedited site characterization are presented in the Draft RCRA Facility Investigation Report for Groundwater in Zone 12 at the DOE Pantex Plant (Argonne 1995a). The word "complete" has been omitted from the referenced sentence in volume I, section 4.6.1.2.*

RC: 06.025
Doc: CO-008/102

Page 4-69, Paragraph 2. Please correct typo, "the conclusion drawn from this (these) data..."

Response: *Correction has been included in volume I, section 4.6.1.2.*

RC: 06.026
Doc: CO-008/103

Page 4-69, Paragraph 6. Concerning the depth to groundwater calculations, were calculations made on the leased and owned land or just owned land?

Response: *Depth to groundwater calculations included the available data for owned land (i.e., the main Pantex Plant).*

RC: 06.027
Doc: CO-008/104

Page 4-69, Paragraph 4. "Although the effectiveness of the fine-grained zone to act as a barrier to vertical groundwater movement is not fully understood,..." The word "barrier" should be changed to "retardant," to more correctly describe movement.

Response: *The text in volume I, section 4.6.1.2, has been revised.*

RC: 06.028
Doc: CO-008/105

Page 4-71, Paragraph 1. What does the statement, "In 1990, the recoverable volume of water in storage and available for use in the Ogallala aquifer was estimated at approximately..." refer to? Does it refer to that volume beneath Pantex, contained in the High Plains Aquifer, or the entire multi-state regional "Ogallala" aquifer? Please clarify.

Response:

The estimate refers to the recoverable volume of water in storage in the Ogallala aquifer in the High Plains Aquifer System. The estimate was calculated using an aquifer simulation model of the High Plains Aquifer System, originally constructed in the early 1980's and updated and revised in 1990, to predict future aquifer conditions. Additional information is provided in Peckham and Ashworth, 1993, "The High Plains Aquifer System of Texas, 1989 to 1990 Overview and Projections." The phrase "in the High Plains aquifer system (TWD, 1993)" has been added to the end of the last sentence in the above-referenced paragraph in volume I, section 4.6.1.2.

RC: 06.029
Doc: CO-008/106

Page 4-75, Paragraph 1. "It is highly likely that this and other earlier releases contributed to the high concentrations of chromium..." (1976-1986). Are further investigations to be done to identify the source, or is it to be accepted as is? 1976-1986 seems rather recent to be the major contributor to the perched aquifer contamination problem. Verify dates and any other sources of chromium.

Response:

Ongoing chromium investigations include determining whether elevated chromium levels could have been caused by the amount of chemicals used for conditioning cooling water during the tower's operational period (1950 to 1964), conducting chromium anion exchange and column studies to determine whether ion exchange resins would be an effective treatment technology, and geochemical modeling to predict the fate and transport of chromium species in groundwater. This information has been added to volume I, section 4.6.1.2.

RC: 06.030
Doc: CO-008/107

Page 4-77, Paragraph 2. "Investigations to determine the potential for contaminant migration to the Ogallala aquifer from Pantex Plant are ongoing." Please provide more specific information as to what investigations are ongoing or planned.

Response:

DOE has investigated the potential for contaminant migration to the Ogallala aquifer from Pantex Plant in homestead wells that are located southeast of the plant boundary. Seven abandoned homestead wells have been sealed in order to prevent potential pathways of contamination into the Ogallala aquifer under the Groundwater Protection Project. A summary of the purpose and scope of the Groundwater Protection Project has been provided in volume I, section 4.6.1.2.

RC: 06.031
Doc: CO-008/108

Page 4-77, Table 4.6.1.2.-3.

a. Under "Source," the Carson County Well Fields should be clearly identified as "City of Amarillo's Carson County Well Fields."

b. Does Carson County irrigation use (1989) include gallons used by TTU for irrigation at Pantex?

Response: *a. Correction has been included in volume I, section 4.6.1.2.*

b. Updated information has been provided in volume I, section 4.6.1.2. The totals for water use in the county do not provide a list of individual uses so it is unknown whether TTU usage is included.

RC: 06.032
Doc: CO-008/109

Pages 4-78, 79, Paragraph 5. Because the TNRCC and EPA requirements in the new permits will be quite different from the requirements of the permit complied with in 1994, it seems that the logic in this paragraph may be faulty. A statement that all parameters in the proposed draft permit have been met for x-number of years would be more persuasive. Please update with current permit information.

Response: *Information from the Final NPDES (June 1996) has been summarized in volume I, section 4.6.1.1, and is presented in volume II, appendix C. Surface water decision criteria have been revised in accordance with the required permit limits for the Final NPDES and TNRCC Wastewater Discharge Permits. The referenced text in volume I, section 4.6.2.1, has been omitted from the paragraph.*

RC: 06.033
Doc: CO-008/110

Page 4-79, Paragraph 4. The statement "Groundwater contamination has occurred in the perched aquifer as a result of past site-related activities, primarily through spills and unintentional releases," is not consistent with information provided by Pantex Plant. Past practices were past practices. Rather than try to explain them as spills and accidents, a more positive statement would be to provide some of the great strides that Pantex Plant has made in the past seven years to correct these practices and investigate and begin to correct the extent of problems created by past practices.

Response: *The text has been modified to state, "Groundwater contamination has occurred in the perched aquifer as a result of past site-related activities. For the past seven years, the Pantex Plant Environmental Restoration Program has assessed inactive sites, conducted investigations to determine the nature and extent of contamination, and implemented remediation strategies to eliminate any present or future threat to human health and the environment. These activities to investigate historical sources of contamination and correct the extent of problems created by past practices will continue in the future."*

RC: 06.034
Doc: CO-008/111

Page 4-80, Paragraph 6. Please specify the "current activities" of UT Austin, TBEG, and TTU Water Resources Center.

Response: *The "current activities" of University of Texas at Austin, Bureau of Economic Geology, and Texas Tech University Water Resources Information Center that are being referred to in the subject text include:*

- *Conducting a perched aquifer tracer test at the Pantex Plant Zone 12 treatability site to evaluate the efficiency of groundwater recirculation for remediation, determine potential retardation effects on high explosives from the injection of treated wastewater, and to predict long-term performance of the remediation system.*
- *Soil vapor extraction modeling and conducting a tracer test in unsaturated sediments above the perched aquifer to predict the efficiency of soil vapor extraction.*
- *Investigating microorganisms for high explosives degradation.*
- *Bioremediation investigations and ecological risk assessments.*
- *Chromium investigations that include determining whether elevated chromium levels could have been caused by the amount of chemicals used for conditioning cooling water during the tower's operational period (1950 to 1964), chromium anion exchange and column studies to determine whether ion exchange resins would be an effective treatment technology, and geochemical modeling to predict the fate and transport of chromium species in groundwater.*

Volume I, section 4.6.1.2, has been updated accordingly.

RC: 06.035
Doc: CO-008/112

Page 4-82, Paragraph 7. Is the effluent volume a condition of the proposed draft permits?

Response: *The NPDES permit has daily average and daily maximum effluent volume limitations of 0.65 and 0.82 million gallons per day respectively for Final Outfall 001. The permit also has reporting requirements for daily effluents at other outfalls. Specific Pantex Plant NPDES permit requirements are tabulated in volume II, appendix C.*

RC: 06.036
Doc: CO-008/113

Page 4-83, Paragraph 1. "Since about 82% of the groundwater withdrawal in Carson County is for irrigation, conversion to dryland farming could have a major beneficial effect on the current rate of aquifer drawdown." Under Texas Law, groundwater is private property. This statement refers to property owned by others and is inappropriate and irrelevant to the SWEIS. Please withdraw this statement.

Response: *Statement has been omitted from volume I, section 4.6.1.2.*

RC: 06.037
Doc: HT02-04/2

We cannot fix a problem we are not permitted to face. I call on the DOE, Mason & Hanger, the unions, the DOD, the City of Amarillo, and the State of Texas to correct, once and for all, this unethical situation that prohibits

documents such as the Zone 12 Groundwater Assessment proposed by Argonne National Lab from being easily available to the general public as well as to our civic leaders.

Response: *The Environmental Restoration program or cleanup process is governed by Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or both, and their associated regulations. Both sets of regulations govern how environmental contamination is defined, characterized, and remediated. Following sampling, analysis, and characterization, a draft report that describes the data, analysis, and cleanup recommendations is sent to the regulator. After review by the regulator, subsequent revision of the report, and final approval by the regulator, the final report is made available to the public. The approval of the report includes approval of the recommendations.*

The RCRA Facility Investigation (RFI) for groundwater in Zone 12 at Pantex Plant is not currently available to the public and there is no timeframe for providing this document to the public. The State of Texas is reviewing this document and has yet to respond. DOE will not release the RFI until receiving State approval.

RC: 06.038
Doc: HT13/7

Another thing is the water and the springs in the mountain. Dry as it seems all around here, particularly when we don't have any rain, there is actually water in the mountain. There is an intriguing sentence on page 5-59 in the document that says some magazines show evidence of water intrusion.

I am interested in knowing to what extent the water intrusion affects any of the 41 in the mountain and how many of the ones that potentially -- well, let's start with that. How many of the 41 are affected by water intrusion?

Response: *A survey of unlocked magazines was conducted at the Manzano Weapons Storage Area at Kirtland Air Force Base in March 1993 to identify magazines that exhibited evidence of water intrusion. The survey revealed that 41 magazines were found to be dry, 21 showed at least some evidence of water intrusion from leaks or seeps, 59 were locked, and 1 was sealed. It should be noted that the degree of water intrusion is characterized more accurately as small, shallow puddles rather than flooding.*

RC: 06.039
Doc: HT13/8

Do you know what the causes of the water intrusion in the two were? Is it [a] water source? Is it flaws, engineering flaws, or cracks in the facility, or why is it and how is it that the water came in? The obvious follow-up is how do you know that there won't be similar problems in any or all of the other 39?

Response: *The exact cause of a small amount of water in storage magazines at the Manzano Weapons Storage Area at Kirtland Air Force Base was not determined. The water could have seeped in through small holes in the roof, walls, or floor joints, or through the chimneys which vent the magazines to the atmosphere. In any event, the obvious excellent condition of the visible interior of the magazines (walls, ceilings, floors) and the very small water puddles observed on the*

otherwise dry floors suggest that very little work would likely be required to make the magazines suitable for pit storage. The magazine interiors actually look much younger than their actual age.

RC: 06.040
Doc: PC-011/1

To expand Pantex's role to accommodate any or all of the above is to me grossly irresponsible in view of the fact that the plant lies above the largest fresh water aquifer in the U.S., and that said aquifer is the lifeblood of this area's agriculture industry. Why the Ogallala aquifer has not been classified as a Class 1 water source is a puzzlement to me.

Response:

Texas enacted a groundwater law in 1949 that authorized the formation of local districts having the power to make and enforce regulations governing groundwater withdrawal. By virtue of this law, Texas has given the power of regulation to local groups, thus placing the responsibility for regulation at the lowest possible governmental level capable of performing the desired functions (USGS 1976). The Texas Water Code section 52.024 grants the Texas Water Commission (predecessor to the TNRCC) the authority to designate Underground Water Management Areas in the State of Texas in the form of a rule to protect groundwater resources. Groundwater resources in the area governed by the Panhandle Groundwater Conservation District, including the Pantex Plant area, have not been designated as Class I or a critical area. This text has been added to clarify volume I, section 4.6.1.2.

RC: 06.041
Doc: PC-011/3

It is a further contention by Pantex boosters that no substantial water pollution has occurred except for the perched water above the Ogallala aquifer. On June 27, 1995, a water sample was taken from one of my windmill wells and submitted for analysis. The results yielded the following information:

For 16 high explosives tested for, results were below PQL [Practical Quantification Limits]. For gross alpha, gross beta, Pu 239/240, Ra 226/228, Sr-90, tritium U 234/238 -- detected, but below Safe Drinking Water Act maximums.

How much will these levels rise if Pantex's role is expanded? Is it something we are willing to risk? Is it truly necessary for the viability of Amarillo's or the Panhandle's economy? Is short term economic prosperity worth eternal contamination?

Response:

The TNRCC detected low levels of high explosive contamination in a domestic Ogallala well located southeast of the Pantex Plant boundary; however, efforts to mitigate further contamination have been completed as discussed in section 1.3.5 of this volume. The well in question has been properly plugged and abandoned under the supervision of the TNRCC and a replacement Ogallala well has been drilled and completed in order to prevent further potential cross-contamination of the Ogallala aquifer. Pantex Plant's Groundwater Protection Project addresses these and future steps to assure the integrity of offsite groundwater quality. Volume I, section 4.6.1.2, has been updated and includes

additional information regarding the Groundwater Protection Project. The scope of this EIS does not include expansion of Pantex Plant's role.

RC: 06.042
Doc: TG-001/1

There should be an addition to Table 6.5-4 in the Water Resource row. This table in the Draft EIS has only the New Mexico State environmental statutes. Of these 19 Pueblo Indian Tribes, six have received EPA approval for water quality standards under the treatment of State designation. These six are Isleta Pueblo, Sandia Pueblo, San Juan Pueblo, Santa Clara Pueblo, Picuris Pueblo, and Nambe Pueblo. And of the six, Isleta Pueblo is the closest in proximity and downstream on the Rio Grande river from the Manzano Weapon Storage Area at the Kirtland Air Force base, which is one of the alternative sites. Other Pueblo tribes have draft water quality standards that they anticipate approval [for] soon.

Response:

Thank you for your observation. Table 6.5–4 in volume I, has been modified accordingly.

RC: 06.043
Doc: PC-034/12

... In volume I,...4.6, Water Resources (p.4-57) it is stated that "Playas have also been identified as possible sources of focused recharge to the groundwater flow system at Pantex Plant. Unlined ditches have been used to dispose of wastewater and stormwater in the past."

As written, the implication is that the Pantex playas recharge the total groundwater system, which includes the Ogallala aquifer. This is not true. At Pantex Plant the playas have been identified as...possible [sources] of focused recharge to the perched aquifer, and unlined ditches have been used to convey wastewater and stormwater.

Response:

Volume I, section 4.6.1.2, has been modified accordingly to state, "At Pantex Plant the playas have been identified as a possible source of focused recharge to the perched aquifer and unlined ditches have been used to convey wastewater and stormwater."

RC: 06.044
Doc: PC-034/13

... In August 1995, EPA issued a draft NPDES permit for the Pantex Plant, yet in volume I (pp. 4-61 and 4-62) very little information regarding the substance of this draft NPDES Permit is presented.

Question: Why? And why does this section on NPDES Permits contain superfluous information about three-year old TNRCC draft permits on surface water discharges?

Response:

Volume I, section 4.6.1.1, and volume II, appendix C, have been updated to present information from the Final NPDES and TNRCC Wastewater Discharge permits.

RC: 06.045
Doc: PC-024/14

Page 5-12, left column, "Impacts of Facility Upgrades," last five lines. No mention is made, in this report, concerning the radioactive trititated water that drains out of some of the tunnels and collects in ponds outside the tunnel entrances. Nor is there any mention of the possible collection of gaseous

radionuclides in the tunnels that could originate from the waste in the expended test cavities.

Response: *With respect to the tunnels at Nevada Test Site, the only tunnel that is being considered for storage of plutonium pits is P-Tunnel. There is no drainage out of P-Tunnel. Upon completion of a weapons effects test, and the recovery of the data, the area is sealed to prevent radionuclide migration.*

RC: 06.046
Doc: PC-023/2

With respect to water resources and water quality, I understand that groundwater and surface water contamination has been attributed to past activities at Pantex Plant. Heavy metals, solvents, etc. found in excessive concentrations in the perched groundwater can be linked to poor disposal practices in the past, and improved waste handling should limit future contamination. However, since soils in recharge areas (including playas and ditches) are contaminated, the contaminants can continue to move to the perched aquifers. I am concerned about the quality of water in some relatively shallow domestic wells in the vicinity. Your report states that at least two domestic wells draw water from perched groundwater.

Response: *Pantex Plant has worked very closely with EPA Region VI and the TNRCC to produce wastewater discharge permits (EPA NPDES Permit No. TX-0107107 and TNRCC Wastewater Discharge Permit No. 02296) that provide stringent wastewater discharge requirements that are protective of human health and the environment. An additional condition of the TNRCC requires Pantex Plant to conduct a study to determine the feasibility of eliminating or minimizing discharges to playa lakes and open ditches or improving the quality of discharge. In addition, DOE is conducting a Groundwater Protection Project to alleviate the potential for groundwater contamination.*

RC: 06.047
Doc: PC-023/3

... It is possible that the water in the perched sources can move to the Ogallala aquifer. The hydraulic gradient of the Ogallala in the vicinity of Pantex indicates well drawdown under Pantex Plant toward the City of Amarillo well fields in Carson County northeast of the plant. In other words, contaminants that leach to the Ogallala under Pantex will likely move toward the wells supplying water to the City of Amarillo. The City of Amarillo has pledged up to 1,460 million gallons per year to Pantex Plant, up from the 221 million gallons used in 1994. If pumping rates from these well fields increase, the well drawdown will increase, thereby increasing the hydraulic gradient and increasing the rate of movement of these contaminants toward the city's water supply.

Response: *The 1,460 million gallons per year of water that was offered by the City of Amarillo refers to reclaimed wastewater from the Hollywood Road Wastewater Treatment Plant, not groundwater supplied from the Carson County wellfield, as discussed in the response to comment 06.003.*

RC: 06.048
Doc: HT16/16

My main concerns about the discussions of the perched aquifer and the Ogallala aquifer have to do with the limited amount of information that is available

describing the limits of the perched aquifer to the south and southeast. And I'm also concerned about the lack of discussion of leakage of perched aquifer waters through the perching horizon. In my reading of the Draft EIS, these two issues are not treated with any...kind of detail. And I would like to know if there's any additional information available that may be added into the final statements. We don't know for sure, for example, what happens to perched...aquifer waters when they reach towards the limit of the perching horizon. Are they simply flowing off the edge of the perching horizon and then into the Ogallala aquifer, or is it possible in some cases that the southern margins of the perched horizon are more or less continuous or sort of flow into the Ogallala aquifer.

Response:

An expedited site characterization was conducted in 1994 and 1995 to characterize the extent of the perched aquifer, nature of recharge, and direction of groundwater flow. The results of the investigation are included in the Draft RCRA Facility Investigation Report for Groundwater in Zone 12 at the DOE Pantex Plant (Argonne 1995a). Data collected during the expedited site characterization were used to predict contaminant movement and to evaluate cleanup options for perched groundwater; the results of this study are reported in Two-dimensional Groundwater Flow Model and Design Tool for Evaluation of Remedial Options for Perched Groundwater at Pantex Plant (Battelle 1996a). Additional investigations are being conducted on private property south and southeast of Pantex Plant. The primary area of concern in this modeling effort is the perched aquifer underlying Zones 11 and 12 and the area east and southeast of the plant boundary.

The perched aquifer occurs as a result of localized groundwater mounds that form beneath the playas from focused surface water recharge. The existence of the perched aquifer is also dependent on the occurrence of a fine-grained zone, reported to be approximately 30 to 110 feet thick. This fine grained zone impedes the downward movement of infiltrating groundwater. The fine-grained zone has an irregular surface, and generally occurs 300 feet below land surface. Where the fine-grained zone is present, perched groundwater collects in sand and gravel deposits that form subsurface channel features. The perched aquifer is thickest beneath Playa 1, which is considered to be a source of focused recharge to the perched aquifer. Groundwater in the perched aquifer is considered to flow radially away from Playa 1. Recharge varies laterally between playa, interplaya, and drainage ditch environments.

It is important to note that the perched aquifer is stratigraphically higher (closer to the surface) and not directly hydraulically connected with the underlying Ogallala aquifer. The depth to groundwater ranges from 210 to 290 feet below land surface in the perched aquifer and from 340 to 460 feet in the underlying Ogallala aquifer.

The information provided in this response has been added to volume I, section 4.6.1.2, for clarification.

RC: 06.049
Doc: HT16/23

On Page 4-57, the first paragraph is somewhat confusing. We'd like to see a statement [that] clearly states that Pantex did at least historically discharge [to] Playa 5. It's implied in the statement they have in the first paragraph. We would like to see it just a little more clear cut. With regard to Ogallala contamination, I understand the EIS had been written before we discovered some slight amount of contamination in the Ogallala proper. Since the EIS hasn't come out in its final version, I think it ought to be revised to go ahead and reflect the conditions we know about now.

Response:

According to the Pantex Plant Environmental Information Document (Pantex 1996), no industrial discharges from Pantex Plant have ever entered Playa 5.

Discussion of contaminants of concern detected in the Ogallala aquifer has been addressed in the Final EIS.

RC: 06.050
Doc: HT16/24

With regard to the Ogallala, the homestead wells, the EIS should note that the low vertical permeability of the fine-grained zone may be compromised by these abandoned homestead wells that have been found on the Pantex site. These wells could provide contaminant pathways through the fine-grained zone to the Ogallala.

Response:

See discussion in section 1.3.5 in this volume regarding the efforts concerning the homestead wells in the Pantex Plant groundwater protection program.

RC: 06.051
Doc: HT16/25

With regard to the facility boundary, the EIS should mention that DOE will take whatever action is practicable to clean up the groundwater to residential drinking water standards beyond the facility boundary. ...On Page C-2 there's a statement that...the Texas State Surface Water Quality Criteria do not apply to Pantex playas. But if you go through the Risk Reduction Rules, 30 Texas Administrative Code, Subchapter S, Chapter 335, you'll note that Texas Surface Water Quality Criteria [do] apply to the Pantex playas surface water quality values. The surface water quality determined in accordance with Risk Reduction Rules [takes] precedence over the risk based concentration guidelines from EPA Region 3, which was cited on section C.1.2. The list of decision criteria doesn't list the Texas Risk Reduction Rules, which also include Texas Surface Water Quality Criteria and drinking water standards and so forth. ...Since the EPA Region 3 guidelines don't apply to Pantex, which is in EPA... Region 6...and we have the Texas Risk Reduction Rules and the Texas Surface Water Quality Criteria, all of which do apply, we'd just as soon you drop the EPA guidelines and substitute the Risk Reduction Standards. This gets to be a problem later on.

In Table C.1.2-1, some of the values cited apparently cite the EPA Region 3 guidance. For instance, the standard for antimony should be 0.006 milligrams per liter, based on the Risk Reduction Rules, which refers it back to the Safe Drinking Water Act, rather than the 0.15 milligrams per liter cited by EPA Region 3 guidance. So, because we're using the wrong guidance, we're getting the wrong numbers cited in the EIS. Standards for gross alpha activity,

according to the Risk Reduction Rules, should be 15 picocuries per liter rather than...N/A—not applicable. That was cited in the table. No water quality standard is provided by the Texas Surface Water Quality Criteria; therefore, the Risk Reduction Rules specify use of drinking water standards which are based on the Federal Safe Drinking Water Act. Proposed drinking water standards should be 50 picocuries per liter or 4 millirems per year for beta particle activity....

And the TNRCC requests that DOE revise Table C.1.2-1 to cite the more stringent surface water quality standards for radionuclides that are developed in accordance with the Risk Reductions Rules. As such, the standard for plutonium-239/240 would be 2 x 10^{-8} microcuries per milliliter, based on the TRCR standards. ...they come out of the Bureau of Radiation Control, Texas Department of Health. Radium-226 and -228 should be 6 x 10^{-8} microcuries per milliliter, again, based on the drinking water standards, Federal drinking water standards. Tritium should be 1 x 10^{-3} microcuries per milliliter, based on the TRCR standards. Uranium-234 and -238 would be either 3 x 10^{-7} microcuries per milliliter, which is a TRCR standard, or 20 milligrams per liter, proposed drinking water standard, whichever is more stringent.

Response:

DOE has completed a Groundwater Protection Project to cleanup the groundwater to residential drinking water standards beyond the facility boundary, as discussed in section 1.3.5 of this volume. The purpose and objectives of the Groundwater Protection Project have been addressed in volume I, section 4.6.1.2.

Surface water quality decision criteria issues are summarized in section 1.3.5 of this volume. In the Draft Pantex Plant EIS, EPA Region III Risk Based Concentrations (RBC) Guidelines were used as a surface water quality decision criteria only for those constituents that did not have established surface water quality standards, Pantex Plant wastewater discharge permit limits, or DOE Derived Concentration Guides (DOE Order 5400.5) for radionuclides. As a result, EPA Region III RBC Guidelines were used as decision criteria for the following constituents: antimony, beryllium, boron, cobalt, molybdenum, nitrite, strontium, tin, vanadium, 3,3'-dichlorobenzadine, 4-methylphenol, acetone, benzoic acid, chloroform, ethylbenzene, methylene chloride, phenol, toluene, total xylenes, HMX, RDX, and ammonia. Of these constituents, the following are now regulated in the NPDES and TNRCC Wastewater Discharge Permits: antimony, beryllium, cobalt, molybdenum, HMX, RDX, and ammonia. EPA and TNRCC determined which constituents would have recording requirements and/or permit limits specified in the NPDES and Wastewater Discharge permits based on a review of the most recent surface water quality data available for the main outfalls and internal outfalls. The most recent analytical data at the time of regulatory review were from 1993. The TNRCC calculated effluent limitations that were based on the Texas State Water Quality Standards (30 TAC 307). The actual effluent limitations, cited in the permits, are more stringent that those calculated by the TNRCC and reported in its Fact Sheet. As stated in the NPDES Permit, EPA has accepted the statistical calculations provided by Pantex Plant and has established metal limitations on

case-by-case basis through best professional judgment under 402(a) of the Clean Water Act for best available technology economically available. In addition to the constituents that are regulated in the permits, the Pantex Plant Environmental Protection Department also has conducted analyses for the following constituents that were not specified in the permit: nitrite, strontium, vanadium, 4-methylphenol, 3,3'-dichlorobenzadine, chloroform, ethylbenzene, methylene chloride, phenol, toluene, acetone, benzoic acid, xylene, boron, and tin. By monitoring for these additional constituents, Pantex Plant is providing additional assurance that any changes in chemical constituents and their relative concentrations are protective of human health and the environment.

NPDES and Wastewater Discharge permit requirements have replaced RBC Guidelines from EPA Region III as decision criteria. Refer to volume I, section 4.6.1.1, and volume II, appendix C.

The Atomic Energy Act authorizes DOE to protect public health and safety and the environment in conducting programs, such as Pantex Plant operations. The purpose of DOE Order 5400.5 is "To establish standards and requirements for operations of the DOE and DOE contractors with respect to protection of members of the public and the environment against undue risk for radiation...." It is DOE's objective to operate its facilities and conduct its activities so that radiation exposures to members of the public are maintained within the limits established in this Order and to control radioactive contamination through the management of real and personal property. It is also a DOE objective that potential exposures to members of the public are as far below the limits as is reasonably achievable and that DOE facilities have the capabilities, consistent with the types of operations conducted, to monitor routine and non-routine releases and to assess doses to members of the public. In addition to providing protection to members of the public, it is DOE's objective to protect the environment from radioactive contamination to the extent practical." As a result, the Risk Reduction Rule and drinking water standards are not applicable decision criteria for surface water quality at Pantex Plant. The TNRCC Permit Fact Sheet (TNRCC, 1995a) states that the known uses of the receiving waters are high quality aquatic life use and contact recreation. The uses for the unclassified waters are intermittent playa lakes with no significant aquatic life uses. Acute aquatic life criteria apply. There is no reference to drinking water standards or Risk Reduction Rules being applicable criteria for Pantex Plant surface water in either the TNRCC or EPA permits or their respective Fact Sheets.

RC: 06.052
Doc: HT16/26

My question refers to -- it's on Page 4-78. And you recognize, and I quote, groundwater management is a responsibility of local jurisdictions through groundwater management districts. The Pantex Plant is located in Panhandle Groundwater Conservation District Number 3, which has authority to require permits and limit the quantity of water pumped. And, in view of this statement in the document, why have you chosen not to register the perched water production wells and the monitoring wells in compliance with Rule 4 of the Panhandle Groundwater Conservation District? It does not require permitting,

but it does require registering and a semiannual report of any water quality analysis that were taken from the monitoring wells.

Response: *DOE is working with the Panhandle Groundwater Conservation District Number 3 to resolve this issue.*

RC: 06.053
Doc: HT16/27

... I'd like for one of the DOE people to characterize to me how the system failed when, on a meeting on May 13th with Johnny Bolin [Guelker] and Danny [Dan] Ferguson of DOE, Boyd Deaver from the TNRCC here in Amarillo and myself, agreed that it was in everyone's best interest to not plug the Lee Cockrell windmill located off site. And then, two days later on May 15th, it was related to me that that well was plugged. And I just wondered where the system failed and what has done to correct it.

Response: *The windmill well was plugged by mistake. It has been redrilled and sampled for chemical analysis.*

RC: 06.054
Doc: HT16/28

When you were making the presentation on the water, you said that radionuclides were significantly below DOE standards. Does that mean that they are detectable?

Response: *Many radionuclides are naturally occurring in soils and groundwater. Activities of radionuclides detected in Pantex Plant groundwater samples were within the range of natural background water chemistry.*

RC: 06.055
Doc: HT17/19

... I'm concerned, as Ms. Smith is, with the threat that I see to the farmer in this community. When we see already that some of this stuff has leached down into the Ogallala aquifer, and people...keep shooting off them test things out there and all that, and they have all them cracks and stuff in the ground.

Response: *Pantex Plant is currently conducting groundwater treatability investigations in conjunction with their ongoing environmental restoration program efforts. Contaminated groundwater is pumped out of the perched aquifer, treated in a carbon-filtration system to remove high explosive contamination, and then pumped back into the perched aquifer. When the treated groundwater is reintroduced into the perched aquifer it flushes and displaces the existing contaminated groundwater, moving it toward the treatment system wells for cleanup. As stated in comment 06.020, the subsurface sediments in the Ogallala Formation consist of unconsolidated sand, silt, clay, and gravel; there are no cracks or fractures. Groundwater moves through void spaces between unconsolidated sand, silts, and gravels, and is being treated at an approximate rate of 42,000 gallons per day.*

RC: 06.056
Doc: HT17/40

Pantex is a Superfund Site. We now have confirmed contamination in the Ogallala Aquifer. It would seem that before we rush headlong into new missions, bringing new waves of radioactive pollution to this plant, that the document should at least address the effort to mitigate pollution already onsite. It really doesn't.

Response: *Additional information, including a description of the Groundwater Protection Project and Corrective Action Plan for ditches and playas has been added to volume I, section 4.6.1.2. For additional detail, see discussion in section 1.3.5 of this volume.*

RC: 06.057
Doc: HT17/56

... There is no recognition that the Ogallala aquifer is the only source of groundwater for the entire Texas Panhandle, the South Plains, and parts of seven other Midwestern states. The siting of hazardous and radioactive operations over this finite water source is totally unacceptable. There is no substitute for water.

Response: *See discussion in section 1.3.5 of this volume. The following sentence has been added to the description of the Ogallala aquifer: "The Ogallala aquifer underlies the whole of the Texas Panhandle, the South Plains as well as parts of New Mexico, Oklahoma, Colorado, Kansas, Nebraska, Wyoming, and South Dakota."*

RC: 06.058
Doc: PC-017/10

There are at least seven playa lakes just off the Pantex site on all sides of the plant. Rainwater runs off the plant site into barrow ditches around the plant and drain into those offsite playas. This drainage is not addressed in the PEIS. The Pantex lake receives none of the runoff. Why were the other playas excluded? The watershed on the south of Lake Meredith, a reservoir for 13 cities, begins on the northwestern corner of Pantex. Water from that section of the plant (where the various EIS's show a nuclear reactor or two may be constructed) runs into Lake Meredith.

Response: *EPA Region 6 NPDES Permit No. TX-0107107 authorizes Pantex Plant to discharge to the waters of the United States, under specified effluent limitations and monitoring requirements. According to this permit, the discharge from Pantex Plant is directed into four playa lakes, located adjacent to the waterbody of McClellan Creek, which flows into the North Fork of the Red River (Waterbody Segment Code No. 0224 of the Red River Basin). There are no known surface water connections that could transport potential contaminants from Pantex Plant into the Canadian River. Due to the flat, level topography of the Pantex Plant, streams are not well developed on the landscape and surface waters drain to the playa basins, as discussed in volume I, section 4.6.1.1. In the event that contaminants were transported by surface runoff, the contaminants would remain within the designated watershed (Pantex 1996).*

RC: 06.059
Doc: PC-017/11

Page 4-79. Use of water from the perched aquifer and also the Ogallala aquifer is just not true, as contamination is in the domestic wells of a neighbor to the east of the plant and a well to the south of the plant. Why are false statements being made? What measures are being taken to clean up the water offsite? This contamination must be coming from the "Pantex AQUIFER." Pantex aquifer is a result of the waste being run into on site playas. How will the contamination of the Ogalala be cleaned? How do you determine "insignificant" amounts? Does DOE define "insignificant" as anything or amount the DOE does not want

the public to believe may be harmful? Can "insignificant" amounts become "significant" if ingested or exposed over long terms? What is the long-term effect on health and safety?

Response: *Minute traces of high explosive contaminants were detected in the Ogallala aquifer after publication of the Draft Pantex EIS. Volume I, section 4.6.1.2, has been amended to provide the updated information. The relation between the past practices and contamination of the perched aquifer is discussed in detail in section 1.3.5 of this volume. The significance of the amounts of any contaminants is considered by comparing the concentration to regulatory standards which are based, in part, on health effects. Five years of surface water and groundwater quality data have been compared to site-specific permit limits, DOE derived concentration guides for radionuclides and Federal and State decision criteria. Concentration limits have been based on State and Federal drinking water regulations and health advisories.*

RC: 06.060
Doc: FG-003/4

Page 4-57, second paragraph: In this paragraph and at other places in the text it is asserted that the discharge water from the plant meets the surface water quality permit requirements. Because it is acknowledged in the document that leakage from waterways and playas enters the ground, EPA guidelines for groundwater quality are of concern here. Under EPA's "Strategy for the 90's" report of the Ground Water Task Force, the Maximum Contaminant Levels (MCLs) established under the *Safe Drinking Water Act* (SDWA) are to be used as reference points in evaluating groundwater quality. This Draft EIS also recognizes the significance of these MCLs when it lists them as "decision criteria" for ground water analyses presented in volume II. The requirements under the National Pollutant Discharge Elimination System (NPDES) do not include all of the contaminants for which MCLs have been set for public water supply systems under the *Safe Drinking Water Act* and in many cases the limits set under NPDES are higher than those under the SDWA. Under these circumstances, we recommend that Pantex consider protecting the groundwater by either lining the ditches and playas with the level required to maintain, or restore to, SDWA MCLs in the groundwater. Discussion on this matter should be included in the Final Statement.

Response: *Detailed information regarding the status and conditions of wastewater discharge permit limits is provided in section 1.3.5 of this volume. TNRCC Wastewater Discharge Permit No. 02296 (as amended) requires that within one year of the effective date of the permit (June 14, 1996), Pantex Plant must conduct a study that determines the feasibility of eliminating or minimizing discharges to playa lakes and open ditches or improving the quality of discharge. The study should, at a minimum, include the following proposals:*

(1) upgrading existing treatment facilities or constructing new treatment facilities to ensure no groundwater quality effects from discharges to playa lakes and ditches,

(2) construction of synthetically-lined impoundments to confine treated effluent and a closed collection system from all process areas to the treatment facilities,

(3) establishment of an irrigation disposal site and accompanying disposal practices plan to eliminate discharges to the playa lakes,

(4) establishment of a reuse and conservation program for all process wastewaters, thereby eliminating any industrial effluent discharge to the playa lakes and ditches, and

(5) development of a schedule for completion of proposals or any other proposals deemed feasible by the permittee.

A Groundwater Contamination Assessment Report is being developed as part of the RCRA Facilities Investigation Work Plan, in association with the Draft RCRA Permit. Discussion of the requirements of the applicable wastewater discharge permits has been updated in volume I, section 4.6.1.1, and volume II, appendix C.

RC: 06.061
Doc: FG-003/5

Page 4-62, last paragraph: The first bullet describes "unsaturated sands of the Blackwater Draw Formation and upper Ogallala" at the surface, but the diagram on page 4-64 indicates that the Blackwater Draw Formation consists of clay. This inconsistency should be clarified in the Final Statement.

Response:

The referenced discrepancy has been clarified by referring to "Unsaturated sands and clays..." in volume I, section 4.6.1.2.

RC: 06.062
Doc: FG-003/6

Page 4-65, third paragraph: It is stated that the perched aquifer "exhibits radial flow." By way of clarification, the Final EIS should note that the flow is radial from Playa #1, suggesting that the playa is a major source of recharge locally.

Response:

Comment noted. The phrase "from Playa 1" has been added to the referenced text in volume I, section 4.6.1.2.

RC: 06.063
Doc: FG-003/7

Page 4-67: The map illustration depicts a domestic water well to the southeast of the Pantex property, just outside the area of the perched aquifer. The well appears to be in the flow area of the perched aquifer. The well appears to be in the flow direction of the groundwater in the perched aquifer and may be in danger of contamination from groundwater in the perched aquifer. The Final EIS should identify the boundaries of the contaminated perched aquifer and establish what risk may exist, if any, for the potential contamination of the Ogallala aquifer.

Volume I, section 4.6.1.2, has been updated with the most current information available.

RC: 06.064
Doc: FG-003/8

Page 4-71, third paragraph: It is indicated here that the quality of surface water being discharged is described earlier at section 4.6.1.1. However, there is no description of the discharge water quality at the point cited. It would be helpful if the FEIS could provide a complete description of the discharged water chemistry within the text.

Response: *A comprehensive description of the discharged water chemistry is provided in volume II, appendix C. The referenced text has been modified to refer the reader to volume I, section 4.6.1.1, and volume II, appendix C, where descriptions/ tabulations of the discharge water chemistry are provided.*

RC: 06.065
Doc: FG-003/9

Page 4-72, second paragraph: It is difficult to visualize all the information about water quality and contaminant locations described here. [It] would be helpful to have one map to display this information in the Final Statement. It would also be helpful if the FEIS could have a section describing the past and current chemical quality of discharges. Section 4.6.1 makes a general attempt at this goal but is too generalized. The Final Statement should list specific contaminants and major components of water chemistry, and describe any changes through time. A table showing concentration ranges, averages, etc., would be appropriate for this discussion.

Response: *This type of information (specific contaminants and major components of water chemistry, source areas, and changes in concentrations through time) is compiled in the Draft RCRA Facility Investigation (RFI) and will be available to the public upon final regulatory approval. Figure 4.6.1.2–7 has been added to volume I, section 4.6.1.2 to show the distribution of RDX concentrations in the perched aquifer. Information regarding past chemical discharges are discussed in volume I, sections 4.5.1.3 and 4.6.1. Table 4.6.1.2–2 in volume I lists source areas of suspected contaminants of concern to groundwater resources. Water quality summary tables that show average and maximum concentrations for a 5-year timeframe are provided in volume II, appendix C.*

RC: 06.066
Doc: FG-003/11

Two sites at the Nevada Test Site (NTS) were assessed for the interim storage of plutonium pits, the P-Tunnel area and the Device Assembly Facility area. The Pantex DEIS (volume I, p. 5-8) indicates that groundwater at the two NTS sites is characterized by a "deep water table," although depth to groundwater is not specifically quantified in the DEIS. A prior Department of Energy EIS reviewed by EPA Region 9 (FEIS, Tritium Supply [and] Recycling, October 1995, volume I, p. 4-114) stated that the depth to groundwater at NTS ranges from 500 to 2,400 feet. The tritium FEIS also indicated that "there are...areas of perched water that lie at considerably shallower depths" at NTS.

Response: *The referenced sentence in volume I, section 5.2.1.4, has been modified to give the range of depths to groundwater. The Pantex EIS only deals with the interim storage of pits at the Device Assembly Facility, located adjacent to Yucca Lake, and P-Tunnel at Ranier Mesa. The plutonium pits would be containerized and stored in these existing facilities. As a result, groundwater resources would not be affected by these storage activities.*

RC: 06.067
Doc: FG-003/14

The Pantex FEIS should discuss whether either of the areas is characterized by "perched water...at considerably shallower depths..." as described in the Tritium FEIS. If so, the groundwater impacts that are reasonably foreseeable should the plutonium pits be damaged in a quake.

Response: *Plutonium pits would be placed in sealed containers that are designed to withstand impact. Thus, the contents are not expected to come into contact with groundwater.*

RC: 06.068
Doc: HT17/69

... I understand that...in this [the Pantex EIS] there...are some omissions which have been brought out. ...It has been noted that there's nothing said about the Superfund Site projects in the study, and it would seem that that might be something important to look at. All of us around here notice the recognition of the Ogallala aquifer, as it is probably, in the United States, the largest fresh water aquifer.

Response: *As stated in volume I, section 6.4, Pantex Plant is working with the EPA and TNRCC to develop a tri-party Federal Facility Agreement to outline reporting requirements, schedules, and funding for the Environmental Restoration Program. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) efforts are being integrated into the existing Resource Conservation and Recovery Act (RCRA) Facility Investigations, corrective measures studies, and corrective measures implementations that are described in volume I, sections 4.5.1.3, 4.6.1.1, and 4.6.1.2. Language describing the extent of the Ogallala aquifer has been added to volume I, section 4.6.1.2.*

RC: 06.069
Doc: PC-025/24

On Page 4-56, buildings listed do not appear to match diagram on page 4-243. Figure appears to be crowded with information. Recommend simplification.

Response: *Figure 4.6.1.1–1 in volume I has been revised and simplified.*

RC: 06.070
Doc: PC-025/25

On Page 4-60. Please explain. If a playa is a wetland [and] a wetland is considered waters of the United States...why is a playa not [considered] waters of the State?

Response: *In 1990, Pantex playas 1 through 4 and Pantex Lake were determined to be jurisdictional wetlands by the U.S. Army Corps of Engineers, and are therefore considered to be waters of the United States subject to protection by the National Pollutant Discharge Elimination System (NPDES). TNRCC Permit No. 02296 has been amended (effective June 14, 1996) in accordance with the EPA Region VI NPDES Permit No. TX-0107107 that became effective on June 1, 1996. Volume I, section 4.6.1.1, has been updated to discuss the terms and conditions of these new permits.*

RC: 06.071
Doc: PC-025/26

... Do the number of wells located on the Pantex site represent significant pathways to increased groundwater contamination? What measures are taken to control this pathway? In the event of a plutonium accident what is the possibility that the well is open and plutonium enters the groundwater through the monitoring system? Assuming the well was open during an accident, what is the release to the groundwater? What is the impact if Pantex loses groundwater usage? Adjacent land owners?

Response: *The low vertical permeability of the fine-grained zone could potentially be compromised by abandoned homestead wells that could provide contaminant pathways through the fine-grained zone to the Ogallala aquifer. As a precautionary measure, DOE has identified and sealed abandoned homestead wells in order to prevent potential pathways of contamination into the Ogallala aquifer under the Groundwater Protection Project. These precautionary measures and other key aspects of the Groundwater Protection Project are discussed in volume I, section 4.6.1.2. In the event of plutonium accident, the plume would have to pass over the open well at the times it was open. This probability would be an order of magnitude less than the probability of a plutonium accident (see volume I, section 4.14). The amount of plutonium that could get into an open well is difficult to predict. Based on the small cross-section of the well and the large area over which plutonium would be spread in an accident, the amount would be very small.*

RC: 06.072
Doc: PC-025/27

On page 4-63, why was OW-WR-20 utilized in cross section when the cross section should go from 6-1003 to 6-1004 to 6-1005? Why was 6-1015 left out? What are the impacts if these wells are utilized? What is the quality of the hydrostatic cross section input data (i.e. well logs)?

Response: *The referenced cross section was taken from DOE 1994nn. OW-WR-20 was utilized because the water quality of this well is discussed in volume I, section 4.6.1.2. Perched monitor well 6-1015 was not included in the cross section on the original reference and was not available at the time of publication of the Draft Pantex EIS. The referenced cross section has been replaced with an updated north-south trending cross section (Figure 4.6.1.2–3) that shows the axis of the paleochannel.*

RC: 06.073
Doc: PC-025/28

On Pages 4-66 and 4-67. Why did you change nomenclature on PM-21 (466) and OW-WR-21 (467)?

Response: *Figure 4.6.1.2-3 in volume I has been revised to refer to OW-WR-21, rather than PM-21.*

RC: 06.074
Doc: PC-025/29

On Pages 4-66 and 4-67, why aren't wells PXSP-OIA, PXSP-03, PXSP-04, etc. listed in appendix C, table C.2.1-1? What level of QA has been completed on this section? Please include QA/QC certification documentation in appendix including signatures of key QA/QC personnel. Please provide documentation assuring QA/QC measures were implemented, met established goals, and necessary certification exists.

Response: *The Draft Pantex EIS was prepared with available information supplied by Pantex Plant. The references for Figures 4.6.1.2–3 and 4.6.1.2–4 in volume I are provided in the referenced text. Data from all referenced well logs that were made available by the time of publication were utilized and included in volume II, appendix C. The administrative record includes files that provide QA/QC certification documentation. Volume II, appendix C has been updated with*

additional information that has become available since the publication of the Draft Pantex EIS.

RC: 06.075
Doc: PC-025/30

On page 4-67, why are wells off the Pantex Plant lacking well numbers?

Response:

The locations of offsite wells are shown. These wells are on private land and data from these specific wells are considered private. Data have been provided to the extent practicable. Well numbers are provided for all onsite wells that are monitored by the Environmental Protection Department or by the Environmental Restoration Program. Inclusion of well numbers would not serve any purpose for this document. Please note that a map showing all vicinity wells has been added to volume I, section 4.6.1.2 (Figure 4.6.1.2–1).

RC: 06.076
Doc: PC-025/31

... Table 4.6.1.2-1, page 46-8. What is the reason the realistic estimate is an order of magnitude larger than the most conservative?

Response:

Aquifer performance tests were used to estimate groundwater velocities. The results of these aquifer tests are highly variable and are dependent on the testing location and relative heterogeneities in the subsurface sediments from one location to another, the duration that the test is run, variations in testing procedures, and the method of analysis. These variations in aquifer performance testing lead to differences in groundwater velocity estimates.

RC: 06.077
Doc: PC-025/32

... What is the source of the statement "These perched zones are believed to be hydraulically separate from the perched aquifer in Zone 12 at Pantex Plant?"

Response:

The referenced statement was provided as a personal communication (February 1996) from the Pantex Environmental Restoration (ER) Department, based on the best available information at the time of publication of the Draft Pantex EIS. Volume I, section 4.6.1.2, has been updated with additional information that has been provided by the Pantex ER Department since February 1996.

RC: 06.078
Doc: PC-025/33

And Page 4-69 in Ogallala aquifer section. Vicinity of ROI, more accurate?

Response:

The referenced text has been modified to state, "The Ogallala aquifer is the principle aquifer and major source of water in the vicinity of Pantex Plant and surrounding region of influence," and "The Ogallala aquifer underlies the Texas Panhandle and the South Plains, as well as parts of New Mexico, Oklahoma, Colorado, Kansas, Nebraska, Wyoming, and South Dakota."

RC: 06.079
Doc: PC-025/34

... Why aren't wells OW-WR-23, and 28 listed in Table C.2.1-1? Does OW-WR-40 leak water to the perched from the contaminated Playa 1? Is OW-WR-40 above or below the floodplain? Are any of the well heads located in the Pantex Plant or vicinity below any floodplain? What are impacts if there are [any]?

Response: *OW-WR-23 and OW-WR-28 are not wells. They are drinking water sampling locations at Buildings 12-2 and 12-6 Cafeteria respectively. The referenced figure has been corrected. Monitoring well OW-WR-40 is screened (or open to groundwater flow) from 580 to 610 feet below ground surface, within the Ogallala aquifer. The fine-grained zone occurs well above the screened interval at a depth of 252 to 356 feet below ground surface. Because the well is only screened in the Ogallala aquifer, the thickness of the fine-grained zone, and the vertical distance (over 200 feet) between the perched aquifer and the Ogallala aquifer, OW-WR-40 does not leak water to the perched aquifer from Playa 1. Based on our review of five years of data, Ogallala monitor well OW-WR-40 only exceeded decision criteria for one constituent, iron, during 1990, 1991, and 1993. However, no contamination from high explosives, organic compounds, or radionulcide contaminants of concern have been detected in this well. According to the 1995 Environmental Report for Pantex Plant (Pantex, 1996c:87), "There was no indication of contamination by radiological constituents, metals, explosives, or organic compounds in Ogallala monitoring wells, and there was no evidence of contaminated groundwater from the overlying perched zone reaching the aquifer." Details regarding the protection of cross-contamination from homestead wells are addressed in section 1.3.5 of this volume.*

RC: 06.080
Doc: PC-025/35

Page 4-76. I'm confused, how can a zone be a source but a landfill is a location? What does 12-5W, etc. mean? What is OSTP?

Response: *The "source" refers to the particular area of the plant where contaminants of concern potentially originated. The "location" refers to the specific building, landfill, leach bed, etc. within that source area. Designations such as 12-5W refer to specific buildings within the respective zone, (e.g., Building 5W in Zone 12). OSTP is the acronym for the Old Sewage Treatment Plant. Acronyms are defined in the EIS with their first usage and in the list of acronyms and abbreviations.*

RC: 06.081
Doc: PC-025/36

Appendix C is difficult to review in support of section 4.6 because DOE flip-flops the nomenclature for well numbers. As an example, table C.2.1-1 [has the] well ID as 15-20, but C.2.2-3 [has] PR-16, please standardize. On page 4-77 isn't it three wells for lead: PR-16, OM-39, and PR-41?

Response: *Primary well numbers have been standardized for clarification. The referenced text in volume I, section 4.6.1.2, has been modified to state "...and lead in three wells...".*

RC: 06.082
Doc: PC-025/37

Page 4-78. What is the source of the 704 million liters? What is the source of the 760 irrigation wells? What is the source of the two private wells? Do you suspect more? What would be the impact of more perched wells?

Response: *The referenced text has been updated and revised. The updated source of data for Pantex Plant wells is the 1995 Environmental Report for Pantex Plant (Pantex, 1996c). Updated irrigation well data was provided by Panhandle*

Groundwater Conservation District No. 3 and the Farm Service Agency. The impact of more perched wells would be dependent on the well's intended use. Perched monitoring wells provide additional sources of information about the water quality, potential contaminants of concern, and changes in chemical concentrations with time. Recovery wells are being used to pump contaminated groundwater out of the perched aquifer for treatment. However, if contaminated groundwater within the region of influence were used for domestic or agricultural uses, several potential pathways of exposure (e.g., ingestion, bathing, other potable water or agricultural uses) could result. DOE has conducted a Groundwater Protection Project as a mitigation measure. For additional information about private perched wells, see discussion in section 1.3.5 of this volume.

RC: 06.083
Doc: PC-025/38

Page 4-79, "the quality of the wastewater discharge is such that it will not degrade..." What is the source of the statement? Please explain position in greater detail. Doesn't the playa carry contaminants to the Ogallala? If (regionally) perched water is used to supply cattle with water, would WWTF water be used as cattle drinking water. If not, how can the above statement be true?

Response:

The quality of wastewater discharge will not degrade the perched and Ogallala aquifers, because the wastewater discharge is regulated through the EPA Region VI NPDES Permit and TNRCC Wastewater Discharge Permit. For additional information regarding these permits refer to section 1.3.5 of this volume and the updated discussion in volume I, section 4.6.1.1. Surface water outfalls are monitored to assure that the discharge water quality is within the specified permit limits. Similarly, perched and Ogallala groundwater is monitored in onsite and offsite locations to assure that human health and the environment are being protected. The hydrology and recharge of the perched aquifer is very complex and the effects upon the vadose zone from continual discharge of water into the existing lakes and drainage ditches does not necessarily result in contaminated groundwater being driven into the Ogallala. The trace levels of high explosive constituents that were detected in an offsite private well were believed to be due to special circumstances; see discussion in section 1.3.5 of this volume. Environmental Restoration (ER) investigations, conducted at or before the time of publication, have indicated that the extent of offsite contamination detected in the perched groundwater has been limited to within one-half mile southeast of the main Pantex Plant Site boundary. The ER program is currently conducting corrective actions, such as interim measures to remove "hot spot" areas of contaminated soils, to protect human health and the environment as discussed in section 1.3.5 of this volume.

RC: 06.084
Doc: PC-025/39

In Table 4.6.2-1, are margins included? Why is the liter conversion included?

Response:

The annual rates referenced in volume I, Table 4.6.2–1, include a 10 percent margin. Liter conversion is included to comply with DOE policy.

RC: 06.085
Doc: PC-025/40

Table 4.6.2.2-1 and Table 4.3.2.2-1 have different sources.

Response:

No, both tables have a common source: Banner, E., Data Needs for the New Projects at Pantex Plant SWEIS request for information supplied by M. Lincoln, Battelle Pantex, Amarillo, TX, May 17, 1995 (PC 1995g).

RC: 06.086
Doc: PC-025/41

In section 4.6.2.2, starting on page 481: What are the sources of water use in each of the 6 projects?

Response:

The source of water for the new facility construction and upgrades, discussed in volume I, section 4.6.2.2, would be Pantex Plant wells. As stated in section 1.3.5 of this volume, the upper bounding conditions (i.e., 2,000 weapons level) would result in a projected annual groundwater withdrawal of 1,011 million liters (267 million gallons), or an increase of 64 percent over FY 1995 water use. Furthermore, under the 2,000 weapons scenario, Pantex Plant groundwater withdrawals would only account for 0.8 percent of the total estimated annual groundwater withdrawals in Carson County.

RC: 06.087
Doc: PC-025/92

Water resources methodology is flawed since the analysis is based on examining permitted discharges of the NPDES system for which Pantex does not have a permit (the permit is pending). Groundwater analysis is flawed since groundwater quality within the [region of influence] ROI [is analyzed] but the analysis does not include other industrial, commercial, petroleum exploration (especially saltwater intrusion, and secondary recovery impacts), CERCLA and RCRA sites contaminating the groundwater. The analysis does not analyze the contamination of the groundwater by underground storage tanks or agriculture nitrates. This information is readily available through the State of Texas. Your methodology specifically calls for ROI analysis of readily available information. The analysis is further flawed because of the lack of analysis of playas within the ROI. Finally the analysis ignores the number of wells located in the ROI as potential contamination pathways to the Ogallala or whether any of these wells [are] resident in a floodplain. The analysis does not include ROI damage from farming and livestock (e.g., nitrogen, pesticides, herbicides, insecticides).

Response:

Impact Assessment Methodologies are provided in volume I, section 4.2. Cumulative impacts include impacts of continued operations at Pantex Plant combined with other reasonably foreseeable projects that could impact the environment at the plant site or in its region of influence (ROI). These include programs examined in Programmatic EISs for waste management, stockpile stewardship and management, and the storage and disposition of weapons-usable fissile materials. Information about new Federal proposed projects was sought, however, no information was forthcoming. The ROI for water resources includes Pantex Plant and the surrounding area that could potentially be impacted by plant operations. The ROI for surface water is the onsite playas and ditch system, and floodplains delineated by the Army Corps of Engineers, as

discussed in volume I, section 4.6.1.1. The ROI for the perched aquifer is based on the extent and migration of contaminants, and is discussed in detail in volume I, section 4.6.1.2. Although the ROI for the Ogallala aquifer has not been quantifiably defined, it is limited to the extent of drawdown in Pantex Plant wells. The quantity of groundwater pumped from Pantex Plant wells is significantly less than for irrigation and for municipal water use, as discussed in section 1.3.5 of this volume. Volume I, section 4.6.1.2, has been updated to address sealing homestead wells located in the ROI that could provide potential contamination pathways to the Ogallala. Damage from other land and water applications outside of the ROI is beyond the scope of this document.

RC: 06.088
Doc: CO-008/114

C-6, Table C.1.2-3. Results from sampling and analyses from Bushland are provided as "background". Because some concentrations of analytes from Bushland samples exceed those measured in Pantex samples, how do you justify presenting these data as "background"?

Response:

The control well at Bushland is completed in the Ogallala aquifer upgradient from Pantex Plant and is, therefore, unaffected by plant operations (Pantex 1995c:82).

RC: 06.089
Doc: CO-008/115

C-11, Table C.1.2-3. Provide a table that cross-references location descriptions for surface water. This would allow readers to recognize the locations at which samples reportedly exceeded or lacked water quality criteria (this table). (Table C.2.1-1 on page C-21 provides similar cross-reference information for the water wells.) Some of these locations appear to be playas, waters of the U.S., but it is difficult to tell from the descriptions.

Response:

The requested information is provided in volume I, Table 4.6.1.1-2.

RC: 06.090
Doc: CO-008/116

C-13, Table C.1.2-3. Hexavalent chromium is shown to exceed the "standard" for 12-17 N, OW-WR-34, and Z-12-S. What was the total chromium for these same samples (i.e., did the concentrations of hexavalent chromium in these samples exceed the measured concentrations of total chromium in the same samples? [in which case the reported concentrations of hexavalent chromium may be exaggerated].)

Response:

Average hexavalent chromium concentrations that exceeded the decision criteria (and year of exceedance) are listed below:

- *12-17-N - 0.12 mg/L (1990)*
- *OW-WR-34 - 0.20 mg/L (1994) Bushland control sample.*
- *Z-12-S - 0.2 mg/L (1990)*

The following are corresponding average total chromium concentrations:

- *12-17-N - 0.12 mg/L (1990)*
- *OW-WR-34 - 0.009 (1994) Bushland control sample.*
- *Z-12-S - 3.5 mg/L (1990)*

Note that the hexavalent chromium concentration appears to be exaggerated on the Bushland control sample.

RC: 06.091
Doc: CO-008/117

C-28, Table C.2.2-1,...third line up from the bottom. The line reads "Parameter Units STD RRS." Is this an error?

Response:

Yes, this was an error and the referenced line has been deleted in volume II, Table C.2.2–1.

RC: 06.092
Doc: PC-026/1

Evidently Pantex continues to use open, unlined ditches to dispose of wastewater and storm water [that] discharges into the playas onsite. ...They are contaminated, and the Ogallala aquifer can also become contaminated. This is very scary.

Response:

Wastewater discharge permit requirements, upcoming investigations, and interim corrective action measures are summarized in section 1.3.5 of this volume. The EIS has been updated accordingly.

RC: 06.093
Doc: PC-029/1

It seems to me that storing radioactive substances over the Ogallala aquifer is not a good idea. Is it true that high explosives from Pantex have been found in the Ogallala? Have wells in the area been contaminated with plutonium?

Response:

See discussion in section 1.3.5 of this volume.

RC: 06.094
Doc: SG-002/1

The TNRCC is concerned that contamination in the perched aquifers beneath the site indicates that past and present industrial discharge practices at the Pantex facility have not been fully protective of natural resources at the site. The DOE should [ensure] that the threat of increased contamination to the Ogallala aquifer and contaminant exposure to ecological receptors is limited to the maximum extent practical.

Response:

See discussion in section 1.3.5 of this volume and response to comment 06.051.

RC: 06.095
Doc: SG-003/18

The TNRCC is concerned that contamination in the perched aquifers beneath the site indicates that past and present industrial discharge practices at the Pantex facility have not been fully protective of natural resources at the site. The DOE should insure that the threat of increased contamination to the Ogallala aquifer and contaminant exposure to ecological receptors is limited to the maximum extent practical.

Response:

See discussion in section 1.3.5 of this volume and response to comment 06.051.

RC: 06.096
Doc: SG-003/21

The Trustees do not oppose the DOE plan to construct an expanded Hazardous Waste Treatment and Processing Facility (HWTPF). However, contamination in the perched aquifers beneath the site [indicates] that past and present industrial discharge practices at the Pantex facility have not been fully protective of natural resources at the site. A treatment facility that is constructed and maintained properly will prevent further injury to natural

resources. In addition, the increase of industrial discharge volume to 2.9 million liters may exacerbate contamination problems if additional measures are not taken by DOE to protect valuable groundwater resources. DOE should [ensure] that the threat of increased contamination to the Ogallala aquifer and contaminant exposure to ecological receptors is limited to the maximum extent practical.

Response: *A treatment facility, such as the HWTPF, that is constructed and maintained properly will prevent further injury to natural resources. Additional measures that are being taken to ensure that the threat of increased contamination to the Ogallala aquifer and contaminant exposure to ecological receptors is limited to the maximum extent practical are discussed in section 1.3.5 of this volume.*

RC: 06.097
Doc: SG-003/24

Page 4-2, Affected Environment. The document states that an area of 50 miles surrounding the Pantex site will be considered the region of influence. The Trustees are concerned that this area will not encompass the potential area of natural resources that could be impacted since: a) the lateral extent of the perched aquifer has not been determined, and b) documented contamination in the Ogallala and its flow direction provide the potential for this contamination to impact various environmental receptors outside this radius.

Response: *Environmental restoration investigations, conducted at or before the time of publication, have indicated that the extent of offsite contamination detected in the perched groundwater has been limited to within one-half mile southeast of the main Pantex Plant site boundary. The distance of 50 miles is traditionally used as the maximum extent of a region of influence for NEPA documents.*

See response to comment 06.087.

RC: 06.098
Doc: SG-003/26

Page 4-3, Section 4.2 Impact Assessment Methodologies, water resources: The qualitative assessment of water quality impacts from wastewater and stormwater runoff does not adequately address potential impacts to surface water and groundwater resources at the Pantex Plant. Furthermore, it does not consider existing contamination in the sediments, surface water, and groundwater and their cumulative impacts. The text should be corrected to reflect what actions would be necessary to thoroughly address the potential impacts to these natural resources.

Response: *Volume I, sections 4.5 and 4.6, have been updated with additional data, new permit requirements, and descriptions of corrective action measures.*

RC: 06.099
Doc: SG-003/29

Page 4-55, Affected Environments. The text states that there is [no] evidence that contaminants found in the perched zone have migrated to the Ogallala aquifer. This is inaccurate and should be corrected to reflect that there is documented contamination in the Ogallala aquifer.

Response: *Groundwater quality sampling that was conducted after the publication of the Draft Pantex EIS indicated that contaminants found in the perched zone had*

been detected (in small amounts) in the Ogallala aquifer. Volume I, section 4.6.1.2, has been updated to report potential contamination in the Ogallala aquifer. For additional information, refer to the summary provided in section 1.3.5 of this volume.

RC: 06.100
Doc: SG-003/30

Page 4-62, Section 4.6.1.2 Groundwater. While the discharges that are permitted by EPA and TNRCC have protective standards [that] presently do not allow excessive levels of contaminants, existing contamination is already present in the perched aquifer and the playas. Therefore, the continual discharge of wastewater provides a hydraulic head potentially driving those contaminants into the Ogallala. Contamination in the Ogallala has been documented and more stringent actions are required in order to prevent further migration of contamination [that] could result in greater injury to an extremely valuable groundwater resource.

Response:

We disagree. The hydrology and recharge of the perched aquifer is very complex and the effects upon the vadose zone from continual discharge of water into existing playa lakes and drainage ditches do not necessarily result in contaminated groundwater being driven into the Ogallala. The Ogallala contamination which is referenced is believed to be due to special circumstances (cross-contamination through an open bore homestead well). This well and six other homestead wells have been sealed under the Groundwater Protection Project. See discussion in section 1.3.5 of this volume and section 4.6.1.2 of volume I for additional information.

RC: 06.101
Doc: SG-003/31

Page 4-69, Section 4.6.1.2 Groundwater, Perched Aquifer portion. See comment #9.

Response:

See response to comment 06.099.

RC: 06.102
Doc: SG-003/32

Page 4-72, Groundwater Quality. The absence of trinitrotoluene in the perched aquifer may not be due to a reduction in the discharge of this contaminant, but rather an indication of it breaking down to degradation compounds in the environment. Also, the text states that levels of trichloroethene occurring at the site barely exceed the Risk Reduction Standards (RRS) decision criteria of 5 micrograms per liter. Data used to make this determination may not be representative of actual levels of contamination at the site. To accurately determine what is occurring at this site, properly screened intervals in groundwater monitoring wells to accurately measure "sinking chemicals, metals, radionuclides and high explosives," as well as the proper suite of analyses, should be employed for all potential contaminants of concern.

Response:

Concur, evidence of natural attenuation and degradation of high explosive compounds including trinitrotoluene has documented during the treatability studies. The maximum concentration of trichloroethene (i.e., trichloroethylene) has consistently occurred in the perched aquifer south of Zone 11 in monitoring well PTX08-1005 as discussed in the Draft RCRA Facility Investigation Report for Groundwater in Zone 12 at the DOE Pantex Plant (Argonne 1995a). In

order to define the stratification of contaminants within the perched aquifer, due to different densities of the contaminants, it is necessary to sample at discrete intervals and depths. Volume I, section 4.6.1.2, has been revised accordingly.

RC: 06.103
Doc: SG-003/33

Page 4-78, Section 4.6.2.1 Impacts of Continued Operations, Weapon-Related activities, Surface water. A thorough evaluation and consideration of existing contamination in surface water and sediments of receiving waters at the Pantex site is needed to adequately assess the potential impacts of wastewater discharges. Cumulative impacts of preexisting contamination and projected waste loads must be considered.

Response: *See discussion in section 1.3.5 of this volume.*

RC: 06.104
Doc: SG-003/34

Page 4-80, Section 4.6.2.1, Groundwater. The TNRCC permit does not include radionuclide parameters. In order to prevent further injury to natural resources, DOE regulatory oversight should be shared with another appropriate agency....

Response: *See discussion in section 1.3.5 of this volume and response to comment 06.051.*

RC: 06.105
Doc: SG-003/35

Ogallala Contamination—The EIS should be revised to reflect that the Ogallala has been impacted by Pantex operations, as evidenced in recent contaminated samples obtained from Mr. Cockrell's private off-site wells.

Response: *Although low levels of high explosive contamination have been detected in a domestic Ogallala well located on the Cockrell ranch, efforts to mitigate further contamination have been completed. The well in question has been properly plugged and abandoned under the supervision of the TNRCC and a replacement Ogallala well has been drilled and completed in order to prevent further potential cross-contamination of the Ogallala aquifer. Additional information regarding the Groundwater Protection Project has been included in volume I, section 4.6.1.2.*

RC: 06.106
Doc: SG-003/36

Homestead Wells—The EIS should note that the low vertical permeability of the fine-grained zone may be compromised by abandoned homestead wells. These wells could provide contaminant pathways through the fine grained zone to the Ogallala. The potential for this to occur has been demonstrated at the Cockrell farm east of the Pantex Plant.

Response: *Efforts to identify and evaluate abandoned homestead wells in order to prevent potential pathways of contamination into the Ogallala aquifer have been completed under the Groundwater Protection Project.*

RC: 06.107
Doc: SG-003/37

Facility Boundary—The EIS should mention that DOE will take whatever action is practicable to clean contaminated groundwater to the residential drinking water standards beyond the facility boundary (page 4-69).

Response: *See discussion in section 1.3.5 of this volume and response to comment 06.051.*

RC: 06.108
Doc: SG-003/40

Pantex Plant Playas—The Risk Reduction Rules (RRR) (30 Texas Administrative Code (TAC),...335, Subchapter S), which include references to the Texas State Water Quality Criteria (30 TAC...307), do apply directly to the Pantex Plant Playas, contrary to the statement on page C-2.

Response:

Refer to the discussion of surface water quality decision criteria presented in section 1.3.5 of this volume.

RC: 06.109
Doc: SG-003/41

Surface Water Quality Values—The surface water quality values determined in accordance with the RRR take precedence over the Risk Based Concentration Guidelines from EPA Region 3 (Section C.1.2). The EPA Region 3 Guidelines are not appropriate standards to apply when values are available in the Texas Surface Water Quality Criteria, the *Federal Safe Drinking Water Act*, or the Texas Regulations for Control of Radiation (TRCR) (30 TAC...336).

Response:

Refer to the discussion of surface water quality decision criteria presented in section 1.3.5 of this volume.

RC: 06.110
Doc: SG-003/42

Tables C.1.2-1 through C.1.2-3—the standards listed in Table C.1.2-1 should cite values based on the RRR, rather than EPA Region 3 Guidance. For instance, the standard for antimony should be 0.006 milligrams per liter (mg/L), based on the RRR, rather than 0.015 mg/L cited for EPA Region 3 Guidance. The standard for gross alpha activity, according to the RRR, should be 15 picocuries per liter (pCi/L), rather than N/A. No water quality standard is provided by the Texas Surface Water Quality Criteria; therefore, the RRR specify use of the drinking water standard. The proposed drinking water standard of 50 pCi/L (4 millirems per year) should also be cited for beta particle activity. The TNRCC requests that DOE revise Table C.1.2-1 to cite the more stringent surface water quality standards for radionuclides that are developed in accordance with the RRR. As such, the standard for plutonium-239/240 would be 2E-8 microcuries per milliliter (μCi/ml), based on the TRCR standards. Radium-226 and Radium-228 would be 6E-8 μCi/ml, based on proposed federal Drinking Water Standards. Tritium would be 1E-3 μCi/ml, based on the TRCR standards. Uranium-234 and Uranium-238 would be either 3E-7 μCi/ml, the TRCR standards, or 20 mg/L, the proposed Drinking Water Standard, which ever is more stringent.

Response:

Refer to the discussion of surface water quality decision criteria presented in section 1.3.5 of this volume and the response to comment 06.051.

RC: 06.111
Doc: SG-003/43

Constituents of Concern—The constituents of concern for groundwater should not be limited to those constituents that exceed risk based concentrations (Section C.2.2, page C-4). In addition, the nature and extent of contamination must be based on background values or laboratory Practical Quantitation Limits (PQL), rather than risked based values. These issues were addressed in DOE's revised Sampling and Analysis Plan and the TNRCC's subsequent approval with modification.

