

MODULE IV

RCRA Corrective Action Program

MODULE IV – RCRA CORRECTIVE ACTION PROGRAM

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MODULE IV – RCRA CORRECTIVE ACTION PROGRAM

IV.A. CORRECTIVE ACTION PROGRAM (CAP)

- IV.A.1. The Permittee shall conduct a CAP for each newly identified solid waste management unit (SWMUs) and each inactive Area of Concern (AOC), as described in Condition IV.G. The purpose and objectives of the CAP are described in Appendices A and B. The CAP has three main parts, including: 1) the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI), 2) the Corrective Measures Study (CMS) and Corrective Measures Implementation (CMI), and 3) Long-term site tracking, inspection and monitoring. The Conditions in Module IV are based on the requirements of the Utah Code Ann. 19-6-105 (1)(d), Utah Administrative Code (Utah Admin. Code) R315-264-100 and R315-101.
- IV.A.2. The Permittee shall implement a community relation's plan as outlined in Appendix A during the CAP.
- IV.A.3. The Director, Utah Division Waste Management and Radiation Control (Director), may append additional SWMUs or AOCs to those listed in Tables 1 and 2 as described in Condition IV.G.
- IV.A.4. The Permittee shall use its best effort to secure all funds that may be required for implementation of the CAP. Failure to obtain adequate funds for the CAP may be considered cause for modification of any approved schedules or compliance dates.
- IV.A.5. If necessary, the Permittee shall seek, by the most expeditious means possible, appropriations from the U.S. Congress for funding to complete the CAP, in accordance with Sections 1-4 and 1-5 of Executive Order 12088 as implemented by the Office of Management and Budget Circular A-106, as amended. Section 1-5 of Executive Order 12088 states "The head of each executive agency shall ensure that sufficient funds for compliance with applicable pollution control standards are requested in the Agency budget."
- IV.A.6. Immediately upon failure to obtain adequate funding, the Permittee shall submit to the Director for approval a written request and justification, for modification of the approved schedule(s) in Tables 3 and 4. The written justification shall demonstrate that good cause exists and document efforts to obtain adequate funding. The Permittee shall also provide an alternate schedule of compliance for continuing the CAP or parts of the CAP for the subsequent fiscal year.
- IV.A.7. Failure to obtain adequate funds or appropriations from Congress shall not in any way release the Permittee from its obligation to conduct a CAP.
- IV.A.8. If adequate funds for the CAP are not available, the Director reserves the right to pursue any actions deemed necessary to protect human health and the environment, including but not limited to administrative proceedings, judicial action, or termination of this permit.

IV.B. STANDARD CONDITIONS

- IV.B.1. Failure to submit the information required by Module IV or falsification of any submitted information is grounds for enforcement action.
- IV.B.2. The Permittee shall sign and certify all plans, reports, notifications, and other submissions to the Director in accordance with Conditions I.BB and I.DD.
- IV.B.3. The Permittee shall submit a minimum of two copies of each plan, report, notification, or other submissions described in Module IV, to the Director. One of the two copies shall be submitted in electronic format.
- IV.B.4. Upon written approval by the Director, all final plans, schedules and reports required by the conditions in Module IV, are incorporated by reference into Module IV. Any noncompliance with such approved plans and schedules shall be deemed noncompliance with this permit and may be subject to enforcement action. Final RFI reports and final CMS Workplans shall be incorporated into this permit as outlined in Condition IV.C and Utah Admin. Code R315-3-4-3. Incorporation of RFI reports into the permit constitutes a Class II permit modification.
- IV.B.5. The Permittee shall submit all draft final plans and reports, final plans and reports, and schedules as specified in Tables 3 and 4. The Permittee shall revise draft final plans, reports and schedules described in Module IV in the time frames specified in Tables 3 and 4 or as specified otherwise by the Director. The Permittee may request extensions to these schedules for approval by the Director.
- IV.B.6. The Permittee shall only notify the Director of planned field work once the plan for the specific field work has been approved by the Director. The Permittee shall provide the Director seven days notification before any sampling or other activities specified in the approved plans and reports described in Module IV and Appendices A and B.
- IV.B.7. All raw data, such as sample results, laboratory reports, drilling logs, bench-scale or pilot-scale data, survey data, and other supporting information gathered or generated during activities undertaken pursuant to Conditions in Module IV shall be maintained at the Facility during the effective term of this permit unless the Director approves an alternate timeframe upon request of the Permittee. Executing contractors may store data for Dugway that is retrievable within seven days during contract life. The Permittee shall provide copies of the said reports, logs, and other data and information to the Director upon request.
- IV.B.8. All plans for IRP remediation work, to include both corrective and interim actions, shall contain detailed sections capturing procedures and physical processes for classification and containment of hazardous wastes. These procedures shall be site specific and include provisions for both expected and the potential for unexpected waste. For sites that include uncharacterized waste, generated waste shall be handled in a manner to minimize dispersion of the waste to the environment. Waste shall be characterized within 90 days of generation/excavation. If the waste is determined to be hazardous, it shall be placed in labeled and dated containers within 72 hours of the waste determination.

