Unique Document # SAB2000500030000

MHSMP-90-36

# FY91 through FY93
# PROCESS DEVELOPMENT PLANS AND BUDGETS

## WEAPON SYSTEMS DEVELOPMENT

September 1990

Unclassified Controlled Nuclear Information
Not for Public Dissemination

Unauthorized dissemination subject to Civil and Criminal Sanctions under Section 148 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2168).

DEPARTMENT OF ENERGY UCNI REVIEW

UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION
REVIEWING OFFICIAL
NAME: D. GILSON
DATE: 10-11-94

DETERMINATION [CIRCLE NUMBER(S)]
1. CONTAINS UCNI
2. DOES NOT CONTAIN UCNI
3. UCNI BRACKETED
4. NO LONGER CONTAINS UCNI

# FY91 through FY93
# PROCESS DEVELOPMENT PLANS AND BUDGETS

## WEAPON SYSTEMS DEVELOPMENT

DEPARTMENT OF ENERGY UCNI REVIEW
UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION
REVIEWING OFFICIAL
NAME: D. GILSON
DATE: 10-11-94
DETERMINATION [CIRCLE NUMBER(S)]
1. CONTAINS UCNI
2. DOES NOT CONTAIN UCNI
3. UCNI BRACKETED
4. NO LONGER CONTAINS UCNI

September 1990

Unclassified Controlled Nuclear Information
Not for Public Dissemination

Unauthorized dissemination subject to civil and criminal sanctions under Section 148 of the Atomic Energy Act of 1954 as amended (42 U.S.C. 2168).

Reviewed by Maxine Thompson
(Name)
Classification Officer
(Title)
9-1-90
(Date)

# CONTENTS

Page

WEAPON SYSTEMS DEVELOPMENT

W89 . . . . . 1

B90 . . . . . 4

SRAM T . . . . . 5

Cost and Manpower Summary Table . . . . . 6

Distribution . . . . . 7

WEAPON SYSTEM W89

PLANT PX

PROCESS DEVELOPMENT
WEAPON SYSTEMS DEVELOPMENT
FY 91 - 93 PLANS & BUDGETS

MY = Manyears
PA = Producibility Assessment
* = Information Not Available/Not Applicable

| FY 1991 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| Target Plate: Develop fabrication, inspection, and test-fire procedures for the Target Plate. | 2.0 | C |
| TOTAL MY | 2.5 | |
| TD $K | 158 | |
| EST. FY 1991 REIMBURSABLES | $70K | |

| FY 1992 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| Target Plate: Complete development activities and transfer to production. | 1.3 | C |
| TOTAL MY | 1.6 | |
| TD $K | 102 | |

| FY 1993 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| TOTAL MY | | |
| TD $K | | |

DOE (b)(3)

PLANT COMMENTS: The purpose of this project is to develop manufacturing processes for the Target Plate [redacted] Stainless steel [redacted] tests as well as alignment tests between the Target Plate [redacted] were completed. Aging study components [redacted] were completed.

DOE (b)(3)

Plant Contact: D. P. Hilleary

Lab Designator and Contact: R. R. Weinmaster/SNLA, M. M. Wraith/LLNL, C. W. Pretzell/SNLL

Interdependent Program:

Phase 3 to 5 Costs:

POD COMMENTS:

WPD COMMENTS:



UNCLASSIFIED

WEAPON SYSTEM W89

PLANT PX

PROCESS DEVELOPMENT
WEAPON SYSTEMS DEVELOPMENT
FY 91 - 93 PLANS & BUDGETS

MY = Manyears
PA = Producibility Assessment
* = Information Not Available/Not Applicable

| FY 1991 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| Gas Sampling and Leak Testing: Complete system for dew point measurement. Begin fabrication of prototype gas sampling cart. | 0.6 | * |
| TOTAL MY | 0.6 | |
| TD $K | 25 | |
| EST. FY 1991 REIMBURSABLES | | |

| FY 1992 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| Gas Sampling and Leak Testing: Complete and test prototype gas sampling cart. | 0.6 | * |
| TOTAL MY | 0.6 | |
| TD $K | 25 | |

| FY 1993 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| Gas Sampling and Leak Testing: Develop the capability to do outside/in leak testing of warheads. | 0.4 | * |
| TOTAL MY | 0.4 | |
| TD $K | 24 | |

PLANT COMMENTS: The purpose of this project is to improve gas sample, dew point, internal pressure, and leak rate measurements. The benefit of this project is to provide improved and more consistent stockpile evaluation data.