Response: *Water quality data from an Ogallala water supply well at Bushland provides regional background groundwater quality data, as discussed in volume II, appendix C, section C.2.2. Volume II, Table C.2.2–3, presents a tabulation of water quality sampling data collected from Pantex Plant Ogallala aquifer wells that exceed decision criteria. TNRCC and EPA Drinking Water Standards and DOE Derived Concentration Guidelines were used as the decision criteria, rather than background values or laboratory Practical Quantitative Limits because the Drinking Water Standards and DOE Derived Concentration Guidelines are regulated to be protective of human health.*

RC: 06.112
Doc: SG-003/62

The sections that deal with Geology and Soils and with Water Resources are generally well done. One issue that is still not adequately covered relates to the perched aquifer. The extent of the fine-grained zone which forms the perching layer is not known. The question of what happens to the perched aquifer is not discussed. Does the fine-grained zone pinch out with the perched aquifer groundwater flowing off the side, down to the Ogallala? Alternatively, will [groundwater in] the perched aquifer eventually migrate through the fine-grained zone and down to the Ogallala? All that the Draft EIS acknowledges is "Recharge to the area aquifers is not fully understood."

Response: *Additional updated information regarding the nature and extent of groundwater contamination in the perched and Ogallala aquifers is presented in section 1.3.5 of this volume. Discussion in volume I, section 4.6.1.2, has been revised for clarification.*

RC: 06.113
Doc: SG-003/63

Groundwater was not considered as a pathway for exposures potentially impacting human health. An obvious concern of some people in the area is contamination of the Ogallala from plant activities. In what way were groundwater scenarios considered, and what pathway assumptions were used?

Response: *Groundwater as a potential pathway for exposure was discussed in volume I, section 4.14.2.1. Potential consequences to the Ogallala aquifer from an accidental plutonium release were investigated in conjunction with a Safety Analysis Report and an Environmental Assessment, which included a study by Los Alamos National Laboratory (LANL 1992). The hypothetical accident was assumed to be a high-temperature fire caused by a jet plane impact into a Zone 4 storage magazine containing nuclear weapons components, and the subsequent release and ignition of jet fuel, leading to dispersal of plutonium. Four potential elements of concern were identified: plutonium, americium, neptunium, and uranium. Of these four, plutonium was determined to pose the greatest risk. Los Alamos National Laboratories used the conservative assumption that the hypothetical jet fuel fire could disperse fine particulate plutonium downwind of Pantex Plant for a maximum distance of 50 miles. Prompt decontamination efforts could reduce radiation levels to 0.2 microcuries per square meter. Plutonium and decay products could infiltrate downward toward the Ogallala aquifer. The model assumed an average recharge rate of 1 inch per year (10 times the High Plains average), and that infiltrating recharge*

water would reach the Ogallala aquifer at depths ranging from 50 to 400 feet. These analyses were conservative because the "worse-case" scenarios were based on a depth to the water table of 50 feet whereas, at Pantex Plant, the typical depth to the top of perched groundwater is approximately 270 feet and the depth to the Ogallala aquifer ranges from 340 to 460 feet. For water table depths of 200 and 400 feet, LANL calculated plutonium travel times of 305,000 and 610,000 years, respectively. Interactions with both surficial materials and the unsaturated portion of the Ogallala Formation would be expected to make plutonium move at a rate slower than the infiltrating water. During the transport time, radioactive decay would be expected to further reduce plutonium concentrations. Current knowledge of the perched aquifer leads to the expectation that where the perched aquifer is present, the downward movement of plutonium would be further reduced, because the low permeability fine-grained zone would impede downward flow and potential contamination would be more likely to move horizontally in the perched aquifer.

RC: 06.114
Doc: SG-003/64

Table C.2.2-2 in volume II provides data on chemical concentrations measured in the perched aquifer. A great deal of data is here, but I do not believe that it represents all available data. The Draft EIS should explain what data was used and what data was not used, and why.

Response:

Evaluation of baseline surface water and groundwater quality is based on a review of all available data tabulated in the Pantex Plant annual site environmental reports (ASER) for a five-year period, from 1990 through 1994. Surface water quality data were collected from 29 onsite sampling locations from 1990 to 1993; surface water samples were collected from only 17 of these sampling locations in 1994. The surface water data collected over the past five years does not include every sampling location each year, because some locations only have sufficient water to sample during storm events. Groundwater quality monitoring data were collected from over 20 onsite sampling locations, including wells completed in the perched and the Ogallala aquifers. It should also be noted that the groundwater data collected over the four years do not include every sampling location each year. In 1995, 78 groundwater monitoring wells were sampled. In addition to the ASERs, available U.S. Corps of Engineers (COE) quarterly groundwater monitoring reports were reviewed. Quarterly groundwater monitoring was conducted to characterize the groundwater quality and extent of contamination in the perched aquifer, in association with the Ditches and Playas RCRA facility investigation for Flow System 6. It should be noted that the water quality constituents that were analyzed for the COE investigation are not always the same constituents that are analyzed for the ASERs. One offsite location, Bushland Playa at the USDA Agricultural Experimental Station west of Amarillo, was used as a control sample to give some insight on background surface water and groundwater quality.

All available surface water and groundwater data from the ASERs were compiled into two cumulative data tables, one for surface water quality data, and the other for groundwater quality data. The data were evaluated through a

process of elimination whereby all parameters with values below the detection limits or those reported as not sampled, not presented, or holding time exceeded were omitted from the water quality data under consideration. For the radionuclides, levels of uncertainty (reported +/- the measured value) were omitted so the data could be processed. The remaining data were then exported into a data management system to speed data manipulation and to reduce the chance of human error. The surface water and groundwater quality data were then sorted by location, parameter, and average value. Contaminants of concern (COC) were determined by comparing tabulated annual average values to the decision criteria presented in volume II, appendix C. Volume II, Tables C.1.2–3, C.1.2–4, C.2.2–2, and C.2.2–3, present values that are greater than or without defined water quality criteria for the five years of water quality data.

RC: 06.115
Doc: SG-003/66

Sections 4.5 and 4.6, which describe water resources and geology and soils, do not provide sufficient information for the reader to determine if environmental impacts could result from continued operations and storage of nuclear weapons at Pantex.

Response:

Volume I, sections 4.5 and 4.6, have been updated with additional data, new permit requirements, and descriptions of corrective action measures.

RC: 06.116
Doc: SG-003/85

Page 4-55, Affected Environment, para. 2, ln 19. The statement is made that there is no evidence that the contaminants found in the perched aquifer have migrated to the Ogallala aquifer. Only a few (2 or 3) Ogallala aquifer monitor wells are located in areas where there is perched groundwater present. There are no Ogallala monitor wells beneath badly contaminated areas such as Zone 12, so there are no data on which to base the conclusion that no contamination has occurred. Furthermore, the unsaturated zone between the Ogallala and perched aquifers has not been sampled so it is not known if these waters and sediments have been contaminated.

Response:

Volume I, section 4.6.1.2, has been updated with additional information regarding the perched and Ogallala aquifers. For additional information, see discussion in section 1.3.5 of this volume.

RC: 06.117
Doc: SG-003/86

Page 4-62, Groundwater, para. 1: There is no discussion of sediment heterogeneity, which strongly affects groundwater flow rates.

Response:

Discussion of the effects of heterogeneous sediments on groundwater flow rates has been added to volume I, section 4.6.1.2. See response to comment 06.076.

RC: 06.118
Doc: SG-003/87

Page 4-63, Figure 4.6.1.2-1. Why are there no monitor wells in the area of Playa 4? Considering all of the discharge that has occurred from Zone 12 south to Playa 4, it would seem appropriate to determine the nature of the hydrogeology in this area.

Response:

Playa 4 and the majority of its watershed are located on property owned and managed by Texas Tech University. DOE has no jurisdiction to place

monitoring wells near Playa 4. There are monitoring wells in place on the DOE owned property north of Playa 4. Additionally, the Ditches and Playas Solid Waste Management Unit process is currently collecting samples from the area of concern noted in this document. Soil and water characterization of the ditches on DOE owned property that leads to Playa 4 are ongoing (PC 1996x).

RC: 06.119
Doc: SG-003/88

Page 4-65. Perched Aquifer, para. 2, ln 1: Contrary to this confusing statement, there are areas at Pantex where perched groundwater is present, but where gravel channels are not present and vice versa. The presence of gravel channels does not control the presence of perched aquifers; it is the presence of a stratigraphic horizon (in this case the fine-grained zone) with a vertical hydraulic conductivity lower than the flux of recharge water moving through the unsaturated zone. It is quite obvious that if the gravel channel were underlain by a coarse sand then no perched aquifer would have formed.

Response:

A stratigraphic horizon with a low vertical hydraulic conductivity, such as the fine-grained zone, is necessary for formation of a perched aquifer. This clarification has been made in volume I, section 4.6.1.2.

RC: 06.120
Doc: SG-003/89

Page 4-69, para. 4, line 6. If the spread of contaminants in the perched aquifer is limited to the confines of perched aquifer in buried channel deposits, then why are there so many perched aquifer monitor wells in Zone 12 with contaminants, but located outside the gravel channel as mapped on page 4-66? It seems obvious that something other than gravel channels is, at least in part, controlling flow in the perched aquifer and that contaminants are present in perched aquifer water outside the gravel-filled channel.

Response:

There are heterogeneities in the subsurface sediments that result in preferencial subsurface flow. The horizontal flow of perched groundwater is controlled by the fine-grained zone that limits the downward movement of groundwater, as briefly discussed in section 1.3.5 of this volume and in the response to comment 06.119.

RC: 06.121
Doc: PC-028/2

Page 5-8, 2nd column, 3rd paragraph:...The water usage and wastewater production are of a major concern in New Mexico and Albuquerque. The State is experiencing a major drought along with Albuquerque. Any additional water usage by KAFB drains the already lowering aquifers in Albuquerque. Go elsewhere!

Response:

The Pantex EIS only deals with the interim storage of containerized pits at the Manzano Weapons Storage Area at Kirtland Air Force Base. As a result, groundwater resources would not be affected by these interim storage activities. Only the guard force and operations personnel (about 150 people) would need water.

RC: 06.122
Doc: PC-028/4

Page 5-58, para 5.5.1.4: Any additional water usage, by any operation puts additional demands on a drought ridden state. Additionally, Albuquerque is

experiencing dwindling water supplies in their aquifers to include KAFB. Any additional water usage, even for pit operations, is not necessary since DOE can select on the other alternatives and should.

Response: *See response to comment 06.121.*

RC: 06.123
Doc: HT17/73

It would be IGNORANT to site future missions at Pantex without first reviewing the geological hazards truthfully and openly. It would be doubly ignorant to continue trying to hide contamination facts as they relate to the Ogallala today. The recharge rate is MUCH faster than folks believed it to be a few years ago, and MUCH faster than what is being publicly acknowledged today.

Response: *Numerous scientific investigations have been conducted to determine the geologic and water resource characteristics at and in the vicinity of Pantex Plant. Volume I, section 4.5, addresses the geologic conditions and potential for seismic activity. Volume I, section 4.6.1.2, discusses the hydrogeologic conditions, including ranges of groundwater velocity and recharge estimates, based upon the most up-to-date information available at the time of publication. The Environmental Restoration Protection Program will continue to monitor existing conditions and perform corrective actions as needed.*

RC: 06.124
Doc: CO-007/1

... Two very important negative impacts—the drawdown from the already dropping water reserves and the contamination into it. The proposal gives inadequate information and inadequate protection of the crop-feeding resource in the agriculturally rich eight state region where the Ogallala is located—not to mention the water supply for Amarillo.

Response: *The importance of the Ogallala aquifer as a valuable regional groundwater resource supply is discussed in section 1.3.5 of this volume.*

RC: 06.125
Doc: PC-030/3

No additional water should be channeled to the open ditches and playas at Pantex because it will accelerate the flushing of contaminants into the soil and eventually into the aquifer.

Response: *See discussion in section 1.3.5 of this volume and response to comment 06.060.*

RC: 06.126
Doc: CO-005/4

A second major flaw in the document is the omission of the importance of the Ogallala aquifer to this area. As the single groundwater supply for 46 counties in the Texas Panhandle and the source of water for parts of seven midwestern states, it is paramount that nothing be done to damage this priceless resource. What could be more important in an environmental document than a detail analysis of the water source, the future supply and the impacts to this source from present activities at Pantex. To ignore the tremendous impact that Pantex has already induced on this finite water source is inadmissible. We ask that you provide detailed analysis on the effects of Pantex activities on the Ogallala (which includes the perched layer), the complete scope of contaminants, the

combined effects of these contaminants and how different constituents react in varying soils and water.

Response: *See discussion in section 1.3.5 of this volume. Additional information has been included in volume I, section 4.6.1.2.*

RC: 06.127
Doc: CO-005/5

We ask that the studies from the Bureau of Economic Geology (BEG) be included as part of the Pantex EIS. Why were the results of the years of work done by BEG not included in the draft document? These are valuable studies with extremely telling results. Provide the reports, analysis and statements produced by BEG in their study at Pantex in the final document.

Response: *Many of the Bureau of Economic Geology (BEG) reports have been cited in the Pantex Plant EIS. BEG reports are included in the administrative record and are available to the public.*

RC: 06.128
Doc: PC-008/3

Plant used 230 million gallons in 1995.

- Texas Tech Farms used 66 million gallons (29%) of the total plant water usage.
- Nuclear weapons operations used 163 million gallons (71%).

Amarillo Water District consumed 16 billion gallons in FY 1995.

Pantex Plant including Texas Tech Farms used 1.4% as much water as Amarillo District. Nuclear weapons operations used 1% of the water used by Amarillo. Considering the water also used for irrigation, the Plant withdrew 0.6% of the regional withdrawal from the Ogallala aquifer.* Nuclear weapons operations consumed 0.43% of the regional withdrawal.

*Draft Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components, March 1996, page S-15.

Response: *Comment noted.*

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3.7 Air Quality

RC: 07.001
Doc: HT02-05/1

[The Proposed Action] is inappropriate for the reasons that winds and storms here are very strong and tend to have...more far-reaching effect[s] than they do in other parts of the country.

Response:

This EIS only assesses the impacts of relocating interim pit storage. The potential relocation of other Pantex Plant operations is assessed in the SSM PEIS. The meteorology and climate (regional and local) at Pantex Plant are discussed in volume I, section 4.7.1 of this EIS. The climatic characteristics of the Pantex Plant area were taken into account in assessing the impacts of air pollutants from normal operations (see volume I, section 4.7) and from accidents (see volume I, section 4.14). The climactic characteristics of each of the other sites being considered for interim storage of pits were also taken into account in assessing impacts (see volume I, chapter 5).

RC: 07.002
Doc: HT02-04/5

The use of strontium-90 to test containment at the Firing Sites is an unacceptable, unpleasant fact to me. Please tell me more about this, as well as the other open air experiments conducted at the site.

Response:

In 1977, one test at Firing Site-15 involved the use of high explosives containing strontium-90 as a tracer. It was later determined that the lagoon was contaminated with strontium-90. During a 1987 study, grab samples were collected in the potentially affected area around the site. Strontium-89/90 averaged 0.398 pCi/g. Another investigation was conducted at the site in 1995 (PC 1996w). All potential radioisotopes were analyzed for, including uranium (U), thorium (Th), beryllium (Be), cesium (Cs), and strontium (Sr). These concentrations were found to be well below the Nuclear Regulatory Commission (NRC) and Texas Department of Health (TDH) soil contamination limits. Detected activities ranged from 0.43 to 1.8 pCi/g for Be-7; from 0.34 to 0.01 pCi/g for Cs-137; and from 0.14 to 0.86 pCi/g for total Sr isotopes. The NRC criteria for no further action were used for thorium, uranium, cesium, and strontium.

RC: 07.003
Doc: HT02-04/6

[Depleted Uranium] DU particles from test explosions at the Firing Site spread into the air, land, and water offsite. DU is toxic and radioactive. While I thank you for starting to clean it up, once again, I must say, tell us more.

Response:

Up until the mid 1980s, test firings were performed in the open areas at the firing ranges, resulting in the dispersion of DU in the immediate area of the firing sites.

Soil and Sediment Quality, volume I, section 4.5.1.3, discusses the general environmental restoration process. Volume I, section 4.5.1, discusses the DU contamination at Firing Sites 4, 5, and 10. A request has been submitted to TNRCC to remove the four currently active Firing Sites from the Pantex Plant Environmental Restoration program. Firing Sites 4, 5, and 10 have a low uranium-234 to uranium-238 ratio. An interim corrective measure is being conducted on Firing Site-5 to remove surface DU contamination. Subsequent confirmation sampling and risk assessment will be conducted at Firing Site 5.

Confirmation sampling will be conducted to confirm that protective levels have been attained and no further action will be required.

For further information see volume II, section I.1.2.4 and Table I.1.2.1–1.

RC: 07.004
Doc: HT16/17a

One of the items that [was] mentioned was that one of the pollutants that we monitor for is [total] suspended particulates, which is no longer true because there is no standard for total suspended particulates, so we stopped monitoring for [them]. Although we take samples, those filters are forwarded to the Bureau of Radiation Control for radionuclide analysis.

Response:

The language in volume I, section 4.7.1 has been revised to say that TNRCC no longer monitors for total suspended particulates.

RC: 07.005
Doc: HT16/17b

And the other item that was mentioned was that we monitor for metals. Again, we don't on a regular basis analyze for metals. We did take a sample in 1993 for about 30 days—30 samples. And then we analyzed for about 20 different metals through kind of a screening method. There aren't any concerns there or we haven't been able to identify any. So we have not done any additional analysis for metals.

Response:

Text in volume I, section 4.7.1 has been revised to reflect that metals are not routinely monitored.

RC: 07.006
Doc: HT16/18

And with regard to air quality impacts, both for No Action Alternative or the consolidation alternative, the non-radiological air quality impacts will be minimal. Only potential is for particulates if more construction activity takes place due to consolidation alternative. And, as the EIS mentions, that if that happens, that mitigation measures will be used to control the particulate emissions. And I think that is a TNRCC-accepted method of control for particulate emissions.

Response:

Volume I, section 4.7.2.2 discusses the emissions from construction activities and volume I, section 4.7.6 discusses the potential mitigation measures to reduce emissions. Regarding the variance between monitoring data and modeling results, see discussion in section 1.3.6 of this volume.

RC: 07.007
Doc: HT16/19

I would like to bring up some inaccurate statements in the EIS that need to be corrected. In Table 4.7.1.3–1 there's a footnote discussing the National Ambient Air Quality Standards, and I think that statement is not accurate, because for ozone and PM_{10} the standard...is determined by statistical methods. And that is based on expected exceedances over a 3-year period. And if...in a 3-year period, the number of exceedances or expected exceedances, averaged over the 3-year period has to be one or less, otherwise that area is considered non-attainment for that pollutant. For sulfur dioxide and nitrogen oxide annual standards and for lead, the quarterly standard, are not to be exceeded. And carbon monoxide, there are two standards, the 1-hour standard and the 8-hour standard. And [for] sulfur dioxide, a 3-hour standard and a 24-hour standard

can be exceeded only once per calendar year. And the statement in the EIS does not make that clear. And on page 4–93, there is a statement that says that Air Quality Control Region 211 is designated by EPA as better than National standards for total suspended particulates. That statement is incorrect because when EPA established new standards for PM_{10} for (inaudible) particulates, the standards for PM_{10} were taken out. So there is no more National standard for TSP. On the same page, 4–93, there is a discussion about methylene chloride found in our monitoring at 213 parts per billion by volume on July 6th, 1993. But there is no mention made that this concentration was seven times the effects screening level established by TNRCC. Although, further review and analysis by our staff, toxicology and risk assessment staff, concluded that this one-time health episode would not result in any long-term health effects. There is greater discussion about the slightly above ESL concentration of dichloroethane, whereas the discussion on methylene chloride was left out. Another point I want to make is that in our four years of monitoring at Pantex we have found a number of exceedances of PM_{10} National Ambient Air Quality Standards. Although the modeling done by both TNRCC and the EIS staff did not predict any possible PM_{10} violations, actual exceedances happened. They could be due to blowing dust or localized earth-moving activities. But that is precisely the kind of scenarios anticipated in the consolidation alternative if additional construction activity takes place. The EIS addresses this issue in section 4.7.6.

Response:

This comment discusses four individual points. Each of the points is addressed in turn.

1) The footnotes containing the discussions of the standards associated with each of the pollutants have been revised in accordance with the comment and the TNRCC Monitoring Operations Division reference "Smarter Air Monitoring for Texas" (TNRCC 1994b).

2) The text discussing the standard for TSP has been deleted.

3) The discussion of the methylene chloride exceedance in section 4.7.1 in volume I has been amended. The following sentences have been added. "The concentration was approximately seven times the ESL (30 ppbv) established by TNRCC.... In the case of the 1993 methelyne chloride exceedance, the TNRCC Toxicology and Risk Assessment Section stated that the one exceedance was not expected to result in any long-term health effects."

4) See section 1.3.6 of this volume for a discussion of the variance between PM_{10} monitoring data and modeling results.

RC: 07.008
Doc: HT16/20

Our modeling staff reviewed the modeling results that [were] given in the EIS. The TNRCC did clean air modeling in 1995 under the agreement in principle. And our staff used a different methodology to do the modeling for [the] Pantex site-wide modeling. And the EIS staff...use the same model, the Industrial Source Complex model, but they used a different methodology to do the modeling. But the conclusions that were arrived at by both models were the same, that only alcohols exceeded the effects screening levels. And when it was

modeled for outside the Pantex boundary, there was no exceedance of the standard or the guideline ESL. So that sort of validates the model, that two different groups of people modeled the same emissions using different approaches, but [came] up with the same conclusion. However, by reviewing the input into the models our staff found that a number of emission points were left out in the modeling that the EIS staff conducted, like the carbon monoxide emissions from emission points 54, 85, and 160. Some of them are very minimal emissions. But, for example, emission point 160 is a natural gas boiler. It has the emissions of 13,000 pounds per year, which was not included in the EIS modeling. The same thing, from the same boiler, the NO_x emissions, the nitrogen oxide emissions, 53,000 pounds a year, that was not included in the EIS model.

Response: *Emission points 54, 85, and 160 were active at the time TNRCC performed their modeling, but had become inactive by the time the modeling was performed for this EIS. For a general discussion of the differences between the two modeling efforts, see section 1.3.6 in this volume.*

RC: 07.009
Doc: HT16/21

... There were a number of hazardous air pollutants that were left out in the EIS modeling, which the TNRCC staff used in their modeling.

Response: *The air quality modeling for this EIS included all current and future hazardous air pollutants. However, some of the pollutants had such negligible concentrations that they were screened out of the tables placed in the Draft EIS. In the Final EIS the tables have been expanded to include all of the hazardous air pollutants. See also the discussion in section 1.3.6 of this volume.*

RC: 07.010
Doc: HT16/22

... We have had some PM_{10} exceedances, although [they] happened at the property, they are not considered a violation of the National Ambient Air Quality Standards. But that is one thing that needs to be taken into consideration when this expansion or consolidation alternative is considered, that some mitigation measures will be employed to avoid exposure to the workers or even potentially to the neighboring residents.

Response: *See discussion in section 1.3.6 of this volume.*

RC: 07.011
Doc: HT16/29

Are all the known emissions for Pantex included in a list in this document, regardless of whether or not there's a standard that it was tested for, or do we only talk about things that there's a standard that applies that you pick up in monitoring? Or are they only monitored for if there's a standard and if there's no standard they're not tracked...? ...I would be interested, and would like even to request, it would be nice if this document gave us a good thorough picture of the plant, regardless of, perhaps, health effects or whatever, just what the emissions are. And, if there are no health effects attached to certain things, that's nice if you can specify that or just that there's not a standard, or whatever. But it would be nice to have a better picture, a clearer picture, of this plant as it currently operates.

Response: *See response to comment 07.009, and section 1.3.6 of this volume.*

RC: 07.012
Doc: HT16/30

... When we reviewed the emissions data that they have reported in Appendix B and the emissions inventory that was submitted to us for our AIP modeling, there were a number of hazardous air pollutants, about 50 of them, that were left out. And, as I said, they are not very high quantities, but they were mentioned in the emissions inventory that was submitted to us, but it is not included in the EIS.

Response:

See response to comment 07.009 and discussion in section 1.3.6 of this volume.

RC: 07.013
Doc: PC-031/2

Some of the most glaring deficiencies and omissions include the continuing use of the Burning Ground with no alternative examined. This facility is not technically acceptable and this document ignores the agreement with our citizen groups to analyze alternatives. The air modeling is inadequate, by the words of the document itself. How could DOE expect credible results with no modeling for residences on the south side of the Plant? There are still no monitors either at the perimeter or outside the plant measuring emissions that are not radiological.

Response:

There are several misunderstandings revealed in this comment. The facts are that:

1) Pantex Plant did conduct a Best Available Control Technology (BACT) of several existing or developmental alternatives to open burning/open detonation. The analysis concluded that controlled open thermal treatment with existing administrative controls constituted BACT. Thus, the plant proposes to continue that activity in this EIS. Since that study was completed, further development of procedures for chemical treatment has warranted further investigation of a base hydrolysis treatability study. Volume I, section 1.2.2 and volume II, section G.3.8 contain additional information on this subject.

2) As stated above, the Burning Ground is not only technically acceptable, but technically the best available method of sanitizing HE components as well as for treating HE-contaminated waste material.

3) The air modeling is not "inadequate, by the words of the document itself." The air modeling for this EIS was performed using EPA approved models, a TNRCC approved data set for meterology and mixing heights, and a comprehensive set of emissions sources and emissions rates. The conclusions of the air modeling are consistent with those of other modeling efforts independently conducted by another contractor and by TNRCC.

4) The air quality modeling included analysis for receptor locations spaced at 100 meter intervals along the north, west, and east boundaries of Pantex Plant. On the south side of the plant, the receptor line was positioned to include most of the property leased from TTU. See Figure 4.7.1.3–1 in volume I for a graphical depiction of the "fence line" receptors. Any air pollutant concentrations emitted by the plant would have to cross these receptors before reaching an off-site residence. In addition, the modeling did include several residences on the south side of the plant. Some "residences" shown in Figure

4.7.1.3–1 of the Draft EIS were inadvertently depicted at incorrect locations. This has been corrected in the same figure of the Final EIS. It should be noted, however, that the residence locations used in the actual computer modeling were correct and the analysis of concentrations at residences is valid.

RC: 07.014
Doc: PC-025/42

On page 4-94, The Target Range is where you explode nuclear devices?

Response:

Nuclear devices are not exploded anywhere at Pantex Plant. The Target Range indicated in volume I, Figure 4.7.1.3–1 is used to conduct live fire training for security personnel with duty sidearms, sub-machineguns, and shotguns.

RC: 07.015
Doc: PC-025/43

Pages 4-96 and 4-99. What are the sources of the information in the tables?

Response:

The sources of information for Table 4.7.1.3–3 are the Pantex Plant Environmental Information Document, Pantex Plant Emissions Inventory, and TNRCC Effects Screening Levels and the Clean Air Act.

For Table 4.7.1.3–4, the sources are TNRCC Air Quality Modeling Guidelines and calculations performed with ISCST2 and ISCLT2 models.

In the Final EIS both tables have been annotated to list these sources.

RC: 07.016
Doc: PC-025/44

General comment on section 4.7: Poor QA/QC of data has occurred in appendix B supporting section 4.7. Examples included below of showing incorrect data are as follows: page B-44, chromium, 45.4 kg, 1000, I hour; page B-44, chromium, 363 kg, 1 hour, page B-45, cresol, 1,000, annual, #11; page B-45, cresolic acid, annual, #11; page B-46, ethyl benzene; page B-48, HF, 363 kg, 24-hour, #3; page B-49, ketone, 363 kg, annual, 8, 10; ketone 363 kg, I hour, #2; Page B-50, methylene chloride, annual, #2; page B-50, naphthalene, 45.4kg, 1 hour, #5; page B-51, NO_2, 45.4 annual, is totally incorrect; page B-51, NO_2, 363 kg, #1, #2, #5, #9, #11; page B-5 1, NO_2 BGU, is totally incorrect. Page B-52, toluene, 500, I hour, #10; page B-52, trichloroethylene, annual, #8, #9, #10, #11. These are only examples determined by visual inspection of data presented in appendix B not actual calculations. What level of QA/QC was completed? What level is required? Please provide QA/QC documentation including signatures assuring certification of data quality. What proof does DOE give that the analysis is of good quality? I believe DOE will blow off my comments in SSM, S&D, and Pantex projects regarding QA/OC. I believe I am presenting evidence that the QA/QC is technically substandard. Prove I'm incorrect.

Virtually every page of the table is incorrect to some degree.

Table B.4.1–1 has numerous concentrations reported with identical roots but orders of magnitude difference. This is highly unlikely and points to poor QA/QC. Cresol residence #1 is in error. HF exponents are in error. Ketone exponents are in error. Lead is incorrect in the 3rd quarter.

Response: *The QA/QC process used for the preparation of this EIS was conducted in accordance with a Quality Assurance Program Plan tailored for the preparation of this EIS and consistent with DOE Order 5700.6c. The process involved multiple levels of review, both internal and external to the team preparing the document.*

The specific section cited in your comment, appendix B, relates to air quality analysis. Preparation of that particular section entailed the analysis of 3.8 million data elements from which the tables you cited were prepared. During the preparation of those tables, there were typographical errors introduced due to misreading of the author's handwriting. The same misreadings that occurred during the word processing step occurred during the reviews, with the effect that the typographical errors in data were not caught by reviewers. Following the discovery of this problem with the particular author's handwriting, the review process was modified to ensure that the entries in the tables of the Final EIS were rechecked against the original data set.

It should be noted that while the Draft version of appendix B contained typographical errors in tables containing thousands of data entries, the air quality modeling and the analysis of modeling results as reported in both the Draft EIS and this Final EIS is still valid. Separate, independent modeling efforts by a different DOE contractor and by the TNRCC, using compatible, but slightly different methodologies, produced results in close agreement with the modeling performed for this EIS. None of the three independent modeling efforts found that any individual pollutant concentrations exceed air quality standards or Effects Screening Levels at the Pantex Plant boundary. The Draft EIS and TNRCC modeling did show that alcohols as a group would exceed a conservatively selected Effects Screening Level of 100 micrograms per cubic meter. Subsequent analysis to prorate the total alcohol concentration according to the quantity on hand of individual alcohols showed that none of the individual alcohols exceed their respective ESLs at the Plant boundary.

RC: 07.017
Doc: PC-025/45

Request extra public review time due to poor quality. I am concerned the input data to the modeling is questionable due to errors noted in tables above. What assurance does DOE provide to certify input data is accurate? What methods were used to qualify input data? What QA/QC documentation exists for input data? Specifically, what level of quality exists for estimated emissions rates?

Response: *Under regulations established by the Council on Environmental Quality, at least 45 days must be provided for public review of a Draft EIS (40 CFR 1506.10(c)). In response to stakeholder requests, DOE extended the public comment period for this EIS to 98 days.*

The models used for air quality analysis are the Industrial Source Code Models (ISC-ST and ISC-LT) developed and approved by the Environmental Protection Agency. The input data for air quality modeling was obtained from two sources. Input data for meteorology and mixing heights were standardized data sets approved by the TNRCC. The input data for emissions inventory was developed by Pantex Plant for use by TNRCC. These data were developed by Pantex Plant

under a DOE-approved, NQA-1 Quality Assurance Plan that meets requirements of DOE Order 5700.6c. The input data sets have been reviewed by TNRCC as well as by technical experts of Pantex Plant and DOE.

RC: 07.018
Doc: PC-025/46

General comment for section 4.7. Tables lack sources.

Response: *Sources have been added to tables in the Final EIS.*

RC: 07.019
Doc: PC-025/47

Page 4-112. Please explain why the paper incinerator listed on page B-17, the wastewater treatment facility's SO_2, and landfill activities PM_{10} are not included?

Response: *The paper incineration emissions (CO, NO_2, and PM_{10}) were included within weapons related activities. Wastewater facility and landfill activities are not considered significant sources of pollutant emissions; hence, are not included.*

RC: 07.020
Doc: PC-025/93

Air does not assess methane releases from activities (oil, gas, and livestock industries) in the ROI. Air does not include SO_2 releases in the ROI.

Response: *Only the criteria pollutants (SO_2, CO, NO_2, PM_{10}, Ozone, and Lead) and some VOCs are regulated by EPA (Under the Clean Air Act) for Air Quality Control Region 211. Table 4.7.1.3–7 presents the SO_2 releases in the ROI. Methane is not listed under the Clean Air Act, but is listed under TNRCC's list. Modeling results for Methane have been added to the Final EIS.*

RC: 07.021
Doc: CO-008/137

Include a list of all air emissions onsite.

Response: *Volume I, section 4.7.1 (Table 4.7.1.3–3) has been expanded to include all chemical air emissions which are of potential significance in air quality analysis. The table shown in the Draft EIS omitted some of these emissions based upon modeling results which showed negligible emissions impacts. However, as a result of this and similar other comments, those chemicals are now shown in the tables.*

RC: 07.022
Doc: CO-008/138

Have all available emissions been used in the model?

Response: *Yes, all emissions sources have been modeled.*

RC: 07.023
Doc: PC-027/7

... Page 5-73, Air Quality. Albuquerque managed to get off the EPA air monitoring program—if we hadn't gotten off we would have been in trouble. All winter long, Albuquerque citizens are not free to build fires in their fireplaces or woodstoves any time they want to, we get fined for burning on a "No Burn" day. We have many "No Burn" days. Our houses are checked to see if smoke is coming out of the chimney on No Burn" days. There is a telephone number to call to get a recorded message about whether we can burn a fire or

not. We have to buy special gasoline for our cars in the winter time and we are nagged constantly about car pooling, etc., to cut air pollution, [encouraged] to have "no drive" times in order to improve air quality. The information you present about the air in this area is not complete because it doesn't reflect the constraints we have to work at in order to achieve acceptable air. The city, county, and citizens work hard to get to this point. You plan to drive 120 vehicles 365 days a year and 30 vehicles 255 days a year making 30- and 50-mile trips and say that your contribution to bad air would be negligible. I don't know -- we're really borderline on meeting the clean air specs and have to work hard to hold the line.

Response: *DOE acknowledges the efforts of Bernalillo County citizens and government to control air pollution. The effectiveness of that effort has resulted in a change in status from "nonattainment for CO" to "maintenance for attainment."*

Volume I, Table 5.5.2.3–1 shows the comparison of the total pollutants (such as CO, NO_2, VOC, SO_2, and particulates) that will be emitted from the vehicles related to pit storage along with the respective total pollutants emitted in the Bernalillo County. These data show that the pollutants emitted from these additional vehicles would be negligible.

RC: 07.024
Doc: SG-003/44

The footnote on National Ambient Air Quality Standards (NAAQS) in Table 4.7.1.3–1 in Volume 1 is inaccurate. Both ozone and PM_{10} NAAQS are based on expected exceedances, meaning that non-sampling days must be accounted for when calculating attainment determination. The NAAQS is attained when the expected number of days per calendar year, averaged over a 3-year period, with maximum hourly average concentration for ozone and 24-hour average concentration for PM_{10} above the standard is equal to or less than one. SO_2 annual, NO_2 annual, and lead quarterly NAAQS are not to be exceeded. CO 1-hour and 8-hour and SO_2 3-hour and 24-hour standards cannot be exceeded more than once per calendar year.

Response: *See response to comment 07.007.*

RC: 07.025
Doc: SG-003/45

In the discussion of air monitoring results on page 4-93 in volume 1, it is stated that methylene chloride was found at 213 ppbv on July 6, 1993. There is no mention that this concentration was 7 times the effects screening level (ESL). Further review and analysis of the methylene chloride data by Toxicology and Risk Assessment staff concluded that this one-time episode would not result in any long-term health effects. Although there is detailed discussion of slightly above ESL concentration of 1,2-dibromoethane, this additional discussion on methylene chloride is left out.

Response: *See response to comment 07.007.*

RC: 07.026
Doc: SG-003/46

TNRCC air monitoring at Pantex has found a number of exceedances of the PM_{10} NAAQS. Although modeling by TNRCC and the EIS staff did not predict possible PM_{10} violations, actual exceedances happened mainly due to

blowing dust and localized earth moving activities. Precisely these kind of scenarios are anticipated in the Consolidation Alternative if additional construction activity takes place at Pantex. The EIS addresses this issue in section 4.7.6 on page 4-118 by stating that mitigation measures will be undertaken to alleviate temporary dust emissions from construction activities. These are standard TNRCC-approved mitigation measures for particulate emission control.

See discussion in section 1.3.6 of this volume for explanation of variance between PM_{10} monitoring data and modeling results.

RC: 07.027
Doc: SG-003/47

TNRCC Modeling staff reviewed Appendix B, Air Quality Analysis, of the Sitewide EIS and their comments are submitted separately. Additionally, the EIS used the same model, the Industrial Source Complex Model, that the TNRCC used for modeling Pantex emissions. EIS modeling was performed in accordance with the EPA guidance document, "Guidelines for Air Quality Models" (revised) and TNRCC guidance document, "Air Quality Modeling Guidelines." The modeling approach used by the EIS is different from the one used by TNRCC. However, both models arrived at the same conclusion.

Response:

See section 1.3.6 of this volume for a general discussion of the differences between the EIS and TNRCC modeling efforts.

RC: 07.028
Doc: SG-003/48

TNRCC used a tiered modeling approach that included a blend of screen and refined modeling techniques because of the large number of fugitive emission locations, buildings, and pollutants, whereas the EIS modeling used a refined dispersion model to accommodate the large number of emission sources and pollutants.

Response:

See section 1.3.6 of this volume for a general discussion of the differences between the EIS and TNRCC modeling efforts.

RC: 07.029
Doc: SG-003/49

In the TNRCC approach, the TNRCC modeling results were added to the results of the modeling conducted by Radian Corporation in support of a permit application. Radian modeling addressed predicted impacts of emissions from the burning ground and container storage area. Therefore, TNRCC used an additive modeling approach to account for emissions from some of the buildings to assess plant wide emission impact. Using this approach, TNRCC modeling concluded that no predicted exceedances of the criteria pollutant impact public health. The maximum concentrations of alcohols predicted at the property line was slightly above the ESL, but concentrations of alcohols predicted at the nearest residence was below the ESL.

Response:

See section 1.3.6 of this volume for a general discussion of the differences between the EIS and TNRCC modeling efforts.

RC: 07.030
Doc: SG-003/50

Using a different approach, EIS modeling also concluded that there would be no exceedance of the NAAQS for criteria pollutants and that the only hazardous air

pollutant that exceeded its ESL was alcohols. Again, predicted maximum concentrations of alcohols for 11 residences located near Pantex were below ESL.

Response: *See section 1.3.6 of this volume for a general discussion of the differences between the EIS and TNRCC modeling efforts.*

RC: 07.031
Doc: SG-003/51

The nonradiological air quality impacts due to the No Action Alternative and the Consolidation Alternative will be minimal, especially if mitigation measures are taken to control particulate emissions due to increased vehicular traffic and construction activity.

Response: *Your observation is correct.*

RC: 07.032
Doc: SG-003/52

Data reviewed were contained in Tables B.3.6-1 through B.3.6-9 and Tables B.4.1-1 through B.4.2-3 of the EIS. Please note that no modeling input and output files were available to assist in our review. Therefore, a comparison was made of the emission rates and results presented in the EIS to the emission rates and results reported in the TNRCC's Modeling Analysis of the Pantex Plant Amarillo, Texas, dated June 1995.

Response: *While the complete modeling input and output files are too voluminous to include in the EIS, the emissions rates are the key ingredient since the modeling equations and the meterology and mixing height data are identical to those used by TNRCC. As described in the response to comment 07.009, the emissions inventory displayed in the Final EIS has been expanded to include all pollutants emitted by Pantex Plant.*

RC: 07.033
Doc: SG-003/53

Some of the sources modeled by the TNRCC were not listed in Table B.3.6-1 of the EIS, so we assumed they were not modeled. However, in the TNRCC analysis the predicted concentrations for the pollutants emitted from the omitted sources, plus all other applicable sources, were less than the respective National Ambient Air Quality Standard (NAAQS). Following is a list of pollutants and omitted sources: CO emissions from EPNs 54, 85, and 160; NO_2 emissions from EPNs 85, 157 and 160; and PM_{10} emissions from EPNs 157 and 160.

Response: *The cited sources are no longer active at Pantex Plant and were not included in the modeling. See response to comment 07.008, and for a general discussion of the differences between the two modeling efforts, see section 1.3.6 of this volume.*

RC: 07.034
Doc: SG-003/54

All predicted concentrations in the EIS were less than those reported by the TNRCC except for alcohols, hydrogen chloride, methylene chloride, and PM_{10}. Except for alcohols, the concentrations for all pollutants were below the respective Effects Screening Level (ESL) or NAAQS. The predicted concentration for alcohols was only slightly higher than the TNRCC-predicted value and less than twice the ESL.

Response: *See section 1.3.6 of this volume for a discussion of differences in the modeling efforts.*

RC: 07.035
Doc: SG-003/55

The EIS Tables B.4.2-1 and B.4.2-2 do not include all the pollutants reviewed by the TNRCC. Therefore, we assumed that the EIS did not include an evaluation for them. However, the TNRCC reported in its analysis that no concentrations for these pollutants were predicted to exceed an ESL or state standard. The omitted pollutants follow: 1,3,5-Trinitrobenzenel-Butanol, 2,4,6-Trinitrotoluene, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 2-Nitronaphthalene, 2-Ethoxyethanol, Acetone, Acetylene, Aluminum, Ammonia, Barium, Benz(a), anthraceneBenz(a), pyrene, Bismuth, Butadiene, Butane, Butene, Calcium, Chlorinated Fluorocarbon, Copper, Cyanogen, Cyclohexane, Cyclohexanone, Dimethylformamide, Dioxane, Ethane, Ethyl Acetate, Ethyl Ether, Ethylene, Formic Acid, Iron, Isobutane, Isobutanol, Ketene, Lithium, Magnesium, Methane, Methane, dichloroN-Butyl, Alcohol, Non-F Solvents, Ortho-dichlorobenzene, Propane, Propene, Pyrene, Pyridine, Silicon, Tetrahydrofuran, Titanium, Total Suspended Particulate, Trichlorofluoromethane, Trichlorotrifluoroethane.

Response: *The maximum fenceline concentrations of the pollutants, both those listed in the Clean Air Act and those listed by TNRCC (as stated above in the comment) were modeled and compared to appropriate TNRCC ESLs. However, only the results for those chemicals that are listed under the Clean Air Act, as amended (Nov 1990), and alcohols, as a group, which exceeded its ESLs were reported in the Draft EIS. All of the maximum fenceline concentrations for all of the chemicals emitted by Pantex Plant, including those listed by TNRCC and used in its modeling, have been included in volume I, section 4.7 and volume II, appendix B of the Final EIS.*

RC: 07.036
Doc: SG-003/56

On Page 4-93, Paragraph 2, 2nd Sentence: "AQCR 211 is designated by EPA as "better than national standards" for total suspended particulates..." To our knowledge there is no national standard for total suspended particulates. EPA replaced the Total Suspended Particulate standard with the particulate matter standard during the late 1980's.

Response: *Commentor is correct. The text in volume I, section 4.7.1 has been revised.*

RC: 07.037
Doc: SG-003/57

On page 4-95, paragraph 5, 2nd sentence, there is a typographical error: "TRNCC" should be changed to "TNRCC".

Response: *Correction has been made.*

RC: 07.038
Doc: SG-003/58

Page 4-95, Air Quality Modeling, corresponding tables. It is not clear in the narrative whether the air dispersion modeling referenced was conducted as part of the Agreement in Principle or as part of the permit application submitted by the DOE.

Response: *Modeling was performed to fulfill the NEPA requirement to present impacts for current operations as well as predict those associated with the future operations being evaluated in the EIS. The monitoring data were not comprehensive enough to create a baseline or to estimate the potential impacts of future operations to the surrounding population.*

RC: 07.039
Doc: SG-003/59

Page 4-97, Table 4.7.1.3-4. The following ESLs need to be corrected: Ethene, Trichloro:135 ug/m^3 for the annual ESL1350 ug/m^3 for the 30-minute ESL.

Response: *Table 4.7.1.3-4 in volume I of the Draft EIS has been expanded and appears as Table 4.7.1.3-5 in the Final EIS. The chemical "Ethene, trichloro-" in the Draft EIS appears as "Trichloroethylene" in the Final EIS. We have inserted the annual and 30-minute ESLs as requested.*

RC: 07.040
Doc: SG-003/60

Page 4-98, Table 4.7.1.3-4. The following ESLs need to be corrected: Methanol:262 ug/m^3 for the annual ESL2620 ug/m^3 for the 30-minute ESL.

Response: *Methanol is listed in the TNRCC's ESL list as Methyl Alcohol, which has the same ESLs as mentioned above. The ESL for Methonol has been added as mentioned in the comment.*

RC: 07.041
Doc: SG-003/61

Page 4-99, Table 4.7.1.3-4. The format of the ESL should be converted to be consistent with the other ESLs represented in the table (e.g., 135 ug/m^3 should be 1.35 x $10E^2$).

Response: *Changes have been made as requested for consistency.*

RC: 07.042
Doc: CO-008/136

Are TNRCC air monitoring results included [in] the air quality calculations? If so, please cite.

Response: *Air monitoring results of TNRCC are described in volume I, section 4.7.1.*

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3.8 Acoustics (Noise)

RC: 08.001
DOC: PC-023/4

The EIS reported that risks to the public from acoustics and natural seismic activity are low. However, the report does not address structural damage to homes and buildings on and offsite of the plant that have occurred due to explosions. One home offsite of the plant suffered significant damage to its foundation, walls, roof supports, and plumbing as a direct result of a planned explosion at Pantex Plant. The "shock" energy from the explosion which caused the damage is similar to energy associated with acoustics and seismic activity.

Response:

Volume I, section 4.8.1.3, describes the noise from high explosives detonation. During 1994, Pantex Plant detonated 60 charges of HE. The maximum charge exploded was 55 pounds. Noises from HE detonations were modeled by using the model BLASTO. The results are summarized in volume I, section 4.8.1, Table 4.8.1.3–1. Almost any wind speed from the south quadrants could be expected to give at least 140 dB overpressure from a 55-pound HE burst at Firing Site-4. The nearest residences, 1 and 2, which are both just north of the site boundary, can feel discomfort due to the noise created by this detonation. Window damage would rarely occur, but there could be interior plaster cracking depending on its age. Objects might occasionally be rattled from shelves, but damage to the foundation, roof supports, and plumbing will not occur due to this kind of explosion (55 pound HE detonation).

RC: 08.002
DOC: PC-017/6

Last October 4, 1995, a very large explosive charge was set off for an emergency management drill. Our home received major damages. We would have been better off to have torn our home down and rebuilt from the ground up. We were originally told that the charge was 110 pounds of explosive. Later, plant officials have said only 80 pounds of explosive was used. This was set off about one-half mile southwest of our home. We are now learning of other neighbors who have damages that possibly resulted from that explosion. Throughout the many years of living next to Pantex, the testing of high explosives probably caused damages to our homes resulting in cracking, breakage, etc. The regular shaking and jarring could not possibly do our homes and property any good.

Response:

In October 1995, a charge greater than 55 pounds of HE was detonated. Pantex Plant does not plan to explode charges larger than 55 pounds of HE in the future. Should a larger charge be exploded in the future, the plant would perform appropriate NEPA review for that charge.

RC: 08.003
DOC: PC-025/48

Page 4-125, what are the impacts to animals especially birds as a result of these detonations? [Aren't] detonations generally used by construction industry to chase off nesting birds?

Response:

Detonations have been shown to disperse animals from a given area. However, these dispersals and the impacts are usually considered temporary in nature.

Many devices (including detonation) have been used with various degrees of success for bird control by some firms and agencies. See section 4.9, Biotic Resources, for a discussion of animals at the Pantex Plant.

RC: 08.004
DOC: PC-033/2

... On page 4-122 the map shows a noise measurement location marked "B" that is fairly close to the target range. The table on page 4–126...lists these locations as having been tested on 9-9,15, and16, respectively. Could you please tell me if these were the times when qualifying was taking place at the target range, or were these just normal practice days? If the qualifying was taking place I would like to see earlier and later times of day for the readings. It seems very loud at my house when they are qualifying and they generally start very early in the morning, approximately 5-6 a.m. and sometimes are firing late at night, approximately 10 p.m. Could you please let me know also where that measurement location "B" is for certain? If it is close to my house, where it is located and what it looks like?

Response:

Volume I, section 4.8.1, Table 4.8.1.1–1 and Figure 4.8.1–1, show that noise measurements were made at location "B" (close to the target range). These measurements included the peak sound level from the vicinity of the target range. These measurements were made at 1:07 p.m. (9/9/94) and 8:40 a.m. (9/15/94). No noise measurements were performed on 9/16/94. The peak value of sound was 47 dB at 4,000 Hz. The locations A and E are also close to the target range (volume I, section 4.8.1, Figure 4.8.1–1). Sound measurements were made at location A, on 9/9/94, at 9:45 a.m., 10:05 a.m., and 1:40 p.m. The L_{eq} measurements were 42, 48, and 43 dB respectively. Sound measurements were also made at location E, on 9/15/94, at 9:45 a.m. and 10:00 a.m. The L_{eq} measurement at location E was 43 dB and the peak value of sound was 42 dB at 4000 Hz. The measurements were made with portable instruments. The measurements were made close to residences L4 and L5.

3.9 Biotic Resources

RC: 09.001
Doc: CO-008/19

Page 4-135, Paragraph 3: "Radiological surveys of beef cattle raised..." Please clarify this statement and provide the citation. What type of studies were done, when were they conducted, and by whom?

Response:

Radiochemical studies were conducted comparing cattle grazed on Pantex Plant Site with control cattle grazed at the Bushland Experiment Station west of Amarillo. The beef cattle food chain pathway was investigated by analyzing soil, native vegetation, grain, and cattle tissue samples. The study determined that meat (from cattle) grown on or near Pantex Plant did not represent a radiological hazard to the public because levels of these radionuclides were far below accepted guidelines.

The study was conducted in 1981 at three locations: a pasture 1-mile west of the Burning Ground at Pantex, the Texas Tech feedlot in the southwestern part of the Pantex Plant Site, and the Texas A&M Experiment Station at Bushland (west of Amarillo).

The study involved 11 scientists including L.C. Hollis (a veterinarian from the Texas A&M Veterinary Diagnostic Lab in Amarillo), J. M. Horton (Director of the Killgore Beef Cattle Center in Panhandle, Texas), and nine staff scientists from Los Alamos National Laboratory.

The statement in volume I, section 4.9.1.1, was based on a report entitled Supplemental Documentation for an Environmental Impact Statement Regarding the Pantex Plant, Agricultural Food Chain Radiological Assessment (LLNL 1982). This report, published in December 1982, was prepared in support of the 1983 Pantex EIS. Section 4.9.1.1 has been revised to reference this study and the following text has been added to this section in this EIS, "The study indicated that if beef consumption of 79 kg/yr is assumed then the 50-yr dose commitment to an adult from ingestion of ground beef at 1.6 x 10^{-4} pCi/g weight would be 0.2 mrem to bone, 0.01 mrem to kidneys, and 0.01 mrem to liver. These values are 500 times below the radiation dose each year from natural background."

RC: 09.002
Doc: CO-008/20

Page 4-139, Paragraph 1: Please clarify whether the type of "stock tank" is an earthen structure on one of the drainage-ways to the playa or is a galvanized or metal structure.

Response:

This stock tank is an earthen pit, approximately 5 to 6 feet deep.

RC: 09.003
Doc: CO-008/21

Page 4-139, Paragraph 2: "There are five playa Wetlands in the vicinity of Pantex Plant Site..." Do you mean 5 playas designated as wetlands? There are many more than 5 playas in the vicinity of Pantex.

Response:

Your interpretation is correct. The text in volume I, section 4.9.1.3, has been modified to read "There are six playas on DOE owned or leased land in the

vicinity of the Pantex Plant Site. Playas 1, 2, and 3 on the main plant; Playas 4 and 5 on land leased from Texas Tech University; and Pantex Lake". The statement in the Draft EIS was based on the Wetlands Delineation study by Herrera Environmental Consultants published in 1995 (MH 1995) which delineated Playas 1-4 and Pantex Lake in accordance with guidelines in the Army Corps of Engineers Wetlands Delineation Handbook (USCOE 1987). *Playa 5 has not been delineated.*

RC: 09.004
Doc: CO-008/22

Page 4-140, Paragraph 2: Please correct typo "P. amphibum."

Response:

P. amphibum now reads P. amphibium.

RC: 09.005
Doc: CO-008/23

Page 4-142, Paragraph 1: How do you explain the significant decline from the 1993 to the 1995 floristic survey in the *Echniocereus viridiflorus* population?

Response:

Dr. Marshall Johnson (who conducted these floristic surveys) noted a decline in all age classes of this cactus, from 200 in June 1993 to 50 in July 1995 and then an increase to approximately 75 in September 1995. He stated that the cause of the decline was unknown but said one could speculate that "(1) a high mortality rate prevails among the seedlings; (2) the greater luxuriance of the growth of HPG grass and forbs obscured the presence of the smaller plants as compared to their possibly higher level of visibility in June; or (3) a combination of (1) and (2) above."

RC: 09.006
Doc: CO-008/24

Page 4-142, Paragraph 2: In the statement, "wetland resources would benefit from continued operations since officials are taking steps to...," what specific steps have been agreed upon?

Response:

A 29 May 1996 response from the U.S. Fish and Wildlife Service (FWS) stated the FWS "fully support Pantex's proposed plans to manage portions of plant property for the benefit of native resident and migratory wildlife species, including the proposed playa basin management plans. As described in the biological assessment, the Pantex Plant and surrounding area currently contains and supports significant wildlife resources, but with proposed management, the area has the potential to support an even higher diversity and number of native plant and animal species, to the mutual benefit of both humans and wildlife." Appendix E of the 1996 Biological Assessment for the Pantex Plant (DOE 1996d) includes the following management plans alluded to in the 29 May 1996 FWS letter that are being used to protect wetlands at Pantex Plant:

- *Interim Guidance Document for Pantex Plant Playas.*
- *Management Plan for Playa 2 Management Unit: Phase One.*
- *Natural Resource Management Plan for Pantex Plant, Amarillo, Texas.*
- *Management Plan for Revegetation of Playa Buffer Areas and Formerly Cultivated Areas.*

- *Update for FY94, Groundwater Protection Management Program Plan, Pantex Plant.*
- *Land-Applied Chemical Use Plan for the Pantex Plant.*

RC: 09.007
Doc: CO-008/25

Page 4-142, Paragraph 5: Please correct typo, last sentence. "...but these impacts would not (insert "be") considered significant."

Response:

Suggested change has been made in the FEIS.

RC: 09.008
Doc: CO-008/26

Page 4-143, Paragraph 4: In the statement, "Environmental protection activities currently ongoing at the plant meet all regulatory requirements of FWS," please cite the letter from FWS.

Response:

Environmental protection measures currently ongoing at Pantex Plant support sections 2(b) and 7(a) of the Endangered Species Act (ESA) which requires protection of threatened and endangered species. A biological assessment submitted by Pantex Plant officials on 9 May 1996 fulfilled section 7 ESA requirements for Federal agencies to consult with the U.S. Fish and Wildlife Service (FWS). A 29 May 1996 response from the FWS commended "Pantex for developing a comprehensive and complete BA (biological assessment), and concur with your assessment that the proposed action is not likely to adversely affect any Federally listed threatened or endangered species." This letter is included in volume II, appendix J.

RC: 09.009
Doc: SG-009/1

While we recognize Pantex efforts to discover the amount and extent of the historical contamination and Pantex current contaminant reduction in progress, we are concerned about impacts to wildlife from historic contamination listed in the report. Due to the unknown extent of the historical contamination, TPWD requests Pantex continue to describe the extent of contamination and encourages efforts to clean up or rectify the contaminant impacts. Consider incorporating a timeline showing past efforts and future efforts in contaminant identification and cleanup. If available, please send Joan Glass of our staff copies of completed reports describing potential wildlife impacts.

Response:

The status of the contamination clean up effort is discussed in volume I, section 4.5.1.3 (Soil and Sediment Quality), with additional information provided in chapter 15 (Environmental Restoration) of the Environmental Information Document (EID) (Pantex 1996). A number of wildlife studies have been conducted at the Pantex Plant to identify resident and migratory species, in particular reptiles, birds, and mammals. Faunal studies summarized in volume I, section 4.9 (Biotic Resources), and chapter 7 (Ecology) and chapter 16 (Radiation and Hazardous Chemical Environment) of the EID, do not indicate significant contamination impacts to wildlife from Pantex operations. A time line has been added to volume I, section 4.5.1.3 summarizing previous and future clean-up activities. A copy of the Pantex Biological Assessment (DOE 1996d) is being sent to Ms. Joan Glass.

RC: 09.010
Doc: SG-009/2

TPWD is also concerned about the unidentified minnow species from Pantex Lake. Because there are 6 Federally listed Notropis with 2 additional State listed Notropis species, the minnow species should be identified by a competent scientist. You may request assistance in identification of the minnow by contacting the TPWD Freshwater Studies Program aquatic biologist, Kevin Mayes at (512)754–6844. Upon contacting Mr. Mayes for identification, a minimum of 5 specimens can be send to him at 300 C.M. Allen Parkway, Bldg. B, San Marcos, TX 78666.

Response:

Pantex Plant personnel re-sampled the stock tank near Pantex Lake. No specimens of Notropis were found, but a number of fathead minnows (Pimephales promelus) and one black bullhead (Ictalurus melas) were collected. It is unknown whether the identification referenced on page 4–139 of the Draft Pantex EIS was a misidentification, but that possibility is being investigated.

RC: 09.011
Doc: PC-034/11

Comment (and background information):

In Volume I, 4.2 "Impact Assessment Methodologies" (p. 4-4), under "Biotic Resources," it is stated that "Impacts to wetlands are mostly related to the potential discharge of contaminants to the playas."

Question:

How can impacts to wetlands be related to potential discharges of contaminants? Only actual discharges can have impacts!

Response:

The sentence has been revised to read "Impacts resulting from wastewater discharge into a wetland system are evaluated, recognizing the effluents would be required to meet Federal and state standards."

RC: 09.012
Doc: PC-025/49

Table 4.8.1.3–1, what is the impact to a human without ear protection over a 1/4 mile range? A lifetime for residents?

Response:

Airblast noise resulting from detonation of HE is impulsive in nature and generally less than a second in duration. Personal exposure to 140 dB (from 55 lb of HE) would not be anticipated to cause hearing damage from single impulse events. OSHA provides guidelines to ensure worker protection in elevated noise environments. Workers are not anticipated to have hearing impairment at a distance of 1/4 mile from Pantex activities. The modeling results provided in volume I, section 4.8.1, Table 4.8.1.3–1, were derived from data collected by Pantex personnel.

The OSHA 8-hour time weighted threshold limit value for a 140 dB exposure is 28 seconds. In 1994, 60 detonations of high explosives occurred from charges weighing 5 to 47 pounds. Due to the limited number of high explosive detonations done each year and the short duration of each (i.e., less than 1 second), lifetime residents are not anticipated to be adversely affected by high explosive detonations as currently conducted. As noted in volume I, section

4.8.1.3, additional NEPA review would be conducted if charges in excess of 55 pounds are detonated.

RC: 09.013
Doc: PC-025/50

Section 4.9. Given the semi-arid climate, what impacts have occurred as a result of fires in the recent past? If fires have occurred in the past why isn't it included in the affected environment? Does Pantex use controlled burns to control vegetation? What is the impact? Does the plant dredge the playa systems? What is the impact? Is there a need to dredge in the near future?

Response:

The commentor asked seven questions which are answered in order. Wildfires have occurred in the Pantex Plant vicinity in the past. Property owned or controlled by DOE has been burned by uncontrolled wildfires. There is no mechanism to assess the impacts of past burns. Controlled burning is not used for vegetation control on DOE-owned land. Playas on DOE-owned land are not routinely dredged. Playa 1 was deepened to increase water storage capacity before it was designated or delineated as a jurisdictional water of the U.S. (wetland).

RC: 09.014
Doc: PC-025/51

Page 4–139. There appear to be more than five playa lakes in the vicinity of Pantex Plant (see page 4-56 of this EIS). Pratt Lake, Pantex Lake, and several to the north and south of the site, please comment. Page 4–142. Pit Storage Activities. Please describe non-adverse impacts to biotic resources.

Response:

Only playas at the Pantex Plant Site and Pantex Lake were investigated under biotic resources. See response to comment 09.003. Pratt Lake is discussed in section 4.6 (Water Resources) and included in volume I, Figure 4.6.1.1–1 (Primary Outfalls and Floodplains at Pantex Plant Site). Also see response to comment 06.058.

RC: 09.015
Doc: PC-025/52

Page 4-142. ER activities. "...would not considered significant."?

Response:

The sentence has been revised to insert "be" between "not" and "considered."

RC: 09.016
Doc: PC-025/53

Page 4-142. Waste Management: "... will have a long-term beneficial impact on plant and animal species?" Landfills and an open burning activity that fumes metals and radioactivity are considered beneficial? Please provide documentation supporting statement. Any direct impacts to non-threatened, non-endangered species or non-wetlands? Please provide documentation supporting position.

Response:

Volume I, section 4.13 (Waste Management) summarizes waste management activities to collect and dispose of hazardous, nonhazardous, radioactive, low-level radioactive mixed hazardous wastes in accordance with the Pantex Plant's Resource Conservation and Recovery Act (RCRA) Part B Permit. Volume I (Air Resources), section 4.7, summarizes air emissions at the Burning Ground. Data on the onsite construction debris landfill and burning ground emissions indicate that they are being conducted in accordance with RCRA and Clean Air Act

guidance. One of the intents of RCRA waste management regulations is to minimize adverse impacts to plants and animals. Recognizing that waste cannot be simply ignored, the implementation of regulated forms of treatment and disposal is more advantageous than the practices prevalent throughout American industry prior to the 1970's.

RC: 09.017
Doc: PC-025/94

Biotic Resources [section] does not analyze the number of playas within the ROI.

Response:

See responses to comments 09.003 and 09.014. Volume I, section 4.2 has been revised to indicate that the ROI for biotic resources was restricted to investigation of flora and fauna at the Pantex Plant Site and the nearby Pantex Lake, which is also owned by DOE. Also see response to comment 06.058.

RC: 09.018
Doc: SG-003/7

This comment is a duplicate of comment 09.011.

RC: 09.019
Doc: SG-003/27

Page 4-4, Biotic Resources: The text states that U.S. Fish and Wildlife Service and appropriate State agencies have been used in the process of determining whether Pantex Plant operations would impact any plant or animal. This is incorrectly stated. The Trustees understand that an ecological screen has not yet been completed for this site and an ecological risk assessment has not been performed. The text should be corrected to reflect what has actually been assessed at this site and which agencies were involved.

Response:

A Biological Assessment (BA) of the Pantex Plant was submitted to the U.S. Fish and Wildlife Service (FWS) by the Amarillo Area Office on May 9, 1996 in accordance with section 7 interagency consultation requirements of the Endangered Species Act (ESA). See response to comment 09.006 regarding the favorable FWS reply. The BA was prepared in accordance with ESA guidance and may not meet the requirements for a Natural Resources Damage Assessment required under Section 107 of the Comprehensive Environmental Response Compensation and Liability Act. However, Pantex officials have had meetings with attendance by EPA, TNRCC (representing the Texas Parks and Wildlife Office), and the Texas General Land Office. This additional information has been incorporated into volume I, section 4.2 (Biotic Resources subsection) and chapter 6 (Environmental Compliance Requirements for Implementing the Proposed Action and the Alternatives).

RC: 09.020
Doc: PC-028/8

The Biotic Resources (para 5.5.1.7) and cultural resources (para 5.5.1.8) will be in [a] higher risk category. The higher risk not only includes possible contamination, but even more probable, the damage caused by increase of related activities like facility preparation, transportation to and from, and even from the additional 150+ humans to be placed on or about the Manzano WSA full time. Select another site, not KAFB.

Response: *The analysis of both biotic (volume I, section 5.5.1.7) and cultural resources (volume I, section 5.5.1.8) leads to the conclusion that no impacts to these resources are to be expected by the relocation alternative. However, the decision to relocate or not would be made after consideration of environmental, cost, and other technical factors.*

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3.10 Cultural Resources

RC: 10.001
Doc: CO-008/27

Why were the agricultural based lifestyle and the community of Panhandle, as a cultural impact, not evaluated? Most people in the region are only one generation removed from the farm or their grandparents were farmers. Also, the supportive business and families are involved in this culture. The culture in general, and the resources associated with it, were not mentioned.

Response:

Volume I, section 4.10 addresses the prehistoric and historic resources within the boundaries of Pantex Plant. Twelve historic agricultural sites have been recorded within the plant's boundaries.

The community of Panhandle is located approximately 16 kilometers (10 miles) east of Pantex Plant, and is thus outside of the area addressed by section 4.10. A discussion of impacts to the agriculturally based lifestyle of this community is out of scope for this section. An ethnographic discussion of agricultural lifestyles and resources as a "culture" are likewise considered to be out of scope in this section of the EIS. Agricultural resources within the plant boundaries and the ROI are discussed in volume I, sections 4.4, Land Resources; 4.5, Geology and Soils; 4.6, Water Resources; and 4.11, Socioeconomic Resources.

RC: 10.002
Doc: HT13/37

... Is it your position that [this EIS] adequately analyzes archeological sites for historic preservation purposes [at the Manzano Weapons Storage Area]?

Response:

To elaborate on the response given at the public hearing, the comment is concerned with cultural resources at the Manzano Weapons Storage Area (WSA) on Kirtland Air Force Base (KAFB). The KAFB Environmental Management Division has coordinated historic preservation efforts, including all cultural resource surveys and findings within the Manzano WSA as well as the base. Twenty-seven archaeological sites have been located within the WSA by a 100% ground survey conducted by Argonne National Laboratories. As discussed in volume I, section 5.5.1.8, 22 of these sites have been recommended for inclusion or eligibility to the National Register of Historic Places.

RC: 10.003
Doc: PC-034/14

Comment (and background information):

In volume I, §4.10.1.2 "Native American Groups" (p. 4-150), it is stated that "An inventory of traditional Native American sites identifying features such as petroglyphs, ceremonial areas, or sacred sites has not been conducted nor have any such sites been identified at Pantex Plant (DOE 1995K:4-280)." This statement is incorrect! Numerous archaeological surveys have been conducted on both DOE-owned and DOE-leased land for the purpose of identifying and recording of all Native American sites including any petroglyphs, ceremonial, or sacred sites. That part of the sentence that states no such traditional sites have been identified is correct. It is worthy of note that the stated reference is incorrect both qualitatively and quantitatively! Page 4-280 of the given reference discusses Oak Ridge National Laboratory; however, when one turns to page 4-300 of that reference one finds: "Native American resources

associated with these groups have not yet been identified at Pantex, but the remains of temporary campsites, hunting locations, ceremonial locations, or isolated burials are possible."

Question: How can these words be used as a reference for the statement in the Pantex SWEIS? And why doesn't DOE know that these surveys have been conducted?

Response:

The discussion of Traditional Cultural Properties (TCP's) is misleading as presented in the draft document and has been clarified. The identification of TCP's, as differentiated from archaeological or historical features, has been conducted through consultation with the 10 tribes with recognized potential ties to the area. There have been numerous cultural resource (archaeological and historical) surveys conducted at Pantex Plant that are discussed in volume I, section 4.10, and these surveys have no doubt identified features that could be TCP's. TCPs are identified through specific studies conducted to address properties or areas that are important in a community's historically rooted beliefs, customs, and practices. Studies of this type would typically entail a detailed ethnographic study involving consultation with Native American Groups with traditional or ancestral ties to the area which is now Pantex Plant, and possibly field inspections with these individuals prior to, or associated with, any survey project. This consultation is important as many TCP's may not be discernible as such to anyone but a knowledgeable member of the group that ascribes significance to them.

The reference to page 4-280 is a typographical error. Page 4-280 was the location of the referenced section in the draft document. The correct page number is indeed 4-300 in the Final Programmatic Environmental Impact Statement for Tritium Supply and Recycling (DOE 1995k). This has been corrected in the final version of the Pantex EIS.

The words used as a reference in the Pantex EIS are accurate, and represent the status of known resources belonging to historic Native American groups that occupied or utilized the Pantex region. There is a possibility that campsites, hunting areas, ceremonial sites and isolated burials may be discovered within the land that comprises the Pantex Plant. It is also possible that native plants with traditional medicinal or spiritual uses, landmarks important in religion, myth or visions, or areas of supernatural connotations that are kept secret until they are threatened, could be located within this area of land on the Texas panhandle. Cultural resource management involves much more than the survey and excavation work that DOE has conducted at the plant. It is an on-going management tool that traces and protects history and prehistory, as well as protecting the concerns of current Native American peoples.

RC: 10.004
Doc: HT17/33

I am a member of the Cheyenne-Arapaho Tribes of Oklahoma, which is a Federally recognized tribe. I did receive a letter dated September 15th, 1994 in regard to a summary notification of Native Americans. They mentioned several tribes on there, and in going through this letter I noticed that the Northern

Cheyenne was not on here; neither was the Northern Arapaho Tribe. I would ask that they be included in this Environmental Impact Statement.

Response: *The Northern Cheyenne and the Northern Arapaho Tribes have been included in chapter 9, the List of Agencies, Organizations, and Individuals to whom copies of the EIS are sent.*

RC: 10.005
Doc: HT17/34

There's a lot of concerns as far as being a member of the Plains Indians Tribes. ...We have a lot of historical and traditional cultural properties related to this area, all the way down from...the northern Dakotas down to the Palo Duro Canyon. So, we do have some sites that are significant to us,...and I am concerned about this. ...I would ask that you continue to address this on a government-to-government type basis and consult with the Federally-recognized tribes

Response: *Cultural resources addressed in the Pantex Plant EIS only address known or suspected areas or features within the boundaries of the plant. These are discussed in volume I, section 4.10 of the document. Areas of traditional cultural properties (TCP's) have not been identified by past inventories or research within the plant boundaries; however, TCP's of importance to varying Native American Groups are located throughout the plains. DOE respects and protects the TCP's when they are identified, and will continue to consult on these issues with Native American tribes, governments, and groups.*

RC: 10.006
Doc: HT17/35

...there are other tribes out there that are not Federally recognized who you might consider consulting with as well.