IV.C. RCRA FACILITY INVESTIGATION (RFI)

- IV.C.1. The Permittee shall conduct the RFI for all SWMUs and inactive AOCs listed in Tables 1 and 2, as described in Appendix A.
- IV.C.2. The Permittee shall notify the Director in writing within thirty days after making a determination that an AOC as listed in Table 2 is inactive. This notification shall include a schedule for conducting an RFI as described in Condition IV.C.1 and Appendix A.
- IV.C.3. The Permittee shall prepare and submit the results of the RFI in the draft final Phase II RFI Reports and CMS Workplans for the SWMUs and AOCs as described in Tables 3 and 4 and as described in Appendices A and B. Based on the RFI results, the Phase II RFI Reports shall propose risk-based residential land use, industrial land use or remedial action as defined in Utah Admin. Code R315-101. The final Phase II RFI Report and CMS Workplans shall be added to the permit as described in Condition IV.B.4. which requires a sixty-day public comment period.
- IV.C.4. For SWMUs meeting the industrial risk requirements of Utah Admin. Code R315-101, but where corrective action or a CMS is not needed or is no longer needed due to implementation of interim measures as described in Condition IV.E., the Permittee shall include post-closure or other long-term site management requirements in the Phase II RFI Reports. Upon final approval by the Director of the Phase II RFI Reports, the Permittee shall implement the post-closure of other long term site management requirements until such time as the SWMU(s) is added to a post-closure permit or an alternate long-term site management plan is approved by the Director.
- IV.C.5. The Permittee shall prepare and submit for Director approval, a Facility-wide ecological assessment plan as indicated in Table 3 and Appendix A. This plan may include all active or inactive AOCs, Hazardous Waste Management Units (HWMU) or SWMUs listed in Tables 1 and 2.
- IV.C.6. The Permittee shall prepare and submit for Director approval, a plan addressing potential hazards related to historical testing of biological agents at SWMUs and AOCs. This plan shall be submitted as indicated in Table 3.

IV.D. DETERMINATION OF NO FURTHER ACTIONS (NFA)

- IV.D.1. The Permittee may propose for approval by the Director in the final Phase II RFI Report, final Phase I RFI Report for AOCs, (or for Interim Measures/Voluntary Action or SWMU Assessment Reports as described in Condition IV.G) that SWMUs listed in Table 1 or AOCs listed in Table 2 be excluded from further investigation in accordance with Utah Admin. Code R315-3-4-3 for Class II permit modifications. An NFA designation generally means that land use is completely unrestricted, that long-term site management is not required, and that the requirements of this permit are no longer applicable
- IV.D.2. An NFA proposal shall contain information gathered during the RFI demonstrating that no releases of hazardous waste or hazardous waste constituent(s) are present, or that releases which may be present have been adequately defined and meet the NFA criteria specified in Utah Admin. Code R315-101 and Appendix A.

