

**MODULE IV  
CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS  
AND  
SCHEDULE OF COMPLIANCE**

**IV.A. SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN**

- IV.A.1. The Permittee has conducted a RCRA Facility Investigation (RFI), in accordance with Module IV, for each Solid Waste Management Unit (SWMU) and Area of Concern (AOC) specified in Table 1. The Conditions in Module IV are based on the requirements of Section 3004(u) Hazardous and Solid Waste Amendments (HSWA) of 1984. UAC R315-8-6.11 requires the Permittee to implement corrective actions for releases of hazardous constituents from SWMUs and other source areas.
- IV.A.2. The Executive Secretary may require that the Permittee add additional SWMUs and AOCs to those listed in Table 1 in accordance with UAC R315-3-4.2, based on additional information received by the Permittee, the Executive Secretary, or any other knowledgeable source.

**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 termination of this permit in accordance with UAC R315-3-4.4. Any noncompliance with such approved plans and schedules shall be deemed noncompliance with this permit and may be subject to enforcement action.
- IV.B.2. The Permittee shall sign and certify all plans, reports, notifications, and other submissions to the Executive Secretary 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 required by this module, to the Executive Secretary.
- IV.B.4. Upon written approval from the Executive Secretary, the Permittee can request and may receive extensions of the compliance schedule due dates specified in Table 2.
- IV.B.5. If the Executive Secretary determines that further actions beyond those provided by Module IV, or changes to that which are stated herein, are warranted, the Permittee shall modify Module IV in accordance with UAC R315-3-4.2.

- IV.B.6. All raw data, including laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to Conditions in Module IV shall be maintained at the Ashland Distribution facility in the Freeport Center, Clearfield, Utah, during the effective term of this permit.
- IV.B.7. Discoveries made during the course of groundwater monitoring, field investigation, or environmental auditing conducted in accordance with this Module, or other facility activities which indicate that hazardous waste or hazardous waste constituents have been released from a SWMU shall be reported in writing as specified in Table 2. Such releases may be from already documented or newly identified SWMUs.
- IV.B.8. The Permittee shall submit certain information, proposals, and reports to the Executive Secretary for review and approval in accordance with the time frame specified in Table 2.

**IV.C. DESCRIPTION OF CURRENT CONDITIONS**

- IV.C.1. The Permittee submitted for the Executive Secretary's approval, a current conditions report on January 24, 2003, as part of the Phase I RFI Report, providing information pertinent to the Permittee's facility in accordance with the schedule specified in Table 2. The report included data gathered during previous investigations or inspections and other relevant data, including background information.

**IV.D. RCRA FACILITY ASSESSMENT**

- IV.D.1. The Executive Secretary has conducted a RCRA Facility Assessment (RFA) of the Permittee's site.
- IV.D.2. The RFA Report was prepared in December 1999 and included all SWMUs identified at the time.

**IV.E. RCRA FACILITY INVESTIGATION**

- IV.E.1. The Permittee has conducted a RFI to determine the nature and extent of known or suspected releases of hazardous waste(s) or hazardous waste constituents from the SWMUs listed in Table 1. The Permittee submitted the RFI Report on January 24, 2003. Based on the results, a No Further Action designation was approved by the Executive Secretary in a letter dated December 13, 2005. None of the SWMUs were identified as having a release of hazardous waste or

hazardous constituents that pose a threat to human health or the environment.

- IV.E.2. All maps provided in the Phase I RFI Report were consistent with the requirements set forth in UAC R315-3-2.5 and were of sufficient detail and accuracy to locate and report all work performed at the site. The maps depicted:
- IV.E.2.i. All solid or hazardous waste treatment, storage, or disposal areas including all solid waste management units active after November 19, 1980;
- IV.E.2.ii. All known past solid or hazardous waste treatment, storage or disposal areas including solid waste management units regardless of whether they were active on November 19, 1980;
- IV.E.2.iii. All known product and waste underground tank piping, past or present;
- IV.E.2.iv. The location of all past and present production and groundwater monitoring wells. Ground and top of casing elevations and construction details were included.
- IV.E.3. In the RFI Report, the Permittee provided a history and description of ownership and operation and solid and hazardous waste generation, treatment, storage, and disposal activities at the Facility.
- IV.E.4. The RFI Report provided dates of past product and waste spills, type of materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted, including any inspection reports, technical reports or other reports generated as a result of the response; and a list of relevant environmental documents and studies prepared for the Facility.
- IV.E.5. The RFI Report provided a preliminary report describing the existing information on the nature and extent of any contamination.
- IV.E.6. The RFI Report summarized all possible source areas of contamination. This included all regulated units, SWMUs, waste and product spill areas, and other suspected source areas of contamination. For each area, the Permittee identified the location of each SWMU, quantities of solid and hazardous wastes and areas where additional information is necessary.
- IV.E.7. The RFI Report included an assessment and description of the existing degree and extent of contamination. This included available monitoring data and qualitative information on locations and levels of contamination at the Ashland Clearfield facility; all potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, hydrogeo-chemistry, water quality, meteorology, and air quality; and the potential impact(s) on human health and the environment, including demography, groundwater and surface water use, and land use.