Response: *Consultations are made between the DOE and Federally recognized Native American Tribes, governments and groups, as well as Pan-Tribal groups such as the Owens Valley Board of Trustees.*

RC: 10.007
Doc: HT17/36

There's a lot of other concerns that I have, especially with the vegetation within the area. I also have some concerns with the potential adverse [effects from] inadvertent discoveries of artifacts or human remains that may be there.

Response: *As discussed in volume I, section 4.10.2, any discovery of subsurface cultural features or artifacts identified during land disturbance activities will be appropriately mitigated after consultation with the State Historic Preservation Office (SHPO). Typically, in discovery situations, ground disturbing work is halted until a decision can be made between the consulting officials as to avoidance, collection, testing, or excavation. If human remains are located the requirements of the Native American Graves Protection and Repatriation Act (NAGPRA) are followed; work is halted and the Pantex Cultural Resource Media Manager, the Texas SHPO, and concerned Native American Tribal groups and governments are immediately notified. Construction activities are not resumed until the remains are removed by a tribal member, archaeologist or coroner. It may also be decided to leave the remains in place, reroute the*

construction, and avoid further disturbance to the site. These decisions are made on a case-by-case basis.

There have been no vegetated areas or specific plants identified to-date within the boundaries of the Pantex Plant that have been identified as traditional cultural properties. Traditional use of specific plants for religious or medicinal purposes as well as harvesting areas may be identified as areas of future concern, but these have not been identified.

RC: 10.008
Doc: HT17/37

I am the designated NAGPRA representative for the Cheyenne Tribe. I don't know if any of you are familiar with the Native American Graves Protection and Repatriation Act of 1990. And that was one of my other concerns, that I noticed that it was cited inside this study, but it wasn't really in detail.

Response:

DOE is knowledgeable of the Native American Graves Protection and Repatriation Act (NAGPRA) and will abide by its direction if mortuary remains or related cultural items are located within Pantex Plant. The rights of lineal descendants and members of Indian Tribes to Native American human remains and funerary objects with which they are affiliated will be instituted when and if these remains are located. Consultation with the appropriate State, Federal and Tribal representatives will be instituted and if requested, reburial or a transfer of ownership of the items will be instituted. NAGPRA is mentioned in volume I, section 4.10, but is not discussed in detail as no human remains have been located on Pantex Plant Site.

RC: 10.009
Doc: HT17/38

And I did note...in this letter that there [were] scheduled visits to the tribes, and I would just like to ask if those visits have occurred, and if they have occurred, I would like to request copies of the comments that were received from those tribes.

Response:

The Pantex Plant Cultural Resource Manager visited the 8 Native American tribes listed in volume I, section 4.10.1.2 on June 22, 23, and 24, 1994. The tribes did not submit comments regarding these visits.

RC: 10.010
Doc: PC-027/6

Reference historic and prehistoric resources in the Summary (Page S-24) and in the volume I - Main Report page 5-59, item 5.5.1.8: "Twenty-seven historic and prehistoric archaeological sites have been found in the Manzano WSA. Of these sites, 8 have been recommended for inclusion in the National Register of Historic Places and 14 others are considered to be potentially eligible for inclusion." Noted that you said there would be no impact to cultural and paleontological resources, but they may be so locked up because of security requirements that nobody will be able to see them. I would think that inclusion in the National Register of Historic Places might involve the possibility of a visit or a look at the site. Will that be possible if strengent security requirements are in effect?

Response:

The Manzano WSA is a secured area. Sandia National Laboratories provides security to the facility and it is not available for public access without approval.

This policy would continue whether Manzano WSA is chosen for interim pit storage or not.

RC: 10.011
Doc: PC-028/5

Page 5-58, para 5.5.1.8–Comment: By placing the Pit storage area within Manzano WSA, the increased security will certainly reduce, even prohibit scientific and public access to the 27 historic sites. Consider the other alternative sites which do not present this type of problem.

Response:

At present, the Manzano WSA is a secured access area. Scientific and public access to the area must be obtained from the U.S. Air Force. If this area is chosen for pit storage, access to the 27 historic sites is not expected to change. The Secretary of Energy will consider the environmental impacts of each alternative along with mission requirements, technical factors, and public interest before issuing the Record of Decision.

RC: 10.012
Doc: PC-028/9

The Biotic Resources (5.5.1.7) and cultural resources (5.5.1.8) will be in higher risk category. The higher risk not only includes possible contamination, but even more probable, the damage caused by increase of related activities like facility preparation, transportation to and from, and even from the additional 150+ humans to be placed on or about the Manzano WSA full time.

Response:

The analysis of both biotic (volume I, section 5.5.1.7) and cultural resources (volume I, section 5.5.1.8) leads to the conclusion that no impacts to these resources are to be expected by the relocation alternative. However, the decision to relocate or not would be made after consideration of environmental, cost, and other technical factors.

RC: 10.013
Doc: PC-033/7

I request a copy of the transcripts or notes taken from meetings with any of the affected tribes mentioned in the Draft SWEIS. Gordon Yellowman commented at the recent hearing on June 25, 1996 and asked for a copy of the meeting notes. Nan Founds replied stating that they did not visit the individual tribes, but sent them a letter. She will send him a copy of the letter and comments received. I am requesting copies of this [letter] and the comments received.

Response:

Comment noted. Refer to response to 10.009.

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3.11 Socioeconomic Resources

RC: 11.001
Doc: HT03/1

Yes, there is one confusion factor, looking at all three PEIS's, and that is they use different multiplications for the number of direct jobs versus the impact in the community.

Response:

To elaborate on the response given at the public hearing, a number of comments relate to the economic multipliers used in the Pantex EIS, SSM PEIS, and S&D PEIS. (Refer to Comment 11.016 which has been repeated by various commentors.) A general explanation of the multipliers is provided below to avoid duplication of responses to all such comments. Further details are provided in response to specific comments later in this section.

All three documents referenced by the commentor use the U.S. Bureau of Economic Analysis' regional economic model known as Regional Input-Output Modeling System (RIMS II) as the basis for employment and income impact analysis. This model is used by government agencies, university researchers, and private economists to measure regional economic impacts. It is designed to be sensitive to differences in the economy from one region to another.

The differences in the employment multipliers presented in the three documents are not because of the models used but because of the differences in the input provided to the models by the authors of those documents. These inputs relate to a number of factors including the size of the region of influence, the type of activity involved in the projects being considered (assembly/disassembly versus construction of a light water reactor, for example), the number of direct employees needed, the average income per employee or total payroll, the money spent on local purchases of goods and services to support Pantex operations or construction and operation of new facilities, the money spent by the Pantex Plant workers in the local economy, and the average wage rate applied to indirect workers. Since all inputs to the model are converted into dollars, different wage rates applied to direct and indirect workers can alone generate different indirect employment multipliers. The activities involved in the three programs described in the three referenced documents are different and each requires significantly different inputs which may or may not be available within the region of influence (ROI). This also contributes significantly to different multiplier values in the three documents.

RC: 11.002
Doc: HT10/2

The question is, why is there no cumulative impact analysis in the socioeconomic impact analysis of past actions, like the cancellation in 1988 of the DOE program of a mine geologic repository for spent nuclear fuel and high-level radioactive waste in Deaf Smith County? That particular action was an action that [caused] a great economic disaster here in the [Texas] Panhandle region. And right now we are just barely coming out of..., or just towards the end of coming out of, that particular recovery from that particular action.

Response:

Cumulative impacts include the incremental impacts of the actions when added to other past, present, and reasonably foreseeable future actions.

Socioeconomic impacts of past actions, though not discussed individually by projects, are reflected in the baseline employment and population estimates which form the basis for evaluation of impacts from the proposed action and alternatives. Thus, any impacts from the cancellation of the repository program in Deaf Smith County on the Pantex ROI would already have been included in the description of the affected environment and the projections under the No Action Alternative. Cumulative economic impacts of concurrent DOE actions for which sufficient information was available have been discussed in volume I, section 4.11.5. As mentioned on page 4-7 of the Draft EIS, information on other Federal (non-DOE), state or local projects including private developments was sought through contacts with federal and state regulatory agencies, Amarillo Economic Development Corporation, Panhandle Municipal Water Authority, and the City of Amarillo. This effort yielded only one project (future closure of Helium Plant) that would contribute to the cumulative impacts in the Pantex Plant ROI. Cumulative impacts of this project have been included in volume I, section 4.11.5.4.

RC: 11.003
Doc: HT10/3

And then the more recent announcement of closure of the U.S. Department of Interior's Bureau of Mines Helium Operation. [This is] not addressed anywhere under cumulative impacts.

Response:

Volume I, section 4.11.5.4. has been expanded to note that the Helium Operations Plant, a facility that employs approximately 175 people, will be downsized (employing 30 to 40 workers). As a result of Congressional legislation, on October 9, 1996, the President signed the Helium Privatization Act of 1996 directing helium operations to discontinue production and sale of refined helium by no later than 18 months from the date of enactment (i.e., April 1998). The downsizing will occur over the next 18-months.

RC: 11.004
Doc: HT08/1

... It will hurt the economy of this city to have another payroll eliminated... Already gone are the Air Force base, the helicopter plant, the helium plant, and Pantex. What next? Cutting the payroll of this city further, I am against wholeheartedly.

Response:

The decisions to close federal facilities or operations are made by different federal agencies in the context of national policies. DOE has considered the cumulative economic impacts of these past actions in the baseline evaluation of the existing environment. DOE will further consider economic impacts in the decision-making process for projects for which it is responsible. See response to comment 11.002.

RC: 11.005
Doc: HT11/19

Well, one concern that I'd like to state is in your risk assessment, [which is based] on 1990 census figures.... Because Las Vegas itself has changed so much in the past six years, I think that...the 1990 census figures probably aren't...the ones to use.

Response:

Las Vegas has grown substantially since the 1990 census was taken. However, risk analysis requires population data by the smallest geographical units of the

city or the region of influence such as Census Tracts or Census Blocks. In fact, it is further broken down by sectors within a 80 kilometers (50-mile) radius circle from the project site in order to identify the potential number of people who may be at risk at different distances from the project site. Only the 1990 census information is available at that level of detail (census tract and block level) and is, therefore, utilized in risk assessment to provide a consistent basis for comparison of sites in different states.

RC: 11.006
Doc: HT11/32

We also, depending upon the number of shipments and nature of the shipments,...are concerned here with perceptions of risk and possible consequences of that on the tourism industry. This is...the mainstay of Nevada economy, and if there were to be an incident or accidents on the interstate, especially near The Strip, this could have various severe consequences, economic consequences.

Response:.

Nuclear materials have been shipped to the Nevada Test Site (NTS) since the early 1950s. Radioactive waste has been shipped to the site since 1961. There is no historical evidence that perceptions associated with nuclear material or waste shipments to the NTS have affected the economy of Las Vegas or resulted in a deterioration of tourism in Las Vegas. In fact, the Las Vegas area has experienced remarkable growth over the past three decades. Tourism in southern Nevada has increased from 21 million visitors in 1990 to a forecast 31 million in 1996. Therefore, there is no reason to conclude that future shipments to NTS would adversely affect tourism industry or the State's economy.

Since its establishment in 1975, the DOE Transportation Safeguard Division has accumulated more than 119 million kilometers (74 million miles) over the road experience in transporting DOE owned cargo without any accidents that resulted in release of radioactive material. Section 6.3 of the Pantex Plant Safety Information Document provides a listing of accidents resulting in damage to safe secure tractor trailers (Pantex 1996a).

RC: 11.007
Doc: HT14/6

But I'm wondering just in the general proximity how many jobs, if any, will this create for the Tri-Cities.

Response:

To elaborate on the response given at the public hearing, as stated in volume I, section 5.4.1.9, approximately 150 additional personnel would be required for the interim storage of pits at the Hanford site. This number represents less than 1.0% increase in the total Hanford Site workforce. Most of the workers can be hired locally.

RC: 11.008
Doc: HT02-02/1

I have come to speak on health and safety issues, as well as the feasibility of having plutonium, other nuclear materials, and other types of hazardous materials and chemicals in our front yard,...over the area's major water supply, and in this very productive and vital agricultural area—[a] major food source—for the nation as well as the world just for Amarillo's "[powers] that be" to possibly create a few more jobs and wealth for themselves.

Response: *The Pantex EIS has been prepared to evaluate the environmental impacts (including health and safety) of continued operations of the Pantex Plant irrespective of whether they occur in the rural areas surrounding the plant site or in Amarillo. DOE's goal is to meet its mission requirements in a manner that protects the public, workers, and the environment; job creation may be an additional benefit but is not the primary objective of any of the proposed alternatives. See response to comment 14.018.*

RC: 11.009
Doc: HT01-08/2

Likewise, we believe that Pantex can be a site where good, high-paying jobs are created in a work environment that includes potentially dangerous materials. When measured in terms of payroll, Pantex is by far the area's largest employer. With 3,500 employees at the plant, a job multiplier of 3.87 shows that Pantex is responsible for a total of over 13,500 jobs in this region. This multiplier was established by Dr. Ray Perryman at Southern Methodist University. The multiplier reflects the fact that the money that Pantex brings into the local economy supports many retail, medical, educational, finance, insurance, and real estate jobs. All told, employment related to Pantex represents over 12% of all jobs in the Amarillo metropolitan area. I urge the DOE to correct the socio-economic impact portions of all three EIS documents to accurately reflect the impact of Pantex on our local economy.

Response: *DOE chose to use the U.S. Bureau of Economic Analysis's Regional Input-Output Modeling System (RIMS II) as the basis for employment and income impact analysis. This nationally recognized model is used by government agencies, university researchers, and private economists throughout the United States.*

Pantex is a major contributor to the employment in the region. However, as explained in response to comment 11.001, the employment multiplier is a derived value and would differ even when the same researcher is looking at different industrial activities. We believe that a multiplier of 1.65 indirect jobs for each direct Pantex job which translates to a total job multiplier of 2.65 is more realistic when considering the proposed and alternative actions being analyzed in the Pantex EIS. Dr. Perryman's analysis (see Amarillo Economic Development Corporation Release dated August 3, 1993 [AEDC 1993] and Perryman Consultants, "Analysis Shows Pantex Plant Adds a Billion in Revenues and Thousands of Jobs to Amarillo Economy," Press Release [Perryman 1993]) does not identify any specific job multiplier. In one place, he mentions that Pantex Plant employs 3,100 persons. Then he estimates that the total employment resulting from Pantex Plant operations is 11,688. This gives us a job multiplier of 3.77. (The commentor, using the rounded figure of 12,000 instead of 11,688, arrives at a multiplier of 3.87.) In the same article, however, Dr. Perryman states that Pantex Plant expansion by 2,400 jobs would result in 5,312 total additional jobs. This would imply a job multiplier of only 2.21, not 3.87. Should it be assumed that he is using two job multipliers because in the Pantex Plant expansion scenario, he is looking at different activities (industries) at the plant, which include peaceful uses for plutonium, operation of a linear accelerator, and long-term storage of plutonium and not the current operations

of assembly and disassembly of weapons. Your comments have been considered by the SSM PEIS and S&D PEIS authors and are addressed in their respective comment response documents.

RC: 11.010
Doc: HT01-08/1

And there's not enough words to say how important Pantex is to our job situation in Amarillo. If you use a multiplier index in the total take on our economy, we're talking about [13,500] jobs out of the 3,500 job base that is at Pantex. Needless to say, from our standpoint, what's truly important to this area from an economic standpoint, we strongly urge the DOE to do everything they possibly can at the Pantex site.

Response:

The Department will consider economic impacts along with other environmental impacts, mission requirements, costs and technological considerations in the Record of Decision.

RC: 11.011
Doc: HT07/2

One of the reasons that employment increased at Pantex by about a thousand people was not so much for the increased work in dismantlement, but to invoke a safety culture at Pantex. A lot of these safety infrastructure programs are independent of the number of units you're doing. Whether you have one weapon or a thousand, you still need your conduct of operations, you still need your safety analysis, you still need your safety question determination, et cetera. And none of the numbers I've seen seem to take into account that you have a base line infrastructure that you can't go below without losing the safety culture. I'd like you to respond to that.

Response:

To elaborate on the response given at the public hearing with Pantex EIS specific information, the decrease in the number of jobs from 3,800 workers at the 2,000 weapon activity level to 3,000 workers at the 1,000 weapon activity level and 2,400 workers at 500 weapon activity level is less than it would be if reduction were in proportion to the reduction in dismantlement. This is mainly because the numbers reflect a baseline infrastructure and safety-related workforce which would remain at Pantex regardless of the volume of weapon disassembly activities. Safety at Pantex Plant is given highest consideration and will continue to be given the same consideration in the future.

RC: 11.012
Doc: HT07/3

My response to that, is that it was looked at...without looking at the plant as a total. ...The way the questions were asked, for the specific operations, we gave the numbers, but no one asked the questions about what it would take to maintain your overall safety infrastructure. I believe that's true.

Response:

See response to comment 11.011.

RC: 11.013
Doc: CO-008/65

Page 4-172. It is stated that the work force could reach 10,220. This is based on all Weapons and Disposition activities being done at Pantex. Please discuss in a manner that shows the time frame break down between construction, weapons and disposition work, and the possibility that everything will not be done at Pantex.

Response: *A workforce of 10,220 represents the cumulative (maximum) workforce assuming that current operations and waste management activities at Pantex Plant would continue when activities relating to the storage and disposition of weapons-usable fissile materials reach their full operational level. The referenced paragraph on page 4–172 of the Draft EIS also indicates that disposition activities cannot start earlier than 10 years from the date a decision is made selecting Pantex Plant as the site for disposition activities. Construction of a completely new reactor could take even longer. However, it should be noted that this discussion is relevant only in the event that Pantex is chosen as the site for long term storage and disposition of weapons-usable fissile materials. That issue is the subject of the S&D PEIS, not the Pantex EIS.*

RC: 11.014
Doc: CO-008/66

Page 4-172. Provide a work force break down by year and activity. If downsizing is required, and exceeds attrition, please provide a downsizing plan.

Response: *Although impacts of various levels of downsizing are evaluated in the Draft EIS, a realistic downsizing plan cannot be developed until a record of decision is issued by the Department identifying the level of activity and associated choice regarding new or upgraded facilities at the Pantex Plant. This decision will not be made before the Final EIS for the Pantex Plant is published. The Department will, however, keep the public informed of its actions on a regular basis and soon after a decision is made. Any decision that would result in downsizing would require a formal Workforce Reduction Plan and additional public participation opportunities in accordance with the National Defense Authorization Act of 1993 (Public Law 102-484).*

RC: 11.015
Doc: CO-008/67

Page 4-172. Knowing that all of the above activities are likely to be limited to 10 to 30 years, if there is an adverse impact from Pantex downsizing, is there money available to the Pantex ROI for long-term community assessment and planning?

Response: *The Record of Decision on the S&M PEIS will identify whether Pantex Plant would be downsized or not. If downsizing does occur, the affected communities can request the DOE to provide financial assistance for community assistance and planning. The DOE Office of Community and Worker Transition can be approached to obtain help for the facility and community transition in case of downsizing.*

RC: 11.016
Doc: CO-008/68

Page 4-172. The socioeconomic analysis of the three EIS's [is] not consistent. The SWEIS Summary (page S-17) assumes 1.65 indirect jobs in the region for every [job] at Pantex. The SSM PEIS (page S-32) assumes 1.16 and S&D PEIS (page 4-205) assumes 3.51. Please explain these differences. Why didn't the DOE use the analysis of the Amarillo Economic Development Commission (AEDC), which is based on local knowledge of the area? Their analysis gives a ratio of 2.87 to 1 (REF. Chamber Quarterly, 2nd Quarter, 1996, Amarillo Chamber of Commerce.)

Response: *Refer to the responses to comments 11.001 and 11.009 for general explanation of multipliers. The referenced article in Chamber Quarterly (ACC 1996) states that AEDC uses a multiplier of 3.9 for jobs at Pantex and goes on to state that the 1,600 jobs projected to be phased out at Pantex could ultimately result in a total loss of 4,600 jobs in all areas of Amarillo economy. If this statement is correct, the number of indirect jobs would be 3,000 (4,600 total jobs minus 1,600 direct jobs = 3,000 indirect jobs), or 1.88 times the direct jobs. The comparable number in the Pantex EIS is 1.65 indirect jobs for each direct job. Please refer to Final SSM PEIS and S&D PEIS for their responses to your comment.*

RC: 11.017
Doc: CO-008/69

Page 4-172. In the draft SWEIS Summary (page S-17, Table S-1), it is stated that at the 500 weapon activity level, Pantex "would support 2,400 direct jobs and 3,949 secondary jobs" and that "personal income additions to the economy would be reduced to $356 million annually." Please explain why this degree of economic loss would not only be an adverse but a Significant Adverse Impact to the community.

Response: *The statement in volume I, page S-17 is a summary of the description provided in volume I, section 4.11.2.1 (p. 4-167 of the Draft EIS), which indicates that a combined loss of 3,715 jobs (1400 direct+2,315 indirect jobs) would increase the unemployment rate in the region of influence from 4.1 percent to approximately 6.2 percent and could trigger out-migration. The reduction of personal income from $564 million at 2,000 weapon activity level to $356 million at 500 weapon activity level would mean a loss of $208 million or 37 percent of the personal income generated by the 2,000 weapon activity level. Compared to the total employment of 107,000 in Amarillo (Ref. Chamber Quarterly, 2nd Quarter, 1996, Amarillo Chamber of Commerce [ACC 1996]), this reduction would represent approximately 3.5 percent of the Amarillo area employment and 3.7 percent of its total personal income of $3.65 billion in 1994. These impacts would, no doubt, be adverse and may be considered significant by some members of the community. The text in the Final EIS has been revised to include this statement. The article in the Chamber Quarterly referenced above, suggests that the jobs added in the next 6 to 7 years would reduce the impact of this job loss.*

RC: 11.018
Doc: CO-008/70

Page 4-165. At the 500 weapon activity employment level, what would be the impact to the revenues for the governing bodies within the Pantex ROI, compared with the current revenues presented in table 4.11.1.6-1 (page 4-165)?

Response: *At the 500 weapons activity level, Pantex workforce would be reduced by 1,400 workers. Additionally, 2,351 indirect workers may lose their jobs in the Pantex region of influence. For analysis purposes, we have assumed that all direct workers and 50 percent of the indirect workers leave the Pantex region of influence as a result of this action. Further assuming, for simplicity in calculation, that all workers live in the City of Amarillo and based on the current per capita revenue of $457, the revenue loss in the City of Amarillo would be approximately $2.8 million about 3.6 percent of the total revenues of the City in*

1994. In reality, this number would be lower since some of these workers do not live in Amarillo and the per capita revenue generated in the counties of the region of influence is generally lower than in the City of Amarillo. Discussion in volume I, section 4.11.2.1 has been expanded to include potential impacts on population and tax revenues.

RC: 11.019
Doc: HT13/17

One of my biggest complaints about the document, which strangely enough some of us do actually read it, a lot of times, under the affected environment, you list everybody all the way from Rio Rancho to Belen and everybody to the west. There are people who live east of Manzano Base. It is the fastest growing area other than Rio Rancho, and this is something that needs to be brought up.

Response:

As shown in volume I, section 5.5, Figures 5.5.2.1-1 and 5.5.2.2-2, population living within a 80 kilometers (50-mile) radius from the Manzano Weapons Storage Area (WSA) has been considered in the analysis. People living east of Manzano WSA are, therefore, included in the analysis.

RC: 11.020
Doc: PC-013/1

It will hurt the economy of this city to have another "pay roll" eliminated. The main 4 plans under plans to dispose of, and those already gone are - the Air Base.

Response:

See responses to comments 11.002 and 11.004.

RC: 11.021
Doc: PC-012/1

Section 4.11.5 on page 4-170 in volume I, Main Report is titled "Cumulative Impacts" and is referring to Socioeconomic Resources. It states that "This section describes the cumulative impacts on Pantex Plant. Cumulative impacts include the impacts of continued operations at Pantex Plant combined with impacts associated with the activities described in the Waste Management Draft PEIS, the Stockpile Stewardship and Management Draft PEIS, or the Storage and Disposition of Weapons-Usable Fissile Materials Draft PEIS."

The Council on Environmental Quality Guidelines published in 40 CFR §1500-1508 define Cumulative impact in §1508.7 as follows:

"Cumulative impact is the impact on the environments (emphasis added) which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

Question: Why is there no analysis of the incremental socioeconomic impact of this action, on the Pantex socioeconomic region of influence, when added to other past and present actions such as the cancellation, in 1988, of the DOE program of a mined geologic repository for spent nuclear fuel and high-level radioactive waste in Deaf Smith County, and the more recent announcement of closure of the U.S. Department of the Interior's Bureau of Mines Helium Operations?

Response:

See responses to comments 11.002 and 11.004.

RC: 11.022
Doc: CO-002/1

In the draft SWEIS (p. S-17) it is stated that at the 500 weapon activity level Pantex "would support 2,400 direct jobs and 3,949 secondary [jobs]," and that "personal income additions to the economy would be reduced to $365 million annually."

Please explain why this degree of economic loss would have not only an adverse, but a significant adverse, impact on the community.

At the 500 weapon activity employment level, what would be the impact on revenues for the governing bodies within the Pantex region of influence compared to the current revenues present in table 4.11.1.6-1 (p. 4-165)?

Response: *See responses to comments 11.017 and 11.018.*

RC: 11.023
Doc: CO-002/2

In Section 4.11.5 "Cumulative Impacts," referring to socioeconomic resources (p. 4-170), it is stated, "This section describes the cumulative impacts on Pantex Plant. Cumulative impacts include the impacts of continued operations at Pantex Plant combined with impacts associated with the activities described in the Waste Management Draft PEIS, the Stockpile Stewardship and Management PEIS, or the Storage and Disposition of Weapons-Usable Fissile Materials Draft PEIS."

The Council on Environmental Quality Guidelines published in 40 CFR §1500-1508 define cumulative impact as follows (§1508.7). "Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result [from] individually minor [but] collectively significant actions taking place over a period of time." (Emphasis added)

Why is there no socioeconomic analysis of the incremental impact of this action on the Pantex socioeconomic region of influence (ROI) when added to other past and present actions, such as the cancellation and shutdown in 1988 of the DOE's high-level nuclear waste repository in Deaf Smith County, and the more recent announcement of closure of the U.S. Department of the Interior's Bureau of Mines Helium Operations in Amarillo?

Response: *See responses to comments 11.002 and 11.004.*

RC: 11.024
Doc: CO-002/3

The socioeconomic analyses of the three EISs are not consistent. The SWEIS (p. S-17) assumes 1.65 indirect [jobs] in the region for every job at Pantex. The SSM PEIS (p. S-32) assumes 1.16, and the S&D PEIS (p. 4-205) [assumes] 3.51.

Response: *See response to comment 11.001.*

RC: 11.025
Doc: CO-002/4

The Amarillo Economic Development Commission (AEDC) analysis, based on local knowledge of the area and a regional impact study performed by Dr. Ray

Perryman of Southern Methodist University, gives a [ratio] of 2.77 additional jobs in the region to every 1 Pantex job (for a total job multiplier of 3.77).

Response: *See responses to comments 11.001 and 11.009.*

RC: 11.026
Doc: CO-009/5

In fact, the impact of Pantex employment in the region of influence is highly significant to the region. Measured in terms of total payroll, Pantex is by far the area's largest employer. The reasonable job multiplier developed by Dr. Ray Perryman at Southern Methodist University, a multiplier of 3.87, applied to the some 3,500 employees at Pantex, suggests the site is responsible for a total of over 13,500 jobs. Employment related to Pantex represents over 12% of the jobs in the Amarillo metropolitan area.

Incidentally, the three subject EISs inconsistently analyze the indirect jobs created in the region by Pantex employment: The site EIS assumes 1.65 indirect jobs for each job at Pantex; the stewardship and management EIS assumes 1.16; the storage and disposition EIS, 3.51 (by far, the most consistent with Dr. Perryman's, which is the same, regional-experience-based multiplier employed by the Amarillo Economic Development Commission).

Certainly, we consider a potential 10% to 12% reduction in metro-area employment a major loss, and by no means a "negligible" concern. We strongly urge the Department to correct the socio-economic impact portions of all three EIS documents to accurately reflect the impact of Pantex employment in its region of influence.

Response: *See responses to comments 11.001 and 11.009.*

RC: 11.027
Doc: PC-034/8

Table 4.11.1.6-1 presents revenues for the governing bodies within the Pantex ROI (p. 4-165). If Pantex is reduced to the 500 weapons activity level, what would be the impact to these revenues?

Response: *See response to comment 11.018.*

RC: 11.028
Doc: HT17/1

I think the DOE has done a pretty good job of describing our economy; however, I think on the impact section there are some weaknesses. It's more of a descriptive document about our economy than it is a projection of what the impacts of Pantex might be on the economy. I know you've used a number of figures for your job multiplier, in terms of how many jobs in the economy exist as a result of the operations at Pantex. Is that a regionally sensitive multiplier that you've come up with, or is that something that's just standard across the board for the nation?

Response: *The socioeconomic impacts associated with the alternatives at the Pantex Plant extend beyond the city of Amarillo and include all the jurisdictions within the four-county region of influence. The database used for the socioeconomic study was developed using information from the Department of Commerce and Labor, as well as financial reports provided by cities and counties. The impacts were measured using the latest version of Regional Input-Output Modeling System II*

(RIMS II), a model developed by the U.S. Bureau of Economic Analysis. The model is used by Government agencies, university researchers, and private economists to measure economic impacts and is available for every economic region in the nation. It is designed to be sensitive to differences in the economy from one region to another.

RC: 11.029
Doc: HT17/2

I think there is some weakness [in] looking at the effects on certain sectors of the economy. In particular, I would note it [the EIS] doesn't talk a lot about [the effects on] retail sales and employment in the retail sector, which has been a tremendous growth portion of our economy over the last five years.

Response:

The socioeconomic impacts associated with the alternatives at the Pantex Plant are described in terms of total earnings (salaries and wages to employees) and total personal income. It is true that impacts on individual sectors of the economy are not analyzed. However, the text in volume I, section 4.11.2.1, states that most of the secondary jobs in the local economy are in the retail trade and service sectors.

RC: 11.030
Doc: HT17/3

It [the EIS] doesn't look extensively at wholesalers and industrial suppliers, many of whom supply [products] to Pantex, but also associated with industry in general. We wouldn't...have the diversity of industrial supply companies in Amarillo without Pantex, and I think that should be taken into account.

Response:

See response to comment 11.029.

RC: 11.031
Doc: HT17/4

...perhaps the most important [aspect] would be the impact, if there were significant job losses. And I know this EIS doesn't contemplate it, but if there were significant job losses beyond what's mentioned, even in terms of looking at the [1,000 weapons] per year, let alone the [500 weapons], the real estate sector would suffer considerably.

Response:

The job losses resulting from reduced weapon activity level are discussed in volume I, section 4.11.2.1 and the job losses resulting from the closure of the plant are summarized in volume I, section 4.11.5.2. The loss of approximately 3,700 direct and indirect jobs would certainly impact the real estate sector, but it should be noted that not all unemployed workers, particularly the indirect workers, are likely to leave the Pantex region of influence immediately or even over a longer period. The text in volume I, section 4.11.2.1 has been expanded to include these effects.

RC: 11.032
Doc: HT17/5

... I think we have some pretty good historical data in Amarillo on what happens when there's large outmigrations in number of jobs and in population. You can look back to what happened when the air base left town or look back in the late eighties, what happened to our economy.

Response:

Comment noted. The text in volume I, sections 4.11.1.1 and 4.11.1.5 has been revised to incorporate population and economic changes occurring prior to 1990.

RC: 11.033
Doc: HT17/6

I'd also ask that maybe additional analysis could be done on the tax revenue portions.

Response:

See response to comment 11.018. The text in volume I, section 4.11.2.1 has been revised to add a discussion of tax revenues.

RC: 11.034
Doc: HT17/7

Again, going back to the problems that happen when you talk about severe job losses in the manufacturing sector of the economy. In terms of real estate, it would have a dramatic effect on all the cities in the region and their ability to raise revenue through property tax. ...There is discussion of the city's revenue capacity in the document, but I think it could be strengthened. Counties are also very dependent in Texas on property tax. In fact, Texas counties are nearly completely dependent on property tax revenues. So, they suffer severely when there are declines in property tax values. Finally, school districts, which aren't mentioned at all in the document,...are also very sensitive to property tax issues. Changes in the property value can have interesting effects in Texas because of our school equity financing law. I'll note that the Canyon School District, which is in the Region of Influence, is already looking at a million dollar deficit because of certain property tax issues.

Response:

See response to comment 11.018. The text in volume I, section 4.11.2.1 has been revised to add a discussion of tax revenues.

RC: 11.035
Doc: HT17/8

The City of Amarillo...in 1989, passed a half cent sales tax to reduce the property tax. So, in essence, they shifted their taxation burden from property taxes, to some degree, to retail sales. If retail sales do not grow at least at the inflation rate, that translates into an actual, in essence, reduction in the funds available to operate the city.

Response:

Comment noted. Retail sales would be reduced if the weapon levels are reduced to 1,000 or 500 per year. The reduction in worker earnings and personal income are discussed in volume I, section 4.11.2.1.

RC: 11.036
Doc: HT17/9

In looking at the government debt section of the document, the majority of the debt was listed as the City of Amarillo. I think there's 55 million dollars of debt. That is primarily revenue bond debt...that is financed through utility fees. It's not dependent on general revenue taxation at all.

Response:

Comment noted. Socioeconomic analysis in volume I, section 4.11.2.1, has been revised to provide a better discussion of population change and tax revenue.

RC: 11.037
Doc: HT17/10

...I think there needs to be some analysis on what effect this might have on water consumption, on water revenues in the city, because that's what backs those revenue bonds that...secure the debt that you've mentioned in there.

Response:

Additional information on impacts to overall tax revenues has been provided in volume I, section 4.11.2.1. Impacts on individual sources of revenues are not

provided because they depend on annual budgetary processes and are too speculative to be included in this EIS.

RC: 11.038
Doc: HT17/11

Finally,...maybe most importantly is population outmigration. Cities tend to be in a growth mode, they tend to plan on future growth. As happened in Amarillo in the sixties and again in the late eighties, when you have outmigration, it dramatically affects all sectors of the economy, particularly retail and otherwise.

Response:

Volume I, section 4.11.2.1, provides socioeconomic impacts which could occur as a result of population inmigration. It should, however, be noted that reduced workforce at Pantex Plant or even the closure of the plant would not result in instant outmigration of population. Even after the closure of the plant, workers would continue to be employed at the site for decontamination and decommissioning of plant facilities over a number of years.

RC: 11.039
Doc: HT17/13

The population figures that you just showed on your slides, I found...in Volume I, on page 4-155. There's some conflicting population estimate numbers for the Region of Influence given in the section dealing with accident risk estimates and fatal cancer estimates. The numbers that are given there are 267,107 [for] population in the Region of Influence. And I'm wondering what the difference is in those estimates.

Response:

In the NEPA process regions of influence (ROI) are defined in relation to the potential for an environmental aspect to be affected. For health risk analysis, whereby contaminants can be dispersed over large geographical areas by weather phenomena or surface features such as rivers, streams, etc., traditionally such potential impacts are assessed within an 80 kilometer (50 mile) radius of the facility of interest. On the other hand, studies have shown that people tend to spend money in the communities where they live. Thus the socioeconomic ROI, for NEPA analysis is traditionally analyzed by defining the political (and census) boundaries within which at least 90 percent of a sites workers live. For the Pantex Plant, 96 percent of workers live in Carson, Potter, Randall, and Armstrong counties. Thus these four counties comprise the socioeconomic ROI for Pantex Plant.

Since the 80 kilometer circle for the human health (accident) analysis includes 14 counties, it has a larger population than the 4-county socioeconomic ROI.

RC: 11.040
Doc: HT17/14

I neglected to mention one aspect that I think should be taken into account on all the EIS documents for all sites, and that's the effect on nonprofit agencies that rely on contributions of the employees at the plant. You would have a decline in the revenue to those nonprofit agencies; at the same time, you'd have economic hardships, creating a larger need for those services.

Response:

Discussion in volume I, section 4.11.2.1 has been expanded to include the potential effect on non-profit agencies due to downsizing.

RC: 11.041
Doc: HT17/16

I think that we felt,...especially looking at your view graph here, that you have brought it down to within just a four-county area for the Region of Influence. And yet for all the other study that was done throughout the document, it is a much wider [area], as was noted by Joe Martillotti.

Response: *See response to comment 11.039.*

RC: 11.042
Doc: HT17/17

...the magnitude of the impact of agriculture was really not addressed and the importance that agriculture has played in this area and the stability of the area. And when the air base was phased out, it was agriculture that brought this part of the State of Texas, or that kept it alive and kept it going. ...One of every four dollars of cash receipts from the State of Texas in total revenue comes from crops and livestock that are produced in this part of the State. Right here in...the High Plains Trade Area, if these counties were detached from the rest of the State of Texas, this [area] would rank number one [nationally] in the fed cattle...production. These are very important items for this area, because you're right in the middle of a prime agricultural area. The cereal crops that are grown here are shipped all over the world. For any product that we raise here, if there is the slightest hint of any contamination, that could devastate this total area. I don't know how many of the other facilities are situated in an area that is a bread basket as much as this area is. I don't think that that was brought out in this document. One of four people is employed in [an] ag-related job in this area. And for anything to happen in agriculture would devastate the area.

Response: *The Department of Energy recognizes the importance of both agriculture and Pantex Plant jobs in the Panhandle economy. The Department has programs of environmental stewardship to protect the environment in general and neighboring farms, ranches, and communities in particular. The analyses in this EIS demonstrate that the Pantex Plant and agriculture can not only coexist, but mutually and beneficially contribute to the economic and social fabric of the region.*

The contribution of agriculture to the regional economy of the Panhandle has been expanded in volume I, sections 4.4 and 4.11.

RC: 11.043
Doc: HT17/18

... I think that it's extremely important to realize that even for the State of Texas, the importance agriculture plays has a tremendous effect upon the revenue that the State of Texas receives. So that even though in this document, which is a nuclear document, it may seem a little strange to address agriculture, I think that a complete risk analysis needs to be done with regard to just exactly what could happen with regard to the future for this area. I know that in 1991, when we first began looking at this issue, that the total impact of agriculture in this area was about three billion dollars, and now that has increased to between five and six billion dollars, and with an economic multiplier it's [in] excess of 12 billion dollars. So, you're looking at a tremendous figure there that could stand a chance of being hurt in some way. So, we'd like to see that addressed.

Response: *See response to comment 11.042.*

RC: 11.044
Doc: HT17/55

In our study of this document, we find that it fails to address the magnitude of agriculture in the Pantex ROI. In this, the heart of production agriculture, it is unthinkable for agriculture, the viable, stable, and essential industry of the Texas Panhandle, not to be appraised. When considering continued and new [missions] at Pantex, work with radioactive, toxic, and hazardous materials, omitting a detailed analysis of the agricultural economy, the basis for economic stability in this area, is a significant impropriety. The dollar value of the agricultural industry to the Panhandle economy is in excess of six billion dollars, creating a local economic activity in excess of 12 billion per year. The State of Texas cannot afford a loss in State revenues from High Plains agriculture.

Response:

See response to comment 11.042.

RC: 11.045
Doc: PC-017/1

What kinds of studies (if any) have been conducted to learn the effects of the proposed actions -- storage of large amounts of plutonium, chemicals, nuclear waste, uranium and other toxic substance and/or the [processing]/reprocessing of those substances on agriculture production, sales, uses, etc? What were the results of such studies if any have been made? Agriculture is mentioned very briefly in the EIS. Agriculture is the major industry in the Texas Panhandle and the only industry near the Pantex Plant.

Response:

Risk assessments conducted in the Pantex EIS as well as in the SSM PEIS and S&D PEIS have shown that Pantex Plant activities do not adversely impact agricultural operations in the region. This is clearly indicated by the growth of the agricultural economy in the ROI over the past several decades since Pantex Plant has been in operation. Pantex Plant routinely conducts environmental monitoring and the results are summarized in its annual site environmental reports (see references to these reports in the Pantex Plant Environmental Information Document, [Pantex 1996]). One special study dealing with radiological effects on beef cattle was conducted in 1982. It was published as a Supplemental Documentation for an Environmental Impact Statement Regarding Pantex Plant, Agricultural Food Chain Radiological Assessment (LANL 1982). Refer to volume I, section 4.9.1.1 of the Pantex EIS and response to comment 09.001 for additional details. Additional agricultural documentation has been added to volume I, sections 4.4 Land Resources, 4.5 Geology and Soils, 4.6 Water Resources, 4.9 Biotic Resources, and 4.11 Socioeconomic Resources.

RC: 11.046
Doc: PC-017/3

What studies have been made on the long-term effects of those activities being proposed or possibly being proposed on our agricultural products? When were such studies made? How were they done? What results were found? Where were they done? Were neighboring farmers and ranchers consulted? Who? Major plans for the future of Pantex cannot be made until such studies are made and found to be positive.

Response:

See responses to comments 11.045 and 09.001.

RC: 11.047
Doc: PC-025/54

Page 4-155. Given the fact that this is 1996 and the section uses 1990 data, has a significant change occurred in population since 1990 and the socioeconomic parameters to warrant estimating the affected environment closer to 1996 time frame? How many visitors to Amarillo are there each year? Is that important? If I-40 closes due to [a] Pantex accident, what are the impacts to East/West Interstates?

Response:

We agree with your comment that Amarillo has grown substantially since the 1990 census was taken. Population change from 1990 to 1995 and estimates of population for the year 2005 are presented in volume I, section 4.11.1.1 of the EIS. Impacts of downsizing have been measured against the more recent population estimates available for 1995 and have been included in the expanded text of volume I, section 4.11.2.1. We do not have data on number of visitors per year, but the money they spend is in the economic statistics. Probability of accidents on interstates used for carrying nuclear materials and their impacts have been presented in volume I, section 4.16, Intersite Transportation of Nuclear and Hazardous Materials.

RC: 11.048
Doc: PC-008/1

The socioeconomic analyses of the three EIS's are not consistent. The SWEIS (p. S-17) assumes 1.65 indirect jobs in the region for every job at Pantex. The SSM PEIS (p. S-32) assumes 1.16 and the S&D PEIS (p. 4-205) assumes 3.51. Please explain these differences. Why didn't the DOE use the analysis of the Amarillo Economic Development Commission (AEDC), which is based on local knowledge of the area? Their analysis gives a ratio of 2.87 to 1 (REF. Chamber Quarterly, 2nd Quarter, 1996, Amarillo Chamber of Commerce).

Response:

See response to comment 11.016.

RC: 11.049
Doc: SG-010/6

Research has demonstrated that nuclear-related activities such as radioactive material transportation have the potential to result in significant socioeconomic impacts. These impacts originate in intense negative perceptions and avoidance behaviors by the public, and public and media interests in "things nuclear" makes it almost certain that these negative perceptions will adversely affect a community's quality of life and subsequently its commercial, residential, and business investment opportunities. Thus, we contend that DOE should do everything possible to limit the movement of these dangerous materials.

Response:

DOE is very sensitive to public perceptions of nuclear-related activities such as radioactive material transportation and has established strict guidelines for transportation of such materials.

See response to comment 16.045 for the safety record of nuclear materials shipments over the past 20 years.

RC: 11.050
Doc: CO-005/1

We are greatly troubled by the fact that agriculture was totally discounted as the major economic stability of the entire area and the second-largest industry in

the State. Providing a job for one in every five Texans and generating more than $40 billion annually for the State of Texas, agriculture cannot be slighted in this document. Beyond the economic consideration is something we must never forget—AGRICULTURE PRODUCES THE ESSENTIALS OF LIFE. As long as people need food, housing and clothes, they will need and depend on agribusiness. This factor was ignored in this environmental document, thus creating a document that is flawed in its most basic conjecture.

This High Plains Trade Area, which encompasses the northernmost 26 counties in Texas produces close to $6 billion annually in cereal crops and livestock, of which $3.25 billion annually is in value-added industry, and creates local economic activity in excess of $12.5 billion.

This region produces 96.8 percent of the State's sugar beets, 85 percent of its fed beef, 48.4 percent of its corn and 47.5 percent of its wheat. Over 100,000 jobs are generated by High Plains agriculture.

Response: *See response to comment 11.042.*

RC: 11.051
Doc: PC-033/5

The agricultural industry and adverse impacts on this industry, as far as I could tell, have been included in only four paragraphs in the Draft SWEIS. In this High Plains Trade Area agriculture plays a major role in the economic stability and I feel should warrant more in depth study as to the adverse impacts on such a valuable industry than are dedicated in this Draft SWEIS.

Response: *The contribution of agriculture to the regional economy of the Panhandle has been expanded in volume I, sections 4.4 and 4.11.*

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3.12 Intrasite Transportation

RC: 12.001
Doc: HT13/19

In the document on [pages] 5-60 and 5-61, you talk about intrasite transportation within the bounds of Kirtland Air Force Base. There is no discussion here, and again, no reference documents, that describe any transportation-related accidents within the bounds of the base.

I am interested in information [on] varying kinds of accidents ranging from fender-benders to other kinds of accidents that would have happened within the bounds of the base [and] over whatever period of time you have that information.

Response:

Accident statistics are maintained by the U.S. Air Force. For 1995, there were a total of 271 vehicle accidents within Kirtland Air Force Base (KAFB); 241 were minor and 30 were major. A major accident involves a loss of life or damage in excess of $10,000. For 1994, there were a total of 283 vehicle accidents within KAFB; 233 were minor and 50 were major.

The potential of vehicle accidents involving pit shipments was considered in the EIS analysis. It was concluded that it is not reasonably foreseeable that an accident on KAFB would occur with the severity necessary to lead to a release of plutonium from an AT–400A container within a Safe Secure Tractor Trailer (SST). As discussed in volume I, section 5.5.1, the controlled transportation route on KAFB does not contain threats that may create the severe environment required to lead to a dispersal of plutonium. In addition, base personnel traffic would be controlled as SST convoys pass through the base roads. Thus, other vehicles do not pose a threat to the SSTs while on KAFB.

RC: 12.002
Doc: HT13/20

That wasn't my question. My question was what documentation exists of transportation accidents within the bounds of the base?

DOE has got documents. If the Air Force has documents, that is fine. I want to know what exists because there is nothing referenced in this document, in the sitewide.

Response:

See response to comment 12.001.

RC: 12.003
Doc: HT13/21

I will be glad to get to the accident scenario in a little bit, but my question hasn't been answered. Just to sort of add to it, there is some interesting numerical information in chapter 4 about actual numbers of transfers internally within Pantex. There is not that same kind of information in this document about Manzano, and that is the kind of information I am looking for. ...So...my specific question...is as you were looking at intrasite transportation issues, did you receive, did you have access to, did you look at actual transportation analysis of accidents, transportation accidents, not necessarily dispersal accidents, just accidents within the bounds of Kirtland Air Force Base?

Response:

See response to comment 12.001.

RC: 12.004
Doc: HT13/77

Are you all, in this document, proposing that the pits currently [in] AL-R8 containers, be transferred into AT-400 containers in this interim timeframe?

What is that timeframe? Over what period of time would that transfer be done?

Response:

DOE is planning on repackaging pits into AT–400A during the period analyzed by this EIS. Pit repackaging is currently scheduled to begin in late 1996 or early 1997. Repackaging of the pit inventory at Pantex Plant is expected to take longer than 5 years.

RC: 12.005
Doc: HT12/15

What is the intent of the hole, the square [in the Stage Right pallets]?

Response:

Discussion of the Stage Right pallets is included in volume II, appendix F.

RC: 12.006
Doc: HT12/17

[In] the newer method of staging, [is there a] forklift [driver] on the forklift?

Response:

To elaborate on the response given at the public hearing, DOE has introduced an automated guided vehicle to replace the stage right shielded forklift that has been used for operations within pit storage magazines. The use of the automated guided vehicle eliminates the need for personnel inside the pit storage magazines for inventories and inspections.

RC: 12.007
Doc: HT12/18

You said when I load these things I'm going to put them in a Type A container. Type B container, okay, fine. Now, you never said I'm going to take them out of that Type B container. So I'm assuming they're stored in a Type B container which is suitable for drop [of] 30 feet or puncture and so forth. How in the world is a forklift going to ram a hole through it?

Response:

To elaborate on the response given at the public hearing, certification testing requirements for Type B packages are described in volume II, appendix F, section F.2.3. After consideration of the range of operational accidents that could occur, a bounding forklift accident scenario was developed. This accident could occur when a 20,000-pound forklift traveling at 5 miles per hour strikes a horizontally positioned container that is fixed. The impact would occur between the boom of the forklift and the container.

RC: 12.008
Doc: HT12/19

Okay, how many forklift operations [have] occurred?

Response:

There is no record of the number of past forklift operations, but there have probably been at least 10,000, none of which resulted in a puncture of a pit container.

RC: 12.009
Doc: HT12/27

Public Speaker: That's, you know, the structures are ventilated, the atmosphere --

Unidentified Speaker: And that's -- they are not in containment.

Public Speaker: And, in fact, they're [unintelligible] out in here that the storage container, you know, is not sealed so it's not a containment barrier either.

Unidentified Speaker: Wait a minute. The storage container is not sealed?

Public Speaker: ALR8s being unsealed the ALR8 container does not --

Unidentified Speaker: They're sealed containers. And the other point is that regardless of which option we're going to the AT400-A, which have the pit which is clad, the inner vessel which is welded, and then you have the outer canister. So actually that's layers of containment there and that's what we're going to in terms of the AT400-A.

Response: *To elaborate on the response given at the public hearing, all pits are hermetically sealed within a metal clad. The AL–R8 container is sealed but does not have an inert atmosphere surrounding the pit. The AT–400A will provide an inert atmosphere as a defense-in-depth measure in addition to the pit clad. Further information on pit container design is provided in volume II, appendix F.*

RC: 12.010
Doc: PC-034/1/2

In the Summary, Table S-1, under intrasite transportation, presents person-rem information (page S-18). The table is supported by Section 4.12 in the main text. An underlying baseline person-rem appears to be incorporated into the estimates for the Proposed Action alternative. Neither the main text nor the table clearly states the assumptions used. The person-rem shown for the Pit Storage Relocation alternative adds the estimated person-rem for pit storage relocation and the person-rem from the 2,000, 1,000, and 500 weapons levels under the Proposed Action alternative.

Thus, while implementing the Pit Storage Relocation alternative, Plant workers are assumed to receive the person-rem associated with the Proposed Action alternative. The radiation exposures for individual workers for the alternatives are within regulatory guidelines and do not have any public health significance.

Response: *The dose estimate presented includes not only the expected doses from weapons operations but also the expected doses from the interzone transfers of 20,000 pits as part of the pit repackaging project. The No Action Alternative dose numbers presented include not only the expected doses from weapons operations but also the expected doses from interzone transfers of 12,000 pits as part of the pit repackaging project.*

The environmental impacts of interim pit storage at Pantex have been discussed and analyzed in the Pantex EIS. The Department of Energy, through its contractor Mason & Hanger, is fully committed to the As Low As Reasonably Achievable (ALARA) program at Pantex Plant to help limit the number of personnel occupational exposures and public/environmental exposures to radioactive material. The majority of Pantex Plant workers receive no radiation exposures (zero dose) during normal operations.

Response: *The environmental impacts of intersite transportation of plutonium pits including each of the four alternative sites have been discussed and analyzed in the Pantex EIS. DOE considered the Relocation Alternative as reasonable. However, DOE has determined continuing interim plutonium pit storage at Pantex Plant as the preferred alternative.*

Costs are not analyzed as part of the environmental impacts.

RC: 12.011
Doc: PC-034/3

In Table S-1 for the Proposed Action alternative, 50 workers receive 61 person-rem for 2,000 weapons. Next, 50 workers receive 48 person-rem for 1,000 weapons. Finally, 50 workers receive 41 person-rem for 500 weapons. How does one scale these numbers? The same type of calculations are made for the No Action alternative. Again, the numbers for person-rem do not follow the amount of work. Why don't the workers receive only one half the amount of person rem for a one half decrease in the work? Is there a certain amount of radiation that they receive no matter what?

Response: *See response to comment 12.010.*

RC: 12.012
Doc: PC-034/4

In the Pit Storage Relocation Alternative, the amount of person-rem from the Proposed Action alternative appears to be added to what happens for pit storage relocation. How can one add the person-rem for these two alternatives? Is the same person-rem used two different times?

Response: *The Proposed Action includes continued weapons operations and pit transfers for pit repackaging. For the Pit Storage Relocation Alternative, both of these activities will be performed in addition to the activities associated with offsite pit shipments.*

RC: 12.013
Doc: HT15/46

It's not clear to me that the document reflects worker exposures of workers who have been dealing with pit storage in Zone 4 West. So I'd like to have some clarification about what is and isn't included in terms of the numbers that you're giving in the documents.

Response: *The Transportation and Staging Department is responsible for pit storage activities as well as interzone transfers of nuclear material. Historical dosimetry data and a description of responsibilities for this department are provided in volume I, section 4.12.1, of this document. This historical dosimetry data were correlated with historical material transfers to estimate impacts from future operations.*

RC: 12.014
Doc: HT15/47

So what's included in as transportation staging includes the workers in Zone 4 as well as the Zone 12 workers involved in those two sites? I'm just trying to clarify.

Yes, both Zone 4 and Zone 12 workers are included. The commentor is asking for clarification of the responsibilities and impacts for the department responsible for pit storage and handling activities. The Transportation and

Staging Department is responsible for pit storage activities in both Zones 4 and 12 as well as interzone transfers of nuclear material. Historical dosimetry data and a description of responsibilities for this department are provided in volume I, section 4.12.1, of this document.

RC: 12.015
Doc: HT15/48

[Are] the calculations...for those [Transportation and Staging Department] workers...the 1993 to 1994 similar reading? When [is] the 1995 similar reading information going to be available and...included?

Response:

The Transportation and Staging Department had a cumulative dose of 3.642 person-rem for 1995. This information is provided in the Final EIS.

RC: 12.016
Doc: HT16/10

It just occurred to me just as I was listening to you talk about whether or not there would be less exposure if the pits were left onsite rather than transporting them and I wondered if the repackaging were not part of the long-term storage...[would then] be left onsite. And...if repackaging is a part of the action,...would [that] be part of the analysis also? Because it would provide the same worker exposure as taking it out of the bunkers and moving it to a new location.

Response:

Onsite movements of pits differ significantly from offsite pit shipments. Because of the limited speeds for onsite transfers, the restraint procedure required for pit containers is less complex and less time consuming than the restraint procedure for offsite shipments. Because of the additional complexity of the restraint procedure, dose estimates for offsite transfers are greater than the estimates for onsite transfers.

RC: 12.017
Doc: HT16/13

If Pantex is chosen for long-term storage, [would] workers...actually be exposed to the same activity bringing them out of the bunkers as they would if they were taken out and moved to another location?

Response:

It is a correct statement that there will be continued onsite movement of pits. A discussion of the pit transfers and the subsequent impacts occurring during the period analyzed in this document is provided in volume I, section 4.12. Onsite movements of pits differ significantly from offsite pit shipments. Because of the limited speeds for onsite transfers, the restraint procedure required for pit containers is less complex and less time consuming than the restraint procedure for offsite shipments. Because of the additional complexity of the restraint procedure, dose estimates for offsite transfers are greater than the estimates for onsite transfers.

RC: 12.018
Doc: HT16/14

My question has to do with Figure F-6.3.1 on Page F-19, appendix F. There is listed a variety of collisions that might occur during transportation which form the basis for the risk and the consequence analyses in that [appendix] and I note that aircraft collisions with the transport train have not been considered, or at least they're not listed. The stage right trailer, the whatever trailer you would like to consider. I guess there's something hauling a trailer, so I think of it as a

train. If we're really looking at 30,000 movements a year, which was the number referred to earlier in the discussion, the total exposure of all of those targets averaged over a year may match the total exposure of a single storage facility, in terms of hours of vulnerability. So it relates to an observation that I've had that, in analyzing the aircraft crash probability, there's been no consideration of the fact that the aircraft is only in a position to impact the target for a short duration, a very short proportion of its entire flight. Here we've got a slowly moving target that's only vulnerable for a short period of time and we've not worried about it. When you're moving the missile instead of moving the target, we worry about the sum total of all these passes. When we're moving the target more slowly, we say, well, it's in the open for such a short period of time that it's negligible.

Response: *To elaborate on the response given at the public hearing, aircraft impacts into a moving vehicle containing weapons or weapons components were considered in the analysis. The potential for this accident is discussed in volume I, section 4.12.2. Assuming a trailer were continually parked within Zone 4, an aircraft impact frequency of less than 1 x 10^{-7} per year was calculated. The risk from this accident using a frequency of 1 x10^{-7} per year is presented in volume I, section 4.12.2.*

RC: 12.019
Doc: HT16/42

In the document, it commented that 18 magazines are currently being used for pit storage. And then there was a chart that indicated pit storage magazines, 22 of them was all. And, yet...as of August 1995, [there were] 7,950 pits at the plant. And it just doesn't add up. We need to know where else the pits are at the plant. You've got too many pits for too few magazines.

Response: *As of July 1996 there were just over 9,000 pits stored at Pantex. There are 22 Zone 4 magazines in Stage Right configuration. That is, magazines in which pits are palletized horizontally, in groups of 4 or 6, AL–R8 containers (one pit per container). The Stage Right configuration utilizes the automated guided vehicle forklift. Of the 22 Stage Right magazines, 18 Modified Richmond magazines and 4 Steel Arch Construction magazines currently contain pits. Each of the 18 Modified Richmonds has 424 pits in it (212 per side), whereas, the 4 Steel Arch Construction magazines contain 252 pits each. In Zone 12, building 12–44, Cell 8 can hold up to 288 pits, and the 12–26 Pit Vault (PV) holds approximately 150 pits. The following table summarizes the these quantities:*

FACILITY	STORED PIT QUANTITIES
18 MR Magazines	18 x 424=7632
4 SAC Magazines	4 x 252=1008
12-44 Cell 8	288
12-26 Pit Vault	150
TOTAL	9078

It should be noted that the two Zone 12 facilities, 12–44 Cell 8 and 12-26 PV, are not currently completely full. Thus, the total number of stored pits is something less than 9,078 (as of July 1996). Since the total changes day to day, exact figures were not available as this response was written, but these numbers indicate approximately 9,000 total pits currently stored at Pantex.

RC: 12.020
Doc: HT16/43

I also would like you all to clarify—there's a place where you say pits accumulated on site. I would like to know if there's a certain point at which a pit is designated as being in storage and if there is kind of an interim staging step where you can have some 'X' number of pits.... If you don't mind, I would like to have clarity about how all pits are categorized, they fall into what categories, et cetera.

Response:

To elaborate on the response given at the public hearing, there is no specific interim staging step for pits designated for storage. When pits are removed from dismantled weapons they are placed in AL–R8 containers (at this point they are counted as "stored" pits with respect to the 12,000 pit limit) and either palletized into Stage Right pallets in the dismantlement facility or temporarily staged in the 12-26 Pit Vault until a quantity exists to fill a pallet. Stage Right pallets hold 4 or 6 pit containers per pallet, depending on the pallet size. Full pallets are then transported from Zone 12 to Zone 4 and placed in one of the storage magazines.

With respect to pit categorization, pits at Pantex can be divided into four primary categories as follows:

- *Surplus—Interim storage pits, not intended for future defense programs use.*
- *Strategic Reserve —Reserved for potential use in future defense programs.*

- *Enduring Stockpile—Current stockpile weapons spares or maintenance units.*
- *Evaluation—Small quantities of pits designated for quality assurance tests.*

With the exception of enduring stockpile pits (limited classified quantities), all of the aforementioned pits are considered as "in storage" and counted with respect to the authorized limit of 12,000 pits currently allowed to be stored onsite at Pantex. See the response to comment 12.019 for details on current pit quantities stored at Pantex.

RC: 12.021
Doc: HT16/44

Something that also doesn't seem to be in the document is the air-conditioning that's being installed in some of the pit storage you use. Things like that, that have to do with current operation and status of the plant, we'd like to understand better.

Response:

The comment is correct. Two Modified Richmond magazines in Zone 4 have air conditioners. Some pits have a maximum storage temperature which has been established by the design laboratory (Los Alamos or Lawrence Livermore National Laboratory). The air conditioning is provided to maintain appropriate temperatures during the summer months for these pits. Additional Zone 4 magazines may have air conditioning installed in the future. This information has been added to volume I, section 4.3.

RC: 12.022
Doc: PC-025/55

Page 4-174: According to Table 4.12.1.1-1, Pantex is stockpiling nuclear explosives or pit components in Zone 12. Please comment since interzone transfers don't balance.

Response:

The commentor is incorrect. DOE is not stockpiling nuclear explosives or pit components in Zone 12. The data in the referenced table refer to transfers occurring during 1994. The data do not include components that were brought to Zone 12 late in 1994 and returned to Zone 4 early in 1995.

RC: 12.023
Doc: PC-025/56

Page 4-174: In the magic numbers of 12,000 and 20,000, what is the maximum number of pit components that would not be included in the storage limits but would be managed in Zone 12 but not considered in storage under the definition of storage? Is this discrepancy accounted for in the analysis? Will these pits be in AT-400 containers? If a shortage of AT-400 containers exists would there be greater risk in Zone 12 management?

Response:

See response to comments 12.019 and 12.020. This small discrepancy is accounted for in the EIS risk analyses, since all calculations used the maximum facility limit quantities for evaluation purposes. It is planned that all pits will eventually be stored in AT–400 containers. The order or priority of which pits will be repackaged first is not yet established. However, the risk assessments presented in the EIS were for AL–R8 containers and constitutes a bounding analysis with respect to risk. Thus, any number of pits which get repackaged into

AT–400 containers would reduce the overall risk from pit storage regardless of whether they are in Zone 4 or Zone 12.

RC: **12.024**
Doc: **PC-025/57**

Page 4-174. Has the analysis accounted for the aging of pits and aging of containers? If Pantex has pits from the fifties, forty years of material fatigue from the radiation, thermal, handling, and other adverse environmental conditions must be enormous. Has DOE accounted for this?

Response:

Pits have been under careful scrutiny for many years through various DOE programs, particularly the weapons Quality Assurance Testing Program, which includes the Pit Surveillance Program and an accelerated aging program to ensure that aging-related defects do not develop in pits. The same pits have already spent several decades under surveillance of DOE, the national laboratories, and the military in the field. Routine stockpile surveillance has been performed on the pits for 20 to 30 years in more hostile environments than Zone 4. All data indicate that pits and containers will not degrade over the interim storage period. The AT–400A container is designed for a 50-year life. A pit and pit container surveillance program will continue for the AT–400A container. This surveillance program will minimize the likelihood of undetected failures in the pits and/or containers.

RC: **12.025**
Doc: **PC-025/58**

In the Zone 4 West Activities section, on page 4-181. DOE estimates 20-22 containers would be removed for surveillance activities. Should a problem become evident, what is the maximum number of surveys possible? What are the impacts? Was this considered?

Response:

Pits have been under careful scrutiny for many years through various DOE programs, particularly the weapons Quality Assurance Testing Program, that includes the Pit Surveillance Program and an accelerated aging program, to ensure that aging-related defects do not develop in pits. The same pits have already spent several decades under the surveillance of the DOE, the national laboratories, and the military in the field. A routine stockpile surveillance has been performed on the pits for 20 to 30 years in more hostile environments than Zone 4. All data indicates that pits and containers will not degrade over the interim storage period. The AT–400A container is designed for a 50-year life. A pit and pit container surveillance program will continue for the AT–400A container. This surveillance program will minimize the likelihood of undetected failures in the pits and/or containers. Should a problem be detected additional surveillance would possibly need to be conducted, but it is not possible to determine the number that would need to be examined without knowing what type pit was affected and what the nature of the problem might be.

RC: **12.026**
Doc: **PC-025/59**

Page 4-182. What is a small number? Several magazines?

Response:

In this case, a small number refers to one Zone 4 magazine. The impacts from this facility have been evaluated in the EIS.

RC: 12.027
Doc: PC-025/60

General comment in section 4.12: The tritium accident caused quantifiable radiological impacts to plant personnel, facilities, environment, and public. For comparison purposes, please compare tritium accident with intrasite transportation impacts. What is the maximum impact to plant personnel, facilities, environment, and public from tritium storage at Pantex? Has the explosive damage potential of stored tritium been evaluated?

Response:

Intrasite transportation impacts are described in volume I, section 4.12. Impacts to the workers related to the past tritium accident are discussed in volume I, section 4.14. All potential accidents involving tritium were explored. Volume I, section 4.14, discusses the risk dominant accidents involving tritium.

RC: 12.028
Doc: PC-025/61

... Section 4.12.2. Since Table 4.12.1.1-1 does not balance, where are the impacts to storage activities in Zone 12 from pits, CSAs, and tritium?

Response:

These components are located on an interim basis within Zone 12. Pits and Canned Subassemblies are stored on an interim basis prior to transfer to Zone 4. Canned Subassemblies are also stored prior to transfer to the Y-12 Plant at Oak Ridge. Tritium reservoirs are stored in the Tritium Vault within Zone 12. Radiological impacts related to these activities are included both in the worker dose estimates and the accident risk evaluation provided in volume I, section 4.14.2.

RC: 12.029
Doc: PC-025/62

General question. What are the continuing impacts to transportation workers resulting from past tritium accident?

Response:

Exposures to plant personnel from the small amounts of tritium offgassing from the past tritium accident in Cell 1 are discussed in volume I, section 4.14, of this document. The total amount of tritium emissions are at the limit of detection. As a result, it is not possible to calculate doses and consequences to the non-involved workers and the public with high confidence levels. To the extent practicable, the dose to the public has been estimated to be less than 1.33×10^{-4} person-rem per year, resulting in a risk of 6.65×10^{-8} excess LCFs. Practically speaking, the maximum dose to an individual non-involved worker or member of the public would be effectively zero.

RC: 12.030
Doc: SG-003/3

Table S-1 in the Summary, under intrasite transportation, presents person-rem information (Summary page-18). The table is supported by Section 4.12 in the main text. An underlying baseline person-rem appears to be incorporated into the estimates for the Proposed Action alternative. Neither the main text nor the table clearly state the assumptions used. The person-rem shown for the Pit Storage Relocation alternative adds the estimated person-rem for pit storage relocation and the person-rem from the 2,000, 1,000, and 500 weapons levels under the Proposed Action alternative. Thus, while implementing the Pit Storage Relocation alternative, plant workers are assumed to receive the person-rem associated with the Proposed Action alternative. The radiation exposures

for individual workers for the alternatives are within regulatory guidelines and do not have any public health significance....

Response: *The exposures associated with intrasite transportation under the Proposed Action are the results of weapons transfers, pit transfers after weapon disassembly, and pit transfers from the repackaging of 20,000 pits. The exposures associated with the Relocation of Pits Alternative are the results of the same activities as the Proposed Action plus the loading of either 8,000 or 20,000 pits for offsite shipment. The No Action Alternative dose numbers presented include not only the expected doses from weapons operations but also the expected doses from the interzone transfers of 12,000 pits as part of the pit repackaging project.*

RC: **12.031**
Doc: **SG-003/4**

In Table S-1 for the Proposed Action alternative, 50 workers receive 61 person-rem for 2,000 weapons. Next, 50 workers receive 48 person-rem for 1,000 weapons. Finally, 50 workers receive 41 person-rem for 500 weapons. How does one scale these numbers? The same type of calculations are made for the No Action alternative. Again, the numbers for person-rem do not follow the amount of work.

In the Pit Storage Relocation alternative, the amount of person-rem from the Proposed Action alternative appears to be added to what happens for pit storage relocation. How can one add the person-rem for these two alternatives? Is the same person-rem used two different times?

Response: *The exposures to the workers associated with intrasite transportation are the result of several activities (see response to comment 12.030). Only a couple of those activities will vary with, and therefore scale to, the different weapons levels. The transfer of weapons for disassembly and the transfer of pits after disassembly will vary according to weapons levels. The transfer of pits for repacking will not vary according to weapons level.*

Since activities associated with pit relocation (e.g., intersite transfers, SST loading) and the Proposed Action (e.g., continued weapon storage and transfer operations) will be performed, the doses associated with these activities are added.

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3.13 Waste Management

RC: **13.001**
Doc: **HT11/22**

... Are [there] currently any waste by-products involved that result from the disassembling process?

Response:

For an elaboration on the response given at the public hearing, see the discussion in section 1.3.9 of this volume.

RC: **13.002**
Doc: **HT11/23**

Any nuclear waste by-products or radioactive waste? And is that waste studied in this EIS?

Response:

For an elaboration on the response given at the public hearing, see the discussion in section 1.3.9 of this volume.

RC: **13.003**
Doc: **HT11/24**

So are most of the by-products stored onsite at Pantex?

Response:

To elaborate on the response given at the public hearing, currently, low-level waste (LLW) is stored onsite prior to shipment and final disposal at the Nevada Test Site. All low-level mixed waste (LLMW) is stored in accordance with the Agreed Order & Site Treatment Plan-Compliance Plan, 30 TAC 335, the RCRA Part B Permit and 40 CFR 260-280. In 1994, Pantex Plant disposed of 32.6 cubic meters (42.4 cubic yards) of LLMW through an offsite commercial landfill located in Utah. In 1996, a second shipment of LLMW was disposed at the same facility totalling 70 cubic meters (91 cubic yards). In September 1996, a third shipment was disposed at the same facility. Volume I, section 4.13, Waste Management, presents the above information, including the updated information regarding the 1996 LLMW disposal shipment. Eventually all stored LLMW would be disposed offsite. See the discussion in section 1.3.9 of this volume.

RC: **13.004**
Doc: **HT02-09/2**

What will the DOE and "We" do with all the waste that will be generated for at least the next 20 years? There are no licensed facilities to accept the wastes that are piled up on facilities throughout the DOE Complex at this time—why generate more than needs to be generated.

