

Standardized Outline

Corrective Action Decision Document/Corrective Action Plan

July 17, 2001

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Executive Summary

1.0 Introduction

Identify the site(s), their location(s), Corrective Action Unit (CAU) number(s) and Corrective Action Site (CAS) number(s). Provide a concise statement relating the corrective action being proposed to the provisions of the Federal Facility Agreement and Consent Order (FFACO).

1.1 Purpose

Provide a concise updated description of the CAU, reference previous documentation and state the purpose of this document, namely to develop and evaluate corrective action alternatives arising as a result of the corrective action investigation and provide a rationale for the selection of the preferred alternative. Provide the plan for implementing the preferred corrective action alternative.

1.2 Scope

Discuss the scope and substance of activities used to identify, evaluate, and recommend alternatives commensurate with the complexity of the site-specific situations. Concisely summarize the scope of the preferred corrective action alternative.

1.3 CADD/CAP Contents

Summarize the contents of the Corrective Action Decision Document (CADD) element of this report. Reference applicable programmatic plans and other documents as appropriate to support the CADD element. Concisely summarize the contents of the Corrective Action Plan (CAP) element of this report. Reference applicable programmatic plans and other documents as appropriate to support the implementation of the preferred corrective action alternative.

2.0 Corrective Action Investigation Summary

Concisely discuss the subject matter described by the following subject headings. Provide only enough information on the site conditions to facilitate an understanding of the corrective action alternatives and subsequent evaluation. Refer the reader to an appendix for a detailed discussion of the results, including any changes/modifications to the approved Corrective Action Investigation Plan (CAIP).

2.1 Investigation Activities

Provide a concise description of the investigation activities conducted at the site. Refer to and discuss the validity of the conceptual model developed in the CAIP.

2.2 Results

2.2.1 Provide summary analytical data, plume concentration isopleth maps or graphics that summarize the investigation results and affirm that based on these results the CAU has been adequately characterized.

2.2.2 Summarize the assessment made in the Appendix on how well the results from the CAIP meet the data quality objectives.

2.3 Need for Corrective Action

Identify why corrective action is necessary at this site (e.g., investigation activities determined Resource Conservation and Recovery Act constituents to be present in concentrations above regulatory action levels) and an evaluation of why possible remedial alternatives are required. Include a summary of impacted media volume/characteristics that require remediation. Address any site specific characteristics that may constrain site remedial actions.

3.0 Evaluation of Alternatives

3.1 Corrective Action Objectives

Describe cleanup goals and justify whether regulatory based or risk based.

3.2 Screening Criteria

List the corrective action standards used to evaluate the corrective action alternatives. All corrective action alternatives should be evaluated with respect to the following:

- \$ Protection of human health and the environment
- \$ Compliance with media cleanup standards
- \$ Control the source(s) of the release
- \$ Comply with applicable federal, state, and local standards for waste management

List and concisely describe the remedy selection decision factors that will be used to further evaluate and rank the corrective action alternatives, for example:

- \$ Short term reliability and effectiveness
- \$ Reduction of toxicity, mobility, and/or volume
- \$ Long term reliability and effectiveness
- \$ Feasibility

\$ Cost

3.3 Development of Corrective Action Alternatives

Identify and concisely describe applicable corrective actions and technologies that will be considered for each affected medium. In accordance with the Data Quality Objectives previously established, identify which actions and technologies are not feasible given the contaminant specific and site specific conditions. Alternatives considered shall at a minimum include:

- 1) A No Action alternative as a baseline case with which to compare all alternatives,
- 2) Preferred technologies alternatives - Based on historical patterns of remedy selection, preferred technologies for common categories of equivalent sites have been established. Alternatives being considered will be limited to those preferred technologies.

3.4 Evaluation and Comparison of Alternatives

Evaluate each feasible alternative in accordance with how well it achieves the corrective action objectives based on the screening criteria given in Subsection 3.2. Discuss and rate each alternative relative to the others.