IV.E.8. The RFI Report documented all investigatory and remedial activities which were undertaken at the Ashland Clearfield facility. This information included: how the activities are mitigating potential threats to human health and the environment and/or are consistent with and integrated into previous RFI work at the Facility; design, construction, operation, and maintenance requirements; and schedules for all activities, including progress reports.

**IV.F. INTERIM MEASURES**

IV.F.1. The Permittee or the Executive Secretary may at any time during the term of this Permit identify and propose to the other party an interim measure. Interim measures shall include measures designed to prevent or abate a potential or immediate threat to human health or the environment. If the parties agree on the appropriateness of such measures, the Permittee shall implement them as required by the Executive Secretary. The following factors shall, at a minimum, be considered when developing an interim measure:

IV.F.1.a. Time required to develop and implement a final remedy;

IV.F.1.b. Actual or potential exposure of human or environmental receptors;

IV.F.1.c. Actual or potential contamination of drinking water supplies or sensitive ecosystems;

IV.F.1.d. The potential for further environmental degradation without interim measures;

IV.F.1.e. Presence and concentration of hazardous waste, or hazardous waste constituents, in the soil that have the potential to migrate to groundwater or surface water;

IV.F.1.f. Weather conditions that may promote the spread of contamination;

IV.F.1.g. Risks of fire, explosion, or accident; and

IV.F.1.h. Other situations which may pose a threat to human health or the environment.

IV.F.2. If the Executive Secretary determines the need for an interim measure, the Permittee shall submit for approval by the Executive Secretary an Interim Measures Plan. The Interim Measures Plan shall identify specific actions to be taken to implement the interim measures and a schedule for implementing the required measures. The Interim Measures Plan shall be incorporated into this permit. The Interim Measures Plan shall include, but not be limited to the following:

IV.F.2.a. Objectives showing how the measure is mitigating a potential threat to human

health (health and safety requirements) and the environment and/or is consistent with and integrated into any long term solution at the Facility.

- IV.F.2.b. Data collection quality assurance and data management information;
- IV.F.2.c. Design plans and specifications, construction requirements, operation and maintenance requirements, project schedules, and final design documents;
- IV.F.2.d. Construction quality assurance objectives, inspection activities, sampling requirements, and documentation; and
- IV.F.2.e. Schedule for submittal of the following reports; progress reports, interim measures workplan, final design documents, draft interim measures report, and final interim measures report.

**IV.G. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY IDENTIFIED SOLID WASTE MANAGEMENT UMTS**

- IV.G.1 The Permittee shall provide written notification to the Executive Secretary of any newly identified SWMUs or AOC not identified in Table 1. The notification shall include the location of the new SWMU or AOC, the dates of its operation, and all available information regarding an identified or suspected release of waste or constituents.
- IV.G.2. The Permittee shall request modification of Table 1 to incorporate any newly identified SWMU or AOC in accordance with UAC R315-3-4.2, within 150 days of discovery. The request to incorporate any newly identified SWMU or AOC into Table 1 shall constitute a Class 1 modification with Executive Secretary approval.
- IV.G.3. The Permittee shall submit a SWMU Assessment Plan as specified in Table 2. The SWMU Assessment Plan shall, at a minimum, include information concerning past and present operations at the unit(s); a Data Collection Quality Assurance / Quality Control Plan; a Data Management Plan and a schedule for implementation of the SWMU Assessment Plan.
- IV.G.4. The Permittee shall implement an approved SWMU Assessment Plan within 30 calendar days of receiving written approval from the Executive Secretary.
- IV.G.5 The Permittee shall submit SWMU Assessment Plan Progress Reports as specified in Table 2.
- IV.G.6. The Permittee shall submit a SWMU Assessment Report as specified in Table 2. The report shall describe activities conducted to fulfill the requirements of the approved SWMU Assessment Plan and shall be of adequate technical quality to

support the development and evaluation of subsequent documentation and its associated recommendation(s). At a minimum, the report shall provide the following information for each newly identified SWMU or AOC:

- IV.G.6.a The location of the SWMU or AOC, identified on a map;
  - IV.G.6.b The type of the unit, including dimensions and a structural description;
  - IV.G.6.c The period during which the unit was operated; and
  - IV.G.6.d All hazardous wastes that were or are being managed at the SWMU or AOC, including results of any sampling and analysis used to determine whether releases of hazardous wastes or hazardous waste constituents have occurred, are occurring, or have the potential to originate from the SWMU.
- IV.G.7. The Permittee shall amend the RFI Workplan and any other subsequent documents as specified in Table 2 if the SWMU Assessment Report indicates contamination exists at a newly identified SWMU or AOC.