Response:

DOE is considering programmatic waste management strategies for the next 20 years under the WM PEIS. The WM PEIS considers economic and environmental impacts including local, regional, and decentralized management strategies.

Pantex Plant, through a combination of successful pollution prevention and waste avoidance techniques (see volume II, appendix G), and offsite disposal of approximately 103 cubic meters (133 cubic yards) of LLMW, has reduced the "piled up" inventory equivalent to the volumes generated during 1992–1995. Further reduction is expected in fiscal year 1997.

RC: 13.005
Doc: HT02-04/3

Pantex, the Superfund site, is currently operating under no [discharge] permit with the State of Texas.

Response:

See discussion in section 1.3.9 of this volume regarding past practices.

RC: 13.006
Doc: HT13/84

Reference page 6-4 in the draft where it talks about permitting, specifically permitting at Manzano if pit storage was done—...I have several questions related to that. Has...the Department of Energy had discussions with the New Mexico Environment Department about what kind, if any, of permit modifications would be needed if the pit storage was done at the Manzano site?

... Does the Department have a position about whether pit storage would be subject to a RCRA permit at Manzano or any other site?

(Ms. Founds: Since this is not waste or surplus material, it would not be part of a RCRA permit.)

Reference page 6-4,...in the discussion...about permit requirements and the fact that Kirtland has an existing permit. It says that new permits or permit modifications could be required. Would you explain that statement in relation to the statement that you just made, Nan?

So will the final EIS have a clear statement about what RCRA permitting requirements the Department feels will be necessary at Manzano or any other site from a RCRA standpoint?

Just as a follow-up to complete the loop, and I have primarily been talking about the Manzano site, but the question really relates to that I was surprised that the draft singles out Kirtland for that on this page. The Pantex site, of course, also has a permit, so the question is, is the similar waste stream modification, to use your term, or waste stream results, would that be included at any site that had a RCRA permit?

To make sure I understand, you are saying that the existing Pantex Part B permit covers storage of 20,000 pits at Pantex?

RCRA waste might result from those kinds of operations, but that is not saying those are RCRA-type waste.

Response:

There are several reasons the New Mexico Environment Department may require RCRA permit modifications for both DOE and the Air Force. Since the Manzano Weapons Storage Area (WSA) has several Air Force Solid Waste Management Units as defined under RCRA, the responsibility for investigation, cleanup, and closure of the SWMUs would likely continue under Air Force's RCRA permit. However a language modification might be required that any new SWMU resulting from a DOE activity would be DOE's responsibility. The Manzano WSA is not currently DOE property (see 40 CFR 270 criteria), language addressing the Manzano WSA would likely be added to the DOE RCRA Part B permit and the Air Force RCRA Part B permit. New Mexico Environment Department is likely to consider these changes as Class 1 modifications covered

under 40 CFR 270 to assure integration of the Kirtland Air Force Base and DOE permits. In addition, see discussion in section 1.3.9 of this volume regarding permit requirements.

Clarifying language has been added to volume I, section 6.5.

RC: **13.007**
Doc: **HT13/85**

To follow up on that helpful comment, is there a document that exists that describes that analysis that you just gave?

My comment would be that prior to the time of the final, I would hope there would be some written-down analysis that would be either included in the EIS or referenced in a supporting document reference that provides this explanation that has just been made, because I don't see it in page 6-4 in the way I read it, and certainly, there is no document...or documents referenced on that page that provides that information.

Response: *See discussion in section 1.3.9 of this volume regarding permit issues. Clarifying language has been added to volume I, section 6.5, with a source.*

RC: **13.008**
Doc: **HT12/36**

Public Speaker: I have a comment. It's a crosscutting issue, it should be brought up in each one. I'm past chair of the CSRA Planners Group.... The State of South Carolina is concerned with any new project coming into the area if Yucca Mountain doesn't [come] about. And that really has to be addressed strongly. And I've heard it from folks in the governor's office and folks in the area around here that before we can have any of these, that issue should be solved at the policy level, like somebody [mentioned]...

Unidentified Speaker: Of State's concern of moving additional operations here with South Carolina?

Public Speaker: Without their feeling that they will be a dumping ground.

Unidentified Speaker: Okay.

Public Speaker: And that Yucca Mountain should be the dumping ground or whatever, but...the issue is, let's not have it stop here. ...Each one of these projects should be looking at the waste issue and even DWPF is not supposed to have its glass containers stay here. So that's something that has to be stressed somewhere as a crosscutting issue. I know it's not unfamiliar with [you].

Response: *See discussion in section 1.3.9 of this volume regarding hazardous materials.*

RC: **13.009**
Doc: **CO-003/1**

The acceptance of plutonium at Hanford should not delay, defer, or negatively impact Hanford cleanup.

Response: *See discussion in section 1.3.9 of this volume regarding hazardous materials.*

RC: **13.010**
Doc: **PC-019/1**

Enclosed is another problem associated with the plant pointed out by Amarillo Globe News. (Globe News, Article, "City Won't Search For Contaminated Glove," May 24, 1996.)

Response: *The specific issue referred to in the article is considered an isolated incident. Pantex Plant has resolved the issue with the City of Amarillo and the State of Texas.*

RC: 13.011
Doc: HT16/32

...the hazardous waste permit 51289 [that] is issued by the TNRCC and mentioned on Page 4-189, the comment...should be amended because the brand new permit became effective February 16th, 1996. ...Section 4.13.1.3 on Page 4-79, some of the units identified in the third paragraph have now been closed and you'll probably want this reflected in the EIS. On Page 4-147 and 148, these paragraphs should be reviewed by the low-level mixed waste team for updates on the current waste inventories, waste plans, and waste activities. Also, discussion of MTU's may need to be revised on these pages. ...we've issued the agreed order, site conception. It's an agreed order issued October 2nd, 1995 concerning mixed waste. I'm not sure that's fully reflected in the EIS.

Response: *Clarifying language has been added throughout the EIS regarding approval of the Class 3 modification dated 2/16/96 and the relationship with the Agreed Order. The offsite disposal of low-level mixed waste has been updated. Another change included deletion of volume I, table 4.13.2.2–1, with the salient information being incorporated in the text.*

RC: 13.012
Doc: HT16/34

...on Page 4-197, first column, first full paragraph, when you describe: In Zone 4, two magazines, eight permitted conex boxes and 25 conex boxes are used for storage of low-level waste. I think I understand that better now. It was very confusing to me when I read it. So eight of the conex boxes are permitted and the other 25 are just the surge capacity that's been added without any permitting process?

Response: *As a result of the recent Class 3 modification dated 2/16/96, clarifying language has been added throughout the EIS, including section 1.3.9 of this volume.*

RC: 13.013
Doc: HT16/35

There's a sentence in the middle of that paragraph that says: Stormwater discharge associated with industrial activities is discharged to the playas on site. I don't know what that means. Can you help me there? I didn't know that stormwater discharge was used in industrial activities.

Response: *The phrase "Stormwater discharge associated with industrial activities" is regulatory language contained in the National Pollutant Discharge Elimination System (NPDES) permit. The sentence was simplified to read "Stormwater drains to the playas onsite."*

RC: 13.014
Doc: HT16/36

...on Page 4-204 where you do your cumulative thing with the PEISs again for the disposition alternative. You list the types of wastes that will be involved in that alternative. And even though a reactor, a nuclear reactor, is kind of the bounding case there, there's no high-level waste mentioned in category of waste that will be generated under that option. I think maybe you may need to add

high-level waste or spent fuel storage or something that's going to be impacted under that.

Response: *Commentor is correct. The clarification has been added to volume I, section 4.13.5.*

RC: 13.015
Doc: HT16/37

...since the contested case hearing negotiations got mentioned, in the settlement agreement there was a much appreciated and significant commitment on the part of the DOE to at least examine one alternative to the burning grounds, an alternative method of incineration of those wastes. It's not mentioned in this document. It should be.

Response: *Additional language examining the continued study of an alternative disposal method has been added to volume I, sections 1.2.2 and 4.13.1, and volume II, appendix G of the EIS.*

RC: 13.016
Doc: HT16/38

It says new facility construction and upgrades are not expected to impact waste operations. One of the things that I have a concern about in this document is the pit conversion and reuse facility, one of the two new facilities that are covered by this document, which we don't seem to learn a great deal of detail about, in terms of what it generates in waste streams, et cetera. And, when you went through this viewgraph, I seem to infer from what you said that this statement was based, in part, on new facilities, I assume waste handling facilities, that had been built on site. And so I'm asking you, is my concern a basis of definition of what impact is or what? I mean, how [do] we bring these kind of broad blanket assumptions back into a document where you're talking about dust particles when you do construction and then you assert that there's no impact. ...I mean, how do we relate this broad assertion to the fact that we have new plutonium handling functions that are going to come onto the plant in this document in this new facility and we have new kinds of hazardous waste operations that are coming on the plant with the other new facility? How can we say that that has no impact?...if you're talking about negative impact as opposed to impact, it's not accurate to say that it has no impact. Maybe your assessment is that none of it is a negative impact. Is that an accurate interpretation?

Response: *To elaborate on the response given at the public hearing, the impacts of new facility construction and upgrades on waste management are discussed and analyzed in volume I, section 4.13.2, and volume II, appendix H, including the Pit Reuse Facility. The six projects presented in the EIS are the Hazardous Waste Treatment and Processing Facility, Pit Reuse Facility, Gas Analysis Laboratory, Material Compatibility Assurance Facility, Nondestructive Evaluation Facility, and Metrology and Health Physics Calibration and Acceptance Facility.*

As described in volume II, appendix H, the Pit Reuse Facility operations are limited to casing enhancements, cleaning, weighing, radiographing, leak checking, inspection, and backfilling. These activities are not considered plutonium processing or reprocessing. Plutonium processing and reprocessing

are not within the scope of the Pantex Plant EIS (see the Stockpile Stewardship Management PEIS).

RC: 13.017
Doc: HT16/41

On the *Federal Facility Compliance Act*, this was being drafted when this draft document was made. And the document says that the impact of this is...unknown at this time. I want to know if there's been an update on this or will...there be more information forthcoming?

Response:

As discussed in section 4.13, Waste Management, the Federal Facility Compliance Act Final Site Treatment Plan was approved by TNRCC in September 1995, and an Agreed Order was issued October 2, 1995. In addition, the tri-party Federal Facility Agreement (FFA) continues to be negotiated (as of September 1996) regarding restoration activities. As discussed, impacts of an FFA remain unknown. Updated information has been incorporated in volume I, section 4.13.

RC: 13.018
Doc: HT17/68

...it's been pointed out several times that this document intentionally didn't try to deal with the permits that have been issued between the time that the document was being written. The concern that I have, however, is...that it be explicitly stated, not just in a chart showing the duration of the permits, but explicitly stated that the permits that we're talking about here, the existing permits that you will be talking about, will all...need to be renewed, revised [again] during the ten-year time frame of this document.

Response:

DOE understands that the permits routinely undergo revision or renewal during the EIS timeframe. Volume I, section 4.13.1, presents the Pantex Plant permits, including effective date and expiration dates. Should renewed or modified permits result in NEPA related compliance issues, DOE will address those issues at that time. As indicated in volume I, section 4.13, Pantex Plant successfully renews and modifies existing permits, as necessary.

In addition, see general discussion in section 1.3.9 of this volume regarding permits.

RC: 13.019
Doc: SG-012/1

Some of the actions appear to (potentially) be in conflict with NMED laws and regulations. Vol. I, page 6-4, 6.5 Pit Storage Sites, under the paragraph referring to Kirtland Air Force Base. The U.S. Department of Energy (DOE) must be in compliance with the Federal Facility Compliance (FFC) Order issued by New Mexico under the provisions of the *Federal Facility Compliance Act*. The FFC Order has jurisdiction over generation and storage of mixed waste and site treatment plans for its disposition (p. 5-60, 5.5.10 Waste Management, "The pit storage operations would generate less than 1 cubic meter (1.3 cubic yards) of mixed, low-level, and hazardous wastes.")

Response:

Clarifying language has been added to volume I, section 5.5 and chapter 6.

RC: 13.020
Doc: SG-012/2

Mention of the New Mexico unilateral FFC Order is not included in table 6.5-4.

Response: *The New Mexico unilateral Federal Facility Compliance Order was added to the table.*

RC: **13.021**
Doc: **FG-003/2**

EPA suggest that Appendix G should reference the requirements of Executive Order 12902, Energy Efficiency and Water Conservation at Federal Facilities (March 8, 1994), particularly for the six new construction projects at Pantex listed in table 3.1.1.1-1 (gas analysis laboratory, materials compatibility assurance facility, etc.). Section 306 of Executive Order 12902 contains specific requirements regarding the construction of new facilities owned by the United States. Additionally, the Final EIS would be strengthened if it could discuss whether this Executive Order has any implication on the proposed interim storage of plutonium pits in Nevada, South Carolina, New Mexico, and Washington State in terms of energy and water conservation.

Response: *Additional information has been added to volume II, appendixes G and H regarding Executive Order 12902. For the purpose of bounding the NEPA analysis, current levels of energy and water consumption were used to compare alternative site impacts. The actual design of the proposed facilities includes an energy conservation analysis with life cycle costing.*

RC: **13.022**
Doc: **PC-025/4**

On Page 1-16 in column two in the first paragraph. What is the definition of abnormal? Is the chance of a similar accident greater than 1 in a million? If not, I would argue with DOE risk numbers that the incident is not abnormal. For consistency use risk assessment language for "abnormal." "Abnormal" means nothing. Use unlikely, extremely unlikely, etc. If this incident occurred, what calculations prove the event is abnormal? What number of similar operations were completed before the event occurred? How do you justify orders of magnitude difference between theoretical and actual experience, if one exists? Why does the WM PEIS identify Pantex as a TRU waste generator (see appendix) if Pantex is "Abnormal?"

Response: *The statement "Pantex currently is custodian of significant volumes of LLMW, LLW, and TRUW," found on page 12-1 of volume II of the Draft Waste Management PEIS is incorrect. Pantex Plant currently manages three drums of TRU waste as discussed in volume I, section 4.13.1.*

The phrase "generated from an abnormal weapons dismantlement incident" has been deleted.

RC: **13.023**
Doc: **PC-025/63**

See section 4.13. Why only to 1994 for data? DOE reports annually, correct? Status of permit modification? What impacts are expected? What is status of EPA CERCLA negotiations?

Response: *Updated information has been incorporated in volume I, section 4.13. This includes adding 1995 data to Table 4.13.1.2–1. The 1996 shipment and disposal of low-level mixed waste to Utah has been incorporated. Impacts were reevaluated based on the updated information and presented in volume I, section 4.13.2. The permit modification was approved on February 16, 1996. The EPA*

Comprehensive Environmental Response, Compensation, and Liability Act negotiations are continuing.

RC: 13.024
Doc: PC-025/64

Table 4.13.1.2-2. Why no margin for ER wastes? ER wastes are the most unpredictable!

Response:

A 10 percent margin has been added to environmental restoration waste volumes.

RC: 13.025
Doc: PC-025/65

Table 4.13.1.1-2. In SSM and S&D, the number of burning ground facilities is expected to be reduced to one. Are the 9 trays and 3 pans expected to be closed in the near future like the cages and pits?

Response:

The Stockpile Stewardship Manangement PEIS and Storage and Disposition PEIS look at environmental impacts through 2055. On February 16, 1996, TNRCC approved a Class 3 modification which identifies DOE's operational needs for 9 trays, 3 pans, and 3 flash pads. The permit also identifies the need for these facilities through 2100, the expected year of final closure. The former flashing pits and cages are no longer operational and are undergoing RCRA closure per the permit. The RCRA closures are expected to be completed by fiscal year 1997.

RC: 13.026
Doc: PC-025/68

In sections mixed waste and hazardous waste on page 4-193. Where is all the explosive burning waste noted in section 4.7 and table 4.13.1.1-2?

Response:

For the purpose of NEPA analysis, waste categories (e.g. LLMW, HW, etc.) were used to assess waste management impacts. The commentor is referred to the Pantex Environmental Information Document for detailed waste stream information.

RC: 13.027
Doc: PC-025/69

Page 4-199. How accurate is the 1.45 factor? Why doesn't table 4.13.2.2-1 contain a margin?

Response:

The 1.45 factor represents the best available information. Table 4.13.2.2–1 of volume I has been deleted as noted in response to comment 13.011.

RC: 13.028
Doc: PC-025/70

Page 4-202. 14,000 LLW shipments over 20 years? That's 700 a year, almost 3 shipments a week not including weekends. Is DOE hiding waste at Pantex, the numbers presented in tables 4.13.1.2-1 through -3 don't show this to be true? DOE is considering a landfill for at most 2,500 cubic meters over 10 years. That's stupid! Why don't you landfill the NHW around 13,000 cubic meters over 10 years, 18,000 shipments of HW over 20 years? That's 900 a year, almost one shipment every day not including weekends. Is DOE hiding explosive wastes? DOE should think about a hazardous waste landfill for the 2,000 cubic meters over 10 years.

Response:

Volume I, section 4.13.5.1 has been completely rewritten. The WM PEIS information has been updated to reflect reduced waste volume projections.

RC: **13.029**
Doc: **PC-027/4**

Reference page 6-17, volume I Main Report, Column Potential Applicability/ Permits: The word "permit" was omitted from this page on New Mexico while it appeared in the South Carolina page 6-14 and the Texas page 6-12. I know that water permits are required for businesses and individuals and would assume that a government entity should also comply with the permit requirements, especially since this State has severe water problems. The word "permit" should be added for those New Mexico areas where a permit is required. I realize that laws differ from state to state, but there are some areas where permits are required here.

Response: *The table has been corrected to include the word "permit".*

RC: **13.030**
Doc: **SG-003/38**

Regulatory Oversight - The TNRCC would be more willing to embrace Pantex's mission within the State of Texas if DOE would promote independent regulatory oversight for radioactive source, special nuclear, or by-product material. We applaud DOE's willingness to share its information concerning radioactive contaminants; however, it is our opinion the public would be better served and potential waste management errors minimized if the oversight authority was shared with the TNRCC.

Response: *For DOE to continue to fulfill its responsibilities as mandated by statute, Presidential direction, and Congressional authorization and appropriation, the generation of solid waste including "nuclear waste" is an unavoidable result. Recently, in response to numerous public requests for independent regulatory oversight of radioactive source, special material and by-product material, the Secretary has created a Working Group on External Regulation. This Working Group is presently reviewing various alternatives for external oversight of activities at DOE's nuclear facilities and will submit a report sometime in 1996.*

RC: **13.031**
Doc: **PC-030/2**

DOE should move with all possible speed to cease using the Burning [Ground] for waste management at Pantex.

Response: *The Pantex Plant continues to implement a Pollution Prevention/Waste Minimization Program to reduce environmental impacts through waste avoidance and waste minimization. Appendix G of volume II contains detailed information of the PP/WM Program. As discussed in volume II, section G.3.2, Pantex Plant, in 1994, as a result of a new procedural control reduced HE-contaminated hazardous waste by 99%. As discussed in volume II, section G.3.8, in March 1994, a formal literature search was conducted to investigate treatment/processing methods for HE other than open burning-open detonation. The Best Available Control Technology (BACT) analysis concluded that controlled open thermal treatment with existing administrative controls constituted BACT. The alternatives were determined to be either technically infeasible or economically infeasible.*

However, as part of the Pantex Plant continuing effort to reduce pollution and minimize waste, DOE continues to study potential alternatives to open burning of energetic materials at the Pantex Burning Ground (e.g., commercial resale,

base hydrolysis treatability study). This additional information has been incorporated in volume I, section 4.13, and volume II, appendix G.

RC: 13.032
Doc: PC-033/1

Page S-6, col. 1, par. 1: It states that "Pantex also generates and manages recyclable materials." What are these [materials] and where are they recycled to? Do these include the various barrels of miscellaneous bolts and nuts that are sold at auction or to salvage what the general public can purchase? These barrels have been known to contain various parts that are far from nuts and bolts and are apparently parts of disassembled weapons and other confidential tags and various seals included in these barrels of supposedly recycled materials that I have been told by plant employees are confidential makeup and design. How did these materials make it into a barrel of miscellaneous bolts and nuts at a salvage yard and what are the procedures for recycling these bolts and nuts? Can any individual purchase these, and if so what is to keep them from copying the design and makeup of these parts?

Response:

Volume II, appendix G, addresses the current status of Pantex Plant's Pollution Prevention and Waste Minimization program. Scrap metal or "nuts and bolts" can be recycled and are recycled through various outlets depending on the value of the metal. In some cases due to liability concerns scrap metal is only sold to operators of smelters to ensure the "nut and bolt" is melted down.

The materials contained in weapon components in whole or in part are routinely recycled. In cases were the weapon components are classified (i.e., contain information subject to Atomic Energy Act regulation) or have the potential for military-proliferation value, Pantex Plant is required by law to demilitarize and sanitize (D&S) weapon components. Examples of D&S processes are presented in volume I, section 1.2.2, Disassembly of Nuclear Weapons. After the D&S process, the resulting materials can be recycled. The Pantex Plant uses written procedures for identifying weapon components requiring D&S, D&S processes, and releasing of D&S materials. Volume II, table G.3.7–1, in appendix G of the EIS, shows that 41 metric tons of "weapons metals" have been recycled with a salvage value of 2.1 million dollars.

3.14 Human Health

RC: **14.001**
Doc: **PC-018/1**

There are over 1 million people living in this area. All of the above would be in danger of contamination if an accident did occur at Pantex.

Response:

The Pantex region of influence (ROI) for potential accidents includes an 80-kilometer (50-mile) radius surrounding the plant. An ROI with a diameter of 80 kilometers is the usual ROI for accident analyses in NEPA documents and Safety Analysis Reports. The population in the Pantex ROI is estimated at 267,107 persons. A representative range of accidents including accidents that could result in the release of nuclear materials to this population has been evaluated in this EIS. The impacts from potential accidents at Pantex Plant to people in the area including the risk from contamination are discussed in volume I, section 4.14.

RC: **14.002**
Doc: **PC-009/1**

My question relates to DOE/EIS-0225D, Page 5-12, second column, second paragraph, line 6. The document states starting at line 5: "With an additional 0.11 LCF from pit handling, the total risk of *latent cancers among workers at the P-Tunnel would increase by 1.8 percent."

All references to latent cancers in that section titled "Impacts of Storing 20,000 Pits", refer to LCFs, latent cancer fatalities, except line 6 as indicated above by a "*". Does the increase of 1.8 percent refer to "latent cancers" as it states, or to "latent cancer fatalities" as the rest of the section would seem to imply.

Response:

The commentor is correct. The increase refers to latent cancer fatalities, not latent cancers. The text has been revised.

RC: **14.003**
Doc: **HT11/1**

... How many years is this [plutonium] considered to be actually hazardous waste?

Response:

To elaborate on the response given at the public hearing, plutonium in pit form is not considered a hazardous waste. Weapons-grade plutonium is made up largely of plutonium-239, which has a half-life of approximately 24,000 years. After 24,000 years, one half of the plutonium will still be present. The standard calculation is that 10 half-lives or 240,000 years are required before all of the plutonium is decayed. Whether the plutonium is hazardous depends on its location relative to human receptors.

RC: **14.004**
Doc: **HT11/2**

... If the half life is 24,000 years, wouldn't the actual hazard be much longer than that?

Response:

See response to comment 14.003.

RC: **14.005**
Doc: **HT11/3**

What was the consideration of the maximally exposed individual?...[From] 6.6 rem, which I assume is the forklift driver or whoever punctures this thing,...we go all the way down...to the public exposure.... Public exposure would not be

safe 100 milligrams per year, and I was wondering how we went from one number to the other just like that?

Response: *To elaborate on the response given at the public hearing, the involved worker (forklift driver) is estimated to receive 6.6 rem of dose commitment when a pit is punctured. This dose commitment is over a 50-year period due to the inhalation of plutonium oxide dust released during the forklift accident. The amount of plutonium oxide released is about 0.6 milligrams. This release is then transported and dispersed by the wind. An individual at the site boundary would also inhale some of the plutonium dust if located directly downwind from the release. The dose commitment that the maximally exposed offsite individual receives is much less due to dispersion and deposition of the plutonium dust during its movement from the release point to the site boundary.*

RC: 14.006
Doc: HT11/4

And that [maximally exposed individual] person is really the person hanging around for 24 hours a day?

Response: *To elaborate on the response given at the public hearing, the maximally exposed individual is a hypothetical person who is assumed to be at the site boundary for 24 hours a day.*

RC: 14.007
Doc: HT02-02/2

It may be safer than other sites, but we can prove that accidents—at least I hope the incidents that have affected us personally were accidents—have happened that [have] endangered our property as well as our personal safety and others in the neighborhood of Pantex Plant.

There have been numerous major fires on the site, three of four within the past two years. We took cold drinks and ice to the firemen on various occasions. We have had cast steel shrapnel chunked at us. We have picked up some 300 to 400 pounds of a naval breech block, one piece weighing 59 pounds. Some of this shrapnel was found some one and one-half to two miles from where it was exploded. We have had tractor tires ruined from it.

Through the years, we have had windows broken, pictures knocked off walls, et cetera. On October 4, 1995, a very large charge of explosive was set off to signal the start of an emergency management drill. This drill "test" broke our house, cracked the slab, rafters, walls, brick, shower, plumbing causing flooding of the basement, and other damages resulting in some $30,000 in repairs and replacement of carpets and other floor coverings, rebuilding the shower, cracks, et cetera. We also must have the house leveled.

Too many questions are yet unanswered by the studies that have been conducted. Granted, it would be impossible to anticipate all potential problems that may arise, but there does seem to be a lack of scientific research used for the study. It would appear that a conclusion has been drawn and figures to support that conclusion were used without any real scientific information.

Response: *Incidents or accidents occur at all active industrial plants and Pantex Plant is no exception. However, there have been no accidents at Pantex Plant which*

have endangered personal safety of the public in the plant vicinity. DOE is committed to the safe operation of Pantex Plant, as well as the protection of the public, the environment, and the facility employees.

Grass fires were considered as part of the EIS risk assessment. The specific examples mentioned in the comment were fires which were contained onsite and posed no threat to Pantex operations or offsite property.

With respect to the Naval breech block event, that was a one-time experiment (almost 30 years ago) which is now precluded from reoccurrence by administrative limits and procedures.

The analysis conducted for the EIS was done according to CEQ and DOE guidance in using the best information available and nationally accepted methods and models.

RC: 14.008
Doc: HT05/11

Could you speak more toward the latent cancer fatality issue... and discuss what is the most likely outcome?

If that's the actual expected...outcome, why isn't that put into your statement as the most important?

In other parts of the document, you indicate that the most likely outcome is zero cancers.

Well, I'm saying is you explain this in two different ways in your document. In this shorter version that you've put here in the narrative summary, you appear to attach some greater certitude to potential cancer risks than you do in the other sections, especially in the appendix, where you indicate that the most likely outcome is zero cancers.

And I'm saying, for purposes of explaining this to the community, the more appropriate explanation would be to indicate that the most likely outcome is zero cancers.

Response:

This discussion regards the interpretation of calculated risks from radiological exposures, for example, 0.13 cancer fatalities from an exposure of 330 person-rem. Further clarification of the interpretation of the calculated risks has been provided in the form of a discussion in section 1.3.10 of this volume.

RC: 14.009
Doc: HT05/12

Under the statement he was referring to, it said shipment of pits to an alternative site would increase radioactive exposure of the Pantex Plant by 113. Why would it increase if the pits are shipped to an alternative site?

Response:

The offsite shipment of pits from Pantex Plant would require the removal of the pits from the Zone 4 magazines and the loading and the restraining of pits within a Safe Secure Tractor Trailer vehicle. The performance of these activities will increase the worker exposure total.

RC: 14.010
Doc: HT05/13

What is the underlying base assumption of man-rem or person-rem exposure that you have ascribed to ongoing site work at the 500, 1,000, and 2,000 levels such that you would be able to extrapolate from these numbers exactly what is the base amount that you say they're going to get, irrespective of the number of weapons that they're working?

... I've tried to deconvolute your calculations and I can't do it.

As the person who supplied that data from the Pantex Plant, I'm not able to follow your calculations, nor do I see them stated anywhere in the documents.

I cannot extrapolate where there's a base of what they used to build up on some of these numbers when they compared from site to site. There are some assumptions that were made that are not stated when they made the calculation on what might happen, especially when you start looking at making movements to alternative sites.

... I want some additional information [in the EIS] on the assumptions that were made in reaching these calculations, such that someone reviewing it, not having the opportunity to speak to [authors of the document], could also see if their pencil-whipping of the data would be the same as his.

Response:

This discussion regards the dose estimates for the Transportation and Staging Department provided in volume I, section 4.12, Intrasite Transportation. The commentor requests clarification on why the estimates for worker exposures do not scale to zero for a weapons activity level of zero. The reason that this is not the case is because the dose estimates also include impacts related to interzone pit shipments required for the pit repackaging project. Thus, even at a hypothetical zero weapons activity level, there will still be worker exposures from pit transfers. Further clarification of this issue is provided as a discussion in section 1.3.8 as well as in volume I, section 4.12.

RC: 14.011
Doc: CO-008/38

Page 4-205, Paragraph 4 Exposure from inhalation is the only pathway assessed in Pantex SWEIS. Please discuss exposure through other pathways such as water, soil, and vegetation.

Response:

Additional alternative pathway discussions have been added to volume I, section 4.14.

RC: 14.012
Doc: CO-008/39

Page 4-208, Paragraph 2. Internal exposures, received when radioactive materials are deposited through inhalation, ingestion, absorption, are considered minor contributors to worker doses, therefore are not considered in this document. Please define "minor."

Response:

Historical evidence of external and internal exposures at Pantex is presented in the Pantex Plant Safety Information Document (Pantex 1996a). These exposures show that the internal exposure received by workers is typically a factor of 100 to 1000 less than the external exposure received by workers. The two to three

orders of magnitude difference between these exposures is why it is considered to be a minor contributor to worker exposures.

RC: 14.013
Doc: CO-008/40

Page 4-207, Paragraph 2. Please list improvements/changes in work practices and scope that have been implemented to significantly reduce worker external exposure?

Response:

The As Low As Reasonably Achievable (ALARA) program implemented at Pantex Plant minimizes radiation exposure during performance of all radiological operations. Plant management and the Radiation Safety Department are constantly seeking ways to reduce exposures. As recently as January 1, 1996, exposure limits were reduced from 1 rem/yr to 900 mrem/yr for manufacturing personnel and 500 mrem/yr for the general plant population.

RC: 14.014
Doc: CO-008/41

Page 4-207, Paragraph 2. Please discuss the cumulative effects from radiological exposure, hazardous chemical, toxic releases and emissions on individual workers and the public population.

Response:

There is insufficient scientific evidence to quantify synergistic effects between radiation and chemical exposures, if any. Effects of these exposures are modeled individually using accepted scientific standards and models. The calculated effects from these exposures are shown individually to be extremely low.

Additionally, a useful measure of potential human health effects resulting from exposure to a combination of non-carcinogenic chemicals is the hazard index. Volume I, section 4.14.1.2, describes the basis and the evaluation of the hazard index for Pantex Plant. The hazard index calculation indicates that no adverse health effects are expected.

RC: 14.015
Doc: CO-008/42

Page 4-208, Paragraph 6. "Effects Screening Levels (ESLs) may be unrealistic, to state that none of the chemical concentrations exceed ESLs, therefore they are not expected to have adverse health effects to members of the public." What is the basis for this statement, when synergistic effects have not been evaluated?

Response:

See response to comment 14.014.

RC: 14.016
Doc: CO-008/43

Page 4-209, Table 4.14.1.2-1. Why are there no standards for 5 pollutants resulting from Plant sources in Table 4.14.1.2-1?

Response:

At the time the Draft EIS was produced, TNRCC had not established standards for the fixed pollutants. Since the publication of the Draft EIS, the TNRCC has published standards for Trichloroethylene and for Ketones. Volume I, Table 4.14.1.2-1 has been updated to reflect the new standards.

RC: 14.017
Doc: CO-008/44

Page 4-210, Table 4.14.1.2-1. The table lists significantly higher ESLs for several contaminants, i.e., MIK, and MEK. Please correct the inconsistencies from the table on page 4-209.

Response: *Page 4-210 was a continuation of table 4.14.1.2-1 in the Draft EIS, which began on page 4-209. The ESLs presented in volume I, section 4.14 are specific to each pollutant and are consistent with those presented in Table 4.7.1.3-4.*

RC: 14.018
Doc: CO-008/45

Page 4-210, Table 4.14.1.2-1. Please address latent cancer probability resulting from releases and/or daily operations emissions. Describe cancers not linked to radiological exposures.

Response: *The radiological emissions from normal operations are described in volume I, sections 4.14 and 4.7. Modeling has shown that the doses to the public from these releases is small (6×10^{-5} mrem/yr for a maximum offsite individual from Pantex Plant sources compared to 334 mrem/yr from natural background radiation). This dose is considered a negligible individual dose by the National Council on Radiation Protection and Measurements. The yearly cancer risk from this exposure is estimated at 3×10^{-11}. When compared with the baseline cancer risk in the vicinity of the Pantex Plant (1.7×10^{-3} per year), an individual has a much greater likelihood of incurring a cancer from sources other than Pantex Plant related emissions (e.g., from genetic predisposition, chemical exposure, diet, stress, and other sources of pollution). Cancer mortality statistics for the State of Texas are available in the Pantex EIS public information center.*

The risk of cancer from chemical exposures to a hypothetical offsite individual is discussed in volume I, section 4.14. A hypothetical individual living at the plant boundary would have an increase in lifetime fatal cancer probability of 1.2×10^{-5} from exposures to carcinogenic chemicals released from Pantex Plant.

RC: 14.019
Doc: CO-008/46

Page 4-215, Paragraph 2. The June 1994 study by the Texas Cancer Registry, TDH, focused only on cancers of the breast, prostate, brain, thyroid, and leukemia. Other radiation-associated cancers, such as bone and lung were not included. Why? What about other types of cancers? Please include or justify other types not included.

Response: *The referenced health study was performed solely by the State of Texas. However, discussion with Mr. Barry Wilson of the Texas Department of Health, Cancer Registry Division indicated that the "Study of Cancer in Selected Counties Near the Pantex Nuclear Weapons Plant" (TDH 1994) report was performed "because of a request from environmental groups and media attention." The cancers studied were specifically requested by these groups.*

RC: 14.020
Doc: CO-008/47

Page 4-215, Paragraphs 3 and 5. The epidemiologic study (Acquavella 1985) and the follow-up study conducted by NIOSH only looks at mortality ratios. Is there an on-going health surveillance, either mortality or incidence, for ex-workers of Pantex?

Response: *See discussion in section 1.3.10 of this volume regarding a planned follow-up study.*

RC: **14.021**
Doc: **CO-008/48**

Page 4-215, Paragraphs 3 and 5. Cancer is the only health issue addressed. What about all other health problems associated with nuclear and HE materials processes? Please explain.

Response:

The risk of latent cancers is consistently the major endpoint for mortality associated with nuclear and high explosive (HE) materials processes. The reasons for this focus include:

- *Chemical hazards and impacts are analyzed in volume I, section 4.14 and are found to be small.*
- *Mortality from diseases other than cancer has not been consistently or significantly increased by radiation in human populations (BEIR V) (NAP 1990).*
- *Occupational dose limits (both for chemicals and radionuclides) are set such that deterministic effects (effects other than cancers) will not occur among adults if the dose limits are not exceeded (ICRP 1983).*
- *Genetic damage to worker progeny is not expected at exposure levels experienced at Pantex Plant (ICRP 1991).*
- *The maximum exposures to offsite individuals from potential accidents are not severe enough to cause deterministic effects (ICRP 1983).*

RC: **14.022**
Doc: **CO-008/49**

Page 4-216, Paragraph 2. The yearly incidence rates (refer to work place injuries) measuring Pantex safety programs compares Pantex to national industries. Is this a likely scenario? Why?

Response:

The frequency of workplace injuries provides clear indication of the severity of hazards encountered by the workforce at Pantex Plant as well as the viability of Pantex Plant workplace safety programs. The frequency of work place injuries at Pantex Plant compared to other industries provides a relative comparison both between the severity of hazards encountered at these different workplaces and the viability of workplace safety programs.

RC: **14.023**
Doc: **CO-008/50**

Page 4-217, Paragraph 2. This paragraph states that a fire limited to the interior of a facility would only cause internal releases in the room of the fire. Where would those internal releases eventually go? Wouldn't they have to go external? Please explain.

Response:

As stated in volume I, section 4.14.1 high efficiency particulate air filters installed on ventilation system exhaust ducts will limit the amount of particulate radionuclides released to the environment.

RC: **14.024**
Doc: **CO-008/51**

Page 4-218, Paragraphs 1 and 3. When and how will OSHA regulation of worker health and safety be implemented? What will the reporting mechanisms be?

Response: *The DOE and Occupational Safety and Health Administration (OSHA) have agreed to a temporary pilot project to facilitate the shift of worker protection to OSHA. Under a temporary pilot project agreed to by the two agencies, OSHA will regulate and oversee worker health and safety at the Argonne National Laboratory in DuPage, Illinois. During the pilot, OSHA will evaluate the current safety and health program at Argonne and respond to employee complaints.*

Information obtained during the Argonne pilot project is expected to help the two agencies determine the resource needs of OSHA if it is to ultimately assume responsibility for worker safety and health at DOE facilities. While OSHA regulates and enforces worker health and safety at industrial and some government workplaces, current law exempts most DOE facilities from external regulation and enforcement. DOE internal regulations do, however, require all facilities to meet current OSHA standards.

RC: 14.025
Doc: CO-008/52

Page 4-218, Paragraphs 1 and 3. "DOE contractor operations at Pantex expose workers to hazardous constituents." Are workers fully aware of these exposures and of the combined effects to human health? Discuss in detail how workers are prepared for these exposures, consequences, and effects.

Response: *All hazardous materials at Pantex Plant are required to have a Materials Safety Data Sheet (MSDS) that describes the hazards of the material and the proper packaging, handling, and disposal of this material. All Pantex Plant employees are required to attend a hazards communication training course which trains them to read and interpret hazardous material labels and how to use an MSDS. Workers involved with specific activities such as hazardous chemicals, high explosives, and radioactive materials receive additional job-specific training.*

RC: 14.026
Doc: CO-008/53

Page 4-218, Paragraphs 1 and 3. Daily routine emissions are not reported to the public. Shouldn't workers and the public be made aware of these routine emissions for human health reasons and environmental consequences?

Response: *Daily routine emissions are reported in volume I, section 4.14.2 for radiological emissions and volume I, section 4.7.1 for hazardous chemical emissions. Responses to comments 14.025 and 14.027 describe hazard communication with workers. Documents such as this EIS and site environmental reports provide hazard communication with the public.*

RC: 14.027
Doc: CO-008/54

Page 4-219, 4.14.2.1. "The continuation of weapons-related operations at Pantex would result in the continuation of radiological exposure to plant workers." Have these workers been made aware of these health hazards? Do their families know the consequences of these health effects to themselves, also?

Response: *Radiological workers are required by federal law (10 CFR 835) to receive radiological worker training. Radiological workers are required under article 835.902 to be trained to ensure familiarization with the hazards they will encounter in the workplace. Uninvolved family members will not be exposed to radiation as a result of another family member's employment at Pantex Plant. DOE is required to provide periodic reports to personnel of their individual dosimetry readings. This keeps workers informed of the level of exposure they have received and allows plant management to move personnel (e.g., expectant mothers) away from any operations that could be potentially harmful.*

RC: **14.028**
Doc: **CO-008/55**

Page 4-220, Table 4.14.2.1-1. The cumulative radiological doses and expected latent cancers to the public from normal operations have not been assessed. Why are these exposures not evaluated?

Response: *The radiological emissions from normal operations are described in volume I, section 4.14 of this document. Modeling has shown that the doses to the public from these releases is small (6×10^{-5} mrem/yr for a maximum offsite individual). This dose is considered a negligible individual dose by the National Council on Radiation Protection and measurements. The yearly cancer risk from this exposure is estimated at 3×10^{-11}. When compared with the baseline cancer risk in the vicinity of the Pantex Plant (1.7×10^{-3} per year), an individual has a much greater likelihood of incurring a cancer from sources other than Pantex Plant related emissions (e.g., from genetic predisposition, chemical exposure, diet, stress, and other sources of pollution).*

RC: **14.029**
Doc: **CO-008/56**

Page 4-220, Table 4.14.2.1-1. The combined toxic chemical, radiological releases and emissions are not evaluated for workers or off-site populations. Why? Give exposure rates for both groups.

Response: *See response to comment 14.026 and discussion in section 1.3.10 regarding chemical and radiological synergism.*

RC: **14.030**
Doc: **CO-008/57**

Page 4-221, Paragraph 4. Not all accident scenarios are evaluated. Only a subset that contribute a large fraction of the total risk from Pantex operations are analyzed. Please give reasons why all potential scenarios are not evaluated.

Response: *All potential accident scenarios were not analyzed in detail because their contribution to risk was determined to be small. It is standard practice in risk assessment to identify and discuss those risks with the greatest potential to effect human health.*

RC: **14.031**
Doc: **CO-008/58**

Page 4-222, Paragraph 3. "For the risk significant scenarios for Pantex, the frequency and consequence assessments are performed on a site-wide rather than a facility-specific basis." What would the outcome be if assessment were facility-specific?

Response: *The risk for an individual facility would be lower because the site-wide risk is the summation of the risks of all facilities. It was the intent of the risk assessment*

to identify the total risk that the Pantex Plant poses to the surrounding communities.

RC: 14.032
Doc: CO-008/59

Pages 4-223 and 4-224, Figure 4.14.2.1-1. On the evaluation of risk, does DOE look at all types of cancers or only those noted in the workers study of 1985? If so, why?

Response:

This assessment looked at all cancers that cause fatalities. Nonfatal cancers were not assessed. See discussion in section 1.3.10 of this volume.

RC: 14.033
Doc: CO-008/60

Pages 4-223 and 4-224, Figure 4.14.2.1-1. What chemical and radiologic exposures are "non-involved workers" subject to? What steps are being taken to prepare these workers for unexpected health effects?

Response:

Daily routine emissions are reported in volume I, section 4.14.2 for radiological emissions and volume I, section 4.7.1.3 for hazardous chemical emissions. Radiological exposures to "non-involved" workers are discussed in volume I, section 4.14.2; chemical exposures to "non-involved" workers are discussed in volume I, section 4.14.1.2. Radiological doses during normal operations associated with future Pantex Plant activities would be well below regulatory standards established by the Nuclear Regulatory Commission and EPA and, as such, no non-stochastic health effects are expected. Hazardous chemical exposures during normal operations will be maintained below regulatory standards developed to prevent non-stochastic health effects.

RC: 14.034
Doc: CO-008/61

Pages 4-223 and 4-224, Figure 4.14.2.1-1. The document only analyzes accidents. Please include routine emissions from normal operations.

Response:

See response to comment 14.026.

RC: 14.035
Doc: CO-008/63

Page 4-237 - 239. The combined cumulative impacts resulting from adding the bounding alternative in the other three documents to the Pantex EIS do not fully address all health effects. Give the complete combined cumulative health impacts of all four documents. [This comment applies to all analyses.]

Response:

Combining the bounding alternatives would be useful only if the bounding alternative is chosen from all four documents. However, since it is likely that one or more of these documents would choose alternatives other than the bounding alternative, this format allows the readers and decision-makers the opportunity to combine these impacts appropriately.

RC: 14.036
Doc: CO-008/64

Page 4-239, Paragraph 6. Please provide a schedule for additional evaluations mentioned in this paragraph.

Response:

Pantex Plant operations are continually evaluated by numerous internal and external regulators both DOE and other federal agencies such as the Defense Nuclear Facilities Safety Board. Results from these evaluations are tracked in an issues management system which ensures the findings are incorporated in the

work practices of Pantex Plant. Additionally safety analysis reports are reviewed on an annual basis.

RC: **14.037**
Doc: **HT13/39**

Could you talk some about the scope of what the high explosive research program is and what the fatality rate has been over the last decade for workers who are messing around with high explosives?

Response:

Pantex Plant performs high explosive (HE) synthesis, formulation, machining, extrusion, testing, process development, and analytical operations in performing its HE research and development and production missions. The Pantex EIS Proposed Action includes the continued research and production of HE and weapons components.

On March 30, 1977, two high-order detonations of different types of HE occurred at Pantex Plant. The explosions occurred in Zone 11, Building 11-14A, Bay 8. This resulted in two immediate fatalities and ultimate fatal injuries to a third employee. At the time of the accident, Zone 11 was the plant's high explosive development area. High explosives activities in this area included remotely operated pressing, contact machining (meaning the operator was very near the work being done and was not protected in the event of an explosion), and certain support functions for high explosive operations. Contact machining with personnel present is no longer permitted at Pantex Plant.

RC: **14.038**
Doc: **HT13/40**

So is the Pantex Plant going to be planning to experiment with new types of high explosives as we look ahead in the coming years that the site-wide is supposed to cover?

Response:

See response to comment 14.037.

RC: **14.039**
Doc: **HT13/43**

Secondly, related to that, there's been some discussion about a fatality related to the Lawrence Livermore incident. Nan, I [thought] you said the fatality occurred at Pantex. That is not necessarily what I thought I heard Dave say, so I wish that somebody would clarify that with as much information as you fully have so that it is clear to everybody.

Response:

See response to comment 14.037.

RC: **14.040**
Doc: **HT13/44**

I would like to clarify for everyone there were three people killed at Pantex in 1977. If I remember correctly, two of them inside the building and one of them outside the building [were] killed, so what I would like to ask is how will a document like this handle a facility at Pantex that is known to be deficient?

There is a high explosives machining facility at Pantex that has public access and public parking too close to the building, and it does not meet the plant's current standards, so how is something like that addressed in a document like this?

Response:

The facility referenced does not have public access and does not have public parking. Recently plant personnel determined that a small portion of the nearest

parking lot is slightly closer than current regulations allow. Those safety regulations establish "buffer zones" that are intended to keep noninvolved workers and the public far enough away from a high explosives facility that they would be expected to survive an accident. In the case cited, the only vehicles that are allowed to park in that area are Government vehicles driven by personnel with official business in the facility. This did not cause the facility itself to be deficient. Rather, it meant that the plant needed to take corrective action to satisfy regulatory requirements. Following the discovery, the plant personnel filed an "Occurrence Report". In accordance with the DOE policy on openness, this report was discussed at the next meeting of the Pantex Plant Citizens Advisory Board. Subsequently, the plant resolved the issue by removing that portion of the parking lot that was within the buffer zone.

Scenario #2 analyzes accidents involving accidental HE detonation. Because of facility design and buffer zones associated with HE facilities, impacts to non-involved workers are not expected.

RC: 14.041
Doc: HT13/45

... You have a facility at Pantex that is a high explosives facility that the public can get too close to the building, and this is something that was brought before the Pantex Citizen Advisory Board a couple of months ago.

... There is a parking lot too close to the building so that people who are outside the building could be injured by an accidental explosion; that is other workers at the plant that may not be working in the facility, but they can be near that facility because the buffer zone is not appropriate.

How does a document like this handle a deficient facility?...

Response: *See response to comments 14.040 and 14.043.*

RC: 14.042
Doc: HT13/46

In theory, I want to understand how a site-wide EIS addresses a facility that is not [adequate]. Do you just do this generally? Also, when you find something specific, do you discuss it in this document in general, or do you turn it into a generalized accident scenario rather than addressing specifics?

Response: *See response to comments 14.040 and 14.043.*

RC: 14.043
Doc: HT13/47

Let me express a concern that I think is related to this, and that is why -- let's keep on this point, because I don't think Nan is quite understanding the point, which is on the high explosives facility and the parking and also related to the gaps in the doors of the Zone 12 assembly/disassembly bays, there was analysis done related to this document.

However, I believe, and I would be delighted if anybody here can point me to it, I believe that neither of those specifics, the lack of buffer zone around high explosives and the specifics of the gaps and the mitigation efforts that have been taken, neither of those things, in fact, are included in this document.

[Ms. Bergman: The doors are.]

The discussion of the doors and gaps that were found and what was done is in this document? Where?

Response: *During preparation of the Draft EIS, Pantex Plant personnel discovered that particular assembly/disassembly cells had larger gaps between the edges of personnel and/or equipment doors and their frames than had been analyzed in prior studies. The cumulative gaps around the personnel and equipment doors of individual cells varied, but the worst case resulted in a total gap area greater than the 42 square inches that had been analyzed in previous Safety Analysis Reports. Since the gap area affects the amount of radioactive material that can be forced out of a cell by the air pressure of an explosive accident, plant personnel immediately reported the variance and initiated an Unreviewed Safety Question. To resolve the issue, the plant immediately implemented measures to reduce the amount of high explosives and plutonium allowed in the cell and then modified the doors to close the total gap area of each cell to less than 42 square inches. Additional modifications have been designed to further close the gap area of each cell to less than 5 square inches. These modifications have been approved and funded for implementation in Fiscal Year 1997. This Final EIS includes health risk analyses of cell accidents that portray the present design basis gap area (42 square inches) and the future gap area (5 square inches). See response to comment 14.040 for discussion of the buffer zone around the high explosives facility.*

RC: **14.044**
Doc: **HT13/48**

Where in this document does it specifically say that you have, in an existing high explosive facility, a parking lot that is closer to the building than what current DOE requirements are, and secondly, where in this document does it say that there were gaps around doors in virtually all of the major assembly/ disassembly bays at Pantex that were there for up to 13 years? Where are those two statements in this document?

Response: *The buffer zone is not discussed. The problem identified has been corrected and does not change the impacts in the EIS. The door gaps are discussed as part of volume I, section 4.14, Scenario 1. See responses to comments 14.040 and 14.043.*

RC: **14.045**
Doc: **HT13/49**

What computer model did you use to assess the risk associated with transporting the pits from Pantex to Manzano?...

Response: *The ADROIT code was used to assess the risk associated with transporting the pits from Pantex Plant to Manzano; specifically, it is used to model transportation carried out in Safe Secure Tractor Trailers (SSTs).*

RC: **14.046**
Doc: **HT13/53**

Perhaps I have missed it in Volumes 1 or 2 for the discussion of the tritium risk [for] current and proposed activities in Pantex. I understand during disassembly, they have to take the tritium bottles off of the weapons, and sometimes there may be trouble with the valves being open that should be closed.

I didn't see any discussion in here of the number of times that a base had to be shut down because of tritium release setting off the monitors, and I didn't see any analysis of what the health risk was from the tritium exposures that happened during dismantlement in the current report.

I didn't see any more generalized analysis of an accident that [allows] tritium to go into a water form and escape from the building. Did I miss it somewhere, or is it not in here?

I didn't say "go off consistently," but I have heard there's been a number of incidents [where] tritium has escaped from a weapon that was under dismantlement.

I didn't see any accounting of the numbers of tritium releases that have happened inside.

How many times has there been tritium released during dismantlement to this point in time?

In your bounding scenario that you have got, you are ballparking how many times that will happen as we move ahead into the future?

Do you expect there to be a subsequent tritium accident where there is tritium released?

Is it the usual 1×10^{-4} when you have already had an accident that was 1 x 1?

What I am suggesting in my comment is really the failure to report accurately on the accidents that have already occurred at Pantex.

The failure to really have a full discussion of the accidents that have already occurred makes the public reader of these documents be somewhat skeptical about the extremely low estimates about accidents happening and extremely low estimates of health effects from the accidents that come about.

A more full discussion of the accidents that have already occurred, I think, would have contributed to a much greater sense of public credibility and that which I think you will be encountering through the rest of this process.

Response: *Tritium is a potential health hazard for personnel engaged in weapon assembly or disassembly procedures. During these procedures, the hazard of bodily tritium uptake by plant workers potentially exists due to potential contamination of weapon components by trace leakage of tritium gas from storage reservoirs in certain weapons. Valves on tritium reservoirs are closed during dismantlement. Workers involved in these operations are monitored for tritium uptake. The tritium bioassay program is in place to track tritium uptake by weapons workers. The bioassay program is also used to track the extent of any tritium releases. In 1993, the total tritium population dose was 0.183 person-rem with a maximum individual dose of 14 mrem. In 1994, the total tritium population dose was 0.115 person-rem with a maximum individual dose of 11 mrem.*

Facilities where tritium operations are conducted are equipped with Radiation Alarm Monitoring Systems (RAMS) that provide prompt warning to plant personnel so that they can effect emergency procedures and minimize possible radiation exposures from the release of radioactive material. At times, a RAMS alarms because of system equipment failures not related to tritium releases; nevertheless, plant procedures dictate a facility evacuation anytime a RAMS is activated. Occurrence reports for inadvertent tritium alarm actuations are available in the public reading rooms in Amarillo and Panhandle. These alarm actuations do not involve tritium releases.

There is also a hazard from potential accidents involving tritium. Volume I, section 4.14, describes two risk significant accidents involving tritium: Scenario 5, Tritium Reservoir Failure from Internal Event, and Scenario 7, Multiple Tritium Reservoir Failure from External Event/Natural Phenomena. Scenario 5 involves the release of tritium as a gas and Scenario 7 involves the release of tritium as water vapor. Scenario 5 has occurred once in the past (reservoir discharge within Cell 1 in 1989); this event, with other past accidents, are described in detail in section 6.4 of the Pantex Plant Safety Information Document (Pantex 1996a). The impacts of this accident are described in section 4.7, Air Quality. The frequency of tritium releases at Pantex Plant is defined as "anticipated" and is estimated based on historical experience at approximately 2×10^{-2} *releases per year at a 2,000 operational level. Mathematically, this frequency indicates a tritium release related to Scenario 5 every 100,000 operations. Even though this event is defined as anticipated does not guarantee its occurrence in the future. With adherence to procedures and proper training, Pantex Plant personnel work to minimize the likelihood of the reoccurrence of the Cell 1 tritium accident.*

RC: **14.047**
Doc: **HT13/55**

In your accident analysis, you have a puncture, so that is a puncture of one pit container, right?

Did you ever consider the possibility that there could be more than one?

Response:

Volume I, section 4.14.2.1, Scenario 6 examines the risk from plutonium release due to a forklift impact during pit handling. The physical configuration of pit containers precludes the possibility of puncture of more than one by a single forklift. The frequency of the event, however, accounts for all operations and thus considers all forklift activities.

RC: **14.048**
Doc: **HT13/56**

What is the fire tolerance?

Response:

See discussion on Intrasite Transportation in section 1.3.8 of this volume regarding pit pyrophoricity.

RC: **14.049**
Doc: **HT13/58**

We don't have any records about how these pits are going to hold up in the coming decade, so we need to invest multiple billions of dollars in doing research to see if problems could develop in these pits sometime in the next 10,

20, 30, 50 years. There is a lot of discussion about multiple billions of dollars going into trying to answer those questions.

Response: *See discussion on Intrasite Transportation in section 1.3.8 of this volume regarding the DOE pit surveillance program.*

RC: 14.050
Doc: HT13/59

Currently, how many of those pits in storage are actually under surveillance or actually looked at visually each year of the 12,000 whatever it is pits in storage in Pantex? How many of them are actually taken out and looked at each year? Could you give us a ballpark idea?

Response: *Historically, pits have had few problems. With 20,000 pits in storage, approximately 20 pits per year will be inspected. These pits will be from different weapons programs. Approximately 22 AT–400A containers will be tested yearly. Based on historically low problems with pits, DOE believes this surveillance program will minimize the likelihood of undetected failures.*

RC: 14.051
Doc: HT13/60

What is the length of time that the current containers have been studied to see how effective their seal has been?

So what is the track record?

The reason why I ask is the similarity between the stockpile stewardship concern about what is going to happen to plutonium in the aging pit inside a very carefully sealed weapon where there's been decades of study of humidity, moisture, air pressure, materials compatibility...

With all this study, they are still investing multiple billions of dollars, because if you get a leak inside your pit, inside your container, inside your weapon, if there is even a pinprick air hole, you can get moisture introduced inside a weapon, and the moisture can cause all sorts of problems, and oxygen, as we know, with these materials can cause all sorts of problems, but somehow, those same sorts of problems could happen with the pit in storage, could it not, if the seal on the containers is broken?

I may be wrong about this, but apart from the risk of a criticality accident, a nuclear explosion, aren't there also risks from the plutonium meld getting oxidized, and isn't the oxidized metal more mobile than the metal itself in the shape and the form of the pit? Isn't there a flammability risk for the plutonium metal as well? I [thought] I understood there were those two potential risks.

Response: *See discussion on Intrasite Transportation in section 1.3.8 of this volume regarding pit pyrophoricity.*

RC: 14.052
Doc: HT13/61

Are you saying there is no flammability risk for the pits that are in storage in the current containers?... So are you saying it is pyrophoric, meaning that it ignites on contact with air?

Response: *Plutonium in pit form is not pyrophoric. See discussion on Intrasite Transportation in section 1.3.8 of this volume.*

RC: 14.053
Doc: HT13/62

So if your container developed, for example, a pinprick. If the seal on the pit developed a pinprick hole or rusting crack, then the plutonium metal became oxidized from the contact with the oxygen which it wasn't supposed to have, and you had some plutonium in an oxide form inside the plutonium metal pit, and if it was exposed to air, are you saying there is no flammability risk and no dispersal risk?

Response:

All pits are hermetically sealed within a metal clad. DOE has considered the potential for pit leakage during storage and has designed both a container and a surveillance program to minimize the likelihood of oxygen introduction into a pit. The AT–400A will provide a container within a container, the inner container having an inert atmosphere as defense-in-depth measures in addition to the pit clad. Scenario 6 examines the risk from plutonium release due to a forklift impact during pit handling. The amount of material released in this event bounds any material released from a pinprick hole. Because the plutonium pit is made of plutonium metal, most of the plutonium remains in the storage container during a forklift accident. Less than 0.6 milligrams of plutonium oxide dust would be released from the storage container.

The possibility of intentional damage to pits within Zone 4 is minimized by an active personnel assurance program and a high level of security. DOE believes the policy, procedures, and security in place at Pantex Plant preclude the occurrence of the scenarios described by the commentor.

RC: 14.054
Doc: HT13/63

If you drilled a hole, for example, through your container, then you drilled a hole through a pit, and you left it sitting out in the sun for a couple of decades, there wouldn't be any problems whatsoever with any health or safety or environmental problems with the these stored pits? Is this what you are saying?

Response:

DOE believes the policy, procedures, and security in place at Pantex Plant preclude the occurrence of the scenario described by the commentor.

RC: 14.055
Doc: HT13/64

What is the difference between a drilled hole and a pinprick hole in terms of introduction of oxygen into a part of the nuclear weapon pit that wasn't designed to have contact with oxygen?...

Response:

All pits are hermetically sealed within a metal clad. DOE has considered this scenario and has designed both a container and a surveillance program to minimize the likelihood of oxygen introduction into a pit. The AT-400A will provide a container within a container, the inner container having an inert atmosphere as defense-in-depth measures in addition to the pit clad.

RC: 14.056
Doc: HT13/65

Isn't it true that the container in which the pit is placed is multilayered, there is metal, [there] is styrofoam, and there is stainless steel? We are not talking about going through the external wall of the pit container, and then you have got the pit right there.

Response: *Design features of both AL–R8 and AT–400A are provided in volume II, appendix F.*

RC: 14.057
Doc: HT13/66

What if you puncture a pit, what happens then? How much of the pit would disperse? How would it actually get dispersed from a puncture? Would these be metal particles or oxidized?

Response: *Because the plutonium pit is made of plutonium metal, most of the plutonium remains in the storage container during a forklift accident. Less than 0.6 milligrams of plutonium oxide dust would be released from the storage container. The only pathway for release of this plutonium dust is through the opening caused by the forklift.*

RC: 14.058
Doc: HT13/67

Over what length of time would that oxidation process and dispersal process happen if you have had a puncture through a pit?

... How would the dispersal occur? Would the process of oxidation actually suspend some of these particles into air spontaneously without it having to receive further kinetic energy?

Response: *See discussion on Intrasite Transportation in section 1.3.8 of this volume regarding pit pyrophoricity.*

RC: 14.059
Doc: HT13/68

So if you, somebody, opened up 100 pits and poked holes in all of them. This kind of scenario like an internal sabotage scenario, somebody was really mad at the DOE for getting laid off from their job after serving their nation for 25 years in a job where they get picked on by the public all the time, and they went in and they opened 50 of these containers and poked holes in pits and walked out, what would the general scope of plutonium dispersal impacts be? Did I miss it somehow?

[What if this happened when] wind is blowing 50 miles per an hour?

But you have all the security around Pantex and the Kirtland base, and you don't consider that.

Response: *DOE believes that the high level of security and personnel assurance program at Pantex Plant will preclude the occurrence of the internal sabotage scenario described by the commentor.*

RC: 14.060
Doc: HT13/72

Page 5-61 of the draft statement says that each of the bunkers at Manzano has the capacity to store up to 800 pit containers in a Stage Right configuration in you slide show. Has there been a Safety Analysis Report done on storing...up to 800 pits in those bunkers?

Response: *Safety analyses have been done for similar structures at Pantex Plant. These facilities have capacities of hundreds to thousands of pits. The Manzano bunkers being considered for use provide similar or better capabilities for storage than those previously analyzed at Pantex Plant. In any case, before*

DOE elected to move pits to Manzano, a full site-specific safety analysis report (SAR) would be developed for the proposed Manzano facilities.

RC: **14.061**
Doc: **HT13/73**

Has the safety analysis report for storing pits in zone 4 at Pantex been updated since...the 1993 safety analysis report that was done at the time of the EA for interim pit storage at Pantex?

Response:

The Zone 4 safety analysis is being updated but is not complete.

RC: **14.062**
Doc: **HT13/75**

Back to the AL–R8 which is currently being used at Pantex, that has an oxygen atmosphere, and it is not a neutral atmosphere, it is not a sealed container, am I right?

You haven't put a special neutral helium in there, and you are not preventing oxygen from getting in there. It is just air, right?

... So what I would like to know is how this document accounts for not just as accident like if a forklift threw something, but a pit that has a minor flaw that you all had checked for but overlooked so that over time, years of storage, you once again have this, perhaps, pinprick sort of thing going on in a container where oxygen is present, so you have your plutonium to oxidize over time and perhaps surprise some worker when they open that canister at some later date.

How does this document evaluate that kind of scenario?

Response:

The AL-R8 pit container does not have a sealed inner container with an inert atmosphere. Additional details for the AL–R8 container can be found in volume II, appendix F. The pit itself is hermetically sealed so oxygen does not have a route to the plutonium. Pits have been monitored over time and from a storage perspective no problems have occurred. DOE has considered this scenario and has designed both a container and a surveillance program to minimize the likelihood of oxygen introduction into a pit.

RC: **14.063**
Doc: **HT13/76**

Do you stand by your earlier comment that about ten pits per year are all that are examined out of the almost 8,000?

That is the number that I think are destructively tested.

Response:

Historically, pits have had few problems. With 20,000 pits in storage, approximately 20 pits per year will be inspected. These pits will be from different weapons programs. Approximately 22 AT–400A containers will be tested yearly. Based on historically low problems with pits, DOE believes this surveillance program will minimize the likelihood of undetected failures.

RC: **14.064**
Doc: **HT13/78**

Where are the impacts, including radiation exposures, from that transfer to be discussed in the Pantex Draft EIS?

Just to clarify that you are getting information to use in the final, so there will be —this further information you are talking about will be available before the final? I am trying to figure out essentially where it fits in.

Let me say what I understood you to say so you can correct me if I misheard. You are saying that any worker exposures, radiation exposures to workers, for this transfer from the AL–R[8] to the AT–400 is covered in the overall worker exposure analysis of operations in this document?

Is the operation — is that operation, in terms of where it happens at Pantex, in terms of what facilities, et cetera, is that discussed in the document, and if so, where?

Is there a safety analysis report or other document that describes this transfer process?

I am asking you now to tell me which specific document that you are talking about.

Again, just so we are speaking the same language, those three documents that I heard you talk about are what I call the three background documents.

I don't recall, and if there are people here that know these documents better than I, that is why I am asking, I don't recall in any of those three background information documents that this transfer procedure is, in fact, described. If it is, I would like somebody who knows that to tell me, because I missed it, and I'd like to read it.

Response: *At the time the Draft EIS was written, doses from the pit repackaging operations were estimated to be within the current cumulative doses for production workers. Since, the Draft EIS was published the design of the pit repackaging facility has been changed and is under development. Because of these changes, there is likely to be additional cumulative exposure to workers at Pantex Plant. Additional exposures due to the pit repackaging operation are described in volume I, section 4.14.*

RC: 14.065
Doc: HT13/86

I want to go back to an issue that was brought up earlier about the accidents at Pantex and about supposedly deficient facilities at Pantex. I think it should be noted that [the high explosives] accident occurred nearly 20 years ago....

The practices have changed since that time. The facilities at Pantex for high explosives are extremely modern. They are the only facilities in the DOE complex that can perform this mission today without any modification. The parking lot problem is being addressed by management at the plant. It was brought up to the P[P]CAB in order to let them know that they are addressing that.

The door gap issue has been widely discussed in P[P]CAB meetings and in the community in Amarillo. I think that's been mischaracterized in the meeting tonight. I think that is being addressed by management at the plant.

I guess my comment would be both those issues have been raised in recent months concurrently with the production of this EIS, but near the end of the process at the time the draft was issued, I think it is unrealistic to expect very contemporary events that occurred near the end of the process to be addressed in this when they are really day-to-day management things that are being handled by plant management, and they are being done in concert with the P[P]CAB.

I will further comment that Pantex has an outstanding safety program. Pantex is used as a resource by employers in the Amarillo region for training information, for how to institute a safety program, and there is an extreme confidence in the safety and reliability of not only the weapons but the employers who handle those weapons at the plant.

Response: *See responses to comments 14.040 and 14.043. The two cases cited were the parking lot of the high explosives facility and the gap areas around the doors of assembly/disassembly cells. It is correctly noted that the problems were discovered by plant personnel, immediately reported to plant management, and promptly solved by plant action without accident or injury. These are success stories of how the safety program is designed to preclude accident and injury. The discussion of the door gaps is located in volume I, section 4.14, Scenario 1.*

The Pantex Plant Cells are currently being operated within the safety basis defined in a Justification for Continued Operation (JCO). This JCO establishes administrative controls to minimize the consequences of a potential accident until the end objective of reducing the door gap area to 5 square inches is reached.

RC: **14.066**
Doc: **HT13/89**

I have a request that is kind of similar to and follows along with actually both of the last two comments which related to this document, and that is that not only the history of safety practices at Pantex, but the history of safety practices at each of the alternative sites...included, because while it is not necessarily always specifically factored into your risk analysis that you do in these documents, from a public standpoint, the public is interested in evaluating the safety performance of facilities in terms of handling hazardous and radioactive materials.

There are lots of differing perceptions on the part of the public as to which facilities are safe and which facilities are dirty. The most helpful and objective way of having some analysis of that is actually having some comparative analysis of the historic practices at those various facilities so that it can be identified whether certain facilities may have a "better" or "worse" safety record.

It is not up to me or anybody else to say, "We suppose this," or, "We suppose that." There is some actual data that is released in unclassified form so that it could be available to the public, and so I would request that kind of information be done on all of the sites and included either in the document or a reference document that cites that.

Response: *The type of historic comparisons suggested cannot be realistically and meaningfully presented. The Department and its plant operators have extensive programs to identify and analyze potential accidents in order to develop techniques that both minimize the possibility of occurrence and mitigate the consequences should an accident occur. In like manner, when an accident does occur, root cause analyses are performed and changes are made to prevent recurrence. Because of these ongoing programs of safety analyses, facilities and procedures are continually improved. This means that the set of procedures and facility conditions present at any given time are likely very different from other times in history. Thus, a historical review of past accidents as an estimate of current safety is inherently flawed. This can be illustrated by the case of the explosive accident that occurred in 1977. This is the only explosive accident in the history of the plant that resulted in fatalities. The procedure that resulted in the accident was an operation in which a worker used a lathe to shape an experimental high explosive. The operator was killed in the resultant explosion, as were two other nearby personnel. Following that accident, the procedure and equipment were both redesigned to eliminate the cause of the accident. The procedure is now performed by a computer controlled robot to regulate pressure and under water to control the temperature of the process. The operator is no longer in the room when the process occurs. Thus, one cannot evaluate the safety of the current facility and its operations by the circumstances that were present in the past. Instead, safety analyses are performed by detailed examination of each step of the process—the physical and chemical characteristics of the materials and equipment used and the actions performed by humans and machines during the process. For each step of the operation, every event that could initiate an accident is systematically identified and the results of that occurrence are characterized. Motion and time studies, measurements, and historical data are used to assist in estimating how frequently an abnormal event (e.g., dropping a wrench) is likely to occur and what could occur as a result of that event. From this analysis, a calculation can be made to estimate the frequency of an accident. Then calculations are made to quantify the results of such an accident. This process results in the most scientifically defensible prediction of the risk of an accident under the actual circumstances present at the time.*

RC: 14.067
Doc: HT13/18

Also, I wish the documents in the future would at least admit that we exist. Kirtland, in 1989, when they started the fire by accident, which was an accident, said that South 14 could be the fire break. ...At that time, there were 500 homes. Now, there are probably 750 to 1,000 families who live directly east of this facility. We would like some recognition of our concerns as well as the Four Hills residents.

Response: *Range fires do occur during dry seasons in New Mexico. However, the nature of the alternative to relocate interim storage of pits to the Manzano Weapons Storage Area at Kirtland Air Force Base would result in no fire hazard. The relocated pits would be sealed in stainless steel, welded shut, Type B containers (e.g., the AT-400A) and placed in a magazine tunneled into the granite of*

Manzano Mountain. The entrance to the tunnel and the interior storage magazine would be protected by heavy steel doors. There would be no high explosives or any other combustible material present inside the storage facility. Consequently, there is nothing in the storage facility which could be a fuel to either start or sustain a fire. Likewise, the pit would be shielded from any externally initiated range fire by the steel doors, the granite of the mountain, and its own protective stainless steel container. It would not be possible to either expose or burn the pit in any credible fire scenario. Thus, while a range fire might occur in the Kirtland area, the pits in the storage facility would not be affected or contribute in any way to the consequences of such a fire.

