



JACOBS ENGINEERING GROUP INC.
ALBUQUERQUE OPERATIONS

ALBUQUERQUE OPERATIONS MANUAL

SECTION 9.2.10

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REMEDIAL ACTION CLOSE-OUT INSPECTION

1.0 PURPOSE

To prescribe the process whereby planned, comprehensive, documented inspections are performed at UMTRA Project remedial action sites upon completion of construction activities.

2.0 SCOPE

These procedures are applicable to all UMTRA Project remedial action sites and will be implemented prior to the initiation of site certification activities.

3.0 REFERENCES AND/OR FORMS

1. UMTRA Project remedial action close-out inspection example checklist.

4.0 RESPONSIBILITIES

1. The applicable DOE/UMTRA site engineer is responsible for notifying the DOE/UMTRA technical support group leader of the need for a remedial action close-out inspection based on construction schedule information as received from the Technical Assistance Contractor (TAC) and the Remedial Action Contractor (RAC).
2. The DOE/UMTRA technical support group leaders, with the assistance of the TAC Quality Assurance Department (QAD), is responsible for the coordination of the scheduling, performance, reporting, and follow-up, as required, of all UMTRA Project remedial action close-out inspections. The technical support group leader is also responsible for the designation of inspection team leaders and the selection of inspection teams.
3. The inspection team leader is responsible for the official notification appropriate project personnel concerning the scheduling of close-out inspections. These notifications will be made through the technical support group leader. The inspection team leader will additionally be responsible for the following activities:
 - 3.1 Brief and direct inspection team members concerning inspection responsibilities.
 - 3.2 Detailed inspection planning.



- 3.3 Performance of the close-out inspection.
- 3.4 Preparation of the inspection report.
- 3.5 Inspection follow-up and close-out.
- 3.6 Follow-up inspection of corrective actions (as required).
4. The inspection team members, under the direction of the designated inspection team leader, are responsible for the following inspection activities:
 - 4.1 Detailed inspection planning assistance.
 - 4.2 Performance of the close-out inspection.
 - 4.3 Inspection report preparation assistance.
 - 4.4 Follow-up and close-out assistance.
5. The Remedial Action Contractor is responsible for the performance of all required inspections and tests during construction activities to ensure compliance with all approved Remedial Action Plan (RAP) and Remedial Action Inspection Plan (RAIP) requirements. The performance of remedial action close-out inspections per this procedure in no way diminishes the need of the RAC to perform the required inspections and tests.

5.0 PROCEDURES

1. Prior to completion of remedial actions and site demobilization, the RAC shall conduct a thorough site inspection to verify completion of specified remedial actions. This inspection will be conducted by representatives of the RAC's Operations, Engineering, and Quality Assurance/Quality Control departments. The purpose of the inspection will be to verify final site conditions and compliance with approved plans and specifications, and to identify and initiate corrective actions where necessary. Implementation of required corrective actions will be verified through RAC reinspections.
2. Upon completion of the RAC final site inspections, the RAC shall notify the UMTRA Project office, in writing, that remedial actions are complete and that a DOE remedial action close-out inspection is requested.
3. After receipt of the RAC notification, the technical support group leader, in conjunction with the site engineer and TAC-QAD, will designate an inspection team leader, select an inspection team, and establish a date for the performance of the close-out inspection.



4. The close-out inspection team shall be under the direction of the designated inspection team leader. The inspection team shall include, as a minimum, representatives of the DOE/UMTRA operations and technical support groups and the TAC Engineering, QA, and site management departments.

Additional inspection team members representing other specialized areas will be considered, subject to the specific recommendation of the technical support group leader or inspection team leader.

5. A close-out inspection checklist shall be prepared under the direction of the inspection team leader to serve as a guide during the performance of the close-out inspection. The inspection checklist will be a site specific document that will be utilized to verify, through visual inspections, that the final site conditions conform to the requirements of the approved design and construction documents. A copy of the close-out inspection checklist shall be retained in the project site certification file.
6. The technical support group leader shall notify the RAC, through their project director, of the scheduling of the close-out inspection. This notification shall be in writing and will establish the date, time, and scope of the close-out inspection. At this time, the technical support group leader will also notify the Nuclear Regulatory Commission (NRC) of the inspection schedule and extend an invitation for NRC accompaniment during the performance of the close-out inspection. The timing of these notifications is critical in that the remedial action close-out inspection must be conducted prior to site demobilization.
7. A pre-inspection conference shall be held at the inspection location with the RAC representatives and the close-out inspection team. As a minimum this meeting shall encompass the following:
 - 7.1 Introduce inspection team members and RAC representatives.
 - 7.2 Explain the purpose and scope of the inspection.
 - 7.3 Discuss the checklist and inspection sequence.
 - 7.4 Arrange for a post-inspection conference.
8. The remedial action close-out inspection shall be conducted in accordance with the inspection checklist. The inspection will be a walking inspection of the entire site, including the perimeter and sufficient transects to enable the inspection team to inspect the entire surface and all items specifically described in the inspection checklist. In addition to the tailings embankment and surrounding areas, every monument, site marker, sign, monitor well, and erosion control marker will be inspected.
9. All checklist items must be completed and detailed comments made to document the results of the close-out inspection. Any checklist item that is identified as being unacceptable or



noncompliant by an inspector must be fully documented and explained. The purpose of this requirement is to provide a written explanation of inspector observations and the inspector's rationale for conclusions and recommendations. This documentation, in addition to narrative, will take the form of sketches, measurements, photographs, and annotated site drawings.