4.0 Recommended Alternative

Present the preferred corrective action alternative and the rationale for its selection based on the corrective action objectives, screening criteria, and previously approved corrective actions at similar sites (for example: media type, site conditions, comparable nature, and extent of contamination).

5.0 Detailed CAP Statement of Work

5.1 Preferred Corrective Action Alternative

Provide a description of the preferred corrective action alternative and the key elements of its planned implementation.

5.2 Construction Quality Assurance/Quality Control

Identify those construction quality assurance/quality control activities to be conducted during the corrective action, as applicable to remediation of the site.

- 5.2.1 Provide the proposed field sample collection activities (including, but not limited to duplicates, blanks, etc.) in order to certify construction activities.
- 5.2.2 Proposed Laboratory/Analytical Data Quality Indicators to ensure construction activities are meeting the Construction Quality

Assurance/Quality Control guidelines. (eg., proctor tests, density testing, continual sieve analyses to ensure fill material remains consistent throughout construction, concrete strength testing, etc.)

5.3 Waste Management

Provide a summary of how different waste types generated during implementation of the preferred corrective action alternative will be managed. The following are examples of wastes which could be generated during corrective action:

- \$ Sanitary Waste
- \$ Low-Level Radioactive Waste
- \$ Hazardous Waste
- \$ Hydrocarbon Waste
- \$ Mixed Low-Level Waste

5.3.1 Waste Minimization

Discuss how the preferred corrective action alternative will be conducted in a manner that minimizes waste generation.

5.4 Confirmation of Corrective Actions

Identify planned activities to confirm the corrective actions which satisfy the project DQOs. This may best be addressed in a separate sampling and analysis plan/QAPP, depending on the amount of required verification. The confirmation activities should include Data Quality Indicators to achieve closure:

1. Precision
2. Accuracy/bias
3. Representativeness
4. Comparability
5. Completeness
6. Sensitivity

5.5 Permits

Identify any permits needed to conduct the preferred corrective action alternative.

6.0 Schedule

Identify and schedule major activities and milestones for implementing the approved corrective action.

7.0 Post-Closure Plan (Based on actions proposed in Section 5.0 above)

7.1 Inspections

Concisely describe the purpose, frequency, and duration of any planned

inspections.

7.2 Monitoring

Concisely describe the purpose, frequency, and duration of any planned monitoring.

7.3 Maintenance and Repair

Provide a concise discussion of any anticipated or planned maintenance and/or repair activities.

8.0 References

Provide references for the sources of information used during the preparation of the CADD and CAP elements of this report.

Appendices

Corrective Action Investigation Results

Discuss the investigation and present the results. Minimize restating site history, etc.; refer to CAIP, as appropriate. Concisely discuss the field program, focusing on changes or deviations from the planned operation. Present and discuss the results, conceptual site model, quality assurance parameters, and data validation results, as appropriate. Present data in tables, lab data reports, boring logs, site cross-sections with plume data, or other graphic representations of the results, as appropriate.

Data Assessment

Assess how well the results from the CAIP meet the data quality objectives using the primary data quality indicators (DQIs) of precision, accuracy, representativeness, comparability, and completeness. Other DQIs used to support the discussion of the analytical data can be sensitivity, recovery, memory effects, limit(s) of quantitation, repeatability, and reproducibility. The assessment must include a reconciliation of the data with the conceptual site model and the model revised as appropriate.

Cost Estimates

Present cost estimates for the construction, installation, operation and maintenance of each alternative. Calculate and present the cost in today's dollars for each corrective action alternative using time-value-of-money calculations, i.e., discount factors, to facilitate comparison of the alternatives.

Evaluation of Risk

Present assessment of risk for No action and evaluated alternatives, as appropriate.

Engineering Specifications and Drawings

Sampling and Analysis Plan

Include DQOs and Conceptual Site Model Drawing which is reconciled with the model presented in the CADD portion of the CADD/CAP.

Project Organization, include:

1. Name and office telephone number of Project Manager
2. The following statement: AThe 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.@ *

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