RC: **14.068**
Doc: **HT13/30**

We have created some problems, quote, inadvertent problems, that we dare not create. The dangers associated with these plutonium pits in or out of warheads are going to last for a long time, and it is unfortunate that we didn't have a broader public discussion about all of these issues before a decision was made to even create the 20,000 plus warheads and what these unintended consequences would be.

I certainly hope as we talk about interim storage of pits, which frankly, for better or worse, is going to be a lot longer than ten years, and this document should more clearly state that kind of along the lines, Nan, that you, in fact, said in answer to Janna's question, but I don't really see that kind of comment reflected in here, so that is the kind of change that needs to be made in this document.

Response:

It is DOE's policy to evaluate site-wide NEPA documents at least every 5 years to determine whether the existing EIS remains adequate and whether to prepare a new site-wide EIS or supplement the existing EIS (10 CFR 1021.330).

RC: **14.069**
Doc: **HT12/6**

Yes. According to your summary report there was a calculation of potential risks of -- the citizens of Savannah are within the range of the site for getting cancer over a estimated of 50 years. Was there -- did you-all calculate the -- not only the potential release of radiation coming from the Savannah River Site, but did you-all calculate the other plants that's releasing other types of chemicals and other types of radiation or other forms of radiation in combined with that which is coming from the Savannah River Site?

Because if you haven't and you only estimated the potential risk of cancer coming from the Savannah River Site, then there may be a greater risk of low-income people getting the repercussion [effects] of what we economically are trying to benefit from the Savannah River Site.

Response:

The scope of the Pantex EIS includes evaluating the impacts of storing either 8,000 or 20,000 pits at the P-Reactor at the Savannah River Site (SRS). The EIS concluded that no adverse health effects would be expected among the general public, including minority and low-income populations, as a result of normal storage operations. Evaluating the impacts from other operations in the vicinity of SRS is beyond the scope of this EIS.

RC: 14.070
Doc: HT12/7

... Well, in my opinion, that is not fair to the citizens of Savannah because now you're only projecting what Savannah River Site. This is supposed to be a total...assessment of what's going to -- a health assessment, what's going to take place.

So not only should it be calculated, the radiation that's going to be released from the Savannah River Site,...the total impact because say, for instance, we may have a better chance if the Savannah River Site was closed down, you know, instead of adding what radiation or what contamination would be released from the Savannah River Site, we may have a better chance of having a longer life span if we would close the plant down. So if there was a total calculation along with all the other plants along with Savannah River Site, then I think there would need to be more input in the study as far as health...is concerned....

Response: *See response to comment 14.069.*

RC: 14.071
Doc: HT12/8

My concern is birth defects toward our children.... I've read in the past how different radiations...affect births, pregnancies of mothers, and I would like to know the same situation in this area.

Response: *Radiological impacts to the public (including children) from Pantex operations are discussed in volume I, section 4.14. Modeling has shown that potential doses to adults and children alike will be extremely small and as defined by the National Council on Radiation Protection and Measurements, they are negligible.*

RC: 14.072
Doc: HT12/16

I assume that's gamma. The worker at what distance for that 6 rem?

Response: *The 6-rem worker dose from a forklift puncture is primarily alpha radiation due to the inhalation of plutonium dust. This 6-rem exposure is a 50-year dose.*

RC: 14.073
Doc: HT12/21

You have done SARs on those facilities?

Response: *The Zone 4 magazines have an approved Safety Analysis Report. The SAR is currently being updated to the latest DOE Standard.*

RC: 14.074
Doc: HT12/22

[Are you] familiar with plutonium vulnerability assessment done in November of '94? It says that operations of storage activities are continuing with a -- on the basis of a BIO instead of approved safety analysis reports.

Response: *The DOE Plutonium ES&H Vulnerability Assessment (DOE 1994cc) was performed to characterize ES&H vulnerabilities. An ES&H vulnerability is defined as a condition or weakness that may lead to unnecessary or increased radiation exposure of the workers, release of radioactive materials to the environment, or radiation exposure to the public. The study of Pantex Plant, completed in July 1994, identified four potential vulnerabilities: (1) explosion*

in an assembly cell dispersing plutonium outside of the cell/facility; (2) operational accident, human error, or equipment failure causing failure of the pit cladding or pit tube; (3) lack of experience concerning design and lack of knowledge of interim storage and aging of pits and RTGs; and (4) collapse of roof over Bay 27, Building 12-26 due to natural phenomena. The report stated that all handling of disassembled nuclear explosive components and sources containing plutonium at Pantex Plant are performed by trained and qualified individuals in accordance with operating procedures. Likewise, the report concluded that facilities containing the disassembled nuclear explosive components and sources are designed to withstand adverse conditions with minimal damage or release of plutonium. While the responses to these vulnerabilities are being addressed in other documents, this EIS discusses the relevant issues through accident scenarios. The risk from vulnerability 1 is addressed in volume I, section 4.14, accident Scenario 1. The risk from vulnerabilities 2 and 3 are addressed in volume I, section 4.14, accident Scenario 6. The final vulnerability is included as part of volume I, section 4.14, Scenario 3. It should be noted that the particular facility cited as vulnerable to natural phenomena (Bay 27, Building 12-26) is scheduled to be phased out this fiscal year. The operations performed in that building will be relocated to Building 12-104A after completion of an Operational Readiness Review. In view of the nature of the vulnerabilities identified, the actions taken by the plant, and the risk analyses of those vulnerabilities in Pantex Plant Safety Analysis Reports and in this EIS, there is sufficient information on potential environmental impacts (including human health impacts) for the Secretary to proceed with a Record of Decision on storage of 20,000 pits.

RC: **14.075**
Doc: **HT12/25**

I think that also the other vulnerability noted for Pantex was that...Pantex is the only site, the only major plutonium site, that is identified as having a single barrier for plutonium....

Response:

All pits are hermetically sealed within a metal clad. The AL-R8 container is sealed but does not have an inert atmosphere surrounding the pit. The AT-400A will provide a container within a container, the inner container having an inert atmosphere as defense-in-depth measures in addition to the pit clad. Further information on pit container design is provided in volume II, appendix F.

RC: **14.076**
Doc: **HT12/29**

... On page 5-33, you're talking about the worker at Savannah River health consequence and what you show...[as 4×10^{-3} to] the maximum exposed individuals. But you say the probability of a cancer from all causes to the general public is estimated to be twenty percent which implies that six of the thirty workers are going to develop cancer. Now, that doesn't sound like an insignificant consequence to me. That sounds like a significant consequence.

That's from natural causes. Let me comment that the paragraph is unclear. That's what I'm saying, okay. The paragraph is unclear. I know what it means -- what it should mean.

Response: *The text refers to the number of cancer deaths from all causes in the United States. Twenty percent of all deaths in the United States are attributable to cancer from all causes. The text has been changed to clarify the statement.*

RC: 14.077
Doc: HT12/33

Work chart is totally confusing to me. And how a dose rate of one rem per year at one meter at the surface of the trailer, why does that affect the human dose based on geography?

Response: *The dose identified refers to the expected dose rate outside of a Safe Secure Tractor Trailer carrying pits. It is used to estimate population doses along pit shipment routes.*

RC: 14.078
Doc: HT12/34

... What's the natural radiation dose?

Response: *Background radiation doses for the Savannah River Site are provided in volume I, section 5.3.2.*

RC: 14.079
Doc: HT12/35

Now, I submit Pantex has a much higher background radiation than Savannah River. Now, you do not say we ought to move it to Savannah River in order to...decrease the number of people at Pantex, did you? Get the people out of that god-awful place.

Response: *The average dose from natural background radiation to an individual in the vicinity of Pantex Plant is 334 mrem/yr. The average dose from natural background radiation to an individual in the vicinity of the Savannah River Site is 312 mrem/yr.*

RC: 14.080
Doc: CO-003/3

Any permit or plan approval for new Hanford programs/activities must be fully integrated and must comply with all State of Washington public health and safety rules and regulations.

Response: *Transition planning is described in volume I, section 5.1. Existing laws, regulations, formal agreements, and DOE orders will form the basis for transition planning and execution.*

RC: 14.081
Doc: PC-011/2

None of the draft PEIS's have adequately addressed what would happen to this area's farm and ranch economy if a significant accident releasing substantial quantities of radionuclides were to occur regardless of how well it were to be cleaned up. I think the public's perception of the contamination would be such that it would make our products unmerchantable not just for the immediately affected area, but for the entire Panhandle's products.

Response: *Perceived risks are not easily quantified. The socioeconomic impacts of such perceived risks are even more difficult to evaluate. However, a statement characterizing this potential has been added to the appropriate sections of the Final EIS.*

RC: **14.082**
Doc: **PC-006/2**

Storage of pits at Pantex should not be [increased] until the findings of the [Plutonium] Vulnerability Assessment are resolved.

Response: *See response to comment 14.074.*

RC: **14.083**
Doc: **PC-034/5**

In Section 4.14.2.1 (page 4-219) and in Figure 4.14.2.1-1 (page 2-224), a quite classic error is made in explaining potential latent cancer fatalities. The error is to use risk estimates for exposures to large populations and to assume that applying that risk estimate to a specific group of workers allows for definitive conclusions about that group. In this example, the figure provides the correct explanation. The text is misleading and might cause confusion in the community by indicating that the 330 plant workers would suffer a certain number of cancers.

Response: *Further clarification of the interpretation of the calculated risks has been provided in section 1.3.10 of this volume.*

RC: **14.084**
Doc: **PC-034/6**

Health effects are important to understand. The section on continued operations talks about health effects for workers. A statement is made that workers would experience additional cancers.

In the figure, a different explanation is used. The statement in the figure is that an average number of cancers could occur if many groups of workers were exposed. The final statement was that the most likely outcome is zero cancers.

What is the average community member to think?

What is the correct explanation?

Response: *Further clarification of the interpretation of the calculated risks is provided in section 1.3.10 of this volume.*

RC: **14.085**
Doc: **PC-034/7**

The Department of Energy's Office of Emergency Management (NN 60) and the Office of Emergency Response (DP 23) fund the DOE's Atmospheric Release Advisory Capability (ARAC), which is housed at the Lawrence Livermore National Laboratory. ARAC's computer models, which have world-wide acceptance, have been called into service in many real-time responses to both real and potential accidental releases of radioactive material. The Three-Mile Island nuclear power plant (NPP) accident in 1978, the 1986 Chernobyl NPP disaster in the former Soviet Union, and the U.S. Air Force Titan II missile accident in Damascus, Arkansas are just a few examples. In addition, the ARAC models have been utilized in every nuclear weapons accident exercise (NUWAX), since NUWAX 79. Pantex Plant is an "ARAC Site" and is linked to the ARAC center in Livermore via a computer-to-computer connection. ARAC operators are familiar with Pantex operations and can respond in a matter of a few minutes with a computer model graphic output showing the trajectory of the plume of contamination in the event of an accident. When, an if, a real

accident occurred at Pantex it would be the ARAC models and the ARAC capability that DOE would call upon to respond in real time.

... Since ARAC is funded by NN 60 and DP 23 and ready to respond to a radiological accident at Pantex, why did DOE choose to use a model like ERAD to assess consequences for this EIS?

Response: *The Atmospheric Release Advisory Capability (ARAC) is a U.S. government emergency assessment program designed to provide timely and credible assessment advisories to emergency managers for nuclear, chemical and biological hazardous releases to the atmosphere. ARAC uses a series of codes and models integrated into a coherent software system for automated communications, processing and management of both data and calculated assessment products. It uses real time meteorological data to identify populations at risk and enable mobilization for quick response. ARAC is not currently used for risk assessment purposes in a non-emergency situation to predict dose consequences.*

The ERAD code was also funded by DOE to specifically address the radiological impacts associated with an explosive dispersal. ARAC uses a portion of the ERAD code for buoyant heated explosion cloud rise formulation. The ERAD code does have the capability to use climatological data in iterative computations to predict dose consequences required in NEPA documents.

RC: 14.086
Doc: PC-034/9

... In Table 4.14.1.4-1, safety statistics for Pantex are compared to general industry, manufacturing industry and chemical industry (page 4-217).

... Since the largest industry in the Panhandle is agriculture, should not the agricultural statistics be included here?

Response: *The purpose of Table 4.14.1.4–1, in volume I, section 4.14.4, is to compare the safety statistics for Pantex Plant with industries that are similar to the operations performed at Pantex Plant. This is the reason the statistics are compared to general industry, manufacturing industry, and chemical industry rather than agricultural industry.*

RC: 14.087
Doc: PC-034/10

... Appendix D, Human Health, does very little to explain how the impact to human health are derived or calculated. This appendix is more of an explanation of the risk assessment methodology than human health.

Response: *Volume II, appendix D as well as volume I, section 4.14, Figure 4.14.2.1-1 provide detailed descriptions of the methodology followed to estimate human health impacts. Appendix D and section 4.14 discuss the estimated human health impacts associated with continued Pantex Plant operations. Both radiological and chemical impacts are described as well as other worker safety issues.*

The risk assessment methodology presented in volume II, appendix D was utilized to identify the risk dominant impacts in terms of excess cancer fatalities from continued Pantex Plant operations. The human health appendix provides

references to reports such as the BIER-V report which provides further details on the human health effects of ionizing radiation (NAP 1990).

RC: **14.088**
Doc: **PC-024/4**

Page S-9, right column, top of third paragraph. I suggest that the release of chlorine gas, as the dominant accident scenario, may not be accurate. If the Pantex plant was targeted in a terrorist attack, that could prove to be much worse. Another point, is that the chlorine accident may have been considered for a 10-year period, but the plutonium-239 will remain a hazard for over a quarter million years.

Response:

The paragraph addressed begins with the sentence, "The dominant accident scenario in terms of release of hazardous chemicals to the public involves a release of 408 kilograms (900 pounds) of chlorine gas from the water treatment facility." The contention here is that for accidents involving hazardous chemicals (as opposed to radionuclides or high explosives), chlorine is the risk dominant hazard. Acts of terrorism are outside of the scope of the EIS, and are considered very unlikely due to the high level of security evident at Pantex Plant.

Other risk contributors are also assessed in the EIS, so the conclusion about chlorine does not preclude risk contributions from radioactive materials and high explosives. These risk contributors are summarized in volume I, Summary.

The concern that the chlorine accident may have been considered for a 10-year period is unnecessary. The frequency calculations used in the risk assessment are independent of how long a substance remains a hazard, and it is DOE's policy to evaluate site-wide NEPA documents at least every five years to determine whether the existing EIS remains adequate and whether to prepare a new site-wide EIS or supplement the existing EIS (10 CFR 1021.330) cited in volume I.

RC: **14.089**
Doc: **PC-024/13**

Page 5-11, Table 5.2.2.1–1, Major Sources of Radiation Exposure in the Vicinity of the Nevada Test Site. This table should be removed because it contains unnecessary information and is highly misleading in other respects. The term "Vicinity" can, and is likely to, refer to areas [that] are dozens of miles from the test site, and upwind of the test areas that are at the far side of the vast test site.

Under the heading "Other Sources," is "NTS - environmental radioactivity," which is shown to be at least 1,000 times less than any other source including global "weapons test fallout" [in] which NTS was one of the primary sources.

This EIS was supposed to conform with all the requirements set forth in the "Agencies shall insure the professional integrity, including scientific integrity of the discussions and analysis in environmental impact statements" (40 CFR1502.24).

Response:

Volume I, section 5.2, Table 5.2.2.1–1 presents the radiation environment that individuals in the areas surrounding Nevada Test Site (NTS) receive on average. The term "Vicinity" refers to the areas surrounding NTS and the members of the

public within these areas. These areas include both upwind and downwind areas from the test site.

Nuclear tests in the atmosphere at NTS have been confined to weapons having yields below 100 kilotons. All other atmospheric nuclear testing by the U.S. were made at the Eniwetok Proving Grounds in the Pacific Ocean. The predominate source of global weapons test fallout is from atmospheric testing of megaton-range detonations by the U.S. and the U.S.S.R. during the early 60's. A relative comparison between the NTS environmental radioactivity and the weapons test fallout was not made since both are less than 1 mrem and do not contribute significantly to the radiation environment in the vicinity of NTS.

RC: 14.090
Doc: PC-024/15

Page 5-17, left column, first line. Though such an incident may result "...in no significant short-term radionuclide releases to the exterior environment," the next quarter million years might tell a different tale. The mitigation analysis of such an event should not be left to whatever kind of society follows us.

Response:

Should P-Tunnel become the preferred alternative for interim pit storage, DOE would consider performing mitigation analysis for a tunnel collapse.

RC: 14.091
Doc: HT15/25

Under the description of the risk about plutonium on Page D-5, both [involved] workers...and the public are vulnerable to plutonium inhalation if an accident occurs that disperses it as respirable particles; for example, a fire or explosion. ...On Page D-23, there in the first column, first paragraph, it says the long-term exposure pathways and the liquid exposure pathways were not considered.

So we want to be sure, not only that you can take into accurate account types of flight and that type of thing. We want to make sure also that the consequences of [a plutonium] release on a population on-site or off-site are accurately taken into account. ...Long-term exposure [to plutonium has] to be a consideration with soil, farming, and water. ...I have certainly not done full justice to this document, but I raise these issues.

Response:

Details on alternative pathways have been provided in volume I, section 4.14.

RC: 14.092
Doc: HT15/34

For transportation of material, the listing of the accident scenario included environmental impacts for transportation [accidents]. In the evaluation of those accidents, it wasn't included in this event tree analysis.

Response:

The human health impacts from transportation accidents are described in volume I, section 4.16.

RC: 14.093
Doc: HT15/36

... It's really talking about the risk for inhalation of hazardous substances, as I understand the document. The risks for ingestion haven't been included in there.

The inhalation cancer risk is above the normal, except for 1.45×10^{-7}.

Response:

The risks from ingestion of hazardous substances have not been included because the human health risk is dominated from exposures through inhalation.

RC: **14.094**
Doc: **HT15/37**

... What was the assigned risk bin for accidents involving Ogallala aquifer?

Response: *No accidents were identified during the preparation of the Pantex Plant EIS as capable of contaminating the Ogallala aquifer. Risk bins were for human exposures. The pathway for human exposure form the Ogallala aquifer is not a significant contributor. Additionally, several studies indicate that plutonium disposed from accidents will not reach the aquifer.*

RC: **14.095**
Doc: **HT15/38**

... We had trouble, particularly when the Ogallala [aquifer] was involved,...multiplying the risks times the frequency that would happen. ...In other words, if you're considering 10 to the minus 7 or 8 or 9, that multiplied by the likelihood of the accident occurring...reduces the significance. The problem with reducing the Ogallala [aquifer] is [that] it would be such a catastrophic event, that we'd rather not allude to the risk by the possibility of the accident occurring.

Response: *See response to comment 14.094.*

RC: **14.096**
Doc: **HT15/39**

... I understand this EIS really evaluates the future activities at Pantex and several standard alternatives. So I think that approach is valid. But it seems that if the hazardous instances were discounted...because...the constituents' concern were limited, based on that, [we're] not seeing above this particular level. Their evaluation was not carried forward.

My understanding is that the risk was posed only for inhalation pathways, [not] that that would be only added together.

Response: *The commentor's understanding of the EIS appears to be correct. However, it is unclear as to whether or not the commentor has a concern with the EIS. Further detail on alternative pathways has been added to volume I, section 4.14.*

RC: **14.097**
Doc: **HT15/40**

Model for chlorine?

Response: *The chlorine release scenarios were modeled using the Emergency Prediction Information (EPI) code.*

RC: **14.098**
Doc: **HT15/41**

Did you base the probability of the accidents occurring on the data of accidents that have occurred in the past?

Would your analysis predict that there has been as many as one fatality in the plant due to a radiological release?

What would you say the probability is, based on the data that you have, that there would be a death from the radiological release at the plant by someone working in the plant?

Based on past experience with the plants, you do not project...any fatalities from a radiological accident?

Did you estimate any probability of this occurrence base upon previous experience?

But the radiological risks were regarded as negligible; is that correct?

... if you calculated them, what was the probability that someone would incur a fatality on account of a radiologic incident, one in 10,000, one in a million?

... what did you calculate the probability to be that any worker at the factory would die as a result of a radiological release?

Response: *The accident analysis evaluated historical data in addition to Pantex Safety Analysis Reports and other published safety documents. This is represented by the fact that scenarios involving accidental high explosives detonation and tritium reserve failures caused by an internal event are evaluated as being "anticipated." This means that they are expected to occur at least once within a human lifetime.*

There have been no fatalities at Pantex Plant due to radiological releases. Also, no radiation-caused fatalities are predicted. Volume I, section 4.14, Table 4.14.4.1–1 lists the predicted number of excess latent cancer fatalities from Pantex Plant operations.

RC: 14.099
Doc: HT15/42

Have you ever heard of a case of Mr. Glen McGough? The data indicates that there actually has been a death due to a radiological accident at the plant. The exact cause of his leukemia was never exactly identified. And the court case was sealed in 1983 so that there never has been an attempt to find out if his particular death was due to a radiological release.

We've also got recent cases involving a man named John Bell who claims that his illnesses are due to a radiological release. And he also anticipates his demise soon. There may be some other cases. I have heard of a few.

In other words, without taking the actual records on people who have worked at the plant and doing anything, the probability that their deaths were in some way related to accidents that occurred in the plant, we have no reliable way of projecting how many deaths may occur in the future.

Response: *DOE has an ongoing worker health surveillance program. To date, there have been no verifiable indications of adverse health effects from employment at Pantex Plant.*

RC: 14.100
Doc: HT15/43

... Based upon the actual history of the plant, could you have calculated fatalities in the future? And if the calculations that you make indicate extremely low probability of deaths in the future from radiological release, how reliable are your calculations since what we do have, what we actually know,...indicates a vastly greater risk than [what] even you calculated.

Response: *See response to comment 14.098.*

RC: **14.101**
Doc: **HT15/44**

... It bears some examination as to whether or not these particular cases are attributable to the fact that some of them were working at Pantex.

However, the point is that you've made a risk calculation. And in order to determine whether or not it's accurate, we need to identify cases which may be contributable. It's not so much that I fear what is current activity at Pantex. It's what I anticipate may be coming in the future if the plutonium processing occurs. And, in that case, we need to be exceedingly careful about the possibility of radiological production.

If we calculate now what may happen in the future and our calculations are inaccurate, we will probably be inclined to take a much greater risk in the future operations in the plant than we ought. I think you should give that consideration.

Response: *See discussion in section 1.3.10 of this volume regarding health effects.*

RC: **14.102**
Doc: **HT15/45**

I think it's worth noting that in one obvious example of an industrial accident which occurred at Pantex in 1979 that resulted in fatalities, neither the plant operator nor the Federal government was willing to take financial responsibility for the consequences of the accident.

Response: *DOE provides compensation and restitution where appropriate, in accordance with the governing law and/or Presidential direction.*

RC: **14.103**
Doc: **HT15/49**

I just need some help understanding about the consequence categories. When I looked at that, it struck me that this was an acute exposure, a one-time exposure type; is that correct, or am I misunderstanding?

Response: *Exposures from accidental releases of radioactive material are determined from the concentrations and types of material released. During the period following an accident, exposures are from direct radiation from the passing plume and from radioactive material deposited on the ground, inhalation from the plume, deposition on skin, and inhalation of resuspended ground contamination. The inhalation of resuspended contamination is calculated for the lifetime of the exposed individual. Once radioactive material enters the body, it remains there for various periods of time depending on decay and biological elimination rates. Tritium emits a weak beta particle and is biologically eliminated from the body over several weeks. Plutonium emits relatively high-energy alpha particles and is retained in the body for periods of several months to many years. This was accounted for in the EIS by calculating a committed effective dose equivalent, which is a 50-year committed dose, not an acute exposure. Obviously, when an explosion occurs, its impact apart from any associated radioactive release is limited to the timeframe of the explosion.*

RC: 14.104
Doc: HT15/50

... I just wanted to understand what we're talking about when we talk about consequences. The consequences are greatly varied depending on the material we're talking about, just as you referred to. So sometimes you say the acute exposure is probably from an explosion. But, just as we talked about previously with aircraft and the probability of a...plutonium release getting into the soil, there are materials that are toxic. ...So I'm wondering, how do they take all those factors into account?

Response:

See response to comment 14.103. Additional details on long-term pathway issues has been added to volume I, section 4.14.1.

RC: 14.105
Doc: HT15/51

... The [exposures] through the operation of Pantex are in addition to, not other than, so as not to avoid one choice or the other. These are additions to exposure.

Response:

The exposures from Pantex Plant operations are in addition to those received from background sources. These exposures are discussed in volume I, section 4.14.

RC: 14.106
Doc: HT15/52

... Latent cancer fatality [risk factors] are all Greek to me. Would you talk to me about that?

I'm not sure that I know what CEDE is and what it means?

Response:

Based on recommended risk factors of 0.0005 deaths per rem in the general public and 0.0004 deaths per rem for workers, a latent cancer fatality risk can be calculated based on the amount of radiological exposure. Committed Effective Dose Equivalent (CEDE) refers to radiation doses received from radionuclides deposited in organs and tissues. Once deposited in organs and tissues, radionuclides provide a continual source of irradiation. To take account of this continuing irradiation of organs and tissues that occurs after the intake of radionuclides, the CEDE is defined. The CEDE is the time integral of the equivalent dose-rate in a specific tissue following intake of a radionuclide into the body. The CEDE is usually calculated for a 50-year period.

RC: 14.107
Doc: HT16/1

Along with that inhalation and the statement that was made in the document that DOE only addressed inhalation exposure, inhalation is the only pathway accounted for in the assessment of chemical and radiological airborne hazards from normal operations (page 4-205). Now, does this mean that there are exposure pathways of non-airborne hazards, for example, through groundwater contamination? And are these included in the analysis and where do we find them?

Response:

Detail on alternative pathways has been added to volume I, section 4.14.1.

RC: 14.108
Doc: HT16/2

Are there other pathways and accidents that are non-normal operations? Are these included in the accident analysis?

Response:

Detail on alternative pathways has been added to volume I, section 4.14.1.

RC: **14.109**
Doc: **HT16/3**

The Acqua[v]ella Study I believe was referred to, the study on the workers at Pantex. Am I correct that this study compares workers to the community at large?...

Response:

The Acquavella study (Acquavella 1985) compared total and cause-specific mortality for Pantex Plant workers employed between 1951 and 1978 with expected mortalities based on U.S. death rates.

RC: **14.110**
Doc: **HT16/4**

In the accident scenarios and analysis, it seems as though everything has to work 100 percent correctly all the time. ...Is there any built-in analysis for if something does not actually fall into place like it is supposed to?

Response:

Volume I, section 4.14.1.4 describes the mitigation features in place at Pantex Plant to prevent or minimize potential releases. These include multiple protective barriers and systems, reinforced buildings, and redundant safety features. Accident analysis begins with the premise that there has been an event in which some form of failure of the protective barriers or systems has taken place. Consequences are then calculated based on the type and degree of failure.

RC: **14.111**
Doc: **HT16/5**

... Do you consider that there are different initiating events at different times that would cause a different sequence? And is there data that supports this claim?

Response:

For each facility and operation at Pantex Plant, DOE has developed or is in the process of developing a safety analysis report. In addition, other facility-specific safety analyses have been performed and documented. These documents were utilized to identify potential accidents at Pantex Plant. The frequency of internal (e.g., equipment failures or human errors), external (e.g., aircraft crashes), and natural phenomena (e.g., tornadoes and earthquakes) initiating events were evaluated for different facilities and operations. To bound the possible consequences, the amount of hazardous material available for release was taken to be the maximum allowed by facility limits, rather than what might be actually present.

RC: **14.112**
Doc: **HT16/6**

... What is the Panhandle's background, as far as radiological exposure? What's the norm for the region?

From background sources 334 is the total natural [background radiation dose]?

So the 330 that you have here, is that in addition to the 334?

Response:

The natural background radiation in the vicinity of Pantex Plant results in an average dose to an individual of 334 mrem/yr. The 330 rem referred to here is the dose for all workers for ten years. Each worker is getting about 111 mrem/yr (0.111 rem/yr) in addition to the dose from background sources.

RC: 14.113
Doc: HT16/8

This document and, frankly, the other PEISs, don't have historic data on worker exposures at MOX fuel facilities that they're basing their projected impacts on. They don't use that kind of data. So when you come to the public and make statements like we're going to be within regulatory limits,...that doesn't have anything to do with you probabilities and your risks, because the probabilities and risks are not necessarily always related to the regulatory limits.

... I think one of the things that I would suggest is that you make clearer in the text of the document, particularly on the health issues, specifically how you're basing your analysis on historic data and where you really don't have much historic data or very limited historic data that you are, therefore, extrapolating to a 50-year CEDE or to a 10-year operational lifetime.

Response:

DOE has made this revision in the final EIS to ensure that the basis for the dose numbers is apparent.

RC: 14.114
Doc: HT17/28

My surveys of radiation and health around several different Texas nuclear facilities have impressed me with the failure of government and industry to study the health effects of such facilities in any meaningful way.

I'm happy to hear that there is another investigation of the Pantex area underway this summer by the Texas Department of Health in conjunction with ATSTR, but I believe that we need much more thorough going studies, including door-to-door surveys and follow-ups for former Pantex workers and residents of these counties.

Response:

See discussion in section 1.3.10 of this volume regarding health effects, including the planned follow-up study by the National Institute for Occupational Safety and Health (NIOSH).

RC: 14.115
Doc: HT17/29

I found it very instructive to do a simple analysis looking at all cancer mortality before the tritium accident in 1989, in which 40,000 curies were released, compared to the years after, for which I had data at the time [and] I did the analysis.

And there was approximately a doubling of the cancer death rates in Carson County after the accident compared to the four years before.

Response:

The estimated impacts of the past tritium accident are described in volume I, section 4.14 in relation to Scenario 5. The public impact from this accident is estimated at 8.0×10^{-2} person-rem. The hypothetical maximally exposed offsite individual exposure is estimated as 1.1×10^{-2} rem. This exposure would result in an increase in individual lifetime cancer probability of 5.5×10^{-6} compared with a lifetime fatal cancer probability from all other causes of approximately 20 percent for an average individual.

RC: 14.116
Doc: HT17/30

A 1979 study by...a group of University of Heidelberg scientists re-examined the U.S. experiments on which allowable emissions for nuclear facilities were

based, and discovered,...in looking at the protocols of these experiments, that they were doctored from the beginning.

Soil was cooked so there were no microbes present, so the uptake of plants' radionuclides was minimized. And...the radiation was induced just before the plants were harvested, instead of into the soil from the time the plant was a seed, just as an example of the way in which science was acting to obscure the reality of radiation exposure to humans.

The German scientists concluded that the allowable emissions were too high by a factor of 100. So, I keep that in mind in thinking about the expansion of operations at Pantex.

Response:

Discussion of DOE Occupational Radiation Protection standard development can be found in 10 CFR Part 835.

The goals of current DOE radiation protection standards are based on two basic types of radiation induced health effects: stochastic and nonstochastic. Radiation-induced health effects that do not have threshold doses are referred to as "stochastic effects." Examples include cancer and hereditary effects. The objective of the radiation protection standards is to limit the probability of stochastic effects to acceptable levels. Nonstochastic effects can only be manifested if a threshold dose is exceeded; therefore, the objective of the radiation protection standards is to maintain personnel exposure below the threshold doses in order to prevent these effects.

DOE currently accepts the assumption that there is no threshold for stochastic effects. DOE also currently accepts the linear threshold model for stochastic effects. The linear threshold model assumes that any radiation dose increases a person's risk of cancer.

RC: **14.117**
Doc: **HT17/31**

... I noticed a study of the area around Rocky Flats by Dr. Carl Johnson of the Jefferson County Health Department, who correlated plutonium levels in the soil with cancer increases around Rocky Flats. It was a very close correlation, which was corroborated later by the DOE's own studies.

The second article I found worrisome was the contention of the University of Colorado scientist who believes that there is no way you can completely capture fine plutonium particles and prevent them from escaping into the air around plutonium processing facilities.

Given that Panhandle agriculture, the Ogallala aquifer, and the health of many area residents who I'm coming to consider close friends [are] at risk in the event of contamination by plutonium, among other radionuclides that are released in plutonium processing, I would stress that the excess cancers that Dr. Johnson found, which were leukemia, lymph, lung, thyroid, testes, and breast cancers, which paralleled the cancers found in the survivors of the Japanese atom bombs, are of concern.

And would request that no expansion of Pantex operations be considered until thorough health studies, including door-to-door surveys and follow-ups, be conducted to examine the damage that I believe may have already been done to this area by previous emissions.

Response: *See discussion in section 1.3.10 of this volume regarding the planned follow-up study by NIOSH.*

RC: 14.118
Doc: HT17/32

... The track record at Pantex does not give us great confidence that an expansion of an extremely dangerous operation could be handled with any more safety than we've experienced in the past.

Response: *DOE is committed to the safe operation of Pantex Plant, as well as the protection of the public, the environment, and the facility employees. The safety and health environment and impacts at the Pantex Plant are discussed in volume I, section 4.14. In addition, further information on Pantex Plant safety and environmental programs can be found in the Pantex Plant Safety Information Document and Environmental Information Document (Pantex 1996a, Pantex 1996).*

The As Low As Reasonably Achievable (ALARA) program implemented at Pantex Plant minimizes radiation exposure during performance of all radiological operations.

RC: 14.119
Doc: HT17/44

... We were discussing earlier the effect, possibly the health effects on farmers that do farm on the plant site itself, [whether] that has been addressed in this document or not. We would like for it to be.

I know that my husband has done some farming on the plant site. Just the other day he was combining some wheat on the plant site. That stirs up the dust, it disturbs the soil.

Response: *Soil and vegetation sampling of these areas show no levels of pollutants that would be a hazard to farmers.*

RC: 14.120
Doc: HT17/49

There has been considerable concern over the status of how the plant establishes its safety envelope, certain things like safety analysis reports that are being redone at Pantex. What is the status of updating the safety analysis reports so that you establish the safety of work for this plant?

Response: *Safety analysis reports (SARs) for Pantex Plant are being rewritten to DOE Order 5480.23. In accordance with that order, Pantex Plant has submitted a Basis for Interim Operations (BIO). The BIO includes the status of all SARs, a schedule for completion of the remaining SARs, and a summary/status of all Unreviewed Safety Questions. This report also defines the safety envelope, including compliance status. The DOE-approved BIO establishes the authorized safety basis for Pantex Plant. The latest BIO for Pantex Plant is available in the EIS reading rooms in Albuquerque and Amarillo.*

RC: **14.121**
Doc: **HT17/50**

... I think there needs to be a description of unreviewed safety questions, or unresolved.

I don't think it would hurt at all to have a chart listing what they've been in the past year or two, what are [still] pending, where we are on that.

Response:

The Pantex Plant Programmatic Information Document (Pantex 1996b) presents a listing.

RC: **14.122**
Doc: **HT17/51**

What facilities are in compliance, and which ones aren't, with...DOE orders? And if there's been great change in recent history,...describe that change, that the orders were changed,...that [that] caused problems. Give it the context you want, but please give us more of the story to work with.

Response:

The Pantex Plant Programmatic Information Document (Pantex 1996b) presents a listing.

RC: **14.123**
Doc: **HT17/57**

The approach to human health in the draft EIS is flawed. It uses only optimistic scenarios of exposure, statistical methods that obscure potential risks and problems. Evidence used is one-sided, a very theoretical presentation which suggests more exactness in scientific knowledge than is supportable and seems designed to lend credibility where it is not necessarily due. Moreover, the theoretical approach is difficult to [wade] through. It obscures and hides assumptions and it is meaningless to public concerns, because it is removed from everyday life experience.

Response:

The risk assessment and scenario for the EIS examined a wide range of scenarios which included failures in safety systems and emergency responses. For example, scenarios involving fires typically include failures in the fire protection system and emergency fire response crews in their event sequences. Most of the scenarios that are not initiated by external events are initiated by human errors such as dropping, improper forklift handling, or failure to follow a procedure.

Concepts of relative risk, frequency, and consequence may be both difficult to understand and removed from everyday life; however, such a theoretical approach to risk quantification is the only fair and equitable approach available. Prior epidemiological studies of Pantex Plant workers also disclose no excessive incidence of cancer at Pantex Plant. The inference from these studies is that the incremental risk to workers and the public from Pantex Plant operations are very small. Results from the more theoretical approach used in the EIS are consistent with these empirical conclusions.

RC: **14.124**
Doc: **HT17/59**

The data are one-sided. The use of prior studies and data in the draft EIS present only one side of the scientific debate about the effects of low-level ionizing radiation.

The presentation is very lopsided. Studies not cited suggest health effects including leukemia, thyroid cancer, and multiple myeloma have been found in nuclear workers whose cumulative dose for their total working years was between 2.5 and 5 rem. On page 4-205, it is reported that the average annual dose of workers at Pantex is 111 millirem. If we take a worker who is at the plant for 25 years, then 111 millirem times 25 years is a cumulative dose of approximately 2.775 rem. This value is within the range for which health effects were observed in these studies. Moreover, if we take the Pantex control level of 500 millirem per year for most workers, 900...weapons operation workers, we get cumulative doses over a 25-year working life of 12.5 rem and 22.5 rem, respectively. These values are all much higher than the levels at which health effects are observed in these studies.

The agency should reevaluate the risk to workers from low-level radiation exposures using the risk factors reported in these studies.

Response: *See discussion in section 1.3.10 of this volume regarding the radiological risk factors.*

RC: 14.125
Doc: HT17/60

... As the scientific uncertainty highlights, the standards used by EPA, NRC, and DOE are not protective standards. They are politically negotiated standards that allow workers and communities in the vicinity of a nuclear facility to bear a higher cancer risk for the social benefits that are believed to come from the facility.

Response: *See response to comment 14.116.*

RC: 14.126
Doc: HT17/61

The Acquavella study referred to, of 1985, relies on a weak methodological approach and data sources that compares workers to the community at large. The cancer registry data are not a credible source of data for detecting radiation effects in the community surrounding nuclear facilities.

Response: *See discussion in section 1.3.10 of this volume regarding the radiological risk factors.*

RC: 14.127
Doc: HT17/62

The draft EIS relies on inappropriate data to make risk estimates and comparisons in the communities surrounding the Pantex Plant. Again, the most optimistic picture is painted with selective use of evidence and methods. More rigorous studies are needed to more effectively estimate these risks.

Response: *See discussion in section 1.3.10 of this volume regarding the planned follow-up study by NIOSH.*

RC: 14.128
Doc: PC-017/4

What studies have been made on the short-term and the long term health and safety of those of us living near the plant, agricultural workers on and around the plant, and the workers [at] the plant? Have past Pantex workers' health been studied? Have there been follow-up health studies been made on the workers? How were the health and safety studies done? When? What are the results? No

decision of the future of Pantex can be made until answers to these questions are assessed. Answers can only be found after adequate studies have been made.

Response: *See discussion in section 1.3.10 of this volume regarding health effects inclusive of past, present and future health studies.*

RC: **14.129**
Doc: **PC-017/5**

We are told the activities at the plant have no and will not have any effect or at most limited effect on the Pantex workers and on the neighbors and agricultural workers, yet studies have not been made for those conclusions. We are relatively certain that past activities have been a serious threat to both workers and neighbors. The DOE and the contractors seem very reluctant to admit to those health and safety concerns. They appear to get very upset when any instances of health and safety get out. Why? Should not the public be kept informed of such matters? If not, why not?

Response: *Each year, the Pantex Plant publishes a Site Environmental Report. It includes a reporting of all impacts to the environment and the public. The Pantex Plant Safety Information Document (Pantex 1996a), contains a listing of past accidents and events and explanations of their consequences.*

RC: **14.130**
Doc: **PC-017/8**

Most of us cannot afford to spend anywhere near what the DOE can and does to keep from paying claims. [For] example, the John Bell compensation case in which Mr. Bell was made very ill because of uranium toxic fumes while he was drilling a uranium plug from a warhead. The DOE spent hundreds of thousands of dollars to keep from paying about a $85,000 claim.

Response: *See response to comment 14.102.*

RC: **14.131**
Doc: **PC-017/9**

In the event of a disaster that causes damages to our agricultural products and/or land, and/or inability to market our products because of possible contamination, will the DOE pay for those damages at a fair market value in a timely manner? Will they pay willingly without our having to take them to court? Will the DOE pay us for the lose of our top soil and clean the damaged soil?

Response: *See response to comment 14.102.*

RC: **14.132**
Doc: **PC-017/14**

Is there a greater risk to farmers who are plowing and working the soil and harvesting of crops near the site than to the general public? What studies have been done to determine the potential of greater exposure? Should not these studies be done? Is there a danger to our children playing in their [sandboxes] or their swimming pools?

Response: *See response to comment 14.119.*

RC: **14.133**
Doc: **PC-017/15**

Page 4-104 discusses collective dose to surrounding population in a 50-mile radius. Would not [people] living next to the plant, especially those downwind be expected to receive a greater dose than someone who lives in Vega to the

west, up wind, and about 40 miles away? Would not people downwind receive higher doses than those generally up wind? If not, we ask for your proof.

Response: *People downwind of a release would receive a greater dose than those upwind of a release. People closer to the site will receive a greater dose from a release than a person in Vega.*

RC: 14.134
Doc: SG-012/4

Vol. 1, page 5-65, 5.5.2 Resources Discussed in Detail, 5.5.2.1 Human Health, Impacts of Storing 20,000 pits, "The combined worker dose from unloading storage of 20,000 pits at the Manzano WSA would be 283 person-rem distributed over the 30 people directly involved material movement." If there is a collective effective dose of 283 person-rem, which is a sum of a population of 30 workers, then the average effective dose per worker is 9.43 rem. The maximum yearly allowable dose for radiation workers is 5 rem, according to DOE order 5480.11 "Radiation Protection for Occupational Workers" (1992, DOE). The projected radiation dose for these workers is in excess of the yearly allowable dose. The DEIS statement should be clarified and the calculation (inclusive of the population numbers) on person-rem provided.

Response: *The 283 person-rem projected exposure is for the transfer of 20,000 pits over an approximately 10-year time period. It is not, as the commentor suggests, a yearly exposure.*

RC: 14.135
Doc: SG-012/5

The term "person-rem" should be defined in the glossary section.

Response: *This term has been added to Chapter 10.*

RC: 14.136
Doc: SG-012/6

Vol. 1, page 5-65, 5.5.2 Resources Discussed in Detail, 5.5.2.1 Human Health, Impacts of Storing 20,000 Pits, and Impacts of Storing 8,000 Pits. Population doses and risk estimates from accidental releases are based on current populations. Pits are placed in interim storage for 20 years, for instance, and projected population growth is not reflected in the estimated doses (nor is risk) over this time period. Albuquerque has had a high increase in population in the last 20 years.

Response: *It is DOE's policy to evaluate site-wide NEPA documents at least every five years to determine whether the existing EIS remains adequate and whether to prepare a new site-wide EIS or supplement the existing EIS (10 CFR 1021.330).*

RC: 14.137
Doc: SG-012/8

Does the close proximity of the pit storage to weapons presently stored in the Manzano WSA pose an increase in potential nuclear accidents? Why would they not pose a problem?

Response: *Weapons are not stored in the Manzano Weapons Storage Area.*

RC: 14.138
Doc: FG-003/13

EPA believes that the FEIS should provide more documentation as to potential groundwater impacts should an earthquake harm the plutonium pit facility or

render it inaccessible. In particular, we are concerned that DOE may have concluded that leaving the plutonium pits inside the P-Tunnel (should it collapse) may have less environmental impact than attempting to retrieve the pits from inside a collapsed P-Tunnel (due to wording in the Pantex DEIS that impacts to workers and the public from radionuclide releases would be "negligible" because the plutonium containers would be sealed inside the collapse tunnel). Additionally, potential NTS impacts to groundwater, such a scenario, were not discussed in the Pantex DEIS. We recommend that the FEIS provide more information of the depth to groundwater in the Device Assembly Facility and P-Tunnel areas and whether keeping plutonium pits in a collapsed tunnel may ultimately cause a migration of radioactivity to groundwater.

Response: *The analyses of this EIS focuses on immediate or near term effects on the environment and do not address potential impacts over hundreds or thousands of years. In this specific example, DOE has not concluded that, in the event of a tunnel collapse, pits should be left entombed rather than retrieved.*

DOE would evaluate the circumstances of any accident after it occurred to formulate the appropriate response. Since the response to each accident is highly dependent upon the actual accident that occurs and the associated immediate risks, it is not appropriate to develop detailed accident specific plans in advance. General responses to emergency conditions are contained in the Nevada Test Site (NTS) emergency preparedness plans. Should the site be selected for interim storage, those plans would be updated to include the storage activities. A search is ongoing for more data on depth to groundwater at both sites.

RC: 14.139
Doc: FG-003/16

The Pantex Summary (Table S-2) identifies the environmental impacts associated with the alternative pit storage relocation sites. For NTS, the range of potential accident scenarios are limited to two: puncture of a pit due to a forklift accident and an aircraft crash. Potential seismic hazards at NTS are not recognized in Table S-2, as they were in Volume I. We, therefore, recommend that Table S-2 be modified to recognize NTS seismic hazards. Table S-2 should also reflect seismic conditions that may exist at the proposed interim pit sites in South Carolina, New Mexico and Washington State. Modifications to Table S-2 should be incorporated into the FEIS.

Response: *As discussed in volume I, section 5.2.2.1, the human health risk from accidents at the NTS is dominated by handling accidents. The contribution to risk from seismic events is negligible. As described in volume I, section 5.3.2.1, the relative risk from earthquakes at Savannah River Site is over two orders of magnitude below the risk from a forklift accident. Volume I, section 5.4.2.1 describes the relative risk from earthquakes at Hanford Site to be negligible. As described in volume I, section 5.5.2.1, radioactive release from a Manzano storage facility would not result from an earthquake as long as the rock overburden remained intact and the doors leading to the storage facility remained closed. As identified in volume I, Summary Table S-2, the risk at all four alternative sites is dominated by a forklift accident.*

RC: 14.140
Doc: HT16/11

It just occurred to me just as I was listening to you talk about whether or not there would be less exposure if the pits were left on site rather than transporting them, and I wondered if the repackaging were not part of the long-term storage in that option if they were to be left on site. And,...if so, if repackaging is a part of the action, that would be part of the analysis also? Because it would provide the same worker exposure as taking it out of the bunkers and moving it to a new location.

Response:

Pits are planned to be repackaged into AT–400A containers no matter which alternative is chosen. The onsite transfers required for this activity are discussed in volume I, section 4.12. Onsite movements of pits differ significantly from offsite pit shipments. Because of the limited speeds for onsite transfers, the restraint procedure required for pit containers is less complex and less time consuming than the restraint procedure for offsite shipments. Because of the additional complexity of the restraint procedure, dose estimates for offsite transfers are greater than the estimates for onsite transfers.

RC: 14.141
Doc: HT16/12

... If Pantex is chosen for long-term storage, then the workers would actually be exposed to the same activity, bringing them [the pits] out of the bunkers as they would if they were taken out and moved to another location.

Response:

Onsite movements of pits differ significantly from offsite pit shipments. Because of the limited speeds for onsite transfers, the restraint procedure required for pit containers is less complex and less time consuming than the restraint procedure for offsite shipments. Because of the additional complexity of the restraint procedure, dose estimates for offsite transfers are greater than the estimates for onsite transfers.

RC: 14.142
Doc: PC-031/3

There is certainly no community health study upon which DOE can even base the assertions they make. The public, Pantex workers, and former workers deserve adequate health studies of the cumulative impact and adverse health affects resulting from combined exposures to radiological substances, hazardous chemicals, toxic releases, and daily emissions. DOE can not expect to be credible and has no basis to assert "no significant impact" until proper studies have been done.

Response:

Past, present, and future health studies involving Pantex Plant are discussed in volume I, section 4.14.1 of this document. To date, these studies indicate that there have been no significant excess cancer mortality incidences in the Pantex Plant area related to Pantex Plant operations. There have been no verifiable indicators as to any short- or long-term health impacts at the Pantex Plant Site. Public exposure to radiological effluents has conventionally been of extremely small quantity due to DOE safeguards and the nature of the missions conducted at the facility.

RC: 14.143
Doc: PC-025/71

Page 4-205. Isn't it more accurate that the majority of Pantex Plant workers receive no detectable (or observed) radiation exposures?

Response: *The commentor is correct. There is a lower limit below which radiation exposures are nondetectable from background radiation.*

RC: **14.144**
Doc: **PC-025/72**

Section 4-14. What's the big deal with the analysis? The death rate for us all is 100 percent. In the event of a serious accident resulting in deaths, shortened life spans, loss of the Ogallala [aquifer], loss of agriculture, or other damages, what are DOE's commitments to citizens of Amarillo (and others) for the damages? Is the answer "Nothing, it was an act of god, war, the contractor was at fault?" I am serious when I ask this question—What are DOE and its contractors committed to should something go wrong? The people in Amarillo should know as well as the rest of us. Please don't answer the question with safety policy BS.... I want the answer to make the lawyers hurt a little bit from sticking their collective necks out. One hundred percent restitution? What the country can [bear]? What the lawyers can squeeze out? What the politicians can get? We the People will do what is right, just, and in the finest tradition of America? What is the insurance?

Response: *DOE would respond to immediate emergency conditions in accordance with the Pantex Plant Site emergency preparedness plans. The Department would evaluate the circumstances of any accident after it occurred to formulate the appropriate response. Since the response to each accident is highly dependent upon the actual accident that occurs and the associated immediate risks, it is not appropriate to develop detailed accident specific plans in advance. Long-term commitments in terms of clean-up levels or possible compensation would be in accordance with applicable laws, regulations, and direction by the President and Congress.*

RC: **14.145**
Doc: **PC-025/73**

Table 4.14.2.1-2. Frequency of Scenario uses carefully chosen words like Anticipated, Unlikely, et cetera. Please include the mathematical representation in the table...for the purpose of improved clarity. Please explain where the risk of a tornado is in table 4.14.2.1-2. Where is a [lightning] strike event? It is a well known fact that one is more likely to be hit by [lightning] than winning the lottery. Isn't a release of mercury likely? What about an accidental shooting? What is the risk of an employee being killed by an automobile onsite? Where is electrocution of an employee or a construction worker? What about confined space entry problem?

Response: *Natural phenomena events include weather-related occurrences (e.g., tornadoes and severe winds) and earthquakes. They are accounted for in the accident analysis by being included as initiating events that results in a failure and release (e.g., tritium reservoir failure). In volume I, section 4.14, Table 4.14.2.1-2, natural phenomena are identified as possible initiators in Scenarios 3, 4, 7, 8, and 10. The risk from tornadoes and lightening strikes is dominated by the risk from earthquakes for all sites. The other events mentioned in the comment (mercury release, accidental shooting, automobile casualty, electrocution, and confined space entry) are not risk dominant.*

RC: 14.146
Doc: PC-025/74

Page 4-223. Should consider the Annual Risk to be calculated for the Texas Panhandle, I believe that is more representative of the Pantex area. Also consider showing the Annual Risks for Oklahoma, New Mexico, and Kansas.

Response:

The annual fatal cancer risk in Potter, Randall, and Carson Counties surrounding Pantex Plant is 1.7 x 10^{-3} LCF/year. Nationwide, the cancer risk is slightly higher. It is more appropriate to compare the Pantex Plant human health impacts with the annual fatal cancer risk in the vicinity of Pantex Plant since that is the area assessed in the EIS.

RC: 14.147
Doc: PC-025/75

In Scenario 7 on Page 4-231, how many reservoirs (or what percentage) fail during the scenario? Does the hydrogen released explode (like the Valujet oxygen problem) and propagate? What is the inventory of sympathetic explosive, flammable, and combustible material in the adjacent buildings to the vault. Any weapons in the adjacent buildings that could result in a Scenario 9 event? What about stored/moving to being stored pits that would be near the vault and result in a Scenario 8 event? Would the damaged reservoirs react like missiles? Would this result in further release from other reservoirs? If the vault is breached, are others killed due to the hydrogen gas fire and reservoir missiles? How many people would be killed by the concussion blast of the aircraft impact and flammable material explosions resulting after the crash? How many people are likely to be in the area? What documentation is available to prove all the tritium is not released in a massive explosion? The estimated number of tritium container breaches is consistent with plutonium container breaches resulting from an aircraft crash? Are the reservoirs designed stronger than the [plutonium] cans? In the event of a total release of tritium in the vault, a Scenario 8 event, and a Scenario 9 event, what is the probability and the consequence (in curies and fatal cancer probability)?

Response:

In Scenario 7, all of the reservoirs in the building are assumed to fail due to overheating. The hydrogen (tritium) release is oxidized in the flames but does not explode. The adjacent building 12-42 contains flammable and combustible materials which are ignited. These materials are the heat source that cause the reservoirs to fail. Due to the small size of the reservoirs, they would not behave like missiles.

During any aircraft crash, the number of people killed in the impact area would depend on the type of aircraft, time of impact, and typical occupancy of the structure being impacted. The assessment did not quantify the number of potential fatalities but only recognizes that fatalities would occur if such an event were to happen.

The tritium reservoirs are robust but are not designed to the same standards as the AT–400A plutonium storage container. The risk associated with an aircraft impact into 12-42 South Vault is bounded by the risk of Scenario 7 because the frequency of Scenario 7 is greater than the frequency of an aircraft impact into 12-42 South Vault.

RC: 14.148
Doc: PC-025/76

What is the concussion blast resulting from impact? What is the kill zone from the impact and the resulting fire? What is the number of plant causalities?

Response: *See response to comment 14.147.*

RC: 14.149
Doc: PC-025/77

The eleven scenario analyses are flawed since [they do] not allow for multiple scenarios resulting from one initial event. As an example, many aircraft accidents involve two planes; however, this analysis looks at only one impact location. Further, a plane could lose an engine, as it breaks apart, into a weapon magazine while the remainder slams into a pit storage facility. Aircraft impact into tritium vault resulting in damage to pit and or weapon being moved and in near vicinity of ground zero.

Response: *In the Draft DOE Standard for Aircraft Crash Analysis (DOE 1996g), the probability density function, used for computing the probability that an aircraft will crash, is based on national averages of all types of aircraft crashes including incidences where two aircraft were involved. Thus, this aspect has been considered in the methodology. In terms of the debris from one crashing aircraft striking multiple facilities, the analysis includes aircraft dimensions (wingspans), building dimensions (length, width, and height) and locations, and geometric factors which allow an aircraft to impact multiple facilities. The engines possess the density and structural integrity to cause significant building damage and were modeled as the primary penetrators for the facilities of interest. The rest of the aircraft is not as capable of causing building damage to the majority of the Pantex Plant facilities included in the analysis.*

RC: 14.150
Doc: PC-025/95

Accident analysis is flawed because severe weather is not analyzed.

Response: *As discussed in volume I, section 4.14.2.1, severe weather is included in the evaluation of natural phenomena event initiators.*

RC: 14.151
Doc: SG-003/1

In Section 4.14.2.1 (page 4-219...) and in Figure 4.14.2.1-1 (page 2-224), a classic error is made in explaining potential latent cancer fatalities. The error is to use risk estimates for exposures to large populations and to assume that applying that risk estimate to a specific group of workers allows for definitive conclusions about that group. In this example, the figure provides the correct explanation. The text is misleading and might cause confusion in the community by indicating that the 330 plant workers would suffer a certain number of cancers.

Response: *Further clarification of the interpretation of risks has been provided in section 1.3.10 of this volume.*

RC: 14.152
Doc: SG-003/2

Health effects are important to understand. The section on continued operations talks about health effects for workers. A statement is made that workers would experience additional cancers. In the figure, a different explanation is used.

The statement in the figure is that an average number of cancers could occur if many groups of workers were exposed. The final statement was that the most likely outcome is zero cancers. What is the correct explanation?

Response: *Further clarification of the interpretation of risks has been provided in section 1.3.10 of this volume.*

RC: 14.153
Doc: SG-003/5

Appendix D, Human Health, does very little to explain how the impact to human health is derived or calculated. This appendix is more of an explanation of the risk assessment methodology than human health.

Response: *Duplicate comment. See response to comment 14.087.*

RC: 14.154
Doc: SG-003/6

The U.S. Department of Energy's Office of Emergency Management (NN 60) and the Office of Emergency Response (DP 23) fund the DOE's Atmospheric Release Advisory Capability (ARAC) which is housed at the Lawrence Livermore National Laboratory. ARAC's computer models, which have world-wide acceptance, have been called into service in many real-time responses to both real and potential accidental releases of radioactive material. The Three-Mile Island nuclear power plant accident in 1978, the 1986 Chernobyl disaster in the former Soviet Union, and the U.S. Air Force Titan II missile accident in Damascus, Arkansas are just a few examples. In addition, the ARAC models have been utilized in every nuclear weapons accident exercise since NUWAX 79. Pantex Plant is an "ARAC Site" and is linked to the ARAC center in Livermore via a computer-to-computer connection. ARAC operators are familiar with Pantex operations and can respond in a matter of a few minutes with a computer model graphic output showing the trajectory of the plume of contamination in the event of an accident. When, and if, a real accident occurred at Pantex it would be the ARAC models and the ARAC capability that DOE would call upon to response in real time. Since ARAC is funded by DOE Headquarters and is ready to respond to a radiological accident at Pantex, why did DOE choose to use a model like ERAD to assess consequences for this EIS?

Response: *See response to comment 14.085.*

RC: 14.155
Doc: SG-003/8

Enhancement of public safety, protection of public health and the prevention of environmental degradation are crucial factors for assessing Pantex Plant mission accomplishment. Texans must be assured that these issues will receive sufficient attention prior to any decisions regarding plant operations. Thorough and complete assessment of consequence analyses to a satisfactory confidence level is required to support the decisions under consideration.

Response: *See response to comment 14.118.*

RC: 14.156
Doc: SG-003/9

In the Summary, page S-9, right column, it is stated that 8.1 E-6 Latent Cancer Fatalities (LCF) per year would result from and aircraft crash into a facility with a weapons high explosive detonation. Scenario 3, described in Volume I, page 4-229 conflicts with this statement, indicating that the increased risk is 1.8 E-11

latent fatal cancers per year. Table 3.14.2.1-4 in Volume I page 4-228, Excess Cancer Fatality Risk for Scenario 3 lists 5.1 E-6. These figures need to be verified, reconciled, and, if necessary, corrected.

Response: *The accident figures have been revised and verified.*

RC: 14.157
Doc: SG-003/10

In the Summary, page S-10, left column, it states that from an aircraft crash into Zone 4 facilities, 1.5 E-6 LCF per/yr for 20,000 pits and 9.8 E-7 LCF per yr for 8,000 pits would result. Table 4.14.2.1-4, Volume 1, page 4.228, Scenario 9 lists 6.0 E-8 excess cancer fatality risk. For Zone 4 weapons storage, 6.8 E-7 LCF/yr is given on page S-10. Scenario 3 in Table 4.14.2.1-4 lists 5.1 E-6 excess cancer fatality risk. Page 4-250 lists the increase in fatal cancer risk as approximately 2.2 E-11 increase in fatal cancer risk (compared to a baseline risk of 1.5 E-3 per yr). These figures need to be verified, reconciled, and, if necessary, corrected.

Response: *These figures have been verified and have been corrected in the EIS. Scenario 9 risk estimates are dominated by a seismic event effecting Zone 12 rather than by an aircraft crash into Zone 4. The risk estimates for Scenario 3 include aircraft crashes into both Zone 4 and Zone 12 buildings. The fatal cancer risk referred to on page 4-250 of the Draft EIS is for an average individual which is obtained by dividing the risk to the entire population within the region of influence (ROI) by the number of people within the ROI.*

RC: 14.158
Doc: SG-003/13

In the Summary, Table S-1, page S-20, gives a 4 E-12 increase in fatal cancer risk, whereas in the same table, on page S-26 a duplicate entry gives 3 E-12. Volume I, page 4-229, Scenario 3 lists an increased risk of 1.8 E-11 LCF per year. Table 4.14.2.1-4, Scenario 3 gives 5.1 Excess Cancer Fatality Risk. Volume II page 4-250, right column lists 2.2 E-11 increase in fatal cancer risk (per yr). These figures need to be verified, reconciled, and, if necessary, corrected.

Response: *The entry in volume I, Summary, Table S-2 on page S-26 of the Draft EIS is not a duplicate of the entry in Table S-1 on page S-20. The entry in volume I, Summary, Table S-2 of the final EIS addresses the impact from pit storage only. The entry in Table S-1 was in error and has been corrected. The accident excess cancer fatality risks have been verified.*

RC: 14.159
Doc: SG-003/14

In the Summary, Table S-2, page S-25 right column, sixth line, between "in" and "0.04", insert "0.11 LCF and".

Response: *Agreed. The summary has been amended.*

RC: 14.160
Doc: SG-003/15

In Volume I, page 4-155, right column, the projected population in the ROI in 2055 ranges between 214,353 and 246,464. Figure 4.14.2.1-1, page 4.223 gives the ROI population of 267,107 for risk estimates. Volume II, page D-28, left column, gives the population in the ROI as 267,107 for fatal cancer estimates.

An explanation of the different populations is necessary, or one of the ROI needs to be re-named.

Response: *The region of influence (ROI) for the socioeconomic analysis is defined on page 4-155 as the four counties surrounding Pantex Plant. The ROI for the human health analysis is the offsite population within an 80-kilometer (50-mile) radius of Pantex Plant as depicted in volume I, section 4.14, Figure 4.14.1–1. The text calling out Figure 4.14.1-1 in volume I has been modified by adding the following sentence so that the ROI for the human health analysis is more clearly defined: "This circular area surrounding Pantex Plant is the Region of Influence (ROI) for the human health analysis."*

RC: 14.161
Doc: SG-003/16

In Volume I, page 4-215, right column, the statement concerning the Pantex Epidemiologic Surveillance 1994 Annual Report should be updated to indicate that the report has been released. (The 1995 Annual Report may also be available by the time the Final Report is issued.)

Response: *Agreed. The EIS reflects the release of the 1994 Annual Report.*

RC: 14.162
Doc: SG-003/17

In Volume I, page 4-223, Figure 4.14.2.1-l, fifth line from bottom, incorrectly refers to Table 4.14.2.1-3. The correct reference is Table 4.2.1.1-4. A similar error was noted in Volume II, Appendix E, page E-23, left column at the end of paragraph E.3.1.6.

Response: *Agreed. These corrections have been made in the EIS.*

RC: 14.163
Doc: SG-003/39

... The risk from ingestion of hazardous substances should also be included when calculating risk to onsite workers. The EIS only accounts for risk from inhalation.

Response: *The risk from ingestion of hazardous substances was not included because the risk to onsite workers is dominated by the inhalation pathway.*

RC: 14.164
Doc: HT17/74

Without better data from these types of analyses, large uncertainties remain embedded in the draft EIS—and these are not mentioned or addressed. These are different kinds of uncertainties than what I mentioned in #2 above. Those were scientific uncertainties. Now I am talking about uncertainties in the data. A third kind of [uncertainty occurs] in measurements (because of lack of precision in instrumentation).

Response: *A discussion of uncertainties and the method of incorporating uncertainties in the accident risk assessment is provided in volume II, section D.6.*

RC: 14.165
Doc: HT17/75

There are also inter-individual sensitivity issues to the public. For example, studies (not reported in the draft EIS) have found that prenatal x-rays, averaging between 20 mr [and] 400 mr have been found to double the risk of childhood cancer (Stewart and McMahon). Other studies have found effects from low-level radiation exposure (e.g., Kerber 1993). By the way, on page D-4 the

Agency states that "since nondestructive examination using x-rays and gamma rays is a well established industrial practice, this contribution to worker risk is negligible." It may be a well established industrial practice, but there are newer studies that suggest the risks of low-level exposure from x-rays may not be so benign—they clearly are not safe because, again, there is no safe level of radiation exposure.

Response: *The risk factors used in the EIS to estimate the health impacts of radiation exposure are obtained from the 1990 report of the National Academy of Science's Committee on the Biological Effects of Ionizing Radiation, usually referred to as the BEIR V report (NAP 1990). The studies of Drs. Alice Stewart, Brian MacMahon, and Richard Kerber were included in their assessment of the health impacts. While the risks associated with nondestructive examination are negligible, nevertheless the worker exposure from this source is accounted for in the overall worker radiation exposure.*

RC: **14.166**
Doc: **HT17/76**

The draft EIS uses BEIR III and BEIR V reports (pages D-1 and D-2). The risk factors derived from these reports are based on the hypothetical man. Thus, they do not adequately account for inter-individual sensitivity to exposures of radiation. There is no analysis of inter-individual sensitivity in the draft EIS, except the insufficient claim that conservative numbers and scenarios are used. This is not an analysis of inter-individual sensitivity. It is a way of obscuring uncertainties—again. The DOE should recalculate risk factors using a more sophisticated analysis of inter-individual sensitivity among workers and men, women, children—it is also an issue for environmental justice. For example, the composition of the workforce at Pantex is 20 percent minority (see below for more comments about environmental justice).

Response: *The risk factors presented in the BEIR–V report have been endorsed by both national and international radiation protection organizations as the best description that can be provided at this time of the risk of cancer resulting from a specified dose of ionizing radiation. These organizations include the National Committee on Radiation Protection and Measurements and the International Commission on Radiological Protection. The risk factors utilized in the EIS have also been endorsed and adapted by other federal regulatory agencies including the Environmental Protection Agency and the Nuclear Regulatory Commission. Details of the uncertainties in these risk factors, including inter-individual sensitivity is available in the following report: BEIR–V National Research Council, "Health Effects of Exposure to Low Levels of Radiation," National Academy Press, Washington, DC, 1990 (NAP1990).*

RC: **14.167**
Doc: **HT17/77**

The accident scenarios analysis presents the most optimistic view possible. All administrative control and safety programs are assumed to function properly at all times (e.g., air locks). Numerous examples of malfunctioning or improperly used safety and emergency response equipment and procedures, malfunctioning emergency back-up systems, human errors, et cetera have led to accidents in a variety of industries—some of them highly regulated, such as the nuclear power

industry, aircraft carriers, offshore oil drilling facilities, airlines, space travel (space shuttle), et cetera. In many cases, the failures were of the type that were anticipated but they occurred in sequences or combinations that were not, or the failure rates turned out to be higher than anticipated. Many of the failures can be associated with "human reliability" issues (Tuler et al 1988, Tuler et al 1991, Tuler et al 1992, Kasperson et al 1995), and many...more.

Response: *See response to comment 14.123.*

RC: 14.168
Doc: HT17/78

In the draft EIS there is no way to know how much attention was given to human error/reliability analysis in the evaluation of accident rates or consequences. As I noted above, the document assumes that all emergency response and administrative safety programs/control function at 100 percent at all times. Can the Agency provide data to support this claim? Do they have data about the rates of incidents—human errors in different tasks that are relevant to this study? What is their definition of "recordable" (i.e., reportable) incidents? What is included in Table 4.14.1.4-1? What are the data for events which did not result in a lost worker day?

Response: *Human error/reliability was evaluated and is often the initiator for many of the scenarios addressed in the EIS. The document does not assume that all emergency response and safety systems function at 100 percent at all times. Pantex-specific data, nuclear industry data, and general industrial data were used to obtain human error rates for various tasks. Pantex Plant reports occupational injuries and illnesses in accordance with Title 29 CFR, Part 1904. As indicated in volume I, section 4.14, Table 4.14.1.4–1, not all recordable cases resulted in lost workdays.*

RC: 14.169
Doc: HT17/79

The Agency should describe in detail its safety and emergency response plans and training programs for onsite employees and for offsite personnel (including those in the transportation system). Have any analyses/evaluations been conducted on the reliability and effectiveness of response? Can they supply data about the failure rates associated with the safety and emergency response elements (mechanical and human)?

Response: *The safety and emergency response plans and training programs for onsite employees and for offsite personnel (including those in the transportation system) are voluminous, and inappropriate for verbatim inclusion in the EIS. Moreover, the conservative accident consequence assessments in the EIS ignore worker and public evacuation. Hence, details pertaining to safety and emergency response plans and training programs are not germane to the EIS human health evaluations. Failure rates associated with the safety and emergency response elements (mechanical and human) are used as the basis for the accident risk assessment in the EIS.*

RC: 14.170
Doc: HT17/80

Has the DOE completed task analyses of the high risk tasks; e.g., assembly and disassembly of pits and explosive components?

Response: *Detailed task analyses are completed on the assembly and disassembly of each weapon system. Pantex-specific data, nuclear industry data, and general industrial data were used to obtain human error rates for various tasks performed at Pantex Plant.*

RC: 14.171
Doc: HT17/81

Generally, how has the DOE studied and evaluated human error in the tasks done at Pantex?

Response: *See response to comment 14.170.*

RC: 14.172
Doc: HT17/82

In addition, the agency uses a baseline "activity level" of 2,000 assemblies, disassemblies, testings, et cetera per year. They say that the mix does not matter when calculating impacts—which I presume means risks from exposure from either incident free exposure or accident related exposure (page 3-2). There must be a failure rate in these tasks. It might be small but it is not zero. They may be initiating events for accidental exposures, or higher than normal "incident free" exposures. My question is whether there is any reason to believe that failure rates (human errors) in these tasks may be different? Is it "harder" to take a weapon apart than to put it together? I think of a bike or car, where bolts are stripped, pieces stick together, get old, et cetera. Can this happen? The mix of "activities" will probably change as dismantlement occurs. Does the Agency have disaggregated failure rate data for the different "activities" included in the operations done at Pantex? Produce the analysis showing that there are no differences in the failure rates associated with the different activities?

Response: *The mix of weapons operations refers to the relative portions of weapon assemblies and disassemblies. The risk from exposure is different between incident-free exposure and accident-related exposure.*

There are differences between assembly and disassembly. Failure rates for the specific activities involved in the assembly and disassembly of particular weapon systems are classified. Bounding failure rates for the assembly/ disassembly process were obtained from Pantex Plant safety documents.