Plant Contact: L. C. Myers

Lab Designator and Contact: SL-PX-005-WD-91/J. E. Costa, J. B. Woodard/SNLL

Interdependent Program:

Phase 3 to 5 Costs:

POD COMMENTS:

WPD COMMENTS:



UNI

WEAPON SYSTEM B90

PLANT PX

PROCESS DEVELOPMENT
WEAPON SYSTEMS DEVELOPMENT
FY 91 - 93 PLANS & BUDGETS

MY = Manyears
PA = Producibility Assessment
* = Information Not Available/Not Applicable

| FY 1991 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| MC4043/MC4256: Continue evaluation of automated loading and radiusing techniques for the MC4043 Jettison Cutter. Develop real-time quality assurance and post-load inspection techniques for Type VI PLSC. Refine MC4043 and MC4256 component assembly and testing procedures. Continue to evaluate alternate extrudable formulations and PLSC optimization parameters. Develop leak-check techniques. | 5.0 | C |
| TOTAL MY | 5.0 | |
| TD $K | 317 | |
| EST. FY 1991 REIMBURSABLES | $100K | |

| FY 1992 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| MC4043/MC4256: Continue alternate extrudable explosive material investigations. Further refine automated loading, quality monitoring and inspection techniques for Type VI PLSC. Continue PLSC optimization investigations. Finalize assembly and testing procedures and transfer process technology to production. | 3.2 | C |
| TOTAL MY | 3.2 | |
| TD $K | 204 | |

| FY 1993 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| MC4043/MC4256: Evaluate target material response to PLSC jet impact for MC4043 Jettison Cutter. Continue to support technology transfer to production. Identify ultimate in-process inspection technique for PLSC. Continue PLSC optimization and alternate extrudable materials studies. | 2.6 | C |
| TOTAL MY | 2.6 | |
| TD $K | 200 | |

PLANT COMMENTS: The purpose of this project is to develop manufacturing, inspection, and test-fire processes for the MC4043 Jettison Cutter and the MC4256 Parachute Deployment System. Type VI PLSC performance characterization has been completed. Feasible inspection techniques are currently under investigation. Semi-automated radiusing and loading of PLSC has been accomplished. Several alternate extrudable explosive candidates have been identified for further testing.

Plant Contact: S. G. Hallett

Lab Designator and Contact: SA-PX-006-AD-91, SA-PX-010-AD-91/M. G. Vigil, D. L. Marchi, D. R. Begeal, R. R. Weinmaster/SNLA

Interdependent Program:

Phase 3 to 5 Costs:

POD COMMENTS:

WPD COMMENTS:

WEAPON SYSTEM SRAM T

PLANT PX

PROCESS DEVELOPMENT
WEAPON SYSTEMS DEVELOPMENT
FY 91 - 93 PLANS & BUDGETS

MY = Manyears
PA = Producibility Assessment
* = Information Not Available/Not Applicable

| FY 1991 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| Converter: Provide design assistance for the converter. Conduct evaluation tests. Develop processes for manufacture, inspection, and test fire. | 1.7 | C |
| TOTAL MY | 1.7 | |
| TD $K | 111 | |
| EST. FY 1991 REIMBURSABLES | $15K | |

| FY 1992 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| Converter: Continue development of fabrication, inspection, and test-fire techniques. | 1.6 | C |
| TOTAL MY | 1.6 | |
| TD $K | 102 | |

| FY 1993 TECHNOLOGY (or Task Description) | MY | PA |
|---|---|---|
| Converter: Complete test-fire technique development and begin transfer of the technology to production. | 1.7 | C |
| TOTAL MY | 1.7 | |
| TD $K | 136 | |

PLANT COMMENTS: The purpose of this project is to provide design assistance, conduct evaluation tests, and develop processes for the manufacture, inspection, and test fire of the converter.

Plant Contact: P. E. Kramer

Lab Designator and Contact: D. R. Begeal/SNLA

Interdependent Program:

Phase 3 to 5 Costs:

POD COMMENTS:

WPD COMMENTS:

# FY91 THROUGH FY93 PROCESS DEVELOPMENT PLANS AND BUDGETS

## Weapon Systems Development

### COST AND MANPOWER SUMMARY TABLE

| | FY91 | | FY92 | | FY93 | |
|---|---|---|---|---|---|---|
| | MY | TD $K | MY | TD $K | MY | TD $K |
| W89 | 5.0 | 278 | 4.9 | 264 | 1.4 | 84 |
| B90 | 5.0 | 317 | 3.2 | 204 | 2.6 | 200 |
| SRAM-T | 1.7 | 111 | 1.6 | 102 | 1.7 | 136 |
| Weapon Systems Development Total | 11.7 | 706 | 9.7 | 570 | 5.7 | 420 |

# DISTRIBUTION

## DEPARTMENT OF ENERGY - AL

G. N. Pappas, POD

## DEPARTMENT OF ENERGY - AAO

P. M. Ramey, Area Manager
L. M. Paradee, Chief, Production Operations Branch

## MASON & HANGER - PANTEX PLANT

R. E. Bailey, Development, 11-2
C. L. Brasher, Development, 11-2
G. C. Cockrell, Development, 11-2
B. D. Faubion, Development, 11-2
D. W. Garrett, Development, 11-2
J. E. Hemphill, ES&H, 12-2
E. J. Henke, Fabrication, 12-97B
D. P. Hilleary, Development, 11-2
M. S. Johnson, Fabrication, 12-6
P. E. Kramer, Development, 11-2
L. C. Myers, Fabrication, 12-6
R. Ortiz, Fabrication, 12-97B
E. D. Poynor, Assembly, 12-69
D. W. Prigel, Quality, 12-28
R. J. Slape, Development, 11-2
R. E. Taylor, Program Management, 12-36

Circulation Copy:
1. C. D. Alley, Plant Manager, 12-36
2. R. J. Barton, Asst. Plant Manager, 12-36
3. Publications Section, Development, 11-2



UC X