

# **Standardized Outline Corrective Action Investigation Plan July 17, 2001**

## **Table of Contents Executive Summary**

### **1. 0 Introduction**

Provide a summary statement of the proposed corrective action investigation and identify the site(s), location(s), Corrective Action Unit (CAU) number(s), and Corrective Action Site (CAS) number(s).

#### **1.1 Purpose**

Provide a brief history and description of the CAU and the purpose for the corrective action investigation. State that the plan was developed using the Data Quality Objectives (DQO) process. Include a summary of the results of the DQO process described in the text of Subsection 3.4. Place a detailed discussion of the application of the DQO methodology and the DQOs to this particular situation in an appendix.

#### **1.2 Scope**

Describe briefly the scope of the investigation.

#### **1.3 CAIP Contents**

Summarize the contents of the CAIP. Reference applicable programmatic plans and other documents (e.g., QAPP, HASP, etc.).

### **2.0 Facility Description**

When the CAIP addresses multiple CAUs and/or CASs, the plan may contain information, as appropriate, to describe significant differences between CAUs and/or CASs and rationale for consolidation of CASs into CAU(s).

#### **2.1 Physical Setting**

Describe the physical setting of all the CASs in the CAU, focusing on how the setting may effect the investigation requirements.

#### **2.2 Operational History**

Provide a description of the use and history of the applicable CAS(s). If historical documents are referenced, ensure that the referenced historical information has been made available to the Nevada Division of Environmental Protection (NDEP).

### **2.3 Waste Inventory**

Identify the type(s) of wastes suspected to be present in the CAS(s).

### **2.4 Release Information**

Identify any known or suspected releases from the CAS(s), including potential release mechanisms, migration routes, exposure pathways, and affected media. In addition, identify known releases from adjacent localities that have impacted the CAU(s)/CAS(s).

### **2.5 Investigative Background**

Identify any previous investigations of the identified CAS(s). Include a summary of meaningful, historical analytical data where possible. Include a brief statement referencing the required NEPA documents.

## **3.0 Objectives**

### **3.1 Conceptual Site(s) Model(s)**

Identify potential contaminant sources, release mechanisms, migration pathways, and exposure points. Also identify the assumptions made to develop the conceptual site(s) model(s), include a graphical illustration of the model, and reference the sections in the CAIP where more detailed information is presented supporting those assumptions.

This section must address the need for an investigation of the following topics as they pertain to the conceptual site model, or contain an explanation for why it is not needed.

- \$ Topography
- \$ Geology including stratigraphy/lithology
- \$ Climate
- \$ Hydrogeology
- \$ Floodplain Studies
- \$ Infrastructure

### **3.2 Contaminants of Potential Concern**

Identify the targeted analytes for the investigation by CAS. If the investigation will include sampling more than one environmental medium, this section may contain a subsection for each medium of concern.

### **3.3 Preliminary Action Levels**

Provide regulatory and health-based concentration values for the contaminants of potential concern upon which decisions for future action for the site will be based. (It should be noted in this section that these are not necessarily the final clean up

criteria). If the investigation will include sampling more than one environmental medium, this section may contain a subsection for each medium of concern.

### **3.4 DQO Process Discussion**

Discuss the results of the DQO analysis. Identify the analytical methods, their instrument or method detection limits, and related requirements for quantitative measurement of the potential contaminants of concern for all site media.

## **4.0 Field Investigation**

Provide a description of, and the rationale for, the activities to be conducted to gather and document information from the field investigation(s). Identify and describe the methods to be used in enough detail to allow understanding of the scope and completion of the tasks involved. This will include, as applicable, the identification of sample collection and handling activities and analytical requirements.

The data for these topical areas may be based on field investigation activities which may include but are not limited to:

- \$ Surface Geophysical Surveys
- \$ Surface Soil Sampling
- \$ Subsurface Soil Sampling
- \$ Borehole Geophysics
- \$ Monitoring Well Installation and Development
- \$ Groundwater Sampling
- \$ Floodplain Studies
- \$ Other investigations that may be identified in sections 2.1 through 2.4 and/or section 3.1 above.

## **5.0 Waste Management**

Describe the procedures to be used for waste identification and handling.

### **5.1 Waste Minimization**

Discuss how the field investigation will be conducted in a manner that minimizes waste generation.

### **5.2 Potential Waste Streams**

Identify the potential waste streams that could be generated during the investigation (investigation-derived wastes)

### **5.3 Investigation-Derived Waste Management**

Identify how different waste types generated during the investigation will be handled. The following are examples of the types of investigation-derived wastes that could be generated during a specific investigation:

- \$ Sanitary Wastes
- \$ Low-Level Wastes
- \$ Hazardous Wastes
- \$ Hydrocarbon Wastes
- \$ Mixed Wastes

### **6.0 Quality Assurance/Quality Control**

Identify those quality assurance/quality control activities to be conducted during the corrective action.

- 6.1** Provide the proposed field sample collection activities (including, but not limited to duplicates, blanks, etc.).
- 6.2** Proposed Laboratory/Analytical Data Quality Indicators to achieve closure:
  1. Precision
  2. Accuracy/bias
  3. Representativeness
  4. Comparability
  5. Completeness
  6. Sensitivity

### **7.0 Duration and Records Availability**

#### **7.1 Duration**

Provide the tentative duration (in calendar days) for the corrective action investigation.

#### **7.2 Records Availability**

Include the following sentence: "This document is available in the DOE public reading rooms located in Las Vegas and Carson City, Nevada or by contacting the appropriate DOE or DTRA project manager." The NDEP maintains the official Administrative Record for all activities conducted under the auspices of the Federal Facility Agreement and Consent Order (FFACO).

### **8.0 References**

Provide references for the sources of information used during preparation of the CAIP.

**Appendices:****A.1 Detailed Discussion of Data Quality Objectives/Process and Methodology as Applied to this Project/DQO Results**

In accordance with EPA protocols for data validation and usability (cf. The *EPA Guidance for Quality Assurance Project Plans, EPA QA/G-5, 1998*), state the DQOs, include a graph of each of the contaminants displaying the acceptance criteria, false acceptance and false rejection of Decision Errors as applicable. (EPA's Data Quality Objectives Decision Errors Feasibility Trials (DEFT) Software, Feb 2000, may be used as an aid.) Discuss the results of the DQO analysis and, where applicable, appropriately address the following elements:

- \$ Hypothesis Test
- \$ Statistical Model (when possible)
- \$ Design Description/Option
- \$ Sampling Process Design
- \$ Rationale for Sampling Design
- \$ Sample Location
- \$ Sample Size
- \$ Decision Performance Curve
- \$ Conceptual Site Model and drawing

**A.2 Project Organization, include:**

1. Name and office telephone number of Project Manager
2. The following statement. The identification of the project Health and Safety Officer and the Quality Assurance Officer can be found in the appropriate plan. However, personnel are subject to change and it is suggested that the appropriate DOE or DTRA Project Manager be contacted for further information. The Task Manager will be identified in the FFACO Monthly Activity Report Prior to the start of field activities.@ \*

**A.3 Other reports or information as appropriate.**

\* Note: The verbiage has been changed from Bi-Weekly to Monthly per the Letter Agreement approved on April 5, 2004.