RC: 14.173
Doc: HT17/83

Finally, I began this part by saying that the accident scenarios are all optimistic scenarios in the sense that no (or no significant) exposures result. The Agency should go through the exercise and show us what might be the effects of accidents that are not controlled perfectly—what might be exposure pathways, exposure levels, and health effects of such a scenario? Even if the possibility is small, we would like to see what the consequences are.

Response: *See response to comment 14.123.*

RC: 14.174
Doc: HT17/84

As you say, risk is the product of probability of occurrence and magnitude of consequences. What if worker exposure occurred because contamination did escape from air locks?

Response: *Consequences to involved and uninvolved workers are provided in volume I, section 4.14.*

RC: 14.175
Doc: HT17/85

What accidents have occurred at the plant? As shown in Table 4.14.1.4-1, what were these accidents? Can the DOE provide us with descriptions and any results of post-accident evaluations (including the methods of evaluation)? What worked well in containing them, and what did not? In other words, what features of the accident were not anticipated to occur together or with high frequency?

Response: *The Pantex Plant Safety Information Document (Pantex 1996a) provides additional information on the accidents, incidents and off-normal or unusual occurrences at Pantex Plant. This information provides the basis for Pantex-specific accident and failure rates.*

RC: 14.176
Doc: HT17/86

There is no system of community monitoring for contamination offsite? There is an implicit assumption that releases will only occur in controlled areas [or] that detection devices will observe every possible release. This does not seem to be a valid assumption.

Response: *Onsite monitors are placed to detect contaminates before offsite impacts occur. Soil sampling is ongoing to detect historical contamination.*

RC: 14.177
Doc: HT17/87

There is no analysis (as far as I remember right now) of synergistic effects among radiation exposures and chemical exposures and among chemical exposures with different types of contaminants. The DOE should deal with this issue in the EIS, citing and evaluating studies that address synergistic effects of chemical exposures of different types. What analysis have they done to justify a claim that this is not a significant issue?

Response: *See discussion in section 1.3.10 of this volume regarding chemical and radiological synergism.*

RC: 14.178
Doc: HT17/88

The DOE only addresses inhalation exposure. But this is a bit confusing. "Inhalation is the only pathway accounted for in the assessment of chemical and radiological AIRBORNE hazards from normal operations" (pg. 4-205). Does this mean that there are exposure pathways of non-airborne hazards? For example, through groundwater contamination? Are these included in the analysis anywhere? Likewise, are there other pathways in accidents (non-normal operations)? Are these included in the accident analyses? How? What data do you have to support the claim that airborne hazards and inhalation exposure is the only significant pathway?

Response: *Additional details on long-term pathway issues have been added to volume I, section 4.14.1.*

RC: 14.179
Doc: CO-005/6

The entire approach to human health in the draft EIS is flawed. We are being asked to comment on a document which seems to be driven by the goal of reassuring the public that there are no health risks associated with the Pantex Plant. It uses only optimistic scenarios of exposure, statistical methods that obscure potential risks and problems, evidence used is one-sided, a very theoretical presentation which suggests more exactness in scientific knowledge than is supportable, and seems designed to lend credibility where it is not necessarily due.

Response: *See response to comment 14.123.*

RC: 14.180
Doc: CO-005/7

Moreover, the theoretical approach is difficult to wade through—it obscures and hides assumptions and it is meaningless to public concerns because it is removed from everyday life experiences (e.g., pg. D-2, brief attempt to explain individual risk in terms of latent cancer fatalities).

Response: *See discussion in section 1.3.10 of this volume regarding radiological risk factors.*

RC: 14.181
Doc: CO-005/8

The data are one-sided. The use of prior studies and data in the draft EIS present only one side of a scientific debate about the effects of low-level ionizing radiation. The [presentation is] very lopsided. Studies not cited suggest that health effects, including leukemia, thyroid cancer, and multiple myeloma, have been found in nuclear workers whose cumulative dose for their total working years was between 2.5 [and] 5 rem (Geiger et al 1992; Gilbert 1994; Kendall 1992; Kneale 1993; Wing 1991).

Response: *See discussion in section 1.3.10 of this volume regarding radiological risk factors.*

RC: 14.182
Doc: CO-005/9

On page 4-205 it is reported that the average ANNUAL dose to workers at Pantax is 111 mrem. If we take a worker who is at the plant for 25 years, then 111 mrem x 25 years = a cumulative dose of approximately 2.8 (2.775) rem. This value is within the range for which health effects were observed in these studies. Moreover, if we take the Pantex control level of 500 mrem/year for most workers and 900 mrem/year of weapons operation workers we get cumulative doses over a 25-year working life of 12.5 rem and 22.5 rem, respectively. These values are all much higher than the levels at which health effects were observed in these studies.

Response: *See discussion in section 1.3.10 of this volume regarding radiological risk factors.*

RC: 14.183
Doc: CO-005/11

Moreover, as the scientific uncertainty highlights, the standards used by EPA, NRC, and DOE are not protective standards. They are politically negotiated standards that allow workers and communities in the vicinity of a nuclear facility to bear a higher cancer risk for the social benefits that are believed to

come from the facility. These standards should not be used to suggest that there are safe doses of radiation—there are NO safe doses of radiation. This is a commonly agreed point at this time in the scientific community.

Response: *See response to comment 14.116.*

RC: 14.184
Doc: CO-005/12

The Aquavella 1985 Study relies on a weak methodological approach and data sources (e.g., it compares workers to community at large). The critiques of this study are discussed in more detail in Dead Reckoning by Geiger et al 1992.

Response: *See discussion in section 1.3.10 of this volume.*

RC: 14.185
Doc: CO-005/13

More about one-sided data. Cancer registry data are not a credible source of data for detecting radiation effects in communities surrounding nuclear facilities (Sage 1994). This is a study that was done by Michael Sage, Director of CDC/ATSDR. Cancer registry data in Texas are discussed in the draft EIS on page 4-215.

Response: *Cancer risk data for the communities surrounding Pantex Plant were used to provide a relative risk comparison between the cancer risks posed by operations at Pantex Plant and the cancer risks from other causes. The effects of radiation exposure are modeled on national and international recommendations.*

RC: 14.186
Doc: CO-005/14

The draft EIS relies on inappropriate data to make risk estimates and comparisons in the communities surrounding the Pantex plant. Again, the most optimistic evidence and methods. More rigorous studies are needed to more effectively estimate risks—better exposure assessments, assessment of historical releases, and exposure pathways.

Response: *See response to comment 14.185.*

RC: 14.187
Doc: CO-005/15

The draft EIS uses BEIR III and BEIR V reports (page D-1 - D-2). The risk factors derived from these reports are based on the hypothetical man. Thus, they do not adequately account for inter-individual sensitivity to exposures of radiation. There is no analysis of inter-individual senstivity in the draft EIS, except the insufficient claim that conservative numbers and scenarios are used. This is not an analysis of inter-individual sensitivity. It is a way of obscuring uncertainties--again. I would direct the Agency to a growing body of research literature on ways to address inter-individual sensitivity. The agency should recalculate risk factors using a more sophisticated analysis of inter-individual sensitivity. This is not just necessary for inter-individual sensitivity among workers and men, women, children--it is also an issue for environmental justice. For example, the composition of the workforce at Pantax is 20% minority.

Response: *See response to comment 14.166.*

RC: 14.188
Doc: CO-005/16

Describe in detail the safety and emergency response plans and training programs for onsite employees and for offsite personnel (including those in the

transportation system). What analyses/evaluations [have] been conducted on the reliabilty and effectiveness of response? Can DOE supply data about the failure rates associated with the safety and emergency response elements (mechanical and human)?

Response: *See response to comment 14.169.*

RC: 14.189
Doc: CO-005/17

Have you completed task analyses of the high risk tasks; e.g., assembly and dissasembly of pits and explosive components? Generally, how has DOE studied and evaluated human error in the tasks done at Pantex?

Response: *See response to comment 14.170.*

RC: 14.190
Doc: CO-005/18

The accident scenarios are all optimistic scenarios in the sense that no (or no significant) exposures result. Go through the exercise and show us what might be the effects of accidents that are not controlled perfectly—what might be exposure pathways, exposure levels, and health effects of such a scenario? Even if the possibility is small, we would like to see what the consequences are. In your words risk is the product of probability of occurrence and magnitude of consequences. What if worker exposure occurred because contamination did escape from air locks? What accidents have occurred at the plant? What were these accidents as shown in Table 4.14.1.4-1? Provide us with descriptions and any results of post-accident evaluations (including the methods of evaluation). What worked well in containing them, and what did not? In other words, what features of the accident were not anticipated to occur together or with high frequency?

Response: *Duplicate comment. See response to comment 14.167.*

RC: 14.191
Doc: CO-005/19

There is no analysis of synergistic effects among radiation exposures and chemical exposures and among chemical exposures with different types of contaminants. We ask that this issue be included in the EIS, citing and evaluating studies that address synergistic effects of chemical exposures of different types. What analysis have been done to justify a claim that this is not a significant issue?

Response: *See discussion in section 1.3.10 of this volume regarding chemical and radiological synergism.*

RC: 14.192
Doc: CO-005/20

The agency only addresses inhalation exposure. But this is a bit confusing. "inhalation is the only pathway acounted for in the assessment of chemical and radiological AIRBORNE hazards from normal operations" (page 4-205). Does this mean that there are exposure pathways of non-airborne hazards? For example, through groundwater contamination? Are these included in the analysis anywhere? Likewise, are there other pathways in accidents (non-normal operations)? Are these included in the accident analyses? How? Provide the data to support the claim that airborne hazards and inhalation exposure is the only significant pathway.

Response: *Details on alternate pathways have been added to volume I, section 4.14.1.*

RC: 14.193
Doc: PC-025/20

Also wetlands should be identified for the same reason. Like children and the elderly, aren't wetlands sensitive areas requiring analysis? Since Pantex playas are points of recharge to groundwater, under an accident scenario, would not 1,000 playas in the ROI pose a significant pathway to the groundwater? If an accident occurred, what is the maximum amount of plutonium, risk to the public, and other impacts to the groundwater from the playa pathway? What is the impact if all groundwater in the ROI becomes contaminated with trace amounts of plutonium? Where are the nearest dairy cows? Should that be discussed due to high risk pathway to small children?

Response: *Additional detail on alternative pathways has been added to volume I, section 4.14 of this document.*

3.15 Aircraft Accidents

RC: 15.001
Doc: HT05/6

... On the airplane accident scenario, was that scenario based on the flight paths now? Or did you take into effect that the flight paths could be changing when they get a new radar system out there at the Amarillo airport?

Will that show up in the final analysis, the final draft?

Response:

See discussion in section 1.3.11 of this volume.

RC: 15.002
Doc: HT05/7

I've heard that Delta [Airlines] no longer flies into Amarillo and that American Airlines has down-sized the aircraft that they're using. Does this have an impact on the numbers that you have provided? Is it being considered in future iterations of the model or what?

Response:

To our knowledge, a Delta Airlines shuttle continues to fly into Amarillo. Continental Airlines discontinued service into Amarillo. American Airlines used to fly MD-80s into Amarillo, but discontinued these in favor of Fokker 100s. This information will be accounted for in the RAMS data, but not necessarily in the FAA airport operations data because of the four categories this data is broken into. That is, although American Airlines replaced the MD-80s with Fokker 100s, they still constitute Commercial Air Carriers. The only difference that will be seen in the FAA data is whether or not American Airlines increases or decreases its flights per day into and out of Amarillo. Future iterations of the calculation will take this into account.

RC: 15.003
Doc: PC-021/1

It is implied that the probability of an aircraft hitting a facility would be unacceptable if it exceeded 10^{-7}. DOT (FAA) Aircraft Systems Safety Analyses tend to place events with probabilities greater then 10^{-7} in the category of "improbable" and require that such an event not create any hazard. If the probability is the range, 10^{-9}, it is considered "highly improbable" and the event may result in a hazard but no loss of life. An event of probability, 10^{-13}, is considered "extremely improbable." No event that would be considered as "catastrophic" or resulting in the loss of life may exceed this order of magnitude in probability of occurrence. Since the perforation of or the scabbing of a structure containing nuclear weapons material is considered as having the potential for causing an explosion, this event must be considered as "catastrophic."

Response:

The value of 10^{-7} has been chosen by the DOE as a bounding value for aircraft accident analysis. The selected frequency categories used in the Pantex EIS are as follows:

- *Anticipated ($x \geq 10^{-2}$ per year)*
- *Unlikely (10^{-2} per year $> x \geq 10^{-4}$ per year)*
- *Extremely Unlikely (10^{-4} per year $> x \geq 10^{-6}$ per year)*
- *Not reasonably foreseeable (10^{-6} per year $> x$)*

It can be seen that the value of 10^{-7} is on the fringes of the "not reasonably foreseeable" range. However, for conservatism, this value was used as a boundary. In the context of the Appendix E text, the value of "$>10^{-7}$" implies falling into one of the above four ranges. Also see discussion in section 1.3.11 of this volume.

RC: 15.004
Doc: PC-021/2

The characterization of mode of operations is much improved over that in the original analysis, though I do have some question regarding the relative values of γ. I find it somewhat surprising that the value for military aircraft is lower than that for commercial aircraft. This is particularly troubling since fighter, attack, and training aircraft tend to have a somewhat higher overall accident rate.

Response:

The analysis used for the Pantex Draft EIS aircraft accident analysis was that contained in the Draft DOE Standard (DOE 1995z) for "Accident Analysis for Aircraft Crash into Hazardous Facilities." The values used for the analysis came directly from this document. The values of γ are part of the Solomon model which has been eliminated in its use in the Final EIS. In-flight aircraft were analyzed using the new non-airport model.

RC: 15.005
Doc: PC-021/3

The impact angle used in the analysis is 15 degrees. This approach ignores the possibility of higher angle impacts such as those demonstrated by the United Airlines Boeing 737 in Colorado Springs, the US Air Boeing 737 in Pennsylvania, the American Eagle ATR72 in Indiana, and more recently, the Valujet DC-9 in Florida. (Incidentally, at least three of these accidents occurred during the "in-flight" phase of flight.)

Response:

See discussion in section 1.3.11 of this volume. Additionally, the Final EIS uses guidance provided by the Draft DOE Standard (DOE 1996g) on aircraft crashes. This Standard uses even more conservative impact angles of five to seven degrees dependent on the flight mode and aircraft category. It should also be noted that the structural penetration calculations included aircraft striking the structures via skidding into the walls as well as direct hits onto the roofs. Direct high impact angle hits represent a small fraction of the risk.

RC: 15.006
Doc: PC-021/4

General aviation turbojets have wingspans of up to 90 feet.

Response:

The range of values listed in Table E.2.2–1 of volume II of the Draft EIS came directly from the Draft DOE Standard (DOE 1995z) for "Accident Analysis for Aircraft Crash into Hazardous Facilities." This value does not significantly affect the analysis results since the average weighted representative wingspan for aircraft near Pantex was used, and maximum wingspans were used for the other candidate storage sites. The Draft DOE Standard (DOE 1996g) wingspans are listed in Table E.2.2–1 of the Final EIS.

RC: 15.007
Doc: PC-021/5

I question the accuracy of the stated equation for the speed of sound in soil. This is stated as:

$C_s = \{(E_s \cdot g) \div \rho\}^{0.5}$ where

C_s = the speed of sound in soil (ft/sec)

E_s = the modulus of elasticity of soil = 470,000 lb/ft^2

ρ = the density of soil = 130 lbs/ft^3

g = the acceleration due to gravity = 32 ft/sec^2 (actually, g = 32.174 ft/sec^2)

Using these values, I calculate the speed of sound in soil to be 340 ft/sec. I find this to be quite low in light of the Sea Level, ISA value for the speed of sound in air (1,116 ft/sec). Unfortunately, I do not have ready access to references regarding the values of E_s and ρ.

Response:

Using the values provided, the speed of sound in soil does result in a value of 340 ft/sec. An independent source was reviewed for application of the speed of sound in soil and it indicated that the speed of sound in soil was approximately 39 percent of that in air. This value is dependent on the type of soil but shows the above overburden equation referred to by the commentor is applicable.

RC: 15.008
Doc: PC-021/6

It should be noted that the 4,800 feet Mean Sea Level (MSL) ceiling for the prohibited airspace over the Pantex Plant equates to approximately 1,200 feet Above Ground Level (AGL).

Response:

This has been corrected in the Final EIS.

RC: 15.009
Doc: PC-021/7

It is stated that helicopters have been omitted as a hazard "because they are forbidden from flying in the airspace over Pantex Plant and have little potential to penetrate facilities of interest." This is an incorrect statement. Helicopters are prohibited from operating over the Pantex Plant at altitudes of less than 4,800 ft MSL. They are free to overfly the plant at higher altitudes. Further, some helicopters operate at extremely high weights and flight speeds. For example, let me submit the Sikorsky MH-53.

Response:

According to information obtained from the Amarillo Tower, helicopters are prohibited from flying over the Pantex Plant at altitudes less than 4,800 MSL (1,200 AGL). The only exception to this rule is the Southwestern Public Service (SPS) helicopter which does powerline inspection and maintenance. However, they must call the Tower for permission to do so. Information obtained for the Draft EIS was incorrect, and as a result helicopters were not considered in the Draft EIS. Helicopters have been included in the Final EIS aircraft analysis.

RC: 15.010
Doc: PC-021/8

There is a typographical error in which the Saab SF340 is referred to as the SF34.

Response: *In reading aircraft data from the RAMS data, some aircraft designators are abbreviated. It is our understanding that the SF340 and the SF34 are the same kind of aircraft. The text has been modified in the Final EIS to read SF340.*

RC: 15.011
Doc: PC-021/9

What category of operation do test flights by aircraft from the modification and maintenance facilities at Amarillo International Airport fall under?

Response: *See discussion in section 1.3.11 of this volume. These flights are included in the RAMS data and are included in the FAA data as part of the takeoff and landing operations at the Amarillo International Airport.*

RC: 15.012
Doc: PC-021/10

RAMS data from 25 days in May 1995 were used to determine the spectrum of overflights on each high-altitude jetway. Since this data is recorded by computer, why was the sample only 25 days? What was the reasoning behind the choice of May 1995? Was this period truly representative, or was this selection made as a means of weighting a particular result? Seasonal changes in both air traffic and preferred routings could result in different answers.

Response: *At the time the analysis was completed for the Draft EIS, high-altitude RAMS data from 25 days in May 1995 was all that was available. The non-airport model in the Draft DOE Standard (DOE 1996g) does not require this data.*

RC: 15.013
Doc: PC-021/11

Are stated distances to airways the distances to the airway centerline or to the edge of the airway. In general, federal airways extend 4 nautical miles to either side of the centerline. As they are defined by the VORTAC's, at some distances they may be somewhat wider than this minimum value.

Response: *The distances given are from the centerline of the airways to each of Zones 4 and 12. Airways are not considered in the Final EIS analysis.*

RC: 15.014
Doc: PC-021/12

All commercial operations from Runway 04 were assumed to be bound for Dallas on the 105-degree airway. What about test flights from the maintenance and modification facility located [at the] Amarillo International Airport?

Response: *This conservative assumption was based on information obtained from the Amarillo Tower concerning the trend of aircraft taking off on Runway 04 to follow routes bordering the plant along Highways 60 and 683. With the issuance of the new Draft DOE Standard (DOE 1996g), there is no consideration of airways, so this assumption is not needed. See discussion in section 1.3.11 in this volume. The test flights are included in the RAMS data and are included in the FAA data as part of the take-off and landing operations at the Amarillo International Airport.*

RC: 15.015
Doc: PC-021/13

Again, I am surprised that the value of γ for military aircraft, particularly the small sub-category, is lower than that for air carriers. Again, combat and training aircraft tend to have a higher accident rate than airliners.

Response: *The analysis used for the Pantex Draft EIS aircraft accident analysis is that contained in the Draft DOE Standard (DOE 1995z) for "Accident Analysis for Aircraft Crash into Hazardous Facilities." The values of γ are part of the Solomon model which has been eliminated in its use in the Final EIS. In-flight aircraft were modeled using the new non-airport model contained in the Draft DOE Standard (DOE 1996g).*

RC: **15.016**
Doc: **PC-021/14**

[The] general aviation turbojet wingspan is too small. Examples of up to 90 feet are easily found, especially in the ranks of new products.

Response: *The values listed in Table E.3.1.4–2 of volume II of the Final EIS are both Draft DOE Standard (DOE 1996g) and average weighted representative wingspans for aircraft flying around Pantex Plant.*

RC: **15.017**
Doc: **PC-021/15**

Airliner landing skid distance is given as 1,860 feet while general aviation turbojet landing skid distance is quoted as 37 feet. The landing speeds of both classes of aircraft are comparable so the skid distance must be treated as comparable. In fact, any general aviation aircraft that only skids 37 feet must have either been moving very slowly or impacted something very solid. With a 15-degree impact angle, this is unrealistic and misleading.

Response: *The values listed in Table E.3.1.4–2 of volume II of the Draft EIS came directly from the Draft DOE Standard (DOE 1995z) for "Accident Analysis for Aircraft Crash into Hazardous Facilities." They have been updated in the Final EIS per the latest version of the Draft DOE Standard (DOE 1996g).*

RC: **15.018**
Doc: **PC-021/16**

Impact velocities stated in table are unrealistic. A general aviation turbojet moving as slowly as 152 ft/sec (90 knots) is indeed in serious trouble. These aircraft are fully as fast as airliners and many military aircraft. If an airliner can impact the facility at 422 ft/sec (250 knots), it must be assumed that general aviation turboprops and turbojets can as well. These aircraft are certified to the same regulations (FAR Part 25) as air transports and tend to operate in a similar manner.

Response: *The values listed in Table E.3.1.4–7 of volume II of the Draft EIS came directly from support material for the Draft DOE Standard (DOE 1995z) for "Accident Analysis for Aircraft Crash into Hazardous Facilities." They have been updated per the latest version of the Draft DOE Standard (DOE 1996g). This support material is listed in the references at the back of Appendix E.*

RC: **15.019**
Doc: **PC-021/17**

Stated probabilities for damage exceed guideline maximum by two orders of magnitude.

Response: *The probability of damage is thus in the "extremely unlikely" range. The guidelines quoted by the commentor are FAA guidelines. This analysis used guidelines provided by the Draft DOE Standard (DOE 1996g).*

RC: 15.020
Doc: PC-021/18

As you can see, there are still a rather large number of inaccuracies in the analysis. I recognize that the Aircraft Accident Analysis has been performed in accordance with the guidelines presented in the Draft DOE Standard, "Accident Analysis for Aircraft Crash into Hazardous Facilities." However, it is my contention that this methodology itself is still lacking in a number of areas.

Response:

The Draft DOE Standard (DOE 1996g) is in the process of being finalized. Based on the concerns raised at several of the public meetings, it has been revised accordingly.

RC: 15.021
Doc: PC-021/19

I cannot dispute the contention that the likelihood of an aircraft crashing into a facility containing nuclear material is remote. My question for you now is, what if the unlikely happens? If a light aircraft impacts an earth berm-protected igloo after sliding off most of its speed, the answer is most likely "nothing." Alternatively, if the aircraft is large and/or impacts the structure at a high velocity, the potential exists for a catastrophe of tremendous proportions.

Response:

While it is true that a large aircraft has the potential to damage a facility, this does not necessarily result in a release of radioactive materials since many of the critical Pantex structures have super stout construction and earth overburden. However, in the structural analysis methodology, consideration of super stout structures, using the given equations, results in a conservative structural assessment. See volume I, section 4.15.7, for a discussion of additional levels of conservatism in the Final EIS.

RC: 15.022
Doc: PC-021/20

Moreover, the analysis only predicts the probability of and partial damage potential of an accident. No attention is given to the scenario of an intentional crash into the facility by a suicidal pilot. Where once this would have been unthinkable, the events of recent years have shown that the unthinkable can and does happen. After all, who would have anticipated the bombing of the World Trade Center, the bombing of a Federal office building or the suicide of a distraught student pilot by crashing his airplane into the White House. As I pointed out in my comments on the Aircraft Accident Analysis, the prohibited airspace over Pantex extends only up to approximately 1200 ft above ground level. Under these circumstances, even basic single-engine general aviation aircraft beginning at a cruising speed of 90 knots (152 ft/sec) can go from legal flight to being imbedded in a hazardous facility in less than 8 seconds. There is simply no way to stop such an attack without undue danger to all air traffic in the area.

Response:

The Draft DOE Standard (DOE 1996g) states that it "does not include consideration of malicious acts (e.g., sabotage, terrorism, and war). The available data on aircraft crashes do not support statistical assessments of such acts. Further, such acts are not unique to aircraft, nor are they initiated by failures and errors associated with aircraft."

RC: 15.023
Doc: PC-021/21

Further, the recent Valujet accident in Florida leads me to raise the question of emergency use of the runways at Amarillo International Airport. The proximity of Amarillo to the major East-West routes and the availability of an extremely long runway makes for an attractive option in the event of an in-flight emergency. In such an event, an aircrew is permitted to waive all regulations in the attempt to perform a safe landing. With the prevailing southerly winds, and the location of the Pantex plant, the chances [of] an aircraft making an overflight of the hazardous facilities while already in a degraded state are extraordinarily high. Will the facilities at Pantex swallow and contain a crashing airliner as effectively as the Florida Everglades?

Response:

The Draft DOE Standard (DOE 1996g) is applied based on normal operations, as well as emergency conditions that may occur to aircraft in the vicinity of a given facility. These emergency conditions are accounted for statistically in the probability density function (pdf). The probability of hitting a facility is calculated based on these operations. The scenario described above would not be applicable to Pantex due to the difference in topography.

RC: 15.024
Doc: PC-021/22

The presentation of pages of probabilities does little to address the "What ifs" of the hazard presented by normal aircraft operations in the vicinity of hazardous facilities. Perhaps of more importance, these probabilities do nothing to address the possibility, though remote, of malicious intent. Further, normal aircraft safety analyses tend to address only the hazard to the aircraft and its occupants, with some consideration given to the event that injury might occur if the aircraft or its components strikes individuals on the ground. It is important to note that only limited damage to other than the aircraft itself is addressed. In the event that an aircraft hits and perforates a facility containing fissile material for nuclear weapons the potential for damage is not limited to the immediate vicinity. In this case, we are dealing with the potential for widespread impact, including regions far downwind of the accident site.

Response:

The Draft DOE Standard (DOE 1996g) states "The focus is on analyzing the risk posed to the health and safety of the public and onsite workers from a release of hazardous material following an aircraft crash. Thus, this is not a standard on aviation safety and does not consider the risk to the occupants of the aircraft, the risk to individuals inside a building affected by the crash into the building, or the risk to other individuals on the ground, either within or outside a facility boundary, who might be directly impacted by the crash... This standard does not include consideration of malicious acts (e.g., sabotage, terrorism, and war). The available data on aircraft crashes do not support statistical assessments of such acts. Further, such acts are not unique to aircraft, nor are they initiated by failures and errors associated with aircraft." Consequence analysis was completed for fissile materials release, regardless of the initiating event. This analysis can be found in volume II, section D.4.2.

RC: 15.025
Doc: CO-008/1

Page E-3, E.2.1. What is the relationship between the "j" value and the probability of the aircraft penetrating the magazine?

Response: *The only relationship between the "j" value and the probability of the aircraft penetrating the facility is the fact that the "j" index divides the aircraft into categories for use in the four factor formula for determination of hit probability. The category j = 1 "Commercial: Air Carrier" will have a larger engine weight and diameter than the category j = 6 "General: Fixed-wing, reciprocating, single engine" and thus may have the potential to penetrate a given facility.*

RC: 15.026
Doc: CO-008/2

Page E-3, E.2.1. Why is the term "scabbing" used on page E-3, paragraph 1, when the term "spalling" is used on Page 4-249 to describe the same phenomenon? Please explain the different terms.

Response: *Spalling is a local damage that signifies the ejection of target material from the front face of the target. Scabbing is a local damage that signifies the peeling off (or ejection) of material from the back face of the target. The terminology on page 4-249 of volume I of the Draft EIS was incorrect and has been corrected in the Final EIS.*

RC: 15.027
Doc: CO-008/3

Page 4-241, Paragraph 3. What is the monitoring procedure and the maximum time frame the magazines remain open?

Response: *Once magazines have undergone their periodic inventory check, they are locked up for 18 months. During this inventory, the doors to the facility are only open for a few hours. During the lockup time, the doors are monitored through alarms as to unauthorized entry. Limiting Condition of Operation (LCO) information in the Zone 4 SAR states that only three magazines are allowed open at one time.*

RC: 15.028
Doc: CO-008/4

Page 4-241, Paragraph 3. Do pilots flying at night use the Pantex lights as a landmark, instead of using the [VORTAC]?

Response: *All pilot training programs must be approved by the FAA and flight instruction must be performed by an FAA licensed instructor. These flight training programs teach, among other things, fundamental techniques of flying and navigation as well as the rules of flight. All flights must be performed in accordance with either Visual Flight Rules (VFR) or Instrument Flight Rules (IFR). Both sets of rules govern flight at night, since the distinction is height of cloud ceiling and visibility (i.e., distance one can see) rather than whether it is day or night.*

If a pilot were flying at night under VFR conditions, one would expect the pilot to take advantage of the lights of the Pantex Plant in the same way he or she would take advantage of other landmarks such as the lights of the Amarillo International Airport, lights of the City of Amarillo and other communities, lights of the prison, etc. That would be to use the spatial pattern of lights (and any unique aspects of particular light sources) as navigation reference points to determine one's position and enable the pilot to either confirm progress along the desired course or to make corrections to intersect the desired flight path. It should not be inferred that because the lights of Pantex (or any other visible

location) are used as reference points, that the aircraft then flies Rather, the lights are used to help the pilot mentally envision where is in relation to where the pilot wants to be. It should also be noted can be seen from great distances at night with the exact distance depe the atmospheric visibility and aircraft altitude (above ground level a in time. Typically, under normal VFR conditions in the vicinity of A rotating beacon and the high intensity approach lights of th International Airport would be visible from much further than 10 m under these conditions, there would be no need for a pilot to fly over Plant or VORTAC as a means of finding his or her way to the ai landing.

If a pilot were flying at night under IFR conditions, one would not ex to use Pantex Plant as a landmark. Instead, the pilot would instruments inside the cockpit to navigate from point to point. Since th of cities and other ground installations such as the Pantex Plant do on IFR navigation charts, trying to see and use the lights of F navigation reference would be pointless. Instead, the pilot would along the centerline of a particular directional signal from an navigation facility, such as the Amarillo VORTAC.

RC: **15.029**
Doc: **CO-008/5**

Page E-5, E-2.2. Why is the 15-degree impact angle used in the a the possibility of higher angle impacts ignored. The Value Jet l Everglades had an impact angle of about 75 degrees.

Response: *See discussion in section 1.3.11 of this volume regarding angle of in*

RC: **15.030**
Doc: **CO-008/6**

Page E-8, E-3.1, Paragraph 1 and Page E-11, E-3.1.2. Please add th "The 4800 feet Mean Sea Level ceiling over the Pantex Plant equ 1200 feet above ground level."

Response: *Correction has been made in the Final EIS.*

RC: **15.031**
Doc: **CO-008/7**

Page E-11, E.3.1.2. Why state that helicopters are "omitted" a because they do not fly over the plant? Neighbors observe them fly plant regularly. Helicopters often operate at high weights and high s

Response: *See response to comment 15.009.*

RC: **15.032**
Doc: **CO-008/8**

Page E-11, E.3.1.2. Are aircraft or post maintenance operational from modification and maintenance facilities at the Amarillo Airport the report? These planes tend to circle over the plant repeatedly.

Response: *See discussion in section 1.3.11 of this volume regarding Amarillo I. Airport operations.*

RC: 15.033
Doc: CO-008/9

Page E-15, 3.1.3, Paragraph 1. Why were only 25 days in May, 1995, used? To give a more accurate picture of over-flights, why not use 30 days, 60 days, 6 months?

Response: *See response to comment 15.012.*

RC: 15.034
Doc: CO-008/10

Page E-15, 3.1.3, Paragraph 1. Do the distances of Federal airways vary?

Response: *The widths of the Federal airways do vary. The high altitude beacon beam is projected upward from the ground, and it expands with altitude.*

RC: 15.035
Doc: CO-008/11

Page E-15, 3.1.3, Paragraph 1. Are distances measured from the centerline or from the edge of the [VORTAC]? How far from the centerline do they extend?

Response: *The distances given are from the centerline of the airways to each of Zones 4 and 12. An airway model is not used in the Final EIS.*

RC: 15.036
Doc: CO-008/12

Page E-15, E.3.1.3. It is a false assumption that all commercial operations from Runway 04 are always bound for Dallas on the 105-degree airway?

Response: *This conservative assumption was based on information obtained from the Amarillo Tower concerning the trend of aircraft taking off on Runway 04 to follow routes bordering the plant along Highways 60 and 683. With the issuance of the new Draft DOE Standard (DOE 1996g), there is no consideration of airways, so this assumption is not needed.*

RC: 15.037
Doc: CO-008/13

Page E-15, E.3.1.3. How many test flights for the modification and maintenance facilities at the airport use Runway 04?

Response: *See discussion in section 1.3.11 of this volume regarding Amarillo International Airport operations.*

RC: 15.038
Doc: CO-008/14

Page E-30, figure E.2.2-1. General aviation turbojet wingspans of up to 90 feet are common now, particularly among newer aircraft. Why are they not included?

Response: *See response to comment 15.006.*

RC: 15.039
Doc: CO-008/15

Page E-33, Table E.3.1.4-2. The skid distance of airliners and turbojets are comparable. Airliners use 1860 feet, but 37 feet is used for general aviation turbojets. That being the case, a higher angle impact would be expected. The 37 feet at a 15-degree angle is unrealistic and misleading. Please reevaluate and define the aircraft categories and the skid distances of general aviation turbojets. Also, be consistent within the correlating tables, i.e. E.2.2-1 and E.3.1.4-2.

Response: *The values listed in Table E.3.1.4-2 of volume II of the Draft EIS came directly from the Draft DOE Standard (DOE 1995z) for "Accident Analysis for Aircraft*

Crash into Hazardous Facilities." Since turbojets are not the dominant risk, this value does not affect the analysis results. The Final EIS uses the Draft DOE Standard (DOE 1996g) which has updated skid distances.

RC: 15.040
Doc: CO-008/16

Page E-22, E.3.1.6, Paragraph 2. Is the crash scenario in [the] EIS different from that in Storage and Disposition PEIS? If it is, please explain why.

Response:

Yes, the crash scenario is different from that in Storage and Disposition PEIS. It is explained in volume I, section 4.15.5.3, that if any of the storage alternatives associated with this PEIS were implemented, there would be a change in the aircraft crash probability. Any of these alternatives would involve the removal of all pits from Zone 4, which would reduce the aircraft accident probability. For impact analysis, see the Final PEIS.

RC: 15.041
Doc: HT13/54

When you did your aircraft crash analysis from Pantex, you assumed it would be in what kind of container?

Response:

To elaborate on the response given at the public hearing, in the Draft EIS aircraft analysis, the AL–R8 container was assumed. The AT–400A would provide much more protection than the AL–R8, thus the analyses presented are conservative.

RC: 15.042
Doc: HT12/31

... a large fraction of the accident analysis is directed towards airplane accidents — airplane crash dispersing material. And you go through that at Savannah River, which is very improbable and low consequence should it happen, and you consider that a bounding accident. I question whether it is in fact a bounding accident for a Class I facility like the P-Area reactor. I don't know that you've analyzed the bounding accidents.

Response:

The aircraft crash scenario at the Savannah River Site is not a bounding accident for the P-Reactor. As is stated in the Final EIS, the probability of aircraft crash into the P-Reactor was calculated as 1.2×10^{-6} for all types of aircraft using the methodology outlined in the Draft DOE Standard (DOE 1996g). The probability of releasing material from P-Reactor, given the hit, was calculated as $\leq 9.2 \times 10^{-9}$.

RC: 15.043
Doc: PC-024/12

Page 5-10, left column, Section 5.2.1.12, Aircraft Accidents, 1st paragraph. ...The airspace [over NTS] is now highly restricted due to the past nuclear testing program and the activities of the surrounding U.S. Air Force's Nellis Air Force Range (NAFR). This may not remain so if there are major changes in the operating status of these facilities [that] are now under review in respective EISs.

Response:

The issue of restricted airspace over NTS was revisited in the Final EIS.

RC: 15.044
Doc: CO-006/1

The 1994 "Finding of No Significant Impact" arising from the Environmental Assessment found an airplane crash/accident occurring at Pantex to be an

"incredible event" not justifying the preclusion of additional storage at Pantex. Even so, the plant subsequently worked with the Department of Defense and the FAA to reduce flights paths over Pantex, and took other steps to ameliorate the situation. However, the Draft EIS does not account for the reduced flights thereby exaggerating the probability for airplane accidents at Pantex and their resulting impacts, and, incredibly, increases the probability of a crash from the 1994 "FONSI." In the recent hearings, Nan Founds responded to this concern by saying that DOE is formulating its own analysis not dependent on FAA data, but also stated there were serious problems with DOE's analysis, which would be addressed. In its initial analysis, DOE is ignoring not only credible work already completed, but also the obvious reduction in accident potential for use in determining the ES&H of siting new functions at Pantex. This undermines the perceptions for fair and equal criteria for use in accurately comparing the various sites under consideration. We urge DOE to correct the analysis and avoid the wrongful preclusion of Pantex for consideration of additional functions.

Response: *See discussion on aircraft crash in section 1.3.11 of this volume comparing results of the previous analysis.*

RC: 15.045
Doc: HT15/1

... I pose a question for DOE. Why in the prepared draft environmental impact assessment did the analysis of aircraft accidents cease...at the four factor analysis? [I] request that, before the final EIS is published,...the probability risk assessment be conducted.

Response: *The aircraft analysis did cease with the four factor formula per se. However, the structural analysis results in Appendix E of volume II were used to determine the release probability. These release probabilities were then used in the Human Health sections to determine risk.*

RC: 15.046
Doc: HT15/2

The analyses that have been done have been done on the basis of historical data. And the purpose of that analysis is to predict the likely impact on the future operations at Pantex. We know the future of some of the risk factors in the aircraft accident rating. We know, for example, that GPS approaches already exist, so some aircraft are now flying different routes. We know that the T-37 flights from Reese Air Force Base ceased this month. And we know that the T-37 flights, T-38 flights, and the B-1 flights from Reese will cease in December. So we know a number of the aircraft, that in the four factor model have driven this outcome of about 4×10^{-5} for probability of an aircraft accident in a year, will not exist in the future. And I recommend that in the final impact analyses, those things that we know be included in the analysis so that we can all together look at the most accurate possible aircraft accident prediction.

Response: *As it stands, the Draft DOE Standard (DOE 1996g) does not allow for the consideration of Global Position System (GPS) approaches and aircraft flying different routes. Also, until the RAMS data can reflect the change in these military aircraft, and until the Federal Aviation Administration (FAA) airport operations data reflect the change, there is no way to incorporate the change*

into the model and apply it to Pantex Plant. These changes would reduce the risk at Pantex Plant and therefore the EIS is conservative.

RC: 15.047
Doc: HT15/3

In the draft standard appendix, it [discusses] the generic crash rates for each aircraft category and subcategory [according to] accident reports published by the FAA in the RSD and by the United States military craft. ...You don't reference that published data. Is that data available and can we get a copy of that data?

Response:

The information is included as references in the "Data Development Technical Support Document for the Aircraft Crash Risk Analysis Methodology".

RC: 15.048
Doc: HT15/4

You said the evaluation techniques used to estimate crash rates are documented in References 1 and 2. But those references are also in the draft and they're not available to us here.

Response:

This information is located in the Technical Support Document, which followed approximately two months after the release of the Draft DOE Standard (DOE 1996g).

RC: 15.049
Doc: HT15/5

The methodologies that you used to convert FAA or military accident data into crash probability [estimates]. Is that methodology available for our review?

Response:

See response to comment 15.048.

RC: 15.050
Doc: HT15/6

... Until we've had a chance to look at your data and an opportunity to do analysis, how do we know that the crash probability distribution or the crash rates per landing probabilities reflects military operations, other military people, military pilots [in] this analysis?

Response:

See response to comment 15.048.

RC: 15.051
Doc: HT15/7

Were you able to determine the small military operations that are actually from Reese Air Force Base?

Response:

The number of small military operations from Reese Air Force Base could not be determined separately, but the total number of small military aircraft was determined.

RC: 15.052
Doc: HT15/8

The initiative Tom Williams spoke about in the reduction initiative, is that taken into account in your application to the standard in the EIS or will it?

Response:

See discussion in section 1.3.11 of this volume. Additionally, a brief statement in volume I, section 4.15.1.3, discusses a previous analysis of the relative risk reduction associated with the overflight reduction measures.

RC: 15.053
Doc: HT15/9

... "Small military [aircraft] tends to be the controlling hit probability in the environmental impact statement. [Since] there's such a wide variety of aircraft

types, why can't we actually do the analysis subcategory. Why can't we actually identify individual aircraft types and use available crash rates?

Response: *This was done for large and small military crash rates in the Final EIS, and it did not change the results more than five percent.*

RC: 15.054
Doc: HT15/11

... We've talked several times this morning about the safety factors. The safety factors are there and they're not quantified. Is it possible to produce a document that says this is our best estimate and this is the uncertainty that remains in the assessment?

Response: *The authors of the Draft DOE Standard (DOE 1996g) indicated that this could not be done.*

RC: 15.055
Doc: HT15/12

Since these numbers as point estimates will be used to make your decision, I think it's important that we be able to tell the senior decision-makers when we have a lot of confidence in a number and when it's sort of a fuzzy number. When you stay conservative, you create another problem. If I focus exclusively on one risk in life to the exclusion of others, I can bring that risk to very near zero, but my risks in other areas go up.

Response: *For the Final EIS an effort was made to characterize the level of conservatism inherent in the aircraft crash analysis.*

RC: 15.056
Doc: HT15/13

Given the limited availability of the final analysis numbers, I find it very difficult to try to guess what the impact might be in the refinement of the standard. And I haven't heard this morning any kind of estimates as to whether or not the refinement of the standard and the supporting documents might provide some clarification on this fuzziness Dr. Rock talked about, this conservatism. Is it generally agreed upon that there will be some reduction in that numerical risk probability or is there any kind of feeling that anyone has on this?

Response: *Due to the changes made in the Draft DOE Standard (DOE 1996g) and the additional level of detailed analysis, the risk results were shown to decrease. For the Final EIS an effort has been made to characterize the level of conservatism inherent in the aircraft crash analysis.*

RC: 15.057
Doc: HT15/14

That does provide the decision-maker some measure of comfort, if you will, in the conservatism of the numbers, but it does the exact opposite to the local citizens. It provides them [with] a sense that the plant may not have been as safe as indicated over all the years that it's been in existence, which I don't believe is the case. I believe that there's a point somewhere in between that is more like the real answer to this problem. And that needs to be stated.

Response: *See discussion in section 1.3.11 of this volume comparing the results of the previous analysis.*

RC: 15.058
Doc: HT15/15

... We're looking at two and a half months...for the information to be available to do those calculations and present that data. There won't be enough time to look at that and to say we accept this or we agree with this. It really places the state reviewers in a difficult position at this point. I think it's impossible, actually. And I'm wondering about the date that the EIS is driven [toward]...I think [there is] some question as to what dates they [EIS and other two PEISs] will be available.... Are they on track? Is this still concrete or is there a possibility that we might allow for more comprehensive review of the information to provide the level of certainty...

Response:

This comment was made prior to the availability of the Draft DOE Standard (DOE 1996g) for Aircraft Crash Analysis and its associated technical support documentation. Subsequently, the State of Texas formally requested an extension of the review and comment period for the aircraft crash analysis. At the time of this response, the Department had not reached a decision regarding the request for extension. As of July 22, the Draft Standard (DOE 1996g) was made available. To maintain the schedule for the Final EIS, the State of Texas reviewers were provided copies of the Draft Standard and invited to participate in the final analysis.

RC: 15.059
Doc: HT15/16

What we want is...accurate information in the EIS. And if that calls for a delay in order to get the right numbers in there, then we are going to formally request that the site-wide EIS delay until those right numbers are clear.

Response:

See response to comment 15.058.

RC: 15.060
Doc: HT15/17

If I hear you correctly, you're saying that you are driven by a deadline. And if later information comes in after that deadline you'll make those adjustments. And what we're saying is we're not bound to that deadline. We'd rather have the right information. And if that takes a couple of months, we're willing to move that deadline back.

Response:

See response to comment 15.058.

RC: 15.061
Doc: HT15/18

So it will give a range and best estimate and worst case estimate, and if we're really lucky, the lowest accident estimate? If you only put it in the introduction and you don't put it with the numbers so that the numbers are self-evident—all of us have had enough experience with the media—I understand the headline will lead to an incorrect assumption.

Response:

This comment pertains to the Draft DOE Standard (DOE 1995z) and not to the Draft EIS. Due to the changes made in the Standard and the additional level of detailed analysis, the risk results were shown to decrease. For the Final EIS an effort has been made to characterize the level of conservatism inherent in the aircraft crash analysis.

RC: 15.062
Doc: HT15/19

... I want to thank the DOE for the hard work on reducing and minimizing the risks, to the extent possible. The committee that Tom Williams has worked on changed the approaches to the airport. But to build on the last comment there, I'm afraid that in a very important process like an EIS process,...(inaudible) and should be. I'm reminded somewhat of the scientific information that was put out by groups that later proved incorrect, like a food scare abut eggs are good for you or bad for you, whatever. We get these maybe presumptive announcements about the risk factor that don't concur necessarily with previous ones and they've not undergone the type of scrutiny that good science work demands. And that is what the State of Texas is asking for today, is to try and do that kind of peer review based on documents that will be coming in in the future. Going back to meet the consistency, people need to understand what the risks are and grasp that, including the new level of conservatism.... The accumulative effect of that [conservatism] changes the number radically from what was the risk published in previous studies. I think there needs to be, as Dr. Rock mentioned,...annotation in the document itself if you're going to remain fixed on those numbers. And I think the public deserves a very good explanation of why this number may not square with previous numbers, because the number of planes flying over there and the types of planes hasn't changed.

Response:

See discussion in section 1.3.11 of this volume comparing the results of the previous analysis.

RC: 15.063
Doc: HT15/20

If you know that steps are being taken to minimize that risk or the number of overflights over Zone 4 in the future, maybe there should be a number for what the risk will be in those outcomes if it is, indeed, reduced through mitigation steps. And I think those are things that could serve the public well and will make them feel more comfortable.

Response:

See discussion in section 1.3.11 of this volume regarding the Amarillo International Airport operations.

RC: 15.064
Doc: HT15/21

... I guess the only comment I had is [that] the numbers look very much different than they did in past studies. And what I'm hearing from you is [that] really things are extraordinarily conservative and minimized, but that's not what's conveyed in the text. ...Maybe there's some way to convey that more clearly in the text.

Response:

See discussion in section 1.3.11 of this volume comparing the results of the previous analysis.

RC: 15.065
Doc: HT15/22

... where you referred to the Zone 4 overflight work initiatives quantifying the results, does that mean this would be Volume 1? The initiatives are described in section 4.14.5.4, but there's no numbers applied there. There's no reduction, I guess, in the estimates.

Response: *The 82 percent reduction from the Overflight Working Group initiatives is documented in volume I, section 4.15.6. It is estimated that implementation of the MOU, the offset localizer, relocation of the VORTAC and 65 percent use of the GPS will result in an 82 percent cumulative risk reduction. This 82 percent reduction was estimated using the Solomon Model.*

IC: 15.066
Doc: HT15/23

... It looks like there was a whole year that you were able to draw information off of, April '95 to March '96. [Why did you use] 244 days instead of 365?

Response: *The Draft EIS analysis used one year (1994) of FAA data to determine the number of airport operations and 76 days of RAMS data to determine the representative wingspans, engine weights, and diameters. For the Final EIS, six and one half years (January 1990 through June 1996) of FAA data were reviewed and the maximum number of aircraft for the four categories collected (Air Carrier, Air Taxi, Military, and General Aviation) was used. To characterize the representative wingspans, engine weights, and diameters, RAMS data from January 19, 1995 to January 18, 1996 was collected. For this time period 330 of 365 days of data were collected. The remaining 35 days were not available due to the equipment being moved or the RAMS system was not in operation. The missing 35 days would not change the results of the analysis. If 1995 FAA operations data are used instead of the maximum data, the probability of hitting a facility is reduced by 15 percent.*

IC: 15.067
Doc: HT15/26

The other observation I'd like to make is that statistics are a fascinating thing. They are not a solution. They are no guarantee. So the aircraft crash probability to be quite low is one thing. But it is that such things don't happen can happen.

Response: *The comment author is correct. The Final EIS uses the best available model and data. The Department believes that the risks are quantified with sufficient accuracy to allow decision makers to make correct decisions.*

IC: 15.068
Doc: HT15/27

I think the most impressive thing to me are the mitigation efforts that the Department is undertaking, as well as made. I want to know, is it possible that the Department of Energy will then stop those mitigation efforts and we will not try to move aircraft from flying over the plant.

Response: *The DOE is committed to the aircraft risk reduction issue. The mitigation measures will proceed regardless of the values presented in the EIS.*

IC: 15.069
Doc: HT15/28

One of the effort of Pantex in moving overflights further toward the northwest corner of the plant, I can't help but observe that's where the nuclear reactor might be and that there are other facilities that are going to have to be taken into account so that we know this is considered under this aircraft crash analysis versus the aircraft analysis that related to the current EIS.

Response: *The risk of this potential facility to aircraft will be evaluated in tier NEPA documents to the Storage and Disposition of Weapons-Usable Fissile Materials PEIS should it become necessary.*

RC: 15.070
Doc: HT15/29

... There are those times when there are accidents that do happen and that are beyond the control of any of the mechanical problems that possibly could go wrong with an aircraft. And this was just an issue that we were wondering if it has been factored in and how it was going to be factored in.

Response: *In this analysis, mechanical failure is one of the initiators considered in the aircraft accident analysis. Mechanical failure contributors are reflected in the crash rates presented in the Draft DOE Standard (DOE 1996g).*

RC: 15.071
Doc: HT15/30

... Since there are maintenance and modification of facilities at the Amarillo Airport, there are planes that are out on test flights and they do a lot of circling. And we wondered were there considerations that these are not aircraft that are in tip-top flying shape given...in the document.

Response: *See discussion in section 1.3.11 of this volume regarding the Amarillo International Airport operations.*

RC: 15.072
Doc: HT15/31

I think that where we really are having difficulty with this on test flight is, to our knowledge, they are not all the time actually perfect aircraft that are taking off. And I do appreciate this thing that they have to be in a certain condition. But that does not mean they do not have a problem at the time of test flight. And these considerations, we thought, needed to be brought out in the document.

Response: *See discussion in section 1.3.11 of this volume regarding the Amarillo International Airport operations.*

RC: 15.073
Doc: HT15/32

I'd like to commend DOE and the FAA in their attempts to alleviate some of the concerns of the citizens on the probability of airplane crash in Zone 4 and Zone 12. I hate to show my ignorance in this, but could you, in plain English, tell us what the probabilities of a crash are? Is it one in a million? In previous studies that number was quoted around. Why has that increased? Does that take in those hit probability factors?

Response: *See discussion in section 1.3.11 of this volume. Additionally, the probability of an aircraft crash into Zones 4 or 12, as calculated in the Draft EIS, is 4×10^{-5} which is 40 in a million. The probability of an aircraft crash into Zones 4 or 12, as calculated in the Final EIS, is 3.1×10^{-5} which is 31 chances in one million. The corrected analysis, as well as other historic analyses, all agree that the aircraft crash hit probability for Pantex Plant is in the low to mid 10^{-5} range (approximately 10 to 40 chances in one million per year that an aircraft will hit Zones 4 or 12). It should be noted that hit probability is not an accurate representation of risk. Risk involves an aircraft crash which leads to a release of plutonium. Probabilities for an aircraft crash leading to a release are in the 10^{-6} range (approximately 1 to 9 chances in one million) or lower.*

RC: **15.074**
Doc: **HT15/33**

In past studies, that skid area has been factored and reduced. ...Which skid factors are you using to determine [skid distances]?

Response:

The recommended skid distances given in the Draft DOE Standard (DOE 1995z) for each aircraft category were used in the Draft EIS. In some cases skid distances were subsequently reduced in the case where one building was shielded by another. The Final EIS uses skid distances updated in the Draft DOE Standard (DOE 1996g), and considered one building shielding another.

RC: **15.075**
Doc: **HT15/10**

We're told that the support documents, the driving coefficient that control the outcome of the four factor detailed analysis, will not be available for two months. And we're being asked to wait. It's an issue of we're being asked to trust the support documents are fine, but we're not in a position to see for external peer review. My question is, can they be made available in a fashion that will keep this process in a time line and give us a reasonable opportunity to do a technical peer review?

Response:

See response to comment 15.058.

RC: **15.076**
Doc: **HT17/43**

We're also very encouraged to see that the Department of Energy has taken steps, working with the local government of the City of Amarillo and the State of Texas, in reducing the number of aircraft overflights. I think that show their good-faith efforts to try to operate in as safe a manner as possible. We also appreciate the Department of Energy's openness policy.

Response:

The Department will continue its good-faith efforts and openness policy in an effort to operate in as safe a manner as possible.

RC: **15.077**
Doc: **SG-012/3**

Vol. I, page 5-63, 5.5 Kirtland Air Force Base, 5.5.1.12 Aircraft Accidents, "An analysis was performed to determine whether expected bomb loads (one to four 909-kilogram [2000-pound] bombs) could damage the Manzano storage magazines in the event of an airplane crash. With the minimum cover of 9 meters of granite and earth, the magazines cannot be damaged by any foreseeable aircraft events." Vol. II, page E-26, Aircraft Accident Analysis, E.3.2.4 Structural Calculation, "A survey of contour maps reveals that the approximate overburden for the Manzano WSA is approximately 3.05 meters." Based on the aforementioned information, it is unclear which of the above statements is correct. If the second statement is correct, then the minimum overburden is 3 meters, and the analysis of the bomb loads should be further considered as a plausible accident analysis. Although a bomb load may not have impacts below 9 meters of granite, it may impact 3 meters.

Response:

Commentor is correct. The minimum overburden at Manzano WSA is 9 meters. This error has been corrected in the Final EIS.

RC: **15.078**
Doc: **HT16/15**

My question has to do with Figure F-6.3.1 on Page F-19, Appendix F.... There is listed a variety of collisions that might occur during transportation [that] form

the basis for the risk and the consequence analyses in that [appendix]. And I note that aircraft collisions with the transport train have not been considered, or at least they're not listed. The stage right trailer, the whatever trailer you would like to consider. I guess there's something hauling a trailer, so I think of it as a train. If we're really looking at 30,000 movements a year, which was the number referred to earlier in the discussion, the total exposure of all of those targets averaged over a year may match the total exposure of a single storage facility, in terms of hours of vulnerability. So it relates to an observation that I've had that, in analyzing the aircraft crash probability, there's been no consideration of the fact that the aircraft is only in a position to impact the target for a short duration, a very short proportion of its entire flight. Here we've got a slowly moving target that's only vulnerable for a short period of time and we've not worried about it. When you're moving the missile instead of moving the target, we worry about the sum total of all these passes. When we're moving the target more slowly, we say, well, it's in the open for such a short period of time that it's negligible.

Response: *To elaborate on the response given at the public hearing, aircraft impacts into a moving vehicle containing weapons or weapon components were considered in the analysis. The potential for this accident is discussed in section 4.12.2 of volume I. Assuming a trailer was continually parked within Zone 4, an aircraft impact frequency of less than 1 x 10^{-7} per year was calculated. The risk from this accident using a frequency of 1 x 10^{-7} per year is presented in section 4.12.2 of volume I.*

RC: 15.079
Doc: PC-025/78

Doesn't Amarillo have an airshow with flyovers during high risk maneuvers? Was this accounted for? If the incident rate for an airshow is higher than the general aviation conditions set forth in section 4.16, how does DOE justify [that] the current NEPA analysis meets the intent of NEPA. In the last ten years how many airshow (US and worldwide) accidents have occurred relative to section 4.15 parameters in determining frequency of crashes? Assuming an airshow high velocity impact with at least two impact scenarios per year over the period of this EIS, what are the impacts to the public from releases?

Response: *Amarillo International Airport does have airshows on occasion, with aircraft performing high risk maneuvers. However, the probability density function contained in the Draft DOE Standard (DOE 1996g) includes crash frequencies based on national averages, which include those as a result of airshow crashes. As a result, this scenario has been considered in the current analysis.*

RC: 15.080
Doc: PC-025/79

In Scenario 7 on Page 4-231. What is the maximum tritium release in curies? Why isn't a direct high velocity aircraft crash into the vault considered?

Response: *Aircraft impacts into the tritium vault are considered in the analysis. However, aircraft impacts are not risk dominant compared with the seismic event. The typical source term for this event is 3.9 x 10^{7} curies (Ci).*

C: 15.081
oc: PC-025/80

General comment, section 4.15. The VORTAC serves no real purpose. crippled plane goes where it wants to. What is FAA and DOE going to do if only way to bring a crippled plane in is over the plant? Shoot the plane down

esponse:

The probability density function contained in the Draft DOE Standard (D 1996g) includes crash frequencies based on national averages. These cr frequencies are based on national statistics which include "crippled" aircra they resulted in a crash. Thus this hypothetical scenario has been addressed the analysis.

C: 15.082
oc: PC-025/81

I would argue the total number of yearly flight operations is incorrect. Beca neither the number of satellites or the Space Shuttle operations are include believe satellites have a nearly 100 percent orbital failure rate. Thus, a hi velocity satellite impact is reasonable.

esponse:

The Near Airport analysis outlined in the Draft DOE Standard (DOE 199 includes consideration of normal airport operations. Whereas the non-airp high altitude overflight model in the Standard considers impacts from hi altitude aircraft. Spacecraft (the Shuttle, satellites, etc.) ground impacts statistically insignificant compared to conventional aircraft flights. It should noted that the majority of spacecraft burn up in reentry, prior to impacting ground.

C: 15.083
oc: PC-025/82

Table 4.15.2-2 information seems impossible given the recent Valujet accid where the plane blasted through a limestone formation. If the impact forces that plane were used in analyzing impacts at Pantex, what would change? W the maximum velocity used in determining damage? Velocity is squared in force equation correct? The calculations on page E-19 are flawed by using sl moving aircraft. The LLNL report seems contrived to show the damage wo be minimal by using the 70th percentile velocities turning takeoff or landi NEPA requires you to assess reasonable situations. Since the probability of aircraft crash is independent of the damage it causes. I would argue a hi velocity impact of a massive plane is just as likely as a small plane at low spe thus NEPA requires you to analyze the impact of the most damaging scenar please comment.

esponse:

See discussion in section 1.3.11 of this volume regarding angle of impact a response to comment 15.005.

C: 15.084
oc: PC-025/83

General comment, sections 4.15 and 4.16. Please provide information on level of QA/QC defending the analyses of these sections. I would like the sa information as requested on water and air quality sections of this EIS.

esponse:

The QA/QC of the referenced sections of the Draft EIS, as well as the en document was conducted in accordance with the Tetra Tech Quality Assura Program Plan, document number CB-1000, May 22, 1995. The progra

tailored for preparation of the EIS and to meet DOE Order 5600.6C and NQA-1 as appropriate. For detailed information, refer to these documents.

The assessments (including methodologies, models, and results) of aircraft accidents in section 4.15 of volume I were subject to a multiple level of technical peer review to ensure technical validity. Included in this review process was: (1) the analyst's immediate supervisor, (2) the functional area manager, (3) technical experts from the Amarillo Area Office, and (4) technical experts from the Albuquerque Operations office.

Additionally, the assessments (including methodologies, models, and results) of aircraft accidents in section 4.15 of volume I were exposed to extensive peer reviews. These reviews included two workshops occurring over several weeks along with independent supporting analysis by the workshop participants. The participants included representatives from DOE, Sandia National Laboratories, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, the Defense Nuclear Facility Safety Board, as well as nuclear safety experts from private organizations.

Additionally, these assessments were peer reviewed by DOE Headquarters Technical Safety Review Panel. This group is made up of safety experts throughout the DOE complex whose main responsibility is providing safety analysis guidance to Pantex Plant.

During the public review process, the assessments (including methodologies, models, and results) of the aircraft accidents in section 4.15 of volume I were reviewed by a group of independent scientists from Texas A&M University and the University of Texas.

RC: 15.085
Doc: CO-008/17

Pages E-5 and E-16, E.2.1 and E.3.1.4. Why is the value of "y" [γ] for military aircraft lower than that for commercial aircraft?

Response:

See response to comment 15.015.

RC: 15.086
Doc: CO-008/18

Pages E-5 and E-16, E.2.1 and E.3.1.4. The proximity of Amarillo to the major east-west routes, and the availability of an extremely long runway makes for an attractive option in the event of an in-flight emergency for both military and commercial overflights. In such an [event], an aircraft is permitted to waive all regulations in the attempt to perform a safe landing. With the prevailing southerly winds, and the location of the Pantex Plant, the chances of an aircraft making an overflight of the hazardous facilities, while already in a degraded state, are extremely high. Will the facilities at Pantex be prepared for such an emergency?

Response:

The probability density function contained in the Draft DOE Standard (DOE 1996g) includes crash frequencies based on national averages. These crash frequencies are based on national statistics, which include emergency landings if they resulted in a crash. Thus this hypothetical scenario has been addressed in the analysis. Additionally, the FAA and DOE have established a "hotline"

between the air traffic control tower and the Pantex Plant operations center to provide for immediate emergency communication should the need arise.

C: 15.087
oc: MG-001/1

I am concerned about the "plane crash" analysis. As Mayor, I have been deeply involved in efforts to reduce overflights over the plant, and other preventative measures. How can it be that the probability of a crash causing a release has increased since your 1994 Finding of No Significant Impact, after Pantex and the Amarillo Airport? Even the DOE officials at the hearings conceded that their analysis had serious problems, and needed to be corrected. I urge your office to correct these errors, and act to avoid wrongfully depriving Pantex of future functions for which it may be selected.

esponse:

See discussion in section 1.3.11 of this volume regarding the results of the previous analysis.

C: 15.088
oc: SG-003/90

As of this date, July 11, 1996—the eve of the closing of the comment period for the draft EIS—those personnel from Tetra Tech responsible for preparing the Final EIS have not (1) received the DOE standard, (2) have not received the final technical support documentation, and (3) have [no] idea if the probability of an aircraft crash into a Pantex plutonium storage facility is 1 or 100 in a million. Therefore, at the close of this comment period, we can not verify their results because none is available. What is known is that everything published in the draft EIS will be changed based upon the new DOE standard.

esponse:

See discussion in section 1.3.11 of this volume. Additionally, concerns 1 and 2 are correct. However, for the Draft EIS, Tetra Tech personnel calculated the probability of a crash into either Zone 4 or 12 [as] 4 x 10^{-5} or 40 in one million, which is similar in magnitude to what has been calculated in the past in previous aircraft crash analyses done for the Pantex Plant. This is documented in the Final EIS.

C: 15.089
oc: SG-003/91

The aircraft crash rates are fixed in the DOE standard; however, [we] do not have access to either the Technical Support Documentation nor the data from which the accident crash rates (usually reported as accidents per hundred thousand flying hours) have be calculated into a crash probability for each takeoff, for each landing, or an in-flight rate per square mile. This calculation requires many assumptions and several different steps. From interviews, we have determined that draft DOE standard does a credible job in establishing these crash rates. However, since DOE contractors have denied access to both the data and the technical support documentation, we request that that the following points of potential errors be addressed by the DOE contractor, reviewed by a competent authority, and be included in the Final EIS.

esponse:

Crash rates are given in the Technical Support Documentation for the Draft DOE Standard (DOE 1996g), which has been made available.

RC: 15.090
Doc: SG-003/92

Military aircraft perform touch and go landings for proficiency training only with an instructor on board. Additional landing practice is accomplished as a low approach with the wheels not touching the runway. The civilian tower counts this low approach as two operations (1 takeoff and 1 landing) but no record of a landing is recorded in the military records. We request details of how this discontinuity in the raw data is accounted for in the DOE standard. We request that following data be published in the Final EIS for all military aircraft with significant impact at the Pantex facility: accident and crash rates per hundred thousand flying hours; average hours per sortie; average landings and low approaches per sortie; and number of crashes attributed to landing, takeoff, and in-flight categories.

Response:

Military records are not accounted for in the Draft DOE Standard (DOE 1996g). We do not plan to gather this information because the Draft DOE Standard does not use this information. The information contained within the Draft DOE Standard is based on FAA records. Crash rates for various aircraft categories are given in the Technical Support Documentation for the Standard, which has been provided to the commentor.

RC: 15.091
Doc: SG-003/93

It was pointed out in interviews that there are 422 off-airport crashes per year of general aviation aircraft in the United States [that] are considered in the calculation of the probability in-flight crash rate. This data may be true, but it would be overly conservative to assume the probability of crash into a vacant or farming square mile was equal to the probability of crash into a built-up [area] such as the Pantex compound. Many general aviation crashes are the result of engine failure, nearly all general aviation aircraft have flight controls that function without power and pilots are trained to attempt forced landings in those emergencies. No pilot given a in-flight situation where some flight control remains, would aim at the Pantex compound rather than away from the reinforced structures at the compound. Given the good weather conditions at Amarillo and the relatively open spaces surrounding the Pantex compound, the crash site cited in the DOE standard would be greatly reduced for the local application of in-flight general aviation aircraft.

Response:

The suggestion of reducing the crash rate cited in the Draft DOE Standard (DOE 1996g) for the local application of in-flight general aviation aircraft has been taken under consideration, but is conservative given the fact that this factor cannot be quantified.

RC: 15.092
Doc: SG-003/94

In general we feel the DOE standard is a tremendous improvement in accuracy over the previously used Solomon model for predicting the probability of an aircraft crash into a facility. The Solomon model was far too overly conservative in the estimate of the contribution of high altitude overflight aircraft. Since this new DOE standard corrects the in-flight contribution of the Solomon model, we would logically expect that the probability of an aircraft crash into the Pantex plutonium storage facilitates should decrease from previous studies that used the Solomon model. We request that the Final EIS

provide some narrative description of the new calculation of hit probability in comparison to the previously conducted studies and a short justification for the differences in the findings.

Response: *Information on previous aircraft analyses is presented in section 4.15.1.3 of volume I of the Final EIS. This information is presented in both tabular and narrative form. See also discussion in section 1.3.11 of this volume.*

C: 15.093
oc: SG-003/95

After reviewing the draft EIS and conducting interviews, we recommend that the DOE standard in its application to the Pantex facility be localized for the conditions and aircraft traffic in the following ways: A. The small military aircraft subcategory which makes up a large portion of the traffic at Amarillo Airport must be studied by specific aircraft types. The T-38 and T-1 aircraft, which are the dominate aircraft types in the traffic stream, must have separate hit probabilities as well as separate release probabilities.

esponse: *The current analysis can treat all large and small military aircraft types on an individual basis for crash rates. There is a less than five percent difference in the results.*

C: 15.094
oc: SG-003/96

B. The closure of Reese AFB in Lubbock, Texas by December 1996 will have a significant effect on the forecast T-1 and T-38 traffic at Amarillo Airport and therefore attempts must be made to use the actual forecast numbers rather that past history for these aircraft.

esponse: *It is difficult to forecast what the closure of Reese Air Force Base will do to the numbers of T-1s and T-38s. These aircraft may relocate to another facility and yet still fly into Amarillo. An accurate description of the numbers of these aircraft would show up in the RAMS and FAA data. The current analysis is conservative with respect to the closure of this Base.*

C: 15.095
oc: SG-003/97

C. The collection of RAMS data at Amarillo Airport has provided the Department with a very good record of the number and types of aircraft and their ground track in comparison to the Pantex facility. This data should be used when necessary to adjust DOE standard crash rates, which are based upon a total average of all airports throughout the United States. The takeoff ground tracks for Runway 04 do not follow the typical pattern assumed when the data was collected for the DOE standard.

esponse: *The RAMS data has been used for the Final EIS to determine dominant aircraft on an individual basis to adjust the crash rates to be more representative. There is a less than five percent difference in the results.*

C: 15.096
oc: SG-003/98

D. When Using the RAMS data, insure that military aircraft that are in formation be counted as multiple aircraft rather than as a single aircraft.

Response: *The RAMS data distinguish military aircraft flying in formation as individual aircraft. Each aircraft has a unique identification beacon that the RAMS records.*

RC: 15.097
Doc: SG-003/99

The Pantex facility has super stout structures and consideration of the structural capacity and resistance to aircraft penetration should be accurately modeled.

Response: *Analysis of structures is done using the Chang equations provided in the Draft DOE Standard (DOE 1996g). Application of these equations to these super stout facilities gives a conservative result. Section 4.15.7, volume I of the Final EIS discusses this conservatism.*

RC: 15.098
Doc: SG-003/100

The effective aircraft crash skid length should be localized to consider the local conditions at the Pantex facility.

Response: *See response to comment 15.074.*

RC: 15.099
Doc: SG-003/101

The FAA and DOE have agreed to several mitigation measures to reduce the probability of aircraft impact into Pantex and we applaud those efforts. The draft EIS provided an estimate of the effectiveness of these measures using the Solomon model which were significant. Although the application of this new model in the DOE Standard will probably estimate the effectiveness of these measures as insignificant, we believe they are significant and should be estimated separately.

Response: *See discussion in section 1.3.11 of this volume. Additionally, the DOE is committed to the aircraft risk reduction issue. The mitigation measures will proceed regardless of the values presented in the EIS.*

RC: 15.100
Doc: SG-003/102

We recommend that DOE continue to collect radar data at the Amarillo airport as a mitigation item for the Site Wide EIS. We highly recommend that the current method of tracking radar should be improved with DOE funding a state-of-the-art system that is equal to the noise monitoring systems installed at many major airports in the U.S. This system should be automated and integrated with a geographical information system and turned over to the airport for their use in airport planning.