10. All areas that provide indications of noncompliance with approved design/construction documents shall be thoroughly investigated at the time of the inspection (i.e., areas which appear to have insufficient erosion protection material coverage will be excavated to verify layer thickness). When an area of concern has been verified as being noncompliant, the applicable inspector shall: 1) physically identify the area with flagging tape, paint, etc.; 2) photograph the area using photo scale sticks, tape measures, and/or erasable boards to appropriately identify the area; 3) note the location of the area on the appropriate site drawing; and 4) complete a brief written description of the noncompliant condition and the methods used for investigation and verification.
11. Field notes that are taken during the performance of the close-out inspection and completion of the checklist will become part of the inspection record. Although no specific format is required, field notes must be legible and in sufficient detail to enable review by the inspection team leader and appropriate DOE, TAC, and/or RAC personnel.
12. In addition to the above noted photographs of noncompliant areas, 35 mm color print photographs shall be taken at various locations, and in sufficient numbers, to provide a record of site conditions at the time of the close-out inspection. Photo log entries will be made for each photograph taken.
13. Note: Deviations from the inspection checklist may be made at the option of the inspection team leader. Such deviations shall normally be to allow for more in-depth investigations or to broaden the investigation when findings raise further questions.
14. At the conclusion of the close-out inspection, a post-inspection conference will be held between the inspection team members and the RAC representatives. This conference will be held prior to departing the inspection location and, as a minimum, shall encompass:
 - 14.1 Discussion of inspection findings and inspection team recommendations.
 - 14.2 Discussion of any needed corrective actions identified during the close-out inspection.
 - 14.3 Discussion of the final close-out inspection report (all official requests for corrective action will be included with the official distribution of the final close-out inspection report).



NOTE: At the option of the inspection team leader, draft inspection finding notes may be left with the RAC representatives.

15. Within ten days of the completion of the close-out inspection, a detailed inspection report shall be prepared. The report shall be reviewed by the DOE/UMTRA technical support group leader, appropriately endorsed, and transmitted to the RAC through the DOE-UMTRA Project manager. Copies of the report shall also be distributed to the inspection team members, project management, cognizant TAC staff members, and the Project Document Control Center.
16. The final close-out inspection report shall be prepared by the members of the inspection team under the direction of the inspection team leader. The report will use the close-out inspection checklist as a guide, and should not address findings that were not presented and discussed at the post-inspection conference.
17. The close-out inspection team leader, with assistance by applicable inspection team members as required, shall evaluate, and follow-up on all corrective action commitments. Follow-up inspections shall be scheduled as needed to verify the implementation and adequacy of the required corrective actions. Continuing deficiencies or failure to implement effective corrective action shall be reported to the DOE/UMTRA Project manager. Upon verification of effective implementation or corrective actions, the inspection team leader shall notify the same distribution noted in 15 above of satisfactory inspection report close-out.

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UMTRA PROJECT
REMEDIAL ACTION CLOSE-OUT INSPECTION
INSPECTION CHECKLIST

INSPECTION LOCATION: _____ INSPECTION NUMBER: _____

INSPECTION START DATE: _____

INSPECTION COMPLETION DATE: _____

WEATHER CONDITIONS: _____

INSPECTION TEAM LEADER:

Name	Title	Organization

INSPECTION TEAM MEMBERS:

Name	Title	Organization

Name	Title	Organization

Name	Title	Organization

Name	Title	Organization

Name	Title	Organization

EVALUATION CRITERIA	YES	NO
<p>Items to be listed as Evaluation Criteria will be site specific in nature and will be developed and documented prior to the performance of the close-out inspection by the designated Inspection Team Leader and Inspection Team Members. Examples of typical Evaluation Criteria are presented on the attached Checklist Continuation Sheet. It should be stressed that these are <u>examples</u> only. Inspection Team Leaders must ensure that Close-Out Inspection Checklists are comprehensive enough to ensure adequate verification of remedial action completion.</p>		

UMTRA PROJECT
 REMEDIAL ACTION CLOSE-OUT INSPECTION
 INSPECTION CHECKLIST

(Continuation Sheet)

EVALUATION CRITERIA	YES	NO
1. Has all site fencing been installed in accordance with specification requirements?		
2. Have all fence posts been properly anchored?		
3. Have the specified types and numbers of gates been installed?		
4. Is there evidence of erosion, digging or excessive open area beneath the fence?		
5. Have all required warning signs been fabricated and installed as specified?		
6. Are site access/maintenance roads in compliance with specified requirements?		
7. Have site survey and boundary monuments been installed as required?		
8. Can depressions, bulges, or uneven settling be noted on the embankment?		
9. Is the emplaced erosion protection material of the specified size and type?		
10. Is there evidence of incomplete or insufficient erosion protection material placement on the embankment or in the drainage ditches?		
11. Is there evidence of seepage on the embankment or the embankment periphery?		
12. Are all monitor wells legibly labeled, capped and locked?		
13. Has all specified site grading and seeding been completed?		
14. Are final site conditions consistent with as-built drawings and specifications?		