#### **IV.H DETERMINATION OF NO FURTHER ACTIONS**

- IV.H.1. Based on the results presented in a RFI Final Report, for newly identified SWMUs, a No Further Action (NFA) petition may be submitted to the Executive Secretary. The petition shall demonstrate that there has not been a release of hazardous waste and hazardous waste constituents that poses a threat to human health or the environment.
- IV.H.2. A determination of NFA shall not preclude the Executive Secretary 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 a SWMU or AOC. In such a case, the Executive Secretary shall require the Permittee to initiate a modification to the Compliance Schedule (Table 2) in accordance with Condition I.D.

#### **IV.I. CLOSURE BY REMOVAL**

- IV.I.1 The Permittee may choose to close newly identified SWMUs by removing hazardous waste and hazardous waste constituents to non-detectable levels using preapproved analytical methods or to preapproved site established background levels. If the Permittee chooses to close by removal, then the Permittee shall submit a Corrective Action Plan (CAP) as specified in Table 2.

**IV.J. RISK ASSESSMENT**

- IV.J.1. The Permittee may address closure of newly identified SWMUs by assessing the risk to human health and the environment associated with any contamination that the Permittee proposes to leave in place. These risks shall be assessed in a Risk Assessment Report (RAR) conducted in accordance with UAC R315-101, submitted to the Executive Secretary for review and approval. The risk assessment for human health shall be conducted using one or both standard exposure scenarios (residential and actual) as needed to determine site risk management options. The RAR shall also include an ecological risk assessment that demonstrates the level of risk to ecological receptors. A request for a waiver from the ecological risk assessment requirement may be submitted to the Executive Secretary and granted, if it can be shown that no biological community or significant ecological endpoints exist at the SWMUs.
- IV.J.2. If the Executive Secretary agrees, through a review of the RAR, that the risk to human health present at the site is less than  $10^{-6}$  for carcinogens and the hazard index is less than one for non-carcinogens, using the residential exposure scenario, and the effects on ecological endpoints are insignificant, then the Executive Secretary shall approve the request for a NFA.
- IV.J.3. If the Executive Secretary agrees, through a review of the RAR, that the risk to human health present at the site is greater than  $10^{-6}$  using a residential exposure scenario but less than  $10^{-4}$  using actual land use conditions for carcinogens or the hazard index is less than one for non-carcinogens, using both exposure scenarios, or any detrimental effects on ecological endpoints can be mitigated by site management, then the Permittee shall submit a Site Management Plan (SMP), as specified in Table 2.
- IV.J.4. If the Executive Secretary agrees through a review of the RAR that the risk to human health present at the site is greater than  $10^{-4}$  for carcinogens or the hazard index is greater than one, using the actual exposure scenario, or any detrimental effects on ecological endpoints warrants corrective action, then the Permittee shall submit a Corrective Action Plan (CAP) as specified in Table 2.

**IV.K. SITE MANAGEMENT PLAN**

- IV.K.1. The Permittee shall submit a SMP as specified in Table 2 and in compliance with UAC R315-101-6.

**IV.L. CORRECTIVE ACTION PLAN**

- IV.L.1. Based on the results of the RFI, the Permittee shall submit to the Executive Secretary for review and approval a CAP for all units that have been identified to have had a release of hazardous waste or hazardous waste constituents and that have a level of risk present that is greater than  $1 \times 10^{-4}$  for carcinogens or a Hazard Index greater than one for non-carcinogens based on the approved risk assessment conducted in accordance with UAC R315-101 of the Rules. A CAP may also be used to propose remediation for SWMUs which the Permittee intends to clean close by removal of waste and waste constituents to nondetect levels or below preapproved background levels.
- IV.L.2. The purpose of the CAP is to develop and evaluate corrective action alternatives and to outline one or more alternative corrective action(s) which will satisfy the target clean up objectives. The criteria identified in UAC R315-101-1(b)(4) of the Rules shall be considered in the determination of appropriate corrective action. The CAP, at a minimum, shall include:
- IV.L.2.a. Project Management Plan;
- IV.L.2.b. A summary of Phase II RFI information as needed to prepare the CAP;
- IV.L.2.c. Proposed remediation goals or target cleanup objectives;
- IV.L.2.d. The corrective measures used to satisfy cleanup objectives;
- IV.L.2.e. Data Collection Quality Assurance / Quality Control Plan;
- IV.L.2.f. Data Management Plan; and
- IV.L.2.g. A schedule for implementation of the corrective action(s).
- IV.L.3. Upon approval of the CAP, the Permittee shall implement the corrective action(s) according to the schedule approved in the CAP. The Permittee shall furnish or retain all personnel, materials and services needed to implement the CAP.
- IV.L.4. The Permittee shall submit Corrective Action Plan Progress Reports as specified in Table 2.
- IV.L.5. The Permittee shall submit a Cleanup/Management Report (CMR) as specified in Table 2. The CMR shall be prepared in accordance with UAC R315-101-8(b) of the Rules.
- IV.L.6. The Permittee shall submit a Certification of Completion (CC) as specified in Table 2. The CC shall be prepared and submitted in accordance with UAC R315-101-8(c) of the Rules.