Response: *It is anticipated that the RAMS project will continue, and the recommendation stated will be taken into consideration.*

RC: 15.101
Doc: SG-003/103

First, let me start by observing that the Department of Energy (DOE) has created the best available models for assessing the probability of an aircraft accident at any point in the country. Second, DOE is to be congratulated for using their models in their Environmental Impact Assessments. Third, DOE is continuing to improve their aircraft accident models. Unfortunately, this continuous improvement poses difficulty for those who try to comment on the Draft EIS for Pantex. A major shift in modeling assumptions occurred between

July 1995 and July 1996. The predicted annual risk of an aircraft accident in any square mile has increased as a result of changes in the model, not as a result of changes in the aeronautical environment in the vicinity of the Pantex Plant. The aircraft accident risk depends as much on the aeronautical environment as it does on the assumptions of the model used for predictive purposes. The final EIS must clearly portray both effects. It is important that this issue be addressed in the Executive Summary as well as in the EIS itself.

Response: *A major shift in the modeling between the July 1995 and July 1996 versions of the DOE Standard involved the consideration of in-flight/high altitude aircraft. The July 1995 Standard utilized a non-airway model, whereas the July 1996 Standard utilizes a non-airport model. The major difference between the two involves the combination of three terms of the four-factor formula [NPf(x,y)] in the non-airport model to give a DOE site-specific value to be used to calculate hit probability. Regarding the aeronautical environment, it is known that the number of T-38s flying into the Amarillo International Airport from Reese Air Force Base will decline when this base closes. This will most likely result in a change in the aeronautical environment indicated by the commentor. However, it is unknown whether these T-38s from Reese will migrate to another Base and still continue to use Amarillo Airport for their training. Until the RAMS and FAA data reflect this change in numbers of T-38s, the change cannot be reflected in the analysis.*

RC: **15.102**
Doc: **SG-003/104**

The discussion in the EIS points out that an Aircraft Accident can be an initiating event in a scenario that leads to public exposure to radioisotopes. Because this is a very unlikely event, the authors attempt to quantify the probability of the event. The Draft EIS used the Draft DOE Guidelines for Aircraft Accident Prediction (July 95, Revised). During the period of public comment, HQ DOE announced its intent to publish final guidelines, now promised for mid-July 1996. Further, DOE wants the Final EIS to be based on the final guidelines. The new paradigm is that aircraft accident locations are best predicted on the basis of the locations of previous accidents. The location probability density function is a smoothed average over the whole nation for en route accidents. For near airport accidents it is a smoothed function of all accidents as a function of distance and direction from a composite runway. This is a major change from the draft guidelines and prior accident models. These assumed the impact location would be near the point along an established "flyway" where an aircraft encountered difficulty and used probability factors with dimensions of accident probability per mile of flight. Preliminary calculations show that the new model predicts accident rates 2 to 10 times higher than the older models. Since the Pantex EIS will be the first to use the new DOE Aircraft Accident Guidelines, and since it may be used to compare predicted accident probabilities at Pantex to those at other DOE facilities, how does DOE intend to explain the changed paradigm to members of the public and to senior decision makers?

Response: *Since the release of the latest version of the Draft DOE Standard (DOE 1996g), it has been shown that the results for the aircraft crash analysis have decreased*

from the Draft Standard (DOE 1995z) and Draft EIS. The Draft DOE Standard (DOE 1996g) was applied to the alternative storage sites considered in the EIS. This was not done for the Draft EIS. Many of the previous analyses conducted for these sites were conducted with methodologies that have since been proven inadequate for a proper characterization of the risk due to aircraft crash.

RC: 15.103
Doc: SG-003/105

In cooperation with FAA, DOE has initiated several mitigation measures to reduce the probability of an aircraft accident involving Pantex facilities. These include moving the back course localizer 6 degrees west and creating GPS instrument approaches that move takeoff and landing operations more than 2 miles away from Pantex. Plans exist to move the VOR onto the airport from its present location near the Pantex fence line. This will reroute high altitude traffic away from Pantex facilities. Unfortunately, the new accident model, based only on the history of previous aircraft accidents, is unable to demonstrate reduced accident probabilities from mitigation measures. From conversations with Kamiar Jamali, DOE did not intend this model to be used for mitigation design. It is designed to provide a common basis for comparing one DOE location to another. Nevertheless, as existence proof for the benefit of mitigation measures, note that the White House is surrounded by a no-fly zone. Request that DOE insure that the final EIS give appropriate credit for mitigation measures completed and contemplated. See the next comment for a suggestion.

Response: *Please see response to comment 15.104.*

RC: 15.104
Doc: SG-003/106

To better understand the true flight environment at Amarillo, DOE installed the RAMS system to record the flight tracks of every aircraft operating near the Pantex Plant. This data has been analyzed by Dr. Y.T. Lin of Sandia labs. In his paper, "Assessment of Aircraft Risk Reduction at Pantex Plant," he uses actual RAMS data to compute the probability density function for aircraft distance from Zone 4 for all recorded aircraft, Dr. Lin uses his data to make three relevant points: 1) It shows dramatic differences in overflight activity on days when the USAF is flying compared to days when there are no military flights. 2) Only a small fraction of all flights approach within 2 miles of Zone 4. 3) The daily total of high altitude and low altitude en route flights provide no clue as to the location of the VOR or of the FAA route structure. These flights are better modeled as uniformly distributed. Can Dr. Lin's approach to analyzing RAMS data be used to demonstrate efficacy of mitigation measures?

Response: *Dr. Lin's approach could be used to analyze the effect of the mitigation measures. However, this would be inconsistent with the Draft DOE Standard (DOE 1996g), as written.*

RC: 15.105
Doc: SG-003/107

The proposed DOE Standard 3014-96, uses a hierarchical accident analysis scheme starting with simple, conservative models and progressing towards complex, accurate models. A screening level of risk <1E-6/yr is recommended. If at any point in the progression, the aircraft crash probability falls below this level, no further analysis is required. It is presumed that other initiating events

become more important than aircraft accidents at this probability level. There are two problems with this approach. First, it leads some to believe that only when the aircraft accident probability is below 1E-6/(sq mi/yr) has an adequate margin of safety been provided. Second, the base accident rate for general aviation aircraft is on the order of 500/yr over 4,000,000 sq mi, or about 1E-4/(sq mi/yr). There are four other categories of aircraft in the DOE guidelines, each with their own accident rate: large military, small military, commercial air carrier and commercial air taxi. Thus, the total aircraft accident probability in the continental United States is above the screening rate, and full analysis is mandated by the DOE standard. DOE should very clearly explain the meaning of their screening level and of any aircraft accident probabilities computed for the Pantex EIS. The Pantex EIS will be the first to use the new geographic based guidelines. Other DOE laboratories and locations have analyzed their aircraft accident risk using earlier draft guidelines. Since DOE claims the aircraft accident model is designed to compare relative risk among DOE facilities, the revised predictions for all DOE sites should be included in the Pantex EIS. This means that the new guidelines need to be applied to all DOE operating locations so that Pantex can be viewed in proper relationship to the others.

Response: *The screening criteria has been more clearly defined in the Draft DOE Standard (DOE 1996g), and this Standard has been applied to all alternative sites in the Final EIS.*

RC: 15.106
Doc: SG-003/108

Although the geographic modeling approach is an interesting exercise, the EIS should also contain complete Amarillo Aircraft accident data from 1970 to 1996. This data should then be explained in the context of the aircraft accident model. That is, based on the accident model, is the real experience an expected outcome? Suggest using the binomial distribution to estimate the confidence in the predicted accident rate. Use confidence interval principles to determine if the location and frequency of observed accidents are in reasonable agreement with the model.

Response:. *Your suggestion has been taken into consideration. Attempts have been made to quantify uncertainty and compare predicted results with historic accident data in the Final EIS.*

RC: 15.107
Doc: SG-003/109

Personnel at HQ DOE understand the difficulty of explaining the aircraft accident probabilities to the public. In a lively discussion at SAIC on 9 Jul 96, hosted by Tim Haley and chaired by Kamiar Jamali, the suggestion was made that EIS analyses not report the aircraft accident probabilities. These probabilities are intermediate results from the model and do not indicate public health risk. An accident is merely a potential initiating event. The suggestion was that the EIS should focus on the release probabilities, instead. This movement from "hit probability" to "release probability" involves many intermediate layers of modeling. First, one must assume the angle of impact for the aircraft. Second, assume an impact velocity and compute the skid distance

during which the aircraft retains sufficient kinetic energy to penetrate a storage magazine or transport trailer and storage container. Third, compute the probability that an aircraft will impact within the dangerous skid distance from the facility heading toward that facility. Fourth, compute the probability that a fire or a dense part of the aircraft will penetrate or destroy the facility. Clearly, the probability that all of the above events occur together is many orders of magnitude smaller than the simple probability that an aircraft hits near a critical facility or transporter. It is also clear that values assigned to the coefficient for each step affect the confidence interval about the point estimate of the release probability. The understandable tendency is to assign worst case values to all parameters to create an upper bound on the estimated release probability. For purposes of communicating to the public, it is desired to have an estimate of the central tendency, the median or the mean value of the release probability as well. Include both the worst case and the mean value of the release probability due to aircraft accidents. The difference between point estimates of the worst case and of the typical case will give public officials an internally consistent estimate of the safety factors built into the prediction algorithm used.

Response: *An effort has been made in the Final EIS to provide the requested additional information. It is our belief that the aircraft crash scenario was analyzed to the point where it was demonstrated that aircraft crash risk is one to two orders of magnitude less than other risks associated with Pantex Plant operations.*

RC: 15.108
Doc: SG-003/110

Not all structures proposed for storage and handling operations at Pantex are constructed in the manner and with the materials assumed in the DOE structural vulnerability analysis. That analysis seems to assume standard rebar reinforced concrete construction techniques. At Pantex there are some facilities that are more stout and some that are less stout than the analysis in the draft EIS seems to assume. Bundling the stout structures into the analysis probably creates a pessimistic estimate of the true risk of release. Suggest DOE obtain data from a test involving crashing an F-4 into a section of a commercial reactor containment vessel. Use that data as a basis for assessing the likelihood that a small military aircraft crash could be an initiating event for a release incident in a stout structure. Then assess the effect on the overall risk to Pantex operations.

Response: *See response to comment 15.097.*

RC: 15.109
Doc: SG-003/111

The present model seems to assume that an accident that results in internal spalling of a structure will produce a release. This assumption seems overly conservative for pits stored in approved storage or shipping containers. Again, the data from the F4 Crash Test may provide valuable clues to the appropriateness of the analytical assumptions in the release models. Clarify in the EIS the release probability from spalling incidents. This may be one of the factors leading to an overly pessimistic assessment of the consequences of an aircraft accident. Since pits will be stored without chemical explosives, spalling seems an unlikely source for damaging both the storage container and the cladding on the pit.

Response: *This suggestion has been included in the Final EIS. Concrete scabbing leading to release is more fully characterized and more accurate results are presented in the Final EIS.*

RC: **15.110**
Doc: **SG-003/112**

In the aircraft accident consequence analysis, the DOE model assumes that either a direct impact or a skidding impact can lead to a release. The model assumes that the aircraft (or its dense structures acting as kinetic missiles) retains dangerous velocities for the entire skid. In reality, the velocity slows continuously during the skid. The target area is computed from the actual facility dimensions, the aircraft wingspan and the skid distance. The skid distance is the dominant factor in target area. Why not use a linearly decreasing velocity as a conservative means for estimating remaining kinetic energy during a skid? This would dramatically reduce the area involved in target zones and would refine the point estimate of critical aircraft accident probability.

Response: *See response to comment 15.074.*

RC: **15.111**
Doc: **SG-003/113**

The structural damage modeling assumes all aircraft in a single FAA category pose similar risk to structures. These categories are useful for licensing, air traffic control and taxing purposes, but may not be ideal for accident analysis. For example, both a T-37 and an F-15 are included in the small military category. The T-37 has much less kinetic energy than an F-15, and has much smaller components that could become missiles. The damage potential of a T-37 matches that of many general aviation aircraft better than it does an F-15. Nevertheless, the default portions of the DOE guidelines treats them identically. Why does DOE use FAA categories rather that a more technical criteria to group aircraft? Suggest a product of wing loading and gross weight as a better metric. Aircraft with high wing loading always approach faster than those with low wing loading. Aircraft with high gross weights always have more stout pieces in their structures and engines than aircraft with low gross weights.

Response: *The FAA categories have been used in the Final EIS, in accordance with the Draft DOE Standard (DOE 1996g). However, use of parameters specific to a certain aircraft type have been utilized. For instance, the T-38 and other dominant aircraft are addressed separately. There is less than a five percent difference in the results.*

RC: **15.112**
Doc: **SG-003/114**

Dr. Lin's analysis of nearest point of approach for each flight trajectory provides an alternative for site-specific accident modeling. It is not likely that his work can be extended to a full analysis of RAMS data within the promised schedule for the final EIS. However, his work does suggest that a careful examination of consequence analysis assumptions may be in order. One is tempted to believe that aircraft flying directly over a facility may pose the greatest risk. However, any aircraft impacting a facility from within a cone above that facility must impact at a very large glide slope angle. At angles greater than 30 degrees, there is virtually no skid distance. Thus the facility floor plan is the target area for impact from above. Because this area is much smaller than that assumed in

the DOE guidelines, the probability of this accident is much smaller. Can the distribution of the points of closest approach be used to determine both the slant range and the line of sight angle to critical facilities? The effective target area for each facility will depend strongly on the impact angle. This effect is not included in the DOE guidelines because they default to a specified point estimate of the impact angle. The basis for this assumption is apparently discussed in the technical support documents for the DOE Standard, but that is not yet published, and may not be published for several more months. A Monte Carlo analysis is likely the right means for accommodating this important effect.

Response: *A suggestion was made to the authors of the Draft DOE Standard to allow for the use of RAMS distances to the facilities of concern. The suggestion of a Monte Carlo analysis was taken under consideration. However, as the commentor has stated, these alternate methodologies are unlikely to be available with sufficient time to meet the schedule of the EIS.*

RC: 15.113
Doc: SG-003/115

A full risk assessment of aircraft accident potential would include a term for a collision between an aircraft and a transport trailer, either on site during transport between structures or off site during cross country transport. No such term is evident in the draft EIS. Suggest that the probability of an aircraft accident impacting a transporter be computed. Due to the short duration of exposure while in transit, it is expected that this risk will be shown to be negligible compared with other risks associated with fixed storage facilities.

Response: *See response to comment 15.078.*

RC: 15.114
Doc: SG-003/116

The tiered approach to aircraft accident modeling encourages the analyst to perform increasingly complex computations if the screening level has been exceeded in the prior step. The next step for the Pantex modeling effort involves using actual aircraft specific accident rates rather than using average accident rates for each of the identified five aircraft categories. It is also possible to use available accident rates for the most commonly observed aircraft in a category and to use the category specific rates for the remainder. If accident rates are assigned to specific aircraft (such as the USAF T-1, T-37 and T-38 aircraft), then verify that the appropriate rates are used for the remaining aircraft in that category. These may be derived from aircraft specific accident data or estimated by marginal analysis of the entire category to determine the portion of the accident rate appropriate to the remaining aircraft types.

Response: *Specific rates for large and small military aircraft have been used in the Final EIS. Results show a less than five percent change with additional level of detail.*

RC: 15.115
Doc: PC-028/11

Per Vol II, page E-23, para E.3.2. There is [no] automatic fire detection capability nor prompt response from local firefighters. This is a serious problem even if the rock overburden would shield the pit storage area from aircraft crashes. There is still the ground attendant problems of [a] mix of ground vehicles and equipment and humans.

Response: *Any damage that could be inflicted on the Manzano WSA bunkers is dominated by the aircraft accident scenario. As is stated in section E.3.2.4 of volume II, the pit storage at Manzano will be done in certified Type B containers. Minor damage to the facility due to aircraft crash is not anticipated to cause damage to the containers sufficient enough to cause a plutonium release. As a result, any damage that could be caused by ground personnel or vehicle accidents is not sufficient enough to cause a plutonium release.*

LC: 15.116
Doc: **FG-002/1**

Regarding the Pantex Site-Wide Draft Environmental Impact Statement, I believe the analysis of the "airplane crash" scenario is deficient. How can it be that the probability of a crash causing a release has increased since your 1994 Finding of No Significant Impact, particularly after Pantex and the Amarillo Airport have worked together to reduce overflights of the plant and taken other preventative measures? I urge the DoE to correct the analytical errors and act to avoid wrongfully depriving Pantex of future functions for which it may be selected.

Response: *See discussion in section 1.3.11 in this volume regarding the results of the previous analysis.*

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1.16 Intersite Transportation of Nuclear and Hazardous Materials

C: 16.001
oc: HT11/5

What would be the route that you would transport this to the test site?

esponse:

For an elaboration on the response given at the public hearing, see discussion in section 1.3.12 of this volume.

C: 16.002
oc:HT11/6

What about...the freeway system?

esponse:

For an elaboration on the response given at the public hearing, see discussion in section 1.3.12 of this volume.

C: 16.003
oc:HT11/7

Are these the transport system...highway route control monitors. Would they be managed so that they would fall into that category?... They can be managed such that they do not fall into the highway route control formula. If they fall into that category, we have lots of notifications for things like that. In fact, you have truck drivers in that situation that would not be allowed to leave their vehicles.

esponse:

For an elaboration on the response given at the public hearing, see discussion in section 1.3.12 of this volume.

C: 16.004
oc: HT11/8

And then you would...be briefed on this if they were expecting to be highway routes. So my assumption is that they are not at this point expecting to load anything from highway routes in quantity. That doesn't have anything to do [with] Federal marshals; that has to do with notification of states....

esponse:

For an elaboration on the response given at the public hearing, see discussion in section 1.3.12 of this volume.

C: 16.005
oc: HT11/12

How many shipments would come to the test site for the 8,000 versus the 20,000 container of pits?

esponse:

To elaborate on the response given at the public hearing, the exact number of pit containers that would be transferred per Safe Secure Tractor Trailer is classified information. However, it would be between 20 and 30. This translates into between 400 and 600 shipments to transfer 12,000 pits.

C: 16.006
oc: HT11/13

And that would be over how long, what time period is that?

esponse:

To elaborate on the response given at the public hearing, at the rate of approximately 2,000 pits per year, it would take about 10 years to relocate 20,000 pits and 4 years to relocate 8,000 pits.

RC: 16.007
Doc: HT11/14

And if there were an accident along the route, do you...have any emergency response ideas?...

Response:

To elaborate on the response given at the public hearing, the emergency response plans and programs for the Transportation Safeguards Division (TSD) are voluminous and inappropriate for verbatim inclusion in the EIS. In general, TSD's emergency response plans involve a tiered organizational response to radiological incidents. In Tier 0, local law enforcement and TSD couriers assess the severity of the accident and determine the need for radiological assistance. Tier I involves the deployment of Radiological Assistance Teams (RATs), a Regional Response Coordinator (RRC), and Public Affairs Office (PAO) personnel. These personnel will have appropriate monitoring and communications equipment to assess the radiological status of the incident. At Tier II, additional technical expertise is provided to the response group. At Tier III, the accident response group will assist in recovery, repackaging, and decontamination operations. These four tiers correspond, respectively, to the following levels: (0) no structural damage and no potential for public controversy, (I) status of unknown or limited damage, (II) excessive damage of Safe Secure Tractor Trailers (SST) or shipment, and (III) radiological release cleanup/repackaging required.

Additional national emergency response resources from around the Nation are available if the severity of an SST convoy incident warrants such a call.

RC: 16.008
Doc: HT11/15

And you'd be using common carriers or contract carriers?

Response:

To elaborate on the response given at the public hearing, commercial carriers are used for radioactive waste shipments from Pantex Plant to Nevada Test Site. Pits would be transported in Safe Secure Tractor Trailers.

RC: 16.009
Doc: HT11/20

The other thing is, during the risk assessment for transportation, was this the 1000 shipments over a six-year period? Was there any cumulative studies done on how that might impact with other shipments of waste proposed and currently planned through Nevada in terms of a cumulative impact risk assessment?

Response:

Details on cumulative impacts have been added to volume I, section 4.16.5.

RC:16.010
Doc: HT11/21

What would you say [is] the amount of shipments at this time per week into the Nevada Test Site?... Do you have an approximate [number]?

Response:

To elaborate on the response given at the public hearing, Pantex waste shipments are minimal compared with other sites that ship to the Nevada Test Site (NTS). The maximum yearly shipment to NTS from Pantex was 28 shipments. The projected shipment rate from Pantex is less than the average occurring over the past three years. More details of radioactive waste shipments to NTS can be found in the Waste Management PEIS or the NTS Sitewide EIS.

RC: 16.011
Doc: HT11/29

... Are they [of] legal weight?

Response:

To elaborate on the response given at the public hearing, Safe Secure Tractor Trailers (SSTs) are legal weight trucks. The class of general commerce vehicles that most closely matches the SST in physical characteristics and travel distribution is the 5-axle, tractor-semitrailer with a van cargo body and a 60–80,000 pound gross combination weight.

RC: 16.012
Doc: HT11/30

What routes would you use?

Response:

See discussion in section 1.3.12 of this volume.

RC: 16.013
Doc: HT11/31

... My name is Russell Dibartolo;...I'm with the Clark County, Nevada Department of Comprehensive Planning, Nuclear Waste Division. And my particular area has to do with impact assessment and review of Department of Energy impact assessments or...environmental impact statement activities.

One of the major things that we have found with a number of Department of Energy EISs or environmental assessments is that we feel that they unrealistically limit their regions of influence that are studied. If you studied, for instance, the Nevada Test Site within a 50-mile radius, you are leaving out with regard to any potential impacts or risks, over a million people or two-thirds of the population of the State of Nevada when you're dealing with shipments to the Nevada Test Site.

So one of the major requests we would have of you, the individuals preparing this particular EIS and others within the DOE complex, is that you take a very good look at the space between the sites. The [area] between the sites, [which] in this case is the Clark County metropolitan area also known as the Las Vegas valley metropolitan area.

We're primarily concerned with the routing of this material. There are certain areas in Clark County that we know of that are very high in accident rates. We know that there are a number of areas in Clark County where there's construction anticipated on the interstate and U.S. highways. This construction program [is] to last about 10 years. We know there's a high correlation between construction, congestion, and accidents, and we would like you to take that into account.

esponse:

The region of influence as defined for the Nevada Test Site is not the same as the population distributions used in the transportation risk modeling. The transportation risk model uses 1990 census block data to determine the population distributions along Transportation Safeguards Division routes.

See general discussion on intersite transportation in section 1.3.12 of this volume for routing information.

RC: 16.014
Doc: HT11/36

You should also know that the Nevada Test Site has established for their EIS process a transportation advisory group, and within that group is a smaller subgroup or team that's called a protocol working group. This particular working group has already provided recommendations and census recommendations among a number of local governments and other interested individuals or groups that have already been sent to the Department of Energy prior to the comment deadline.

They are already working and addressing this, and this particular protocol working group or transportation advisory group has turned out to be a very good vehicle for our interactions. ...It's Frank DiSanza who is head of that program.... He works with DOE Nevada, and...they have...brought together that group. That group meets on an as-needed basis, generally once every two months. The transportation advisory group meets usually about once every quarter, and that's been going on for probably a little bit more than a year.

And it came up for shipments such as this. There were shipments that were planned to come in through North Las Vegas. North Las Vegas by accident heard about them. Turns out that they were just a very few shipments going to the test site cutting across Craig Road, which is a convenient way...—if you're going south on I-15 and you go north on U.S. 95, it's a very good cut-off.

North Las Vegas officials became very concerned about that, and I was working at the university then as a consultant and was brought in to help facilitate meetings. And...from the need that was seen for that, we developed this transportation advisory group, and it has worked very well.

Response: *See discussion in section 1.3.12 of this volume.*

RC: 16.015
Doc: HT14/4

... The transportation of plutonium and special nuclear materials to Hanford storage will require careful planning of routes and consideration of weather emergencies to minimize the likelihood of an accident. Emergency preparedness for minimizing the impacts of an accident will require financial support from DOE for State, tribal and local involvement, including adequate equipment and training. When materials are shipped, timely notification should be provided to the transportation agencies.

Response: *See discussion in section 1.3.12 of this volume.*

RC: 16.016
Doc: HT02-16/1

It is too dangerous to transport as well.

Response: *The risks associated with proposed pit shipments are described in volume I, section 4.16 of this volume.*

RC: 16.017
Doc: HT13/16

... To clarify, who is doing the certification?

esponse: *To elaborate on the response given at the public hearing, the AT–400A container is currently undergoing certification testing at Sandia National Laboratories (SNL). The performance criteria that the package designer must use to assess Type B packaging against these empirically established hypothetical accident test conditions of the transport are prescribed in the Nuclear Regulatory Commission regulations (10 CFR 71.73) and are discussed in volume II, appendix F of this document.*

Following certification testing by SNL, DOE will develop a Safety Analysis Report for Packaging (SARP) for the AT–400A. SARP provides DOE with a detailed safety analysis and risk assessment of the container's performance for its intended mission and expected useful lifetime. Following acceptance of the final SARP, DOE will issue a certification for the AT–400A. The schedule for SARP is not yet available.

C:16.018
oc: **HT13/41**

Will Lawrence Livermore and Los Alamos be shipping different sorts of compositions to Pantex and expecting them to do the machining and tooling?

[Unidentified Speaker: I would presume whatever the role that is identified for Livermore and Los Alamos in the stockpile stewardship and management that it will be supported by Pantex in their mission.]

esponse: *To elaborate on the response given at the public hearing, transferring the HE fabrication mission from Pantex Plant to Los Alamos National Laboratory (LANL) and/or Lawrence Livermore National Laboratories (LLNL) would require an estimated 150 rebuilds to be shipped per year from the high explosive (HE) fabrication site to the weapons assembly/disassembly site. The accident risk from transporting this material would be no greater than the risk encountered by the public from industry's transport of similar explosives. Transferring all or part of the HE fabrication mission from Pantex to LANL and/or LLNL would require an estimated 12 round trips per year to transport HE materials including the return of scrap HE to the laboratories.*

C: 16.019
oc: **HT13/50**

In that model, there are several options for how you input the human population numbers along the transportation route. Can you tell me,...for the input of population data into those model runs, which of those options were used? Are there some default values, such as rural is one person per square mile, urban is five persons per square [mile], suburban is 2.5, [or are there]...more specific ways to enter population data into the model?

esponse: *The ADROIT code uses population information from the 1990 census. For incident free calculations, the uniform population density along transport routes was obtained by determining the maximum population density in census blocks perpendicular to each roadway segment extended out to 30 kilometers. This maximum population density was used as the uniform population density for that road segment. For accident calculations, 1990 census block data were used for the affected populations from postulated dispersal accidents.*

RC: 16.020
Doc: HT13/51

The default values are also calculated from the 1990 census. I think my question was more specific in that we have this route, I-40, between Amarillo and Manzano, and I am wondering whether actual population data for, let's say, a quarter mile, approximately, on either side of I-40 between Manzano and Pantex, is that the sort of information that was used, or was it just the default value plugged in where the default value also comes with the [1990] census, but it is like a statewide average or a regional average for rural and suburban?

Response: *Please see response to comment 16.019.*

RC: 16.021
Doc:HT13/52

Could you give me an answer in sufficient time so I could submit a written comment about the values before the deadline?

Response: *Please see response to comment 16.019.*

RC: 16.022
Doc: HT13/57

I just want to make sure I understood. Would you repeat what you said about the drop onto a spike in terms of transportation testing?

Would you then explain why on page 4-256 of the document it says the puncture test is a free drop of 40 inches onto a 15-centimeter diameter steel pin?

Again, to clarify, because I am trying to understand what is the information people should rely on, on page 4-256, the 30-foot drop test [that] you talked about, and this is a quote, "a 9-meter (30-foot) drop onto an unyielding surface." It is not onto a pin or a spike. It is onto a flat, unyielding surface. I just want to clarify what you are saying in relation to what is in the document.

[Unidentified Speaker: In the document that was identified or accepted by the Department of Energy for its container certification, and I assume you are talking about the AT-400 certification, there are three tests that are done. One is a 9-meter or approximately 30-foot drop test. The other is a drop test on an unyielding object. The other test is a puncturing test where they drop it from a lesser distance, and I believe it is 40 or 50 centimeters, I am not sure, on the spike that they are talking about.]

These tests are done in sequence, and then there is also a temperature test. Those tests are done and required by the NRC for certification of over-the-road transport of special nuclear material.

[Unidentified Speaker: I do want to point out that in these documents, please go back for very specific measurements to the document.]

Response: *The testing requirements for certification of Type B packages is provided in volume II, appendix F.*

RC: 16.023
Doc: HT13/69

So if you are transporting 8,000 pits, and somebody gets a hold of a shipment — I forget how may pits are on the typical shipment.

[Ms. Founds: About 20.]

So somebody got a hold of 20 pits and decided to poke holes in them.

sponse: *The threat of hijacking is taken seriously by DOE. The security policies, procedures, and resources in place minimize the threat to TSD shipments.*

C: 16.024
c: HT13/70

What is the material that is so powerful? How thick is this?

sponse: *Design information for the AT–400A container is provided in volume II, appendix F.*

C: 16.025
c: HT13/71

Somebody passed me this dice diagram, AL-R8, and this is what you were telling me was the container that was so secure that nobody could ever get a hole through it? It is a quarter-inch stainless steel, this new one that is proposed that isn't yet being used.... So you are saying you don't think it would be possible for anybody to get that container open following a transportation accident because of that quarter-inch of stainless steel? Well, again, the credibility of believing...that there would be no possibility whatsoever that that container could be breached under any sort of accident scenario.

sponse: *Potential offsite transportation accidents resulting in plutonium dispersal from AT–400A containers are described in volume I, section 4.16.4.*

C: 16.026
c: CO-003/5

The transportation of plutonium and special nuclear materials to Hanford storage will require careful planning of routes and consideration of weather emergencies to minimize the likelihood of an accident. Emergency preparedness for minimizing the impacts from an accident will require financial support from DOE for State, tribal, and local involvement, including adequate equipment and training. When materials are shipped, timely notification should be provided to transportation agencies.

sponse: *See discussion in section 1.3.12 of this volume.*

C: 16.027
c: CO-010/2

An additional area of concern would be the "major issue" of transportation of the excess plutonium materials to the Hanford Site. We believe that the Draft EIS needs to more fully evaluate the hazards and mitigation measures [that] would need to be implemented in support of the transportation of significant amounts of these materials to the Hanford Site.

sponse: *The Pantex EIS analyzed the risks associated with the shipment of pits to the Hanford Site. The EIS analysis considers all potential accidents that could lead to a release of hazardous material. The analysis considered all combinations (and inter-dependence) of puncture, crush, impact, and fire environments.*

C: 16.028
c: CO-006/3

Accurate comparisons between all sites under consideration should once again make Pantex the preferred site. Maintaining and expanding the interim storage facilities at Pantex would all but eliminate the significant transport costs, and the attendant environmental and political risks involved with moving these

functions to [another] site. Eliminating the unnecessary transportation of radioactive materials, will translate into less cost and greater public safety and protection. Ignoring or miscalculating the risks and costs associated with weapons materials would be a serious omission.

Response: *A description of the transportation of plutonium pits and the expected increase in risk is presented in volume I, section 4.16. No attempt was made to estimate the cost of transporting pits.*

RC: 16.029
Doc: HT15/35

I don't believe that there was the same degree of detail according to the review of hazardous material as there may have been to the radiological aspects of transportation. ...Aspects of transportation [are discussed], but not in the potential for explosion, potential for HAZMAT spill, those sort of things in transportation in the transportation section. And I didn't see those addressed as potential candidate scenarios.

Response: *All hazardous material shipments are transported via commercial carriers in full compliance with applicable DOT regulations. Pantex Plant type operations do not consume or produce large quantities of hazardous chemicals. Consequently, the risks associated with Pantex Plant hazardous chemical shipments are no greater than those associated with other industrial facilities. Further information on the types and quantities of hazardous chemical shipments associated with Pantex Plant operations is available in the Safety Information Document (Pantex 1996a).*

RC: 16.030
Doc: PC-017/13

If transportation of toxic materials and/or radiation materials to other sites poses a threat to [people] along [the routes] of transportation and to other travelers along the roadways, why would the storage of those substances not pose a greater threat to the health and safety of residents and workers at or near Pantex? We will have long-term, 24 hours per day exposure, which will be much greater than the meeting of a fellow traveler along the interstate or the exposure of someone in a roadside park.

Response: *The storage of pits in Zone 4 magazines does not result in radiological doses to the communities surrounding Pantex Plant.*

RC: 16.031
Doc: SG-012/10

Transportation of the pits is a very serious task. What assurances exist for safe transportation? For example, are the transporters meeting speed limits, obeying other traffic rules and using defensive driving techniques to reduce transportation risks? If drivers are [not] complying with safe driving techniques, accident risks are increased. These concerns should be addressed in the DEIS.

Response: *Armed Nuclear Materials Couriers accompany each shipment containing special nuclear material. They also drive the highway tractors and escort vehicles while operating the communications and other convoy equipment. Couriers are required to obey all traffic laws. Transportation Safeguards Division (TSD) makes every effort to ensure its convoys do not travel during periods of inclement weather. Should the convoys encounter adverse weather,*

provisions exist for the convoys to seek secure shelter at previously identified facilities. The TSD has also imposed a maximum 55-mile per hour speed limit on its convoys, even if the posted speed limit is greater.

C: 16.032
oc: MG-002/5

The Region of Influence (ROI) for the NTS alternative must be expanded to include the Clark County Urban Area through which all shipments are planned. As with other DOE EISs, the defined region of influence for the assessment of impacts is 50 miles. From Clark County's standpoint, this is a major flaw in the study since the bulk of the impacts would result from the transportation of the plutonium pits and not the storage itself. This is because the storage technology is relatively advanced and the possible NTS storage sites are [well] isolated and controlled. Use of the ROI practically guarantees findings of no impact. However, all highway routes that are under consideration for shipment of the plutonium pits pass through the most congested areas of the State of Nevada on roads that are undergoing major construction, and in areas where the number of accidents and accident rates are the highest in the State.

esponse:

See response to comment 16.013.

C: 16.033
oc: MG-002/6

Perceptions of Risk. The interstate route [I-15] historically used for DOE shipments to the NTS and now being considered for the additional Pantex shipments is within one-half mile of the Las Vegas Strip and downtown area. This is among the most popular tourist destinations in the country. This means that over 3,000,000 tourists who visit this area annually would be exposed to transportation safety risks and may perceive the area as dangerous and/or one to avoid, even under incident-free operation. Should even a minor incident (e.g., unanticipated stoppage) or accident occur in this area, perceptions of its seriousness may be amplified to a point that fewer people may choose this area as their pleasure or business destinations. Even a minor downturn in the tourist cycle could have a devastating effect on the southern Nevada economy. Although the effects of perceived risk are not easily quantifiable, this variable must be taken into account as routes are screened and evaluated.

sponse:

We agree that perceived risks are not easily quantified. The socioeconomic impacts of such perceived risks are even more difficult to evaluate. However, a statement characterizing this potential has been added to the appropriate sections of the EIS.

:16.034
c: MG-002/8

Accident Analysis and Emergency Management Measures. Another example of the serious constriction placed on impact assessment by a 50-mile ROI has to do with the analysis of accidents and need for emergency management measures. Because the ROI takes into account only on-site areas, the impacts are so small as to be judged insignificant, and transportation and emergency and emergency safety issues do not need to addressed. Further, the new storage/ transportation container, the AT-400A, now under development, has not had real world experience and its operational characteristics and vulnerability to acts of terrorism are open to question. Again, this becomes insignificant if impacts are

not being considered outside the narrowly-defined ROI. In summary, we feel that all impacts that have been addressed in the DEIS must be reconsidered using at least a 100-mile radius from the Mercury entrance to the NTS in order to arrive at a realistic appraisal of potential impacts of relocation of the pits to that site. This would lead to a realistic appraisal of potential impacts due to transportation, the most public aspect of siting a storage area for plutonium pits (and other waste) at the NTS.

Response: *See response to comment 16.013.*

RC: 16.035
Doc: MG-002/9

While we accept the findings of the transportation risk analysis that is based on the probability of a occurrence times its consequences, we are not convinced of the validity of this approach for shipments to the NTS. The Clark County Urban Area, with Las Vegas as its hub, contains the major concentration of traffic and congestion in this mainly rural county. When the population, traffic, impedance, distance and other variables for links in the urban area are aggregated with those of all other links on a potential route, inside and outside Nevada, the relative weight and importance of the urban links is diminished. This then leads to a smoothing of the data and the usual result of insignificant risk. We ask that the DOE take another tack in assessing risk and resultant impact of transportation of nuclear materials, that of comparative risk assessment as endorsed by the U.S. Department of Transportation in its Guidelines for Selecting Preferred Highway Routes for Highway Route Controlled Quantity Shipments of Radioactive Materials, August 1992. This approach places emphasis on comparison of routes on variables that are important in decision-making processes, rather than on probability figures that are almost always insignificant and not interpretable to government decision-makers. For example, comparison may be made on exposure of special populations, impact on environmentally sensitive areas and even relative risk of negative perceptions. This type of analysis on prospective routes selected for analysis in cooperation with affected jurisdictions would provide understandable results and a higher level of confidence in DOE actions than is not the case. As you know, Clark County is willing to provide up-to-date information for your use in such an approach.

Response: *The transportation analysis used in the EIS evaluates accidents occurring in both rural and urban areas. The Pantex EIS evaluates impacts associated with the defined alternative of relocating pit storage from the Pantex Plant. Included in the analysis are impacts associated with transporting pits to alternative storage sites by DOE's Transportation Safeguards Division (TSD). DOE is not using the Pantex EIS to decide between routes that will be utilized by TSD and as such, comparative routing analysis is inappropriate for the Pantex EIS. Routes utilized by TSD are classified, compartmented information and may not be disseminated except to persons with appropriate security clearance and a need to know.*

TSD operations are in compliance with the requirements of 49 CFR 177 for selecting, notifying drivers of, and adhering to preferred routes. The majority of

	TSD travel (90 percent) is over interstate highway; tl over routes that meet the conditions for deviating fron safety or security dictate such deviation. Regulations the requirements regarding notification of the routes *TSD personnel are briefed on construction, conge along the route prior to travel. TSD crews make eve change travel time to avoid potential traffic hazards.* *There is no "smoothing" of the risk due to sparsely p probability of a potential accident and the conseque are dominated by the urban areas.*
RC: 16.036 Doc: SG-011/1	Please provide information on the metric ton am currently stored on the Oak Ridge Reservation (amount that will be shipped from the Pantex fac historical metric ton amount of depleted uranium a information on the environmental impacts for the i uranium at the ORR. The Division contends that depleted uranium stored (interim) at the ORR are e documentation should be prepared to adequately ad health and the environment.
Response:	*The Pantex Plant EIS considers the environmenta shipments of weapons and weapons components (uranium and depleted uranium) related to Pantex Pl of decision for the Pantex EIS will detail DOE's p plutonium components (pits). Impacts related to i uranium at Oak Ridge Reservation are not relevan from the Pantex Plant EIS.*
RC: 16.037 Doc: PC-025/10	If weapons are shipped around the world without a why does the [plutonium] require a special contain the greater risk potential?
Response:	*The risks associated with nuclear weapons shipment section 4.14. Department of Transportation reg require the use of a certified Type B package for plu*
RC: 16.038 Doc: PC-025/84	General comment sections 4.15 and 4.16. Please level of quality assurance/quality control (QA/QC) these sections. I would like the same information a quality sections of this EIS.
Response:	*The quality assurance/quality control (QA/QC) of th Draft EIS, as well as the entire document, was condu Tetra Tech Quality Assurance Program Plan (T tailored for preparation of the EIS and to meet DOE*

(ASME 1994), as appropriate. For detailed information, refer to these documents.

The assessments (including methodologies, models, and results) of human health impacts for volume I, sections 4.14 and 4.16, as well as the aircraft accident assessment in volume I, section 4.15, were subjected to a multiple level technical peer review process to ensure technical validity. Included in this review process was: (1) the analyst's immediate supervisor, (2) the functional area manager, (3) technical experts from the Amarillo Area Office, and (4) technical experts from the Albuquerque Operations office.

Additionally, the assessments (including methodologies, models, and results) of human health impacts for volume I, sections 4.14 and 4.16 as well as the aircraft accident assessment in volume I, section 4.15 were exposed to extensive peer reviews. These reviews included two workshops occurring over several weeks along with independent supporting analysis by the workshop participants. The participants included representatives from DOE, Sandia National Laboratories, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, the Defense Nuclear Facility Safety Board as well as nuclear safety experts from private organizations.

Additionally, these assessments were peer reviewed by DOE Headquarters Technical Safety Review Panel. This group is made up of safety experts throughout the DOE complex whose main responsibility is providing safety analysis guidance to Pantex Plant.

During the public review process, the assessments (including methodologies, models, and results) of human health impacts for volume I, sections 4.14 and 4.16, as well as the aircraft accident assessment in volume I, section 4.15, were reviewed by a group of independent scientists from Texas A&M and the University of Texas.

RC:16.039
Doc: PC-025/85

If the FL container is the only certified container available for shipment purposes, would DOE use the FL container to ease the 12,000 limit on Pantex if the AT-400A is not available? Is this a reasonable alternative requiring DOE to analyze the use of the FL containers to prevent a shutdown at Pantex?

Response:

The alternatives considered in this EIS are container independent. However, DOE considers the AT–400A container as the most likely to be used if the Secretary decides to choose a pit relocation alternative. DOE currently possesses a limited number of FL-containers (approximately 300). A significant fraction of these containers are in use at other facilities. The purchase of a large number of FL-containers is not practical from either a programmatic or a safety perspective. DOE has committed to the development of a container that will enable compliance with the latest Nuclear Regulatory Commission (NRC) Type B package certification testing requirements. The NRC recently modified the certification testing requirements for Type B packages. The AT–400A is being tested to meet these newer, more stringent requirements. However, no data currently exist to prove that the FL-container will meet the newer requirements.

	The FL-container will retain its Type B certificatio certification testing. However, this certification will b containers currently owned by DOE. DOE is committea a pit container that meets the latest regulatory requireme
RC:16.040 Doc: PC-025/86	If the FL container is certified, why doesn't DOE order purposes?
Response:	*See response to comment 16.039.*
RC:16.041 Doc: PC-025/96	... How many AT–400A containers are in existence? Do please analyze?
Response:	*The design of the AT–400A container is currently being fi a few prototype containers in existence. Full scale pr begin at Pantex Plant in late 1996 or in early 1997.*
RC: 16.042 Doc: PC-025/97	... Is it not reasonable that the most harmful event is a truck resulting in a rollover and fire. It appears that rather than dynamic. Thus the analysis overlooks the cc thus the maximum impacts.
Response:	*All potential accidents that could lead to a release of included in the databases used in the analysis. The combinations (and interdependence) of puncture, cr environments. Further detail on the methodology ana can be found in volume II, appendix F.*
RC: 16.043 Doc: CO-008/118	... How will the Texas Department of Public Safet medical services be handled in the Intersite Transportati Will the safety analysis developed by DOE be ac Department of Transportation?
Response:	*See discussion in section 1.3.12 of this volume.*
RC: 16.044 Doc: CO-008/119	Page 4-262, Paragraph 3. Paragraph states, "These shi compliance with all applicable DOT regulations." This material shipments on page 4-264, Paragraph 2, as well. the draft EIS makes assumptions about the equivalence and operations. They assume that the design req packaging, etc. are met at all times. How do they know on compliance with regulations in the transportation i can be a significant difference between what is sup actually is. Moreover, many of the databases that are of hazardous materials transportation do not contain re to make this assumption.

Response: *This statement that the draft EIS makes assumptions about the equivalence of design requirements and operations is incorrect. The analysis considers accidents resulting from improperly maintained equipment, human errors, and other failures to maintain vehicles properly. It is assumed in the analysis that DOE Transportation Safeguards Division (TSD) has accidents of similar severity and root cause as commercial trucking firms, which is a conservative assumption since TSD has not experienced an accident resulting from improperly maintained equipment. Further information on accidents considered and databases utilized can be found in the Sandia National Laboratories document "A Statistical Description of the Types and Severities of Accidents Involving Tractor Semi-Trailers," (SNL 1994b).*

RC:16.045
Doc: CO-008/120

Page 4-262, Paragraph 3. Provide data about the operational reliability of the equipment, tasks, etc. and about the reliability of the inspection and monitoring systems upon which safety relies. Are there data about inspection and monitoring reliability? Has DOE assessed the completeness and reliability of the databases upon which they base their claims? Show with data that there is no significant difference between design and operations in this system. What are the data?

Response: *The clearest indication of the operational reliability of the Transportation Safeguards Division (TSD) transportation system is its historical accident rate. The TSD accident rate is significantly lower than those of commercial trucking firms. The operating history with Safe Secure Tractor Trailers (SST) transport is sufficiently long to define an overall tow-away accident rate. The mean estimate for the rate of tow-away accidents involving an SST is 6.6×10^{-8} per mile. The tow-away accident rate for general commerce vehicles that most closely matches the SST in physical characteristics and travel distribution is approximately 2×10^{-6} per mile.*

It is assumed in the analysis that DOE TSD has accidents of similar severity and root cause as commercial trucking firms, which is a conservative assumption. Further information on accidents considered and databases utilized can be found in the Sandia National Laboratories document "A Statistical Description of the Types and Severities of Accidents Involving Tractor Semi-Trailers," (SNL 1994b).

RC: 16.046
Doc: CO-008/121

Page F-26, paragraph 2,...left [column].... It is fallacy to [say] that "Because of the stringent regulations...there has never been...." The stringent regulations contribute to the result of no documented deaths of significant injuries, but they are not the only reason. Luck, the smart response of personnel, and other intervening factors not related to the quality of training and inspection plays a role.

Response: *We agree with the comment as stated. Text has been changed for the Final EIS.*

RC: 16.047
Doc: CO-008/122

Page F-26, paragraph 2,...left [column].... Did DOE assess how different combinations of "initiating events" may lead to accidents that could result ir

release of hazardous/radioactive materials? What combi used? Was there any attempt in the study to look at this i

Response: *See response to comment 16.042.*

RC: 16.048
Doc: CO-008/123

Appendix F, Tables and Figures F.5.1–F.5.3. In the ever [activities], how will the current system of trai inspections, loading, packaging—in short, all the act moving an object from one site to another) react? Will r Will more people be hired? Will more equipment be u number of inspections, equipment, and people be used this affect reliability in the system? (The research on l that increases in workload can increase failure/errors occur in a linear fashion. Appendix F (tables and figu based on 100 observations—100 observations over how frequency of shipments)? Generally, there is good re frequency of activities increase, one might observe frequent errors.) Please provide clarification for expo provides the most exposure. Clarify exposure incurred pits.

Response: *The acceptance of a pit shipment campaign is not expec occurrence in a non-linear fashion. The workload ir occur will not strain the resources of the Transportati even at a maximum weapons activity level. The total wo peak levels of the past. In addition, TSD will operate usi maintenance, and training as in the past. The 100 obse document refers to a statistical sample not a number The exposure incurred by the repackagement of pits wi I, section 4.14, of the Final EIS.*

RC: 16.049
Doc: CO-008/124

Page 4-262, Table 4.16.1.1-3. Data from radioacti limited for the years 1992–94 only. Thus, one might exceedence probability" (Figures in F5.1–F.5.3) would rates of shipping increase. What data were used to n failure rates would increase in a linear fashion? How v accidents and the risks change if a non-linear rel (increasing failures with increasing workloads and sl this analysis? Why were data presented based on onl there more data than these?

Response: *Figures F5.1–F.5.3 refer to Transportation Safe shipments, not radioactive shipments. The accepi campaign is not expected to increase accident occ fashion. The workload increase if pit shipments c resources of TSD even at a maximum weapons a workload will still be below peak levels of the past. In c using the same procedures, maintenance, and trainin*

observations described in the document refers to a statistical sample not a number of physical inspections.

RC: 16.050
Doc: CO-008/125

Page 4-269, Table 4.16.2.1-1. Do the +/- factors around the base rate cover the extra shipments that would occur to send the materials to other sites? The description of action plans state that 2,000 weapons assemblies/disassemblies per year is the current activity level. Is this the base shipment schedule?

Response:

The +/- factors around the base rate bound a workload of 2,000 weapons operations per year with the subsequent intersite transportation. The base rate refers to the currently planned activity level for weapons operations, which is less than 2,000 operations per year.

RC: 16.051
Doc: CO-008/126

Page 4-269, Table 4.16.2.1–1. When assessing the risks in a transportation system, was the entire system, from design of components, regulatory context, inspections and monitoring, to preparing material for transportation, to loading, to shipping, etc., considered? [If] not, explain. The reason this is important has to do with how failures/errors at one time in the system operation can affect subsequent events. For example, if someone drives off the road when transporting one load, the consequences only affect that single load of material. However, if there is an incorrectly designed or tested package (e.g. shipping container), it would affect all shipments using that package. This has occurred in the high-level radioactive waste transportation system.

Response:

The analysis was performed with a system perspective and considered all aspects of highway shipments. No attempt was made to model unidentified systematic problems. The DOE believes that the policies and procedures in place are sufficient to minimize the introduction of systematic problems into the DOE Transportation Safeguards Division system by correctly identifying and correcting any such problems that occur.

RC: 16.052
Doc: CO-008/127

Page 4-269, Table 4.16.2.1-1. Was a risk assessment completed for the total transportation system for improperly maintained equipment? Provide the data sources and the methodology used in this assessment. (It is not reasonable to assume that there will never be inspection failures.) How would such scenarios affect risk estimates?

Response:

Accidents with root causes of improperly maintained equipment were considered in the analysis. Further information on accidents considered and the databases used can be found in the Sandia National Laboratories document "A Statistical Description of the Types and Severities of Accidents Involving Tractor Semi-Trailers," (SNL 1994b).

RC: 16.053
Doc: CO-008/128

Page 4-256, Paragraph 1. There have been mistakes (errors) made in the desigr requirements and testing protocol of the DOT and NRC for packaging anc testing, and thus in reported results. There are errors and failures in monitorin and inspections so that malfunctioning/corrupted packaging continue to be use

although they do not satisfy the testing requirements. Has DOE addressed such scenarios in their analyses? If not, explain.

Response: *No attempt was made to model unidentified systemic problems. DOE believes that the policies and procedures in place are sufficient to minimize the introduction of systematic problems into the DOE Transportation Safeguards Division system by correctly identifying and correcting any such problems that occur.*

RC: 16.054
Doc: CO-008/129

Page 4-256, Paragraph 1. Regarding the adequacy of databases on pages F-18 and F-22, prior studies suggest that they may not contain complete or reliable data in all cases. ...Does DOE account for such inadequacies in their assessments? For example, what is the uncertainty of these databases? Making assumptions that reflect the uncertainties, in the data resulting from their incompleteness and lack of reliability. Please reassess the risk.

Response: *Uncertainties in data and the means of quantifying these uncertainties are described in the following documents:*

"A Statistical Description of the Types and Severities of Accidents Involving Tractor Semi-Trailers," (SNL 1994b).

"Determination of Influence Factors and Accident Rates for the Armored Tractor/Safe Secure Trailer," (SNL 1994a).

RC: 16.055
Doc: CO-008/130

Page F-19, Figure F.6.3.1-1. Safety analyses that do not directly address the role of human error in contributing to risks are weak. Human error is often found to be the single largest contributor to failure frequencies. This EIS seems to focus on mechanical failures. Is human error included in the failure rates that are used in event trees. How are they incorporated? How are assumptions made about human error rates in a greatly expanded transportation system (under scenarios of shipping pits to other sites and increased rate of dismantlement)?

Response: *Accidents resulting from human error are included both in the accident rate determination and in the accident severity determination. Further information on accidents considered can be found in the Sandia National Laboratories document "A Statistical Description of the Types and Severities of Accidents Involving Tractor Semi-Trailers," (SNL 1994b). The acceptance of a pit shipment campaign is not expected to increase accident occurrence in a non-linear fashion. The workload increase if pit shipments occur will not strain the resources of Transportation Safeguards Division (TSD) even at a maximum weapons activity level. The total workload will still be below peak levels of the past. In addition, TSD will operate using the same procedures, maintenance, and training as in the past.*

RC: 16.056
Doc: CO-008/131

Page F-19, Figure F.6.3.1-1. How many more shipments would there be each year (approximately) if the pits are shipped to SRS, NTS, etc? How much larger/smaller are these rates than current rates? Are these different rates used to

estimate different failure rates in the assessment? Would risk estimates change at all, if times of shipments were changed (e.g., night time vs. day time vs. afternoon only vs. weekends, etc)?

Response: *The exact number of shipments per year is classified information. However, the workload increase if pit shipments occur will not strain the resources of the Transportation Safeguards Division (TSD) even at a maximum weapons activity level. The total workload will still be below peak levels of the past. In addition, TSD will operate using the same procedures, maintenance, and training as in the past.*

Operating environments, such as road type, road location, and time of day, play an important role in the observed accident rates of heavy trucks used in general commerce. These same factors influence the accident rate of the Safe Secure Tractor Trailers (SST) used by the Department of Energy to transport hazardous cargos within the continental United States. Because there is no limitation on the times that SSTs can travel, an average accident rate was determined appropriate for influence factors related to the time of day and days of the week. Additional details and discussions on how these influence factors were accounted for in the analysis is available in the Sandia National Laboratories report "Determination of Influence Factors and Accident Rates for the Armored Tractor/Safe Secure Trailer," (SNL 1994a).

RC: 16.057
Doc: CO-008/132

Page F-8. How many shipments are actually anticipated per year? If pits are shipped elsewhere, how would shipment rates differ from FY 1997?

Response: *The exact number of shipments per year by the Transportation Safeguards Division (TSD) is classified information. However, the workload increase if pit shipments occur will not strain the resources of TSD even at a maximum weapons activity level. The total workload will still be below peak levels of the past. In addition, TSD will operate using the same procedures, maintenance, and training as in the past.*

See responses to comments 16.005 and 16.006.

RC:16.058
Doc: CO-008/133

Page F-8. What are the estimates for subsequent years? How much change will there be in the system rate of shipments over the assessed period of time? If they are being shipped to another location for storage, this would increase the number of shipments per year.

Response: *See response to comment 16.057. Additionally, see responses to comments 16.005 and 16.006.*

RC: 16.059
Doc: SG-010/5

Embracing this strategy will reduce risks and risk perception issues associated with the unnecessary transportation of fissile materials on public roads and highways throughout the country. Clearly, a prolonged shipping campaign of plutonium pits along the Nation's highways, especially through large urban

areas like Las Vegas, will cause significant adverse socioeconomic and cultural impacts even if no accidents occur.

Response: *See discussion in section 1.3.12 of this volume.*

RC:16.060
Doc: PC-028/7

Kirtland Air Force Base also serves as an International Airport. Major highways almost borders KAFB to the west and north. This places the transport of nuclear pits on, about, and above KAFB/Albuquerque. The air traffic is extremely high and the highways are busy with Albuquerque, New Mexico, and Intra/Inter state traffic. The other alternative sites don't have this problem-select one of them.

Response: *All alternative sites involve shipment of pits over routes that pass through one or more cities with an international airport and busy highways. This is not unique to Kirtland Air Force Base (KAFB) or Albuquerque. A description of risk due to the transportation of pits to KAFB is presented in volume I, section 4.16.*

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3.17 Environmental Justice

RC: 17.001
Doc: HT08/2

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, President Clinton's February 11th, 1994 memorandum for the heads of all departments and agencies requires an analysis of environmental effects on low income and minority populations to include human health, social, and economic effects. Why does the draft of all three documents analyze only the human health effects of the Proposed Actions and not the social and the economic effects as required by the Executive Order?

Response:

Social and economic (Socioeconomic) impacts of the continued operations at Pantex Plant have been considered in volume I, section 4.11, Socioeconomic Resources. In the Environmental Justice section, the location of minority or low-income populations, identified in volume I, Figure 4.17.1–1, and Figure 4.17.1–2, leads to the conclusion that no disproportionately social and economic impacts occur on minority or low-income populations from Pantex Plant operations. The text in the volume I has been revised to state this conclusion. Section 4.17.2 of the Draft EIS provides discussion of beneficial economic impacts to both majority and minority populations. A good example of adverse social and economic impacts on minority or low-income community would be from the construction of a freeway through such a community. In the past, many freeway projects have divided these communities into detached neighborhoods with loss of social interaction, economic loss from declining property values, and disruption of social and economic life resulting from forced relocation of residents from the project area. No such adverse impacts are generated by the continued operations of the Pantex Plant.

Human health impacts from Pantex Plant operations are strongly tied to the geographic location of minority and low-income populations. If minority or low-income populations are concentrated in the immediate vicinity of the plant, there is a possibility that such a population could be disproportionately impacted. The Pantex EIS has analyzed the potential for offsite release in both routine and offsite conditions and has not identified a release scenario that would cause a disproportionate effect on any one population, including minority or low-income populations.

RC: 17.002
Doc: HT08/3

The socioeconomic [analysis] is a little bit different than the Executive Orde covering what we just talked about, the environmental justice in minorit populations. ...An analysis of the social and the economic [factors] have to g along with the health effects in the environmental justice analysis, not just th health effects.

Response:

See response to comment 17.001.

RC: 17.003
Doc: HT11/33

With regard to environmental justice, if you're shipping by -- through t interstate, or if you happen to use rail, both the interstate and the rail go alo

about the same route, more than 38 percent of the minority population of Clark County lives within a half mile of either of those routes. And so the impacts or risks might be a little bit higher.... Thirty-eight percent of the population along the railroad and interstate is minority or low-income. In Clark County the minority, low-income percentage is 11. So there's a substantial difference between the minority, low-income population along the routes and the general minority, low-income population of Clark County.

Response: *The environmental justice issue has been analyzed consistently within a 80-kilometer (50-mile) radius circle from the project location at each site under study. The issue of transportation safety has, however, been discussed in volume I, section 4.16, Intersite Transportation of Nuclear and Hazardous Materials. The routing of radioactive materials (including waste) being shipped on the nation's highways and roads is subject to regulations that are administered and enforced by the U.S. Department of Transportation. The primary objective of these regulations is to ensure that the motor vehicles transporting a regulated quantity of radioactive material are operated on routes that minimize radiological risk (49 CFR 397.101[a][1]). DOE will continue transporting radioactive materials in accordance with these regulations.*

RC: 17.004
Doc: CO-008/28

The current definitions/criteria of environmental justice do not take into account the people in rural areas who are politically handicapped in comparison with a large urban center. The weight of the population in the urban area impacts elected representation to such a degree that the minority rural voters, in effect, have little voice, even when they are most highly impacted by decisions. Definitions that are based on race/ethnicity or income alone do not address this problem. This is the situation that exists around Pantex, where neighbors, no matter how well organized, cannot "outweigh" the numbers and interests of urban Amarillo.

Response: *Comment is noted. Concerns of all individuals, whether belonging to majority or a minority and whether living in urban or rural areas are taken into consideration within the overall context of the assessment of potential impacts on the population within the project's Region of Influence. However, the analysis in the Environmental Justice section is provided to meet the requirements of Executive Order 12898, Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations. Although no final guidance for implementing the Executive Order has been issued by EPA, guidance issued by the Council on Environmental Quality and the Department of Energy's own internal guidance were used to focus consideration of environmental justice on large enough groups belonging to minority or low-income populations and not on single or few rural voters. Communities in the Pantex region of influence have been defined as Census Tracts in the Amarillo urbanized area and rural Block Numbering Areas (BNAs) outside the urbanized area.*

RC: 17.005
Doc: CO-008/29

This comment is a duplicate of comment 17.001.

RC: 17.006
Doc: HT13/32

... When you are considering environmental justice, do you also consider number of nuclear projects that are already within a state?...

I mean it is like I am up in Los Alamos, and they want to move Rocky F operations to Los Alamos. They want to shoot missiles. They want to di radioactive waste in the Rio Grande. They want to put midlevel waste at W They want to do more—they want to expand the Alamogordo testing ra Shouldn't that be part of environmental justice to look at how many nuc projects there are already in the state?

Response:

The analysis in the Environmental Justice section is provided to meet requirements of the Executive Order 12898, Federal Action to Ada Environmental Justice in Minority Populations and Low-Income Populati DOE follows site selection criteria for these types of projects. DOE looks c projects currently existing and future projects across the country, and anai how they will affect a local area. Our analyses concluded that none o proposed actions would result in either significant impacts to the entire affe populations or disproportionate adverse impacts to low-income or min populations.

RC: 17.007
Doc: HT13/33

Isn't there an impact section that addresses the fact that there is no evidence cumulative impacts will lead to a significant consequence to the people? Is a part of the environmental justice?

Response:

Cumulative impacts have been discussed for each of the 17 environm resources or issues in this EIS, including environmental justice.

RC: 17.008
Doc: HT12/4

And so, based on that, I have a comment that I am going to make later, think that it's really important particularly under the NEPA regulations a effort by the Department of Energy to really bring the public more int discussion that at some point we look at what is the weakness of our out strategy that does not allow us to bring more -- a diverse group of people this area to these kinds of meetings.

Because based on what the gentleman just said -- and I just saw that summary that it does, in fact, state that a disproportionate burden wo borne by minorities as it's defined here and low-income people in this are they should be in greater numbers at this table to, one, learn what is at what are the potential dangers, what are the benefits, et cetera, et cetera, b to be here to raise their own questions and concerns and then be prepa help make recommendations that will be factored into the final decision.

Because we can point to the successes of the plant, the positive role tha played in this community, the fact that it is one of the largest employ there may be some other things that those regular citizens need to say th

in some way shape the final decision on these particular three EISs that's needed.

Response: *Your comment is noted. DOE has made significant changes in its community outreach programs and continues to improve upon its past practices in response to public input.*

RC: 17.009
Doc: HT12/9

... I'm curious, are there additional government policies that certain demographic groups as being less valuable, more expendable, whatever the term may be in, humane terms, as opposed to other populaces with regard to institutions like SRS?

Response: *To elaborate on the response given at the public hearing, the Nation's nuclear program has evolved over the past five decades in the context of National security requirements. Locations of nuclear facilities were not determined by the racial or ethnic characteristics of the population in the communities where facilities were located. The Federal government has, however, become more aware of the fact that certain Federal programs in the past have resulted in disproportionately high environmental impacts on minority and low-income populations. The President, therefore, issued Executive Order, 2898, in February 1994, to give environmental justice special consideration in locating Federal facilities in future.*

RC: 17.010
Doc: HT12/24

Okay. And then I had another question about the list, how come environmental justice is broken out and it's not included under cultural resources or socioeconomic resources? And having taught NEPA, we normally would put it under there and not have it by itself. And I noticed it was discussed in detail. There are only two things discussed in detail and the rest is [not]....

Response: *Your comment is noted. It is true that till recently, environmental justice was implicitly included in the socioeconomic resources, particularly in the social impact sections, when social impacts were evaluated separately from the economic impacts. With the issuance of the Executive Order 12898 in 1994, which calls for a discussion of environmental justice issue in all EISs, it has been given special attention and was, therefore, discussed in greater detail than has been the case in earlier documents.*

RC: 17.011
Doc: HT12/30

Another comment is you claim here and also in the document of the Savannah River section fully evaluated environmental justice. And I read the two or three pages on environmental justice and there are a lot of facts, there are no conclusions. ...Your companion EIS [SSM PEIS] ...makes all kinds of erroneous conclusions on environmental justice.... But you don't make none. And let you claim you --

Response: *In accordance with Executive Order 12898, we conducted an analysis to determine whether the project (interim storage of plutonium pits) would have disproportionately high and adverse human health or environmental effects on the minority and low-income populations and concluded that no such impacts*

would occur. Please refer to the Stockpile Stewardship and for their response to your comment.

RC: 17.012
Doc: CO-002/5

This comment is a duplicate of comment 17.001.

RC: 17.013
Doc: SG-012/7

Vol. 1, page 5-69, 5.5.2.2 Environmental Justice. The enti 1990 census data. The "no impact" decision does not population growth in this location over the period of time th storage. Albuquerque, for example, has had a substantial in during the last 20 years.

Response:

The Environmental Justice section requires breakdown minority and low-income groups at the lowest possible geog as Census Tract or Blocks. The 1990 census is the only so data consistently for Pantex and the other four sites (Nevada River Site, Kirtland Air Force Base, and Hanford). It gave for analysis throughout this EIS. Socioeconomic impacts area, including population changes, are discussed in volun

RC: 17.014
Doc: MG-002/7

... The population along the Interstate and nearby co disproportionate number of minority and low-income minority and low-income, as compared to Clark County' U.S. 95, the connector between the Las Vegas Urban Area the fastest-growing area of the country with regard to construction. Designation of a transport route for pluto corridor may serve to slow down such growth or, possibl lowering of property values. Use of a constricted ROI ca issues to be ignored. This is another example where a p virtually guarantees that potential impacts may not be iden

Response:

See response to comment 17.003.

RC: 17.015
Doc: PC-025/87

General comment for section 4.17: What are the Mino areas by US congressional districts in the ROI? Does thi potential? What about by Texas legislature districts? Pa Material?

Response:

Environmental Justice analysis for minority and low inco an 80-kilometer (50-mile) radius circle centered in the sou 4 of Pantex Plant. Minority and low-income populatic lowest possible geographical level, i.e., Census Tract areas in the rural areas to identify maximum impa Congressional districts, which are generally larger then show fewer areas with concentrations of minority or lo Moreover, minority and low-income data are not availab the Congressional district and legislature district level.

On page 5-55 the word material is spelled two different ways. The word spelled "materiel" used in the sentence "KAFB is an Air Force Materiel Command base..." means equipment, apparatus, and supplies, as guns and ammunition, of a military force. The word spelled "material" as used "nuclear material..." means the substance or substances out of which a thing is or can be constructed.

RC: 17.016
Doc: CO-008/30

How are individual minority sensitivities in the worker population assessed in the study? Do the training programs and safety information, materials to workers, and the community account for different literacy rates and/or primary languages? Does DOE have any data about the extent to which information about the Plant is known or understood, or the effects of radiation exposure are known/understood in the minority community? If so, provide the data.

Response:

Occupational Safety and Health Administration and implementing DOE Orders address safety and health issues for all workers at Pantex regardless of minority or income status, including radiation exposure. Volume I, section 4.17, Environmental Justice, discusses the potential for radiation effects on minority and low-income populations.

RC: 17.017
Doc: CO-008/31

Was exposure to contaminated clothing, for example by minority laundry workers, considered? If so, how?

Response:

Radiation and/or chemically contaminated clothing is not laundered but is disposed of in accordance with applicable regulations.

RC: 17.018
Doc: PC-008/2

This comment is a duplicate of comment 17.001.

RC: 17.019
Doc: PC-028/6

Page 5-69, para 5.5.2.2:...This section is listed as Environmental Justice. Of all the sites KAFB/Albuquerque has the highest, most diverse population, and putting the pit storage activity in KAFB adds [un]necessary risk to KAFB/ Albuquerque.

Response:

The Manzano Weapons Storage area at Kirtland Air Force Base is one of the five sites which have been analyzed in this EIS to identify environmental impacts of pit storage. One of these five sites will be identified as the pit storage site by the DOE after taking into consideration environmental, cost, technical, and other relevant factors.

RC: 17.020
Doc: HT17/89

The document is designed, again, to reassure. 20% minorities in the workforce is presented as a benefit of good hiring practices. Minority populations are assumed to live too far away (17 miles) to have any risk associated with them. How was inter-individual sensitivity to the worker population assessed in the study? It does not look like it was.

Response:

Analysis in the Environmental Justice section is provided at the Census Trac and Block Numbering Area levels. These are the smallest geographical units fo

which minority and low-income data are available. Inter-individual sensitivity to the worker population is dealt with as an administrative concern by the Pantex Plant management and is out of scope of the EIS analysis.

RC: 17.021
Doc: HT17/90

Do the training programs and safety/information materials to workers and the community account for different literacy rates [and] primary languages? Does the agency have any data about the extent to which information about the plant is known or understood, or the effects of radiation exposure are understood in the communities, minority and not?

Response:

All maintenance and production technicians at the Pantex Plant must pass the Audit Basic Learning Examination (ABLE) which establishes, if passed, that they have the equivalent of an eighth grade English reading and math comprehensive level. U.S. citizenship is also required. All Pantex Plant employees, subsequent to hire, receive general employee training, which is given in English, covering general safety training at the plant to include basic understanding of radiation safety. DOE and Pantex Plant have initiated a broad program of improving communication with the public by providing fact sheets, speakers, exhibits, information fairs, open houses, and presentations with material geared to elementary school students. Pantex Plant also invites the general public to attend Pantex Plant Night each month to speak directly with plant personnel. The time and place is announced through the local media. In addition, specific inquires may be made to the Pantex Plant information office to obtain further information on training programs and plant safety.

RC: 17.022
Doc: HT17/91

The agency did not address the issue of radiation exposure to laundry workers, etc. offsite or onsite. Often these kinds of exposures are predominately to minority populations.

Response:

See response to comment 17.017.

RC: 17.023
Doc: HT17/92

How are transportation routes related to minority communities?

Response:

Transportation routes are selected with highest consideration given to public safety and security of the materials being shipped. Generally, these are interstate highways. Where DOE facilities are located away from interstates and alternate routes through communities are available, routes are selected to provide maximum safety and security and are not based on minority population distribution.

RC: 17.024
Doc: CO-005/21

This comment is a duplicate of comment 17.020.

RC: 17.025
Doc: CO-005/22

How was inter-individual sensitivity to the worker population assessed in the study? It does not look like it was. Do the training programs and safety/ information materials to workers and the community account for different

literacy rates, primary languages. In the communities, how and who provides the information? Provide any data about the extent to which information about the plant is known or understood, or the effects of radiation exposure are known/understood in the communities (minority and not)?