- IV.D.3. A determination of NFA shall not preclude the Director from requiring further investigations, studies, or remediation at a later date if new information or subsequent analysis indicates a release or potential of a release from any SWMU, AOC or newly identified site as described in Condition IV.G.
- IV.D.4. A determination of NFA shall not preclude further investigations, studies, or remediation of range-related testing and/or training activities upon closure of Dugway and/or individual ranges. Such investigations shall be conducted under the Military Munitions Range Program (MMRP), Base-Realignment and Closure (BRAC), Range Sustainability Program (RSP) or other similar program.

IV.E. CORRECTIVE MEASURES STUDY (CMS) AND IMPLEMENTATION

- IV.E.1. Based on the data and conclusions presented in RFI Reports and CMS Workplans described in Condition IV.C, the Permittee shall submit draft final CMS Reports describing site remediation or site management alternatives and plans for SWMUs which do not qualify for NFA or industrial use without corrective action as described in Condition IV.D, Utah Admin. Code R315-101 and Appendix A. The proposed alternatives and plans shall meet the requirements of Appendix B, Table 4, Utah Admin. Code R315-101 or other requirements specified in approved Phase II RFI Reports, CMS Workplans, US Environmental Protection Agency guidance documents, guidance from the Director regarding landfills and groundwater management plans.
- IV.E.2. Upon the Director's approval of the final CMS Report for each SWMUs or each group of SWMUs, the Permittee shall submit to the Director for approval, a draft final CMI Plan. The requirements for the draft final CMI plan are specified in Appendix B and Table 4, and shall include a CMI implementation schedule and post-closure requirements.
- IV.E.3. Upon the Director's approval of the final CMI Plan, the Permittee shall implement the CMI plan as specified in the final CMI schedule and Table 4.
- IV.E.4. The Permittee shall prepare and submit a draft final CMI report, for approval by the Director according to the schedule specified in the final CMI plan and Table 4. This report shall include independent verification that the remedial action was properly constructed and the CMI Plan was properly executed and implemented.
- IV.E.5. Immediately upon completing implementation of the CMI plan, the Permittee shall begin post-closure inspection and monitoring activities as specified in the final CMI plan. The post-closure monitoring requirements in the final CMI plan shall be added to a post-closure permit or other long-term monitoring plan as specified in the CMI Report.

IV.F. INTERIM MEASURES

- IV.F.1. At any time during the CAP, if the Director or the Permittee determines that a release or potential release of hazardous waste and/or hazardous waste constituent(s) from an AOC or SWMU or other situation poses a potential threat to human health and the environment, the Director may require the Permittee to perform interim measures or the Permittee may voluntarily propose interim measures.

- IV.F.2. In determining whether an interim measure(s) is required, the Director (or the Permittee in the case of a voluntary interim measure) shall consider the following:
- IV.F.2.a. The time required to develop and implement a final remedy;
 - IV.F.2.b. The actual and potential exposure of human and environmental receptors;
 - IV.F.2.c. The actual and potential contamination of drinking water supplies and sensitive ecosystems;
 - IV.F.2.d. The potential for further degradation of the medium absent of interim measures;
 - IV.F.2.e. The presence of hazardous waste in containers that may pose a threat of release;
 - IV.F.2.f. The presence and concentration of hazardous waste including hazardous waste constituent(s) in soils having the potential to migrate to groundwater or surface water.
 - IV.F.2.g. The weather conditions that may affect the current levels of contamination;
 - IV.F.2.h. The risks of fire, explosion, or accident; and
 - IV.F.2.i. Other situations that may pose threats to human health and the environment.
- IV.3. If the Director or Permittee determines the need for an interim measure(s), or voluntary interim measures as described in Condition IV.F.2 the Permittee shall submit for approval by the Director an Interim Measures Plan.
- IV.F.4. The Interim Measures Plan or a Voluntary Interim Measures Plan shall identify specific action(s) to be taken to implement the interim measures and a schedule for implementing the required measures. The Interim Measures Plan or the Voluntary Interim Measures Plan shall be incorporated into this permit upon approval of the plan by the Director. The Interim Measures Plan or a Voluntary Interim Measures Plan shall include, but not be limited to the following:
- IV.F.4.a. The objectives of the interim measures, including how the measure is mitigating a potential threat to human health and the environment and is consistent with Utah Admin. Code R315-101;
 - IV.F.4.b. The data collection quality assurance and data management information;
 - IV.F.4.c. The design plans and specifications, construction or excavation requirements, operation and maintenance requirements, project schedules, and final design documents;
 - IV.F.4.d. The construction quality assurance objectives, inspection activities, sampling requirements, and documentation; and

IV.F.4.e. The schedule for submittal of progress reports, the interim measures Workplan, the final design documents, the draft final interim measures report, and the final interim measures report.

IV.G. NEWLY IDENTIFIED AOCs OR SWMUS

- IV.G.1. The Permittee shall notify the Director in writing within 30 days of discovery of any newly identified sites the Permittee believes may meet the definition of an AOC, HWMU or SWMU. Upon notification, the Director and the Permittee shall schedule a visit to the site(s). During the site visit, the Permittee shall present available information about the site as needed to justify a decision about how to manage the site. These decisions include: 1) a determination that the site is not an AOC, HWMU or SWMU; 2) a determination that the site will be addressed through the process outlined in Condition IV.F for interim measures (if managed under Condition IV.F, the site does not need to be added to Table 1 or 2); or 3) a determination that a newly identified AOC or SWMU needs to be added to Table 1 or 2, and that the Permittee must include the new AOC or SWMU in the RFI program as described in Appendix A.
- IV.G.2. If information is presented during the decision making process described in Condition IV.G.1 to indicate that hazardous wastes were or may have been placed in a newly identified SWMU after November 19, 1980, the Director may consider the unit as a Hazardous Waste Management Unit (HWMU/non-notifier) and require the Permittee to close the unit under the requirements of Utah Admin. Code R315-265 40 CFR incorporated by reference and R315-101.
- IV.G.3. Within 30 days of making a decision and choosing a site management process as described in Condition IV.G.1, the Permittee shall submit a schedule for submittal of an interim measures plan or RFI Workplan.
- IV.G.4. The RFI Workplan or interim measures plan shall, at a minimum, include the following information: description of past and present operations and dates of operation; description of site waste streams; all existing site environmental monitoring data; a sample and analysis plan; a quality assurance and quality control plan; plans for collection of human health and ecological risk assessment data and other data and information as needed to fulfill the requirements of Utah Admin. Code R315-101. The plan shall also include a schedule for plan implementation and a date for submittal of a draft final report of results.
- IV.G.5. The Permittee shall submit draft final and final Interim Measures or RFI Reports describing all results obtained from the implementation of the approved plans. The reports shall also include a risk assessment and a CMS Workplan as needed for approval by the Director.
- IV.G.6. Based on the results and conclusions proposed by the Permittee in the Final Interim Measures or RFI Report, the Director may approve the site for no further action as defined in Condition IV.D, require further investigations or require a CMS as described in Condition IV.E.

IV.H. REPORTING REQUIREMENTS

- IV.H.1. The Permittee shall submit to the Director written quarterly progress reports of all activities conducted pursuant to the Conditions of Module IV. The progress reports may be in the form of letter reports or minutes from programmatic update meetings.
- IV.H.2. Quarterly progress reports shall contain a summary description of the work completed during the previous quarter, work projected for the next quarter, and summaries of waste management problems or deviations from approved Workplans encountered during the reporting period and actions taken or to be taken to rectify problems, description of any newly identified SWMUs and other information as listed in Appendix A.
- IV.H.3. The Director may require the Permittee to conduct new or more extensive assessments, investigations, or studies, as needed, based on information provided in these progress reports or other information.