**IV.M. REPORTING REQUIREMENTS**

- IV.M.1. The Permittee shall submit to the Executive Secretary written quarterly progress reports of any activities conducted pursuant to the conditions of Module IV for newly identified SWMUs, except for a quarter when a final report is being submitted.
- IV.M.2. The quarterly progress reports shall contain:
- IV.M.2.a. A description of the work completed;
- IV.M.2.b. Summaries of all findings and all raw data;
- IV.M.2.c. Summaries of all problems encountered during the reporting period and actions taken or to be taken to rectify problems; and
- IV.M.2.d. Projected work for the next reporting period.
- IV.M.3. The Permittee shall maintain copies of other reports, drilling logs, and data at Ashland Distribution, Freeport Center, Clearfield, Utah, during the effective period of this permit. The Permittee shall provide copies of the said reports, logs, and data to the Executive Secretary upon request.
- IV.M.4. The Executive Secretary may require the Permittee to conduct new or more extensive assessments, investigations, or studies, as needed, based on information provided in reports or other supporting information.

**IV.N. MODIFICATION OF THE CORRECTIVE ACTION SCHEDULE OF COMPLIANCE (MODULE IV)**

- IV.N.1. A request for modification of the final compliance dates for newly identified SWMUs specified in Table 2 may be submitted to the Executive Secretary as a Class 2 Modification, in accordance with UAC R315-4-1.5.
- IV.N.2. Pursuant to UAC R315-3-4.2, the compliance schedules specified in Table 2, may be modified if the Executive Secretary determines that good cause exists.
- IV.N.3. The Permittee is required to obtain assurances of financial responsibility for all corrective action as outlined in UAC R315-8-6.12. The Permittee is also required to maintain assurances of financial responsibility in order to meet the compliance schedules as identified in Table 2.
- IV.N.4. Failure to obtain adequate funds or appropriations from its higher-tiered, direct,

parent corporation shall not in any way release the Permittee from its obligation to comply with the SMP or CAP (Conditions IV.K. and IV.L.) or any other requirement of this permit, the Rules or the Utah Solid and Hazardous Waste Act.

- IV.N.5. If adequate funds for Corrective Measures Implementation are not available, the Executive Secretary reserves the right to pursue any actions deemed necessary to protect human health and the environment, not excluding judicial recourse.

**TABLE 1**  
**SOLID WASTE MANAGEMENT UNITS (SWMU)**

1. Solvent Recovery Sump - Removed on July 17, 1984
2. Product Storage Tank Farm Area
3. Product Loading/Unloading Area
4. Container Filling Area
5. Railcar Unloading Area
6. Diesel Cleaning Area – NFA after RFA
7. Waste Collection Tank Area
8. Waste Storage Tank Area – sampled w/ SWMU 2
9. Neutralization Unit Area
10. Existing Hazardous Waste Storage Pad
11. Used Oil Tanks – closed

Refer to Drawing No. 71030-ZD-005, Rev. 0 – Utah DEQ Identified SWMUs.

Note: The Division completed a RCRA Facility Assessment of the Ashland facility. Based on the results of the assessment, Ashland was required to conduct a RFI. Ashland completed the RFI in 2005. Based on the results of the RFI a No Further Action letter, dated December 13, 2005, was sent to the facility.

**TABLE 2**  
**RCRA FACILITY INVESTIGATION COMPLIANCE SCHEDULE**  
**FOR SOLID WASTE MANAGEMENT UNITS (SWMU)**

<b>RFI Activity</b>	<b>Due Date (calendar days)</b>
Submit Current Condition Report	Within 90 days of permit issuance
Submit Phase I RFI Workplan	Within 90 days of receipt of written request from the Executive Secretary
Submit Phase I RFI Final Report	Within 180 days of a royal of the Phase I RFI Workplan.
Submit Phase II RFI Workplan	Within 90 days of acceptance of the Phase I RFI Final Report.
Submit Phase II RFI Final Report	With 180 days of a royal of the Phase II RFI Workplan
Submit Risk Assessment Report	Within 90 days of acceptance of the Phase II RFI