Response: *See response to comment 17.021.*

RC: 17.026
Doc: CO-005/23

The document did not address the issue of radiation exposure to laundry workers, etc. offsite or onsite. Often these kinds of exposures are predominantly to minority populations.

Response: *See response to comment 17.017.*

RC: 17.027
Doc: PC-010/1

If pits in SSTs travel through Hispanic neighborhoods, residents could perceive that a threat to their health and safety.

Response: *The specific routes used by Safe Secure Tractor Trailers are classified for National Security. Safe Secure Tractor Trailers may, however, travel as much through neighborhoods belonging to majority population as through minority populations, including Hispanic neighborhoods. Pantex-related intersite transportation activities will result in a maximum annual collective general population dose of 0.40 person-rem per year (4.0 person-rem for ten years of operations). The health and safety risks are, therefore, considered minimal and would not affect Hispanic neighborhoods disproportionately.*

3.18 Irreversible and Irretrievable Commitments of Resources

RC: 18.001
Doc: HT12/2

I'm looking for a complete environmental assessment [that evaluates],...the total environmental picture including, as NEPA mentions repeatedly, impact on future generations and conservation of nonrenewable resources.

Response:

Volume I, section 4.18, discusses irreversible and irretrievable commitments of resources. Volume I, section 4.19, discusses unavoidable adverse environmental impacts. Radiological impacts are discussed and analyzed in volume I, sections 4.7, Air Quality and 4.14, Human Health.

3.19 Unavoidable Adverse Environmental Impacts

No comments received.

3.20 Relationship Between Local Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

No comments received.

3.21 Cumulative Impacts

RC: 21.001
Doc: HT10/1

My comment and question revolves around the term cumulative impact. As defined in the Council on Environmental Quality Guidelines, cumulative impact is the impact on the environment [that] results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency, Federal or nonfederal, or person undertakes such other action. Cumulative impacts can result from individually minor, but collectively significant actions, taking place over a period of time. That's the comment.

Response:

As directed by the Council on Environmental Quality, a scoping process was employed to identify the scope and "significant issues" that needed to be addressed. The "scope" is defined to include both "connected," "cumulative," and "similar actions." Cumulative impacts are addressed and discussed in each resource area as well as with the alternatives.

RC: 21.002
Doc: HT14/3

... Equity impacts must be addressed in the assignment of new nuclear materials, including plutonium, to Hanford.

Response:

This comment on equity impacts is part of the series of points specifically related to long-term plutonium storage and disposition. The concept of equity is very difficult to apply within the specific scope of this EIS because: 1) transfer of pits to Hanford Site would be only an interim action of no more than 10 years, 2) the Hanford alternative is limited to only 8,000 pits and it is not progammatically feasible to consider smaller amounts at multiple sites, and 3) long-term storage and non pit form plutonium and plutonium pits are within the scope of the Storage and Disposition PEIS.

RC: 21.003
Doc: CO-010/3

We are pleased to note that the Draft EIS has not identified any significant environmental impacts from the use of existing Hanford facilities for this potential mission.

Response:

Volume I, section 5.4.1, assesses the environmental resources at Hanford Site that have the possibility to be impacted. The analyses indicate that the impacts to the resource areas would be minimal.

RC: 21.004
Doc: CO-009/2

Fundamental to DOE's further consideration of the roles Pantex should play relative to the changing missions of the nuclear complex is the unequivocal recognition that even accumulatively, there would be NO significant adverse environmental impacts from retention and potential expansion of the variety of missions possible for Pantex.

The summaries of the relevant draft EISs do not report this fundamental conclusion explicitly; rather, in some instances, the summaries misrepresent that conclusion, reporting, instead, effectively minuscule environmental

potentialities that are characterized as "adverse" only because they do not equate to measurable "benefits." We suggest the rote language of EISs should be expanded to recognize effectively neutral outcomes (not merely "beneficial" or "adverse" consequences).

Response: *Though the environmental "potentialities" (i.e., impacts) might seem "minuscule," 40 CFR §1502.2 states to "devote substantial treatment to each alternative considered in detail, including the Proposed Action so that reviewers may evaluate their comparative merits."*

RC: 21.005
Doc: HT17/12

Finally, I think the overall weakness is probably in the cumulative impacts. You've broken down the process into bits and pieces, where you look at, if this happens you lose this many jobs, and if this happens you lost this many jobs. There's a real lack of effort to try to tie those together and integrate that and say worst-case, best-case. And I think that would be really helpful for the public at large to find out what the future of the plant is.

Response: *When the scoping period occurred for the Pantex EIS, there were numerous comments pertaining to socioeconomics (refer to DOE/EIS-0225-IP pages A-5 through A-9). These comments were then utilized to prepare the methodologies (see volume II, appendix A), which were then formulated into the body of the EIS. Many of the socioeconomic comments were related to the cumulative impacts of the Proposed Action and Alternatives. The Cumulative Impacts sections including volume I, sections 4.21, have been simplified for easier understanding.*

RC: 21.006
Doc: HT17/47

...One sort of succinct thing to deal with is in your cumulative impact sections, where you try to encompass the PEIS's that are floating around out there, when you deal with the Storage and Disposition PEIS, you describe storage and speak to that. And then you describe disposition and characterize it as sort of your bounding case that includes a reactor, and when there's a reactor, there's a MOX fuel site, a processing site, et cetera, et cetera. I ask you all to rework your storage definition. Storage does not mean that we won't have processing at Pantex. ...That, too, can be the scenario under storage. But to have storage set all by itself is inaccurate and it just won't do.

Response: *The scope of this EIS includes interim storage of pits. The Stockpile Stewardship and Management and the Storage and Disposition PEISs evaluate long-term stockpile management and long-term storage and the final disposition of plutonium, respectively.*

RC: 21.007
Doc: MG-002/2

The EIS must take into account cumulative impacts on Clark County that may result from the selection of the Nevada Test Site (NTS) as a storage or disposal site for a number of DOE activities. Given the approach taken in the DEIS that identifies only impacts from this one activity, it is not possible to reliably estimate the impacts to a geographic area of jurisdiction that may result from a

number of initiatives taken by DOE. That is, even though other related NEPA studies for storage or disposal of nuclear materials. Based upon the fact that the NTS is mentioned prominently in a number of ongoing DOE EISs, this latter situation is a distinct possibility.

Response: *DOE recognizes the concerns as related to geographic cumulative impacts at the Nevada Test Site (NTS). The NTS EIS covers more specific issues concerning the cumulative impacts at this site; cumulative impacts from related NEPA studies at NTS are within the scope of the NTS EIS. For the Pantex EIS purposes, NTS was looked at in the context of interim storage, which had resulted in no significant impacts to the environment, in both its natural and physical aspects.*

RC: 21.008
Doc: CO-008/135

... Page 3-4. Would the six referenced upgrades require new, or additional, environmental documentation if the Proposed Action is implemented?

Response: *There would be no additional environmental documentation for those six proposed projects. Page 3-3 of the EIS states, "Specifically, the Proposed Action includes...Performing all required facility upgrades, modifications, and replacement of facilities, and new proposed projects that are foreseeable at Pantex Plant, as described below." The section then goes on to discuss each of the six proposed projects.*

RC: 21.009
Doc: SG-010/2

In reference to the detailed analysis of potential environmental effects at the two sites under consideration for pit storage at the Nevada Test Site (the Device Assembly Facility [DAF] and the P-Tunnel Complex), we concur that pit storage at either of these sites would not have any direct "significant" environmental impacts on existing environmental resources. We note that new construction at the Test Site would occur within existing facilities [inside the DAF or P-Tunnel complex] and/or on adjacent lands that are already disturbed. Because of this, we have purposely forgone a detailed review of the "direct" environmental impacts presented in the DEIS. There are, however, certain "indirect" and largely cumulative impacts that could result from pit storage at the Nevada Test Site. For example, if plutonium pits were placed in the P-Tunnel complex, local and/or regional earthquakes could pose significant seismic risks that might lead to tunnel collapse. In this regard, we concur that, if Nevada is selected for pit storage, a separate assessment of the risks associated with seismic events would be required.

Response: *If the P-Tunnel complex were to become the preferred option under the Relocation for Pit Storage alternative, DOE would consider performing a risk assessment for the facility.*

RC: 21.010
Doc: CO-008/134

The combined cumulative impacts resulting from adding the bounding alternatives in the other three PEIS documents to the Pantex EIS do not fully address all the combined effects. Give the combined cumulative impacts of all four documents in each individual category of the document.

Response: *Each alternative relating to the PEISs and the Pantex EIS h individually. Due to the fact that there will be four RODs, th the opportunity to review the cumulative impacts at eac proposed/alternative activities. In volume I of this EIS, chapter 5 discuss both the environmental and cumulative in each candidate site. For further information relating to c alternatives, please refer to the other PEISs.*

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3.22 Department of Energy Policy

RC: 22.001
Doc: HT11/25

How many pits are ready to be stored right now... decommissioned so that they can be stored somewhere? H are ready to be dismantled?

Response:

The actual number of weapons ready to be dismantled is cl The Pantex EIS evaluates, as an upper bound, the impa dismantlement of 2,000 weapons per year. There are n stored.

RC: 22.002
Doc: HT01-02/1

I'm also concerned that we're focusing just on dragging current weapons without taking positive steps toward rep will be all too soon before the end of their design life is up got a real question whether we are able to build nuclear wea

Response:

Development of replacement nuclear weapons is not part of or alternatives discussed in the Pantex EIS.

RC: 22.003
Doc: HT13/9

... One of the issues that a lot of us are concerned about w wherever they are, is the availability of not only local an these facilities but international inspection.

[There is] a lot of concern about pits both here and in places.... Folks want to know how they are handled to m being misused, reused, put back in because these are, afte surplus pits that are not supposed to be for weapons anym

Response:

No specific program for International Atomic Energ international surveillance and/or inspection has been es implemented security measures to ensure pits would not during storage and still be available for inspection.

RC: 22.004
Doc: HT13/10

Surplus pits. Pantex is a CERCLA site, but Sandia isn though is, how would international inspection be a Manzano site, that is both at Presidential directiv nonproliferation policy, and it is also something the rest ...I am interested in knowing how the access and accessib be for international inspection.

Response:

To elaborate on the response given at the public hear established procedures for international inspection of p time there is no reason to believe that any facilities woul accommodate inspection. Comprehensive Envi Compensation, and Liability Act (CERCLA) designatic potential for International Atomic Energy Agency inspec

RC: 22.005
Doc: HT13/11

So you don't know, among the five sites [that] you have shown, if there are advantages or disadvantages from an international inspection standpoint?

Response:

To elaborate on the response given at the public hearing, that issue was not a significant factor in selecting Pantex Plant as the preferred alternative for interim storage of plutonium pits. Neither would it have been a significant factor if any of the five alternate sites had been selected. However, the Department considers international inspection to be equally facilitated by all site alternatives. Technical and policy issues, such as those pertaining to nonproliferation, are part of the decision making process, but are not required to be part of the NEPA document as noted in 40 CFR 1501.2(b), 1501(b), and 1505.2. However, the environmental factors, together with the policy and technical factors will be available to the decision maker at the time of the decision; not just the environmental factors.

RC: 22.006
Doc: HT13/12

Just to be clear, the pits, for whatever interim period of time they are at whatever facility they are, need to be inspectable. That doesn't necessarily mean that somebody can come in and physically look at the pits. There are ways that pits can be inspected without physically being able to require to divulge the shapes and those kinds of things.

So as an affirmative statement, and one of the many flaws in this document, from my standpoint, is the fact that it doesn't evaluate that issue, does not set up at any and all for the possible sites inspection criteria as a serious flaw....

Response:

See response to comment 22.003. Additionally, the Department considers international inspection to be equally facilitated by all site alternatives. Technical and policy issues, such as those pertaining to nonproliferation, are part of the decision making process, but are not required to be part of the NEPA document as noted in 40 CFR 1501.2(b), 1501(b), and 1505.2. However, the environmental factors, together with the policy, technical, and cost factors will be available to the decision maker at the time of the decision, not just the environmental factors.

RC: 22.007
Doc: HT13/13

... I would also argue that the policy of the United States set by the President is that surplus materials...are supposed to be subject to international inspection.

Response:

Final determination has not been made on whether specific pits are surplus or part of the strategic reserve. The Pantex EIS addresses interim storage of pits without regard to their ultimate disposition. Further, the Department considers international inspection to be equally facilitated by all site alternatives. Technical and policy issues, such as those pertaining to nonproliferation, are part of the decision making process, but are not required to be part of the NEPA document as noted in 40 CFR 1501.2(b), 1501(b), and 1505.2. However, the environmental factors, together with the policy, technical, and cost factors will be available to the decision maker at the time of the decision; not just the environmental factors.

RC: 22.008 Doc: HT13/28	I have another question. Will there be any diffe transparency in the plutonium pit disposition process if sitting on a DOD or DOE site in terms of international of the public being aware of what is happening wi difference in what the public will know? The Department of Energy's secretary does have a poli which is not something I have heard from the Departme expect to hear it from the Department of Defense. I am will be some difference should be pits be at Kirtland.
Response:	*The Kirtland Air Force Base's Manzano Weapons consideration as an alternative storage site within t alternative is selected it will become a DOE facilit accordingly; thus there would be no difference with openness, or public awareness.*
RC: 22.009 Doc: HT13/35	I guess the problem with the Department manager do that nobody trusts the Department of Energy. I think tl independent doing the risk analysis, then it would be m
Response:	*40 CFR 1502.24 requires agencies to ensure integrity*
RC: 22.010 Doc: HT13/36	I appreciate all your efforts, but there is just such a l here that it is hard to overcome and believe and trust d Department, and I am sorry that is true.
Response:	*The preparers of the Pantex EIS have devoted conside accuracy of data used. These efforts are intended document that can withstand scientific and legal scr section 1.3.14 of this volume for a summary of actions to improve public trust during the preparation of its E*
RC: 22.011 Doc: HT12/10	... Right,...but everything seems to deal with policy. type of impact on the policy making from the beginni now [you] are backtracking and want some type of inp [You make decisions] behind our backs all the time a think [you are] not going to continue to do this behin stuck on, why is it like that.
Response:	*The Department is bound by the NEPA and the Environmental Quality regulations to not only c comments from Federal, State, and local agencies; N and interested organizations. These efforts may frequently result in many comments ranging from inte opposition to, a proposed action. See response t summary of the actions the Department has taken t Council on Environmental Quality requirements.*

RC: 22.012
Doc: HT12/11

... That's my concern as well. ...What's our input, how do we know this is going to count. You already did what you wanted to do without asking for permission, [and] you're going to continue doing that. ...This part is just [really] a bunch of bull crap, we're just here.

So how we know what's going to be the outcome and [what] is the true outcome. If we say right now we don't want...to deal with this anymore, is it going to take place, are you going to ship it somewhere else, [is it] going to happen where we don't want it to happen. Or it's already voted where it's going to go.

Response:

DOE disagrees that it ignores input from agencies, other organizations, or individuals. Each comment on the Pantex EIS receives careful analysis whether presented in person, in writing, or via another mechanism. Analysis of comments does not always warrant taking the action recommended in a particular comment. The DOE decision maker does see and consider the comment along with other environmental, technical, policy, and national security issues and factors as part of the decision making process.

RC: 22.013
Doc: CO-003/2

Appropriate local and regional public information and involvement programs must be conducted by the agencies to ensure that the public is fully informed of the risks, hazards, and impacts of such a program. This would be part of the national dialogue on all nuclear materials (noted above) prior to assignment of nuclear materials to a specific site.

Response:

By establishing the Storage and Disposition PEIS, Stockpile Stewardship and Management PEIS, and the Pantex EIS, consistent with Council on Environmental Quality regulations, developing reasonable alternatives subject to public comment, DOE does have confidence that a "national dialogue" has been reasonably established. DOE, with direction of the Office of the President, has attempted to raise the level of public awareness. Included in this national dialogue is an exchange of information as needed with State governors. DOE is proud to recognize the vast network of concerned, interested, and committed stakeholders throughout this nation.

DOE recognizes that all its facilities and hazardous materials, including plutonium, require varying levels of operational and environmental controls to protect workers, the general public, and the environment. DOE has worked with EPA, States, employees, unions, stakeholders, and the general public to develop programs and commitments to better manage its facilities and hazardous materials, including wastes. All of these plans and commitments (e.g., Tri-Party Agreement) have been reviewed for the proposed sites to determine if there are any conflicts or restrictions that would inhibit these sites from serving as good locations for the facilities proposed in the EIS for interim pit storage. Nothing was found that would inhibit the alternative sites from performing the required missions, to include site cleanup.

RC: 22.014
Doc: CO-009/1

At this juncture in the proposed and appropriate downsizing of the nuclear complex, we again strongly encourage the Department and Administration to predicate all actions related to the nuclear complex on the conservative assumption that at least rogue-state or terroristic nuclear aggression against the United States is probable. U.S. vigilance and nuclear preparedness are key to coexistence with mad nations and persons. In turn, the Pantex Plant is, uniquely, a key to economically efficient continuing nuclear preparedness.

Response:

The President has declared that the maintenance of a safe and reliable nuclear weapons stockpile will remain a cornerstone of national security policy for the foreseeable future.

RC: 22.015
Doc: PC-024/1

Page S-4, right column, "Assembly of Nuclear Weapons," 11th line. Remove the word "classified" since virtually all the components in the "physics package" are classified. Check the DOE book "Drawing Back the Curtain of Secrecy" "Restricted Data Declassification Decisions 1946 to the Present (RDD-3), January 1, 1996. [Your] description should also mention the D-T Tube neutron generators.

Response:

The word "classified" has been removed. Adding the phrase "D-T Tube neutron generators" is not necessary for the purpose of summarizing the description of the "physics package." Volume I, section 1.2.2, contains an expanded description of the "physics package."

RC: 22.016
Doc: PC-024/2

Throughout the EIS replace the word "staged" with the word "stored."

Response:

DOE believes that the EIS reasonably differentiates "staging" and "storage" activities as presented in volume 1, section 3.1.1.

RC: 22.017
Doc: HT16/31

... It would probably be helpful to know where there are places where the plant is self-regulating, where there isn't an external regulator with regulatory authority, as opposed to oversight.

Response:

Per Council on Environmental Quality regulations, volume I, chapter 6, Environmental Compliance Requirements for Implementing the Proposed Action and Alternatives, presents Federal and State statues, regulations, and orders applicable to each site evaluated in the EIS. The chapter identifies the responsible agencies. In addition, see response to comment 22.018.

RC: 22.018
Doc: HT16/33

TNRCC would be more willing to embrace the Pantex mission within the State of Texas if DOE would promote independent regulatory oversight of radioactive source, special material and by-product material. We applaud DOE's willingness to share its information concerning radioactive contaminants; however, it is our opinion that the public would be better served and potential waste management errors minimized if the oversight authority was shared with the TNRCC. Now, we're well aware of—this might be a little too brutal—of

DOE's legal obstructionist attitude for the State picking up regulatory authority over radionuclides. We understand we do not have the authority. We also understand that EPA in their assertive program do have the authority. And we are working now with the EPA to pick up that authority, at least to piggyback on to it, not that we can assume it or they can give it to us, but we can certainly hold hands, in a sense, partner with the EPA in their assertive program while this NPL is decided, to get some oversight on radionuclides, not that we feel like it's a great issue. The issue is not that we feel there's a bunch of contamination out there. The issue is solely that...we think that DOE would do a better job with oversight. It's not an issue for Pantex necessarily. We feel that Pantex has done a pretty good job, far better than some of the other DOE sites. It's strictly our ability to do what we are asked to do by the citizens of Texas, which is to regulate and to watch and to concur or not to concur. We don't want to hurt DOE. We don't want to hurt Pantex. We just want to do our job. ...We're in the middle of an FFA negotiation right now. And this will be an issue that we're not going to drop.

Response: *The Secretary has created a Working Group on External Regulation. This group is presently reviewing various alternatives for external oversight of activities at DOE's nuclear facilities and will submit a report sometime in 1996.*

RC: 22.019
Doc: HT17/23

The world at this point needs alternative forms of energy, especially solar equipment, and it needs it very badly. Eventually we're going to have to decide which direction to go, whether we are going to go with nuclear power, and that would eventually involve some considerable reprocessing of plutonium or whether we will go for other means of electrical generation. I would like to see the Pantex Plant take the lead in producing alternative methods of generating electricity and not trying to deal with plutonium, which is essentially a waste material of the cold war and the nuclear arms race.

Response: *Final disposition of weapon-usable plutonium is within the scope of the Storage and Disposition PEIS. One alternative for disposition is using excess plutonium as fuel for nuclear reactors which would generate electricity. Although alternate energy sources are not included in the Proposed Action for the Pantex EIS, research on alternate energy sources is performed at a number of DOE facilities. A variety of information on the Department's alternate energy programs may be obtained by accessing the Internet home pages for the Alternative Fuels Data Center, the Energy Efficiency and Renewable Energy Network (EREN), and the Energy Information Administration. Alternative energy initiatives are included in "Department of Energy 1977-1994: A Summary History."*

RC: 22.020
Doc: PC-017/7

Will the DOE repair and/or replace or pay damages for all these damages? Will the DOE pay for the months of inconvenience and nerve wrecking experiences we have been through?

Response: *The Department has a procedure for consideration of damage claims. Please contact Mason & Hanger Corporation legal department to initiate a claim*

Resolution of the claim will be dependent upon a determination of the cause, extent of damage, and current law regarding liability. See response to comment 8.002 which immediately preceded comment 22.020 in the commentors' letter of June 25, 1996. Comment 8.002 expresses concerns about alleged damage from a high explosives detonation on October 4, 1995.

RC: 22.021
Doc: FG-003/15

The Pantex FEIS should also outline DOE's intentions regarding the retrieval of plutonium pits in such a situation, as well as the feasibility of monitoring the pit storage facility. The DEIS (Volume I, p. 5-17) gives the impression that the plutonium pits would remain entombed.

We ask that the FEIS provide further discussion regarding the wording on page 5-17 of volume I, that "Some mitigation of a tunnel collapse would be needed after a major seismic event. A separate assessment of the risk associated with the mitigation would be necessary..." The Pantex FEIS should better define what is meant by "some mitigation" and a "separate assessment" (would the separate assessment be a NEPA document?). The FEIS should discuss what risks would be analyzed in the separate assessment: radionuclide emissions, worker health and safety, ground water contamination, etc.

Response:

The Department's response would be determined after consideration of the circumstances that exist after the collapse and evaluation of the risks to the environment, the public, and workers involved in any recovery action.

RC: 22.022
Doc: SG-002/2

We applaud DOE's willingness to share its information concerning radioactive contaminants; however, the TNRCC permit does not include radionuclide parameters. And as we have stated before, the TNRCC recommends that the DOE share regulatory oversight with another Federal or State agency to minimize the potential for further injury to natural resources.

Response:

See response to comment 22.018.

RC: 22.023
Doc: PC-027/2

I don't understand the need to store 20,000 pits anywhere. If we are dismantling the nuclear weapons, then we should get rid of the pits, not store them. People who know about nuclear [material] should have the knowledge and imagination to come up with some use for the pits. Perhaps some nuclear function could use that material for some purpose. I can't see why we should need so many for "strategic reserve and surplus". What is the idea behind this storage, to snap them back into nuclear weapons should we decide to change the rules?

Response:

DOE agrees with the commentor that final disposition is preferred over long-term storage as identified in the Purpose and Need discussion of the Storage and Disposition of Weapons-Usable Fissile Materials Programmatic Environmental Impact Statement (S&D PEIS). However, DOE is required to meet CEQ regulations prior to implementing the S&D PEIS programs including final disposition. The S&D PEIS discusses and analyzes the strategy and technologies for long-term storage and the final disposition of surplus weapons-usable plutonium.

RC: 22.024
Doc: SG-003/19

We applaud DOE's willingness to share its information concerning radioactive contaminants; however, the TNRCC permit does not include radionuclide parameters. And as we have stated before, the TNRCC recommends that the DOE share regulatory oversight with another federal or state agency to minimize the potential for further injury to natural resources.

Response:

See response to comment 22.018.

RC: 22.025
Doc: SG-003/20

However, the DOE is one of the Federal Trustees for natural resources and has the responsibility of protecting those natural resources from further injury on behalf of the public. In order to protect those natural resources from further injury, the Trustees recommend that the DOE incorporate more stringent environmentally protective practices at the Pantex Superfund site.

Response:

The Pantex Plant continues to implement a Pollution Prevention/Waste Minimization (PP/WM) program to reduce environmental impacts through waste avoidance and waste minimization. Volume II, appendix G, contains detailed information of the PP/WM program. The program was recently awarded the President's Closing the Circle Award.

In addition to the plant's continuing effort to reduce pollution and minimize waste, DOE has agreed to further study potential alternatives to open burning of energetic materials at the Pantex Plant Burning Ground. Pantex Plant maintains a Resource Conservation and Recovery Act (RCRA) Contingency-RCRA Spill Prevention, Control, and Countermeasures (SPCC) Plan to responsibly protect Pantex Plant employees, the public, and the environment. The SPCC Plan is incorporated into Pantex Plant RCRA Part B Hazardous Waste Permit (HW-50284), which is subject to EPA and TNRCC regulatory oversight.

As discussed in the EIS, EPA and TNRCC share the responsibility for RCRA and Comprehensive Environmental Response, Compensation, and Liability Act requirements including the establishment of restoration levels. Volume I, chapter 6, has been expanded to address the issue of Natural Resource Damage Assessments.

In addition, see responses to comments 22.018 and 22.026.

RC: 22.026
Doc: SG-003/22

Page 1-12, volume 1, section 1.2.2.3 Environmental Restoration. The information communicated in this text does not necessarily constitute restoration of the natural resources that have been injured as a result of the releases of hazardous substances at this site. In order to perform actual environmental restoration, the nature and extent of contamination must be determined to evaluate the potential injuries to natural resources. After such a determination, and in cooperation with the other Federal and State Trustees, restoration projects should be designed that will appropriately compensate the public for injury to natural resources. Performing remediation as needed to comply with all appropriate regulatory requirements does not necessarily

constitute compensatory restoration for injury to natural resources. In order to reduce DOE's residual liability for injury to natural resources, the State and Federal Trustees encourage DOE to continue to work with the Trustees during the remedial process so that appropriate restoration will be incorporated into remedial activities. Page 3-3 Performing environmental protection and environmental restoration activities. Please see specific comment #1.

Response: *DOE continues to work with EPA, TNRCC, employees, unions, stakeholders, and the general public to develop the Pantex Plant Environmental Restoration Program and its commitments to better manage its facilities and restoration activities. DOE is continuing to work with the trustees. As we move toward a Federal Facility Agreement, consultation will increase. Volume I, chapter 6, has been expanded to address the issue of Natural Resource Damage Assessments.*

RC: 22.027
Doc: SG-003/28

Page 4-37 Environmental Restoration Process at Pantex Plant. See comment #1.

Response: *See response to comment 22.026.*

RC: 22.028
Doc: PC-025/5

Of interest [is] why stored plutonium at Pantex [is] not considered solid waste as defined in 40 CFR 261.2 (a)(l), (a)(2), (a)(2)i, (a)(2)ii, (a)(2)iii, (2)(b), (2)(b)1, (2)(b)2, (2)(b)3, (2)(c), (2)(c)(1), (2)(c)(2), 2(d), or 2(e). Why open burning of HE is not RCRA treatment? When does stored plutonium meet the definition of land disposed (stored) as a solid waste? Why not if "accumulated speculatively", "inherently waste-like", scrap, dispositioned, recycled, studied, or burned? What would be the environmental impacts if stored plutonium meets the definition of a solid waste? I consider this a reasonable impact.

Response: *In response to Item 1: The Atomic Energy Act (AEA) of 1954, as amended, regulates plutonium storage. Furthermore, 40 CFR 261.4 (a)(4), the Resource Conservation and Recovery Act (RCRA) specifically excludes AEA source, special nuclear, or by-product material from regulation as a "solid waste." Therefore, stored plutonium is not a "solid waste" as defined by RCRA.*

In response to Item 2: See response to comment 22.029.

In response to Item 3: As identified in response to Item 1 above, plutonium does not meet the definition of a solid waste and, therefore, land disposal restrictions in 40 CFR 268 do not apply.

In response to Item 4: The environmental impacts of stored plutonium are analyzed and discussed in this EIS. The environmental impacts of stored plutonium are independent of statutory and regulatory framework.

RC: 22.029
Doc: PC-025/6

The sixth dash on Page 3-3. Why aren't HE components regulated by RCRA before burning? If I burn an experimental battery that contains lead and explosives but is a proprietary secret of my company, is that RCRA treatment? Request consultation with EPA and the U.S. Justice Dept. on the response.

Response: *Weapon components, materials, or parts of a component that are not being reused cannot be declared waste until they have been demilitarized and sanitized (D&S) in accordance with the Atomic Energy Act, as amended. Once materials are declared waste, they are managed in accordance with applicable Federal and State regulations. The environmental impacts from D&S operations have been specifically incorporated into impacts addressed in volume I, section 4.7, Air Quality, and section 4.13, Waste Management. D&S operations at the Burning Ground were included in the site-wide air modeling analysis. Solid waste generated as a result of D&S weapon components activities are included in the waste volume projections for the three levels of weapon activities. To account for fluctuations, waste projections include a 10 percent margin. D&S operations are part of the proposed continued operation of Pantex Plant as identified in volume I, section 3.1.1, and, therefore, D&S operations are bounded by environmental impacts presented in the Pantex Plant EIS.*

RC: 22.030
Doc: PC-025/66

... Volume I, section 4.13. Are pits a solid waste?

Response: *No, see response to comment 22.028.*

RC: 22.031
Doc: PC-025/67

... Page 4-193. Is demilitarization and sanitization of weapons components RCRA [treated]? Are classified weapon components that cannot be demilitarized and sanitized [and] sent to NTS, a solid waste? What is meant by declassified versus demilitarized and sanitized?

Response: *In response to Item 1: See response to comment 22.029.*

In response to Item 2: See response to comment 22.029.

In response to Item 3: For clarification purposes "declassified" has been changed to "demilitarized and sanitized."

3.23 National Environmental Policy Act Process/Procedures

RC: 23.001
Doc: HT02-08/1

Combining these three documents into a single opportunity for public input, together with the very short amount of time much of the material has been available, does justice neither to the NEPA process itself nor to the people and agencies that wish to make reasoned responses to these documents. At least in the case of the Stockpile Stewardship as well as the Storage and Disposition, the documents are substantive enough to require careful analysis. It is also an unavoidable conclusion that the hearing process envisioned by NEPA has been transformed by DOE into a format they feel they can more effectively control—that being the workshops. There is nothing wrong with workshops per se, but they do not meet the government's full responsibility to the public. That any of us at all are standing here to give testimony is only the result of citizen lobbying and the willingness of individuals to face down any obstacles to get their concerns into the public record.

Response:

Each of the documents has a public comment period, inclusive of public hearings/meetings as required by NEPA. During this time the public is encouraged to comment verbally at the hearings, in writing, by telephone, or by e-mail. The comment periods for these documents overlapped. It was felt that the public would be better served to have one meeting whenever possible to discuss as many of the documents as necessary, depending on the geographical location of the meeting. This format also addressed feedback to reduce the number of meetings the public had to attend. The effort was intended to provide the public with as much information as possible and to allow for as long a comment period as could be scheduled.

For the record, the workshop format used for the public hearing is, in fact, a response to stakeholder requests for this type of format. The entire hearing structure, including the joint presentation of the three EISs, the workshop format, the time periods for formal testimony, the provision of space for displays by citizen groups, and the two-day afternoon and evening sessions were planned by the Pantex Plant Citizens Advisory Board—not DOE.

RC: 23.002
Doc: HT02-08/2

The Site-Wide EIS, an effort brought about by citizen lobbying of the Department of Energy, has not really been in the public domain long enough for a detailed consideration. Unfortunately, the substance of the document itself may require much less time than the gravity of the issues warrants.

Response:

Although the Notice of Availability for the Draft EIS was issued less than a month before the first public hearing was conducted, the comment period was extended to July 12, 1996, during which time the public could submit comments in writing, by telephone, a technical exchange meeting, or via electronic mail. Council on Environmental Quality regulations require a minimum comment period of 45 days. For this EIS, DOE extended the comment period to 98 days. Comments were accepted as late as July 29, 1996.

RC: 23.003
Doc: HT02-07/1

I came over today trying to have an open mind, but I realize that after listening to the City, the State, Federal elected officials, this is a done deal. The most we can hope for is a safe facility.

Response:

The NEPA process requires a thorough evaluation of the Proposed Action, including a variety of alternatives. The decision to accept an alternative is not made by city, county, or Federal elected officials at public meetings such as this. The EIS evaluates the environmental effects of Pantex Plant operations as well as the effects associated with interim storage of pits at alternate locations. The final decision will be made by the Secretary of Energy, based on the findings in the document as well as public input from all areas (private, elected officials, organizations, etc.).

RC: 23.004
Doc: HT11/9

You don't happen to have a web site where we can access more information?...

Response:

We do not have a web site; however, the DOE Home Page can be accessed through the internet. The DOE Universal Resource Locator (URL) address on the internet is http://www.doe.gov. A list that links to DOE program offices can be found at http://apollo.osti.gov/html/servers/hqtitls.html. A map with DOE sites can be found at http://www.doe.gov/html/DOE/infolink/usdoemap.html. Additionally, specific inquiries on this EIS can be accessed through the Internet via nfounds@doeal.gov.

RC: 23.005
Doc: HT11/10

You have an internet address? Is that classified?

Response:

See response to comment 23.004. It is not classified.

RC: 23.006
Doc: HT11/11

What I wonder is, if I have any other questions, is there an area I can tap in and find frequently asked questions?

Response:

This Comment Response Document is one source for answers to frequently asked questions, another is the internet (nfounds@doeal.gov) and phone calls to the DOE EIS office in charge of this document (505-845-4351) or the Office of NEPA Policy and Assistance (1-800-472-2756). While we do not post a listing of frequently asked questions per se, DOE will respond to any questions that any member of the public may have. See response to comment 23.004.

RC: 23.007
Doc: HT11/34

... We were surprised by this meeting...—maybe there was public information or scheduling announcement that we missed. But...no matter whether it's Pantex or [it] has to do with the people that are doing NTS, EIS or any of the EISs where Nevada Test Site is involved, we would like to have a mechanism set up whereby Department of Energy representatives and representatives of local governments that may be affected like Clark County can meet so that we can have a briefing...[to] prepare ourselves for statements [that] in many cases

might be statements of support, given that certain mitigation measures are taken or at least addressed.

Response: *On June 5, 1996 a video conference call was conducted between DOE officials, NTS officials, representatives from the State of Nevada Department of Transportation, the States Advisory Board, and representatives from Clark County, including the Nevada Department of Comprehensive Planning, Nuclear Waste Division, to discuss the EIS and transportation issues. DOE plans to continue interaction with the State and local agencies to solicit their views before decisions are made.*

LC: 23.008
Doc: HT11/35

And at this point I'd like to request a meeting among the management of Clark County, probably the Director of Comprehensive Planning, County Manager, and so on and representatives of Pantex to give us more detailed information. And I would like to also to request in your institutional program that there be periodic updates with identified state holders or units of local government that are affected.

Response: *See response to comment 23.007.*

LC: 23.009
Doc: HT11/37

... The other major concern is...the initial interaction and the ongoing mechanism for ongoing communication, that clear communication makes things a lot easier on both sides.

The person that you might address any correspondence to with regard to establishing a meeting with Clark County is Richard Holmes, H-O-L-M-E-S. He's the director of the Department of Comprehensive Planning for Clark County. His telephone number is area code 702, 455-5175.

Response: *We appreciate this point-of-contact for Clark County. See response to comment 23.007.*

LC:23.010
Doc: HT14/2

... Appropriate local and regional public information and involvement programs must be conducted by the agencies to ensure that the public is fully informed of the risks, hazards and impacts of such a program. This would be part of the national dialogue on all nuclear materials prior to assignment of any nuclear materials to a specific site.

Response: *This is an excerpt from Advice No. 46 of the Hanford Advisory Board regarding the Storage and Disposition of Excess Weapons Usable Plutonium and Special Nuclear Materials. The NEPA process ensures that the public is involved in all phases of this type of large scale proposed project. Public hearings and comment periods allow an avenue for personal interaction with the individuals involved with these projects prior to a final decision concerning the assignment of nuclear materials to a specific site.*

LC: 23.011
Doc: HT02-01/2

Technical analyses will be available later. Cost analyses will be available later. We do not have access to the information necessary to render an informed

opinion, and the Department tells us that is how it will be. For instance, DOE defends the absence of cost information by stating that NEPA does not require a Federal agency to supply cost analyses in a draft document. To that, I say "So what." Such information is necessary to the discussion and so must be made available.

The same applies to technical information. It is not possible that the Department has so little information that it can not give a clearer description of what the operations for dismantling pits and processing plutonium will involve. And no citizen should be satisfied with being put in the position of guessing.

Response: *The NEPA process is not a cost-benefit analysis process. Rather, the law requires that a NEPA document be prepared to ensure that environmental impacts are documented on the record before any decision is made on a major Federal action. Costs are not required in order to assess environmental impacts. Volume I, chapter 4, of the EIS describes the affected environment and the potential environmental impacts expected from the continued operations of Pantex Plant, as well as the associated interim storage of nuclear weapon components. Non-environmental issues such as a cost breakdown between the alternatives have not been developed for the Pantex EIS. It should be understood that Pantex Plant does not dismantle pits. Issues associated with dismantling pits and plutonium processing are not covered in this EIS. Long-term management of the nuclear stockpile is within the scope of the Stockpile Stewardship and Management PEIS, while long-term storage and the final disposition of plutonium is addressed in the Storage and Disposition of Weapons-Usable Fissile Materials PEIS.*

RC: 23.012
Doc: HT02-01/3

The decisions which these documents address are too important for us to allow the Department to go forward in this manner. Whether it is the case that the Department has the missing information yet is not revealing it, or whether the information is not complete, in either instance these draft documents are fundamentally deficient. The public deserves better. The law expects better. And the future must be based on something better.

Response: *The law requires consideration of all available relevant information. The information examined in this EIS is available to the public in two technical libraries established in Tetra Tech offices in Albuquerque, New Mexico, and Amarillo, Texas. These libraries contain more than 2,800 documents assembled in the course of preparing this EIS. The Pantex EIS provides a full and fair evaluation of all reasonable alternatives. Comments concerning the PEISs (Storage and Disposition, Stockpile Stewardship and Management, and Waste Management) are beyond the scope of this EIS; however, these concerns have been considered by the PEIS program staff and will be addressed in the PEIS comment response documents.*

RC: 23.013
Doc: HT02-01/1

It was never the intention of our particular citizens' groups that you...not be abl to respond. That's a misunderstanding that I hope we can clarify, and perhaps

rereading of the letters will serve to do that, letters that have been exchanged between the Department and four of the local citizens' groups.

Response: *The commentor is referring to the three DOE officials that were seated at the table with the meeting facilitator. These individuals participated as hearing officers, and as such, did not engage in dialogue or provide answers to the formal comments delivered by the 23 people that presented formal presentations. DOE officials did engage in dialogue during all the workshop sessions.*

RC: 23.014
Doc: HT01-04/1

I have to admit that stacking EIS on EIS on EIS has gotten a little bit confusing, at least for me and my staff.

Response: *The review periods for these documents were scheduled to overlap because of similarities and scheduling issues. The Department realizes the difficulty to the public to review these EISs at the same time and greatly appreciates the effort. We will take this under advisement for future projects.*

RC: 23.015
Doc: HT07/4

... I think that because the CEQ guidelines say that you are to identify what the significant impacts are, that if there are no significant impacts, you should state that in the EIS.

Response: *See section 1.3.15 in this volume for a discussion of significant impacts.*

RC: 23.016
Doc: HT05/9

With the first reconfiguration EIS proposal six or seven years ago, there was one EIS [that] covered the reconfiguration of the nuclear weapons complex. I'd like to know what the Department's rationale is for dividing among a number of EISs what essentially is one overall decision, which is what to do with the nuclear weapons complex as a whole.

Obviously, your site-wide EIS is a part only of the decision about what to do with pits now and in the future. Why is it that the Department has elected to split up the EIS process and to do fragmented segments?

Response: *The Reconfiguration Study, published in January 1991, envisioned several major initiatives, the principal ones being relocation of the plutonium manufacturing operations at Rocky Flats Plant to a new facility at another site, consolidation of nonnuclear operations, and either downsizing and modernizing other nuclear and research and development facilities in place or pursuing maximum feasible consolidation (DOE 1991a). However, the specific concepts then envisioned were rendered inappropriate by major changes in world events, particularly, the collapse of the Soviet Union. In Response, the Department restructured the reconfiguration concept into several separate but related program decisions that could be clearly defined and examined in detail. The Department also found that it was too difficult to examine all the programs in one PEIS. Thus, the Department restructured the reconfiguration concept into programs for nonnuclear consolidation, tritium supply and recycling, and stockpile stewardship and management. Decisions on the first two have been*

opinion, and the Department tells us that is how it will be. For instance, DOE defends the absence of cost information by stating that NEPA does not require a Federal agency to supply cost analyses in a draft document. To that, I say "So what." Such information is necessary to the discussion and so must be made available.

The same applies to technical information. It is not possible that the Department has so little information that it can not give a clearer description of what the operations for dismantling pits and processing plutonium will involve. And no citizen should be satisfied with being put in the position of guessing.

Response: *The NEPA process is not a cost-benefit analysis process. Rather, the law requires that a NEPA document be prepared to ensure that environmental impacts are documented on the record before any decision is made on a major Federal action. Costs are not required in order to assess environmental impacts. Volume I, chapter 4, of the EIS describes the affected environment and the potential environmental impacts expected from the continued operations of Pantex Plant, as well as the associated interim storage of nuclear weapon components. Non-environmental issues such as a cost breakdown between the alternatives have not been developed for the Pantex EIS. It should be understood that Pantex Plant does not dismantle pits. Issues associated with dismantling pits and plutonium processing are not covered in this EIS. Long-term management of the nuclear stockpile is within the scope of the Stockpile Stewardship and Management PEIS, while long-term storage and the final disposition of plutonium is addressed in the Storage and Disposition of Weapons-Usable Fissile Materials PEIS.*

RC: 23.012
Doc: HT02-01/3

The decisions which these documents address are too important for us to allow the Department to go forward in this manner. Whether it is the case that the Department has the missing information yet is not revealing it, or whether the information is not complete, in either instance these draft documents are fundamentally deficient. The public deserves better. The law expects better. And the future must be based on something better.

Response: *The law requires consideration of all available relevant information. The information examined in this EIS is available to the public in two technical libraries established in Tetra Tech offices in Albuquerque, New Mexico, and Amarillo, Texas. These libraries contain more than 2,800 documents assembled in the course of preparing this EIS. The Pantex EIS provides a full and fair evaluation of all reasonable alternatives. Comments concerning the PEISs (Storage and Disposition, Stockpile Stewardship and Management, and Waste Management) are beyond the scope of this EIS; however, these concerns have been considered by the PEIS program staff and will be addressed in the PEIS comment response documents.*

RC: 23.013
Doc: HT02-01/1

It was never the intention of our particular citizens' groups that you...not be able to respond. That's a misunderstanding that I hope we can clarify, and perhaps a

rereading of the letters will serve to do that, letters that have been exchanged between the Department and four of the local citizens' groups.

Response: *The commentor is referring to the three DOE officials that were seated at the table with the meeting facilitator. These individuals participated as hearing officers, and as such, did not engage in dialogue or provide answers to the formal comments delivered by the 23 people that presented formal presentations. DOE officials did engage in dialogue during all the workshop sessions.*

RC: 23.014
Doc: HT01-04/1

I have to admit that stacking EIS on EIS on EIS has gotten a little bit confusing, at least for me and my staff.

Response: *The review periods for these documents were scheduled to overlap because of similarities and scheduling issues. The Department realizes the difficulty to the public to review these EISs at the same time and greatly appreciates the effort. We will take this under advisement for future projects.*

RC: 23.015
Doc: HT07/4

... I think that because the CEQ guidelines say that you are to identify what the significant impacts are, that if there are no significant impacts, you should state that in the EIS.

Response: *See section 1.3.15 in this volume for a discussion of significant impacts.*

RC: 23.016
Doc: HT05/9

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made (following NEPA analysis) and the third is scheduled to be made in the fall of 1996. In addition, a PEIS was developed to address a new issue—how to provide long-term storage and disposition of surplus nuclear materials resulting from weapons dismantlement. The decision on that program is also scheduled to be made in the fall of 1996.

RC: 23.017
Doc: HT05/10

But I'd like my comment to go to the fact that what you have really done is made it impossible for the public to comment upon the overall program. You have no real programmatic environmental impact statement about which the public is instructed, educated and about which they can comment. And I seriously question whether the law really has been complied with.

Response:

As stated in the response to comment 23.016, the Department found that preparing one PEIS on the entire nuclear weapons program would have been so large and complicated that it would have been too difficult for anyone to digest.

RC: 23.018
Doc: HT02-15/1

I'll reiterate what some other people have already told you, that trying to deal with three documents, actually in less than 30 days that people have had all three of them together to compare, is clearly not an adequate amount of time. And one must conclude [that] either the Department of Energy is in a very big hurry and therefore they won't give an adequate [amount of] time for public comment, or that they don't understand the difficulty of dealing with three documents like this.

Response:

See response to comment 23.001.

RC: 23.019
Doc: HT02-15/2

... A number of people had expected that this format would also include time for DOE officials to respond on the record, and I continue to believe that that should be the case.

Response:

The "format" referred to is the presentation of formal comments at the Pantex public hearings in Amarillo, Texas. Individuals were given a 5-minute window to present a formal comment for the record, in front of DOE representatives. This was not meant to be a discussion session. The public was encouraged to discuss concerns with DOE representatives during the general (workshop) sessions as well as the individual EIS breakout sessions that were being conducted during the public hearings. We appreciate your input, and will consider your suggestions for future sessions. See response to comment 23.013.

RC: 23.020
Doc: HT02-21/1

Everyone who works at Pantex is there by their own choice. Why, now, should the opinions of such a small group receive so much focus?

Response:

DOE places equal importance on every individual's opinion, and upholds each individual's, agency's, or organization's right to be heard. As outlined by NEPA, the public comment period and the public hearings are held to facilitate this opportunity.

RC: 23.021
Doc: HT06/1

The first question is for all of the DOE and DOE contractor folks in the room, how many of them have completely read all three of the EISs? I see three, four, five, six, seven, eight hands, I think.

The point I would make is these folks, out of all the DOE and contractor folks in the room, these folks have had a lot longer to look at all three of these documents than the public [has had], and so you're putting the public in a very difficult position in terms of dealing with all these documents.

Response:

The draft EISs that are referred to in this comment were released for review by DOE and the contractors at the same time that they were released to the public. The review time for these documents is brief for the circumstances, but it is in accordance with that required by law.

RC:23.022
Doc: HT02-09/1

Many issues come into play in this very over-arching discussion. Not the least among them [is] the cost to us, the taxpayer, to produce these documents and to find them flawed in many ways. These documents are lacking important information in many areas that make it virtually impossible to even begin the discussion.

Response:

The draft phase of an EIS is designed to be a period when perceived shortcomings in the document are identified for resolution or further analysis. Public hearings and an accessible comment period provide an opportunity for individuals, agencies, and organizations to point out items that are unclear or situations and alternatives that may not have been addressed to the satisfaction of the commentor. A period of time exists between the draft and the final production of the document to address, and/or correct, these perceived shortcomings.

RC: 23.023
Doc: HT02-04/1

Are all of the important damage reports in the public domain, or are many vital documents concerning soil, air and groundwater contamination still being suppressed?

Response:

The Department provides to the public, upon request, any information that may be released under law. The law does exclude certain information relative to weapons design characteristics, for example, or that is exempt from disclosure by the Freedom of Information Act. Vital documentation has not been suppressed by the government; however, specific technical weapons information is not available to the public for security reasons.

Technical reports are located in the public reading rooms in Washington DC, Las Vegas, NV, Albuquerque, NM, Los Alamos, NM, Aiken, SC, Oak Ridge, TN, Amarillo, TX, Panhandle, TX, and Richland, WA. Inquiries concerning additional material concerning Pantex Plant can be directed to the DOE Albuquerque or Amarillo Area offices. Some environmental information is of a sensitive nature because of its relationship with certain projects, facilities, or missions. These reports are being studied and the information contained within them will be resolved after it is studied.

RC: 23.024
Doc: HT13/14

Just to clarify, I think it is legitimate to have varying selection criteria that go into less detail, but part of what an Environmental Impact Statement is required to do by law is to also evaluate the environmental impacts. So you could use potentially certain criteria to select the sites, but once you have selected them, whether it is Manzano, Nevada, Pantex, et cetera, you need to look at the environmental consequences.

Part of the consequences, both environmental because inspection is going to be important from not only an international, but frankly from a national confidential standpoint, is the availability and the accessibility and how inspection could work.

On the face of it, it seems to me, knowing something about all the five sites [that] you are looking at, that there are differing ways, at some sites, it would be easier to have international inspection, and some would be more difficult, and I think that should be analyzed.

Response:

The Department considers international inspection to be equally facilitated by all site alternatives.

RC: 23.025
Doc: HT13/34

I would suggest that [the] cumulative impact part of your Environmental Impact Statement should also include a cumulative psychological impact of all these projects on the people of New Mexico and how much people here are going to take before there is some kind of rebellion involved. We already know that cancer rates at Los Alamos, breast cancer rates, are 20 to 50 percent higher. We know that the child death rate there is higher than anywhere else in the state. We know a lot of bad things about Los Alamos.

We are looking at the rest of our state and wondering if the rest of our state is going to go that way, too, so I would suggest a psychological impact also be part of the cumulative effect of projects in an area.

Response:

Court precedents state that psychological impacts are not required for a valid NEPA analysis. The U.S. Supreme Court, in Metropolitan Edison Co., v. People Against Nuclear Energy (460 US 766 (1983)), held that psychological effects need not be considered in a NEPA evaluation. People Against Nuclear Energy, an organization of residents living in the area, claimed the commission should consider the severe psychological stress caused to its members by the nuclear reactor restart, especially in view of the failure of another reactor on the same site. While the Court did recognize that "human health may include psychological health," and conceded that risk to human health, including psychological health, came under NEPA, the Court believed that the psychological effects claimed raised policy questions that fell outside NEPA and that analysis of the psychological risks of the nuclear reactor restart were not required.

RC: 23.026
Doc: HT13/38

Well, I also feel that if Kirtland becomes your number one choice, that it is your obligation to hold a hearing here, not to just do this.

Response: *The hearing in Albuquerque fully complies with the letter and spirit of NEPA. Repetitive hearings on this same issue are at this time, considered neither necessary nor a prudent use of the public's time and taxpayers' dollars. Should a new, and previously, unaddressed alternative or significant environmental impact be discovered, the Department would consider additional public meetings.*

RC: 23.027
Doc: HT13/88

I just wanted to clarify the high explosive building with insufficient buffer. I used as an example what I would ask that this site-wide do, which is provide to people [with] an accurate description of the state of the plant, a Pantex Plant site-wide EIS.... I would like this document to contain an appendix or something that gives us an update on the status of the SARs at the plant, the facilities, and the status of whether or not they are in compliance with whatever DOE orders or whatever applies that DOE establishes to make these facilities meet whatever standards they have decided upon.

That is what I would like the site-wide to do. It is not to criticize the plant because in 1977, three people were killed, but it is telling that in 1996, you have a building that still has a similar problem, that people can get too close to it, so I would just like for this document to be complete enough that people can read the site-wide EIS and get an understanding of the plant and where it is going, mitigation, whatever is needed, and it goes forward from there. That is my question.

Response: *The Department has established policies to continually emphasize safety and encourage prompt resolution of any problems discovered. The cited incident is discussed in the response to comment 14.040.*

RC: 23.028
Doc: HT12/1

First of all,...if I suggested it, I didn't mean to, that cost should drive the decision, but I think NEPA itself mandates that they [costs] be considered. If you've got two that are close together in environmental protection, you better know what they cost and maybe—you mentioned proliferation, which is the reason for all of this exercise. Timing, timing is not mentioned here.... It could have an impact on the decision and the costs.

Response: *See response to comment 23.011.*

RC: 23.029
Doc: HT12/12

May I ask a policy question? By what process do you waive [weigh] strategic concerns against potential negative impact to local populations? I was just wondering [if there] was any particular formula, equation, process?

Response: *The Record of Decision represents a judgment weighing all relevant factors in the decision. There is no mathematical formula.*

RC: 23.030
Doc: HT12/13

But are you...working with any type of independent entity that's not in total opposition to DOE but, just in case you did a case study, let's say for instance, cancer. And...are you...bringing in outside resources to say well, this is not what...we're finding.

Well...that's where the problem may be at, because you...hired them.... We're raising some very serious questions then. [You] should be able to fund us with money for us to be able to go out and find [our] own independent study, own independent researchers, the individual that will research our problem for us. And then [together] we could sit at a round table and...come up with an answer....

But...for [you] to appoint us someone or say, well, I [have] this person here [and] you can call him and he'll help you out. [But]...that's not going to work because that's no different than [you] sending out doing the independent research yourself.

Response: *The Department does fund outside research when deemed appropriate to investigate matters about which in-house information is insufficient for decision-making. The commentor is referred to EPA's Office of Environmental Justice. This office provides grants to organizations specifically to study environmental justice issues. This EPA money would be completely independent of DOE and would directly address the commentor's issue. The last EPA notice of availability for funding was announced in the Federal Register on Thursday, June 13, 1996 (61 FR 30063), "Notice of Availability of FY 1996 Multimedia Environmental Justice Through Pollution Prevention Grant Funds." For further information, the commentor should contact EPA at (202) 260-4109.*

RC: 23.031
Doc: HT12/14

... A more narrow question is, is there a way to challenge the ROD, not to necessarily change it although it may get changed in your process, but his specific question is, what is the procedure to challenge a ROD if you feel that that decision is against your community.

Response: *Public comments, as outlined in 40 CFR 1503, are actively encouraged by DOE. All comments received during review of the draft document have been published and responded to in this volume of the EIS. These comments must be addressed in an EIS as outlined in 40 CFR 1503.4. The public may appeal a decision under 40 CFR 1506.10 and make their views known even after the publication of the final EIS. If a substantial opportunity exists to alter the decision, the decision can be made and recorded at the same time that the EIS is published. This gives a 30-day parallel period when the EIS is under both appeal and review. "No action shall be taken until the decision has been made public" (10 CFR 1021.315) as required by the recently revised DOE NEPA Implementing Procedures, published in the Federal Register on Tuesday, July 9, 1996 (61 FR 36222). The decision can be made public by means such as a press release or announcement in the local media.*

RC: 23.032
Doc: HT12/23

... On your evaluation list, I had a question about why you didn't discuss things in detail and why you did. For instance, the facilities in infrastructure at SRS are excellent,...but it says it's not discussed in detail.

Response: *Council on Environmental Quality regulations proscribe that NEPA documents avoid unnecessary detail. In the instance cited, there was no need for further detail.*

RC: 23.033
Doc: HT12/28

What I'm hearing Rick say to you is that he's reading another DOE document that's not badly out of date and it's different than what [your] EIS is saying and what you're telling us here. And in order to go forward from here you need to take that document and...make a review against your EIS, correct and modify as necessary. Isn't that what you're saying, Rick?

Response: *This EIS contains the most current information available.*

RC: 23.034
Doc: HT12/32

It is the conservatism that you put in the bounding accidents—[they] are way too conservative. They need to have some credibility even though they are bounding accidents. You can't just assume, like the safety analysis does, everything is the worse, NEPA doesn't allow that. NEPA says that you will develop reasonable but bounding accidents and I concluded from reading it before Bob raised the question here earlier in the day that the accidents were not reasonable. They were bounding, certainly. ...I could have said that the guys consume...or inhale the pit and, therefore, that's bounding, but that's certainly [not] the intent of a NEPA process.

Response: *The accidents analyzed are both bounding and the most credible of accidents that safety specialists can conceive for the circumstances that exist.*

RC: 23.035
Doc: CO-003/4

Equity impacts must be addressed in the assignment of new nuclear materials (including plutonium) to Hanford.

Response: *Equity along with environmental impacts, mission requirements, costs, and technical factors will be considered in the Record of Decision.*

RC: 23.036
Doc: CO-009/3

(However, we do request that the Department include in the record "dockets" for these EISs the comments by SPS relative to listed potential environmental concerns recited in the draft Tritium Production-related EIS of 1995. In those comments, SPS rebutted the overly sensitive, generally not really site-specific but knee-jerk and ill-informed, and frequently inaccurate characterizations of environmental "concerns" about expanded missions at Pantex. Clearly, those earlier characterizations of possibly "adverse" impacts, especially those related to uses of groundwater, now are rejected by DOE. Nonetheless, a replete record supportive of the Department's April 23, 1996, publicly articulated conclusion that NO significant adverse impacts would result, is appropriate.)

Response: *Each NEPA document prepared by the Department contains the most accurate information available at the time the document is produced.*

RC: 23.037
Doc: CO-009/4

We request—we are tempted to demand—that fair and open cost comparisons among the alternative sites for each function be used in analyzing sites, and that

such accountings be shared with the public that [has] demonstrated interest in the nuclear complex.

Response: *See response to comment 23.011.*

RC: 23.038
Doc: PC-023/1

First of all, I appreciate that this report has addressed many concerns expressed by citizens' groups with regard to previous reports. The writers and compilers of the report should be complimented on their efforts in this process.

Response: *Thank you for the compliment. The Department will pass it on to the responsible preparers.*

RC: 23.039
Doc: PC-022/1

I would like to request [that] you hold public hearings in Albuquerque on the Pantex Storage of Nuclear Weapons Components, as our city is one of the possible sites.

Response: *The public hearing in Albuquerque was held on May 7, 1996.*

RC: 23.040
Doc: HT15/24

We really are interested, as the State is as well, in seeing that the evaluations are good science, good process and all those things, because I don't think any of us are interested in having the numbers be unreasonable for any reason or uninformed for any reason. So that is a problem for us. We do like the idea of being able to read the document and understand thoroughly from what is in the document, that we do think it's clear; there are not terms that are used that are not explained.

Response: *Thank you for the comment. That is always our objective and intent.*

RC: 23.041
Doc: HT16/39

... None of the documentation related to the pit reuse facility is available to the public in Albuquerque, which is where I live, because the DOE reading room has none of these documents available to the public.

Response: *The specific documentation requested contains data that cannot be released to the public.*

RC: 23.042
Doc: HT17/15

... There is an environmental justice section;... there probably ought to be an economic justice section, also, because I think those at risk populations would feel the effect of an economic slow down, while at the same time those agencies that help them would really suffer in terms of available funds. And that's more of a blanket statement and I don't know if that really falls under what your tasked to do under NEPA, but I think it's a failing not only related to Amarillo, but to all the communities that [you] are looking at.

Response: *Economic impacts are addressed in volume I, sections 4.11, 5.2.1.9, 5.3.1.9, 5.4.1.9, and 5.5.1.9.*

RC: 23.043
Doc:HT17/20

I only want to make two comments. And one is I guess to express frustration at being in the situation we're in so very often with Pantex and the Department of

Energy in general of being asked to trust us; the documentation isn't complete, trust us; it's not ready yet, but it will be, trust us; we don't have the cost analysis yet, but it will come, trust us; it's classified, we can't tell you, but we assure you it's okay. And we find ourselves in this position time and time and time again.

Response: *This EIS has been prepared with the most current information available at the time of preparation. Many of the changes from the Draft EIS to the Final involve updating information that has become available recently. All references made in the EIS are available to the public, save those classified or otherwise restricted references. The use of restricted references has been kept to a minimum in this EIS.*

RC: 23.044
Doc: HT17/52

I would like to know the legal connection, if any, of the information documents that you all have composed that go along with this site-wide [EIS]. There are three volumes that [you] have worked with, and I would like to know, when you sit down with a site-wide, do you really need to sit down with those three documents, too, to look at the whole thing? ...Legally, does this thing [EIS] have to stand by itself and are those merely reference documents and they haven't got the same stand-alone right?

Response: *The Final EIS is the only official NEPA document. The other documents mentioned are references used in preparing the EIS.*

RC: 23.045
Doc: HT17/54

In your list of comments, scoping issues that were brought up in this document, [you] left off the nonproliferation concerns. And if you'll go back to your implementation, you will find out that in scoping, nonproliferation received more comments than human health, socioeconomics, transportation, air quality. It was very nearly at the top of the list.

Response: *Subsequent to scoping, the Department determined that there would be no changes to facilities necessitated by non-proliferation procedures. Therefore, there are no impacts to analyze.*

RC: 23.046
Doc: HT17/58

We're forced here to comment on a very narrowly conceived document. We're in a [compromising] position, because we're forced to play on the Agency's ground, with no input into the design of a better draft EIS. Again, we're forced to be reactive, rather than to confront these issues up front in a collaborative, proactive manner.

Response: *A public scoping period was conducted in May and June 1994 to obtain public input into the scope and design of the EIS.*

RC: 23.047
Doc: HT17/65

I think the document provides virtually no, none of the analysis that is necessary in terms of looking at the baseline operations of existing pit storage at Pantex. One of the things, one of the easy things that should be done...is taking your two and a half year old EA for pit storage of those pits and looking at what it said the impacts would be, [if] anything, other than the aircraft analysis, which seems to be the only thing you've even tried to look at, and saying, okay,

over the last two and a half years what does the real data show up in terms of what's actually happened. What [if] those analyses were right, what [if they] were wrong, what [if they] were overly conservative, et cetera.

Response: *The 1994 Environmental Assessment for Interim Storage of Plutonium Components at Pantex was considered and utilized in the production of the Pantex EIS. Baseline operations were also considered by utilizing the information provided in the Pantex Plant Environmental Information Document (Pantex 1996), the Safety Information Document (Pantex 1996a), and the Programmatic Information Document (Pantex 1996b) that were created by the plant as resource material. See response to comments 23.012 and 23.053.*

RC: 23.048
Doc: HT17/66

... I think it is both poor practice and, frankly,...hard to justify that in terms of looking at the baseline of existing impacts, the document provides no assessment of what the impacts of the operation have been to those nearby surrounding residents to the plant. There have been impacts, and they need to be analyzed. It's frankly disgusting that your only charting document of where these surrounding residences even are in the document are wrong, but there's much more wrong with the lack of analysis than that.

Response: *The Department believes that impacts have been properly assessed. The map in the Draft EIS did mislocate some residences. That has been corrected in the Final EIS. However, a check of the database shows that the grid coordinates of the residences in the air quality model are correct and that the effects described were correctly modeled and analyzed in the text.*

RC: 23.049
Doc: PC-017/2

How can you determine the safety and purity of our agricultural activities and products if no thorough studies have been done?

Response: *The available information from past studies, along with the analyses performed in this EIS provide adequate assessment of potential impacts to agriculture and human health risks.*

RC: 23.050
Doc: MG-002/1

We recognize that the DEIS follows the standard NEPA-mandated DOE format of identifying alternatives and then comparing and contrasting these alternatives by describing potential impacts on a number of environments. This standard format is well-recognized as a reliable and valid process to identify traditional impacts that may result from a major Federal activity such as that described in the DEIS. However, we feel that the approach falls short of addressing the concerns of those persons and institutions most affected by the proposed project, namely those located in proximity to the site of the proposed activity and those located along related transportation routes. Residents of Clark County and visitors to the area certainly fall within this definition and we would expect that their perceptions and concerns would be taken into account as the Pantex EIS is finalized and the record of decision is reached.

Response: *Volume I, chapter 4, addresses the affected environment and the potential environmental impacts in an 80-kilometer (50-mile) radius around the Pantex*

Plant. Section 4.11, Socioeconomic Resources, and section 4.16, Intersite Transportation, address the commentor's specific concerns. Comments received in these areas have been considered and the final document has been updated where appropriate. All comments were considered in preparation of the Final EIS, which the Secretary considers in issuing the Record of Decision.

RC: 23.051
Doc: PC-025/1

In general, I do not understand how this EIS and its Proposed Action, No Action, and alternatives meets the intent of NEPA. Please explain how this 2,000, 1,000, and 500 level analysis meets the intent of NEPA. I believe the levels are not different enough to analyze, please comment. Plus don't the impacts at 2,000 cover 1,000 and 500 levels, please comment on this issue. Please explain why an EA or supplemental EIS aren't more appropriate. Please provide a technical response including regulatory citations detailing why this EIS meets the purpose of NEPA when the alternatives are so similar. Should the analysis look at one level of activity and then limit detailing the "what if's" at higher and lower levels if necessary. This would possibly reduce the size of the document by 50 percent.

Response:

The Pantex EIS was prepared to support the Proposed Action of continued operations and interim storage of up to 20,000 plutonium pits at Pantex Plant in accordance with the guidance provided in NEPA (42 U.S.C. Section 4321 et seq.) and the implementing Council of Environmental Quality Regulations (40 CFR 1500-1508). An environmental assessment is not a viable option for the Proposed Action, since the Secretary of Energy made a commitment to the Governor of Texas at the completion of the Environmental Assessment of Interim Storage of Plutonium Components at Pantex Plant that the storage of plutonium pits would not exceed 12,000 pits prior to completion of additional analysis in an environmental impact statement (herein referred to as the Pantex EIS). The rationale for the 2,000, 1,000, 500 activity levels bounding the Proposed Action and alternatives is provided in volume I, section 2.2 of this EIS.

RC: 23.052
Doc: PC-025/2

On Page 1-14 in the second column in the last paragraph. If the decision will be based on cost, technology, national security, and infrastructure considerations, which documents covering cost, technology, and national security will be used? This implies the decision maker will use the information to make the decision without public comment. Does that meet the intent of NEPA? Will they be available to the public? Do the documents exist? When will these documents be completed?

Response:

The analysis for this EIS has been conducted in accordance with CEQ regulations (40 CFR 1500-1508). NEPA ensures that environmental issues associated with a decision are adequately addressed. Cost, technology, national security, and infrastructure considerations are other decision making factors that DOE anticipates relative to this Proposed Action. These documents are prepared as needed prior to the Record of Decision.

RC: 23.053
Doc: CO-005/3

Provide us [with] the data that proves DOE has not already contaminated our soil, air and water. Show us the documents where you have fully assessed the impact nuclear and high explosive activities have had and will have in the future on regional agriculture. Until agriculture is fully assessed, the impacts from the range of alternatives cannot be adequately scrutinized.

Response:

See response to comment 23.023. More than 1,000 documents on Pantex Plant were considered in preparing the EIS. These documents are available upon request from the Department. The Department has already provided baseline information in the form of three documents made available to the public. These documents are: (1) Programmatic Information Document (Pantex 1996b); (2) Environmental Information Document (Pantex 1996); and (3) Safety Information Document (Pantex 1996a).

3.24 Miscellaneous

RC: 24.001
Doc: HT02-22/1

... When we think of Pantex as people, 3,500 people, most of whom are very highly qualified, having a real appreciation for the quality of life for their families, here in Amarillo, we have excellent educational facilities from kindergarten all the way through to graduate level.

We have excellent cultural facilities, symphony, art, opera and so forth. We have excellent climate. We're just about the right size for people who want to really become an integral part of a good community to raise their families.

And of several different sessions that I have heard over the last few years, I don't recall having anybody express any concern about the fact that those 3,500 people who work at Pantex, whomever they may be, need to have a place to live and work in a place where they have a high quality of life.

And I think that is something that DOE needs to remember after they've considered all the technical aspects, all the hard, cold facts, that we've got to recognize that those 3,500 people have an excellent place in which to live and do their work and raise their families.

Response: *Thank you for your comment.*

RC:24.002
Doc: HT13/74

... My comment...is that [the] safety analysis report [should] be made available as the previous safety analysis report for Zone 4 was made available to the public, and I specifically, Don Hancock, Southwest Research and Information Center here in Albuquerque, want to be [notified] when that safety analysis report is available.

Response: *The previous Zone 4 Safety Analysis Report (SAR) was released to the public in 1994 due to the fact that the Zone 4 Environmental Assessment cited this document heavily (DOE 1992f). As for future SARs, including the Zone 4, these documents are generally not available to the public due to the added cost in declassification. As for the EIS, this document relies heavily on the Programmatic Information Document (Pantex 1996b), the Environmental Information Document (Pantex 1996), and the Safety Information Document (Pantex 1996a).*

RC: 24.003
Doc: HT17/48

Another piece, though, that really does trouble me is the lack of context that this document builds. Jerry Johnson, in his introductory remarks, did more to sort of put the context out when we first started this meeting this morning, when he talked about in '89 it was this, in '91 we were talking about expanding, and by the time we got to '93 we were doing thus and so. A few lines, and yet it put far more perspective about what the department had been through, the nuclear weapons program has been through, and what brought Pantex to where we are today. For instance, instead of saying Pantex used to do staging and now we do storage, I think it would not take many more words to say that Pantex [staged] plutonium components until 1989, when the Rocky Flats plant closed, and at

that time it began to hold them, and then say when storage actually initially began.

Response: *The context is stated in the summary section of the Pantex EIS as recommended by CEQ 1502.12.*

RC: 24.004
Doc: PC-025/88

... How many Information Document versions are there (i.e. 1995a, d, and h)? Why so many PCs? What does PC stand for? What does nd stand for? Is N441.1 correct?

Response: *There were numerous versions of the Information Documents (IDs). As the EIS was being produced, the most current ID was used; thus, the EIS lists different versions of the IDs. PC is an abbreviation for personal communication which was used as a reference; the abbreviation nd denotes no date. N441.1 stands for a DOE Order (N441.1) titled, "Radiological Protection for DOE Activities", this Order is current as of March 1, 1996.*

RC:24.005
Doc: PC-025/89

... Why only CDRs as source? Nothing better?

Response: *DOE procedures have tied NEPA into the project review and approval processes. As a result, money is generally not approved for detail design until certain stages are completed in the NEPA process.*