Table 1 - Solid Waste Management Units (SWMUs)¹ U.S. Army Dugway Proving Ground (Dugway)		
SWMU Number	HWMU²	SWMU Name and General Location
<p>1. Only active SWMUs/HWMUs still under the Corrective Action Program are listed herein. All SWMUs/HWMUs that were either determined to not require corrective action under this Module or were closed according to the requirements of Utah Admin. Code R315-101 for clean closure have been removed from this permit module. SWMUs and HWMUs that have post closure requirements are addressed in Module VII of this permit.</p> <p>2. Hazardous Waste Management Units (HWMUs) are closed according to the requirements of Utah Admin. Code R315-265-120 incorporated by reference, 7-14, R315-101 and Consent Order 8908994. HWMUs are not subject to the corrective action requirements of this permit except as described in Conditions IV.A.2, IV.B, IV.F, IV.G and Appendix A, items 4 and 5.</p>		

TABLE 2
AREAS OF CONCERN (AOC)¹

AOC NUMBER	NAME AND LOCATION

¹ The basis for listing of each AOC in this table is contained in the document titled *RCRA Facility Assessment (RFA) for U.S. Army Dugway Proving Ground, 1994*.

² NFA means that the “Final Report of Findings for Areas of Concern” has been approved by the Director and has been incorporated into this permit by reference. The “Final Report of Findings for Areas of Concern” concluded that none of the AOCs met the conditions for permitting the site as a SWMU/HWMU and recommended NFA for AOCs 1 through 21 listed in this table. Additional investigation of the AOCs listed in this table may be required in accordance with Condition IV.D.4.

**TABLE 3
 RCRA FACILITY INVESTIGATION COMPLIANCE SCHEDULE
 FOR SOLID WASTE MANAGEMENT UNITS (SWMUS)
 AND AREAS OF CONCERN (AOC)**

RFI Activity	Due Date
Submit Final Phase I RFI Report	The Phase I RFI for all previously identified SWMUs/HWMUs is complete and has been approved by the Director. Scheduling for new SWMUs/HWMUs/AOCs will be determined as sites are added to this Module.
Submit Final RFI-Phase II Workplans and Implement the Workplans	The Phase II RFI Workplans for all previously identified SWMUs/HWMUs is complete and has been approved by the Director. Scheduling for new SWMUs/HWMUs/AOCs will be determined as sites are added to this Module.
Submit Draft Final Phase II RFI Reports and CMS Workplans for each site or group of sites (grouping of sites is determined by the Permittee).	The Phase II RFI for all previously identified SWMUs/HWMUs listed in Table X of Module VII is complete and has been approved by the Director. Scheduling for new SWMUs/HWMUs/AOCs will be determined as sites are added to this Module.
Progress Reports	There are no active sites in Module IV. Scheduling of progress reports for new SWMUs/HWMUs/AOCs will be determined as sites are added to this Module.
Submit a Schedule for submittal of a Site-Wide Ecological Assessment for Director approval	The Final Site-Wide Ecological Risk Assessment is complete and has been approved by the Director.
Submit a Schedule for submittal of plan addressing potential biological agent contamination for Director approval	Potential biological agent contamination was addressed in the Report of Findings for Areas of Concern and has been approved by the Director. Additional investigation may be required as described in Condition IV.D.4.

TABLE 4 CORRECTIVE MEASURES STUDY (CMS) AND IMPLEMENTATION COMPLIANCE SCHEDULE FOR SOLID WASTE MANAGEMENT UNITS (SWMUS) AND AREAS OF CONCERN (AOC)	
CMS SUBMISSION/CMI SUBMISSION	DUE DATE
Submit CMS Workplans	CMS Workplans shall be incorporated into Phase II RFI Reports
Submit Draft Final CMS Report	As specified in the Director's approved schedule to be included in Final CMS Workplans
Submit Final CMS Report	As specified in the Draft Final CMS Report
Submit Draft Final Corrective Measures Implementation (CMI) Plan	As specified in the approved Final CMS Report
Submit Final CMI Plan	As specified in the Draft Final CMI Plan
Implement CMI Plan	As specified in the Final CMI Plan
Submit Draft Final CMI Report	As specified in the Final CMI Plan
Submit Final CMI Report	As specified in the Draft Final CMI Report
Conduct approved Post-Closure Activities and Implement any approved post-closure plans	As specified in the Final CMI Plan and Condition IV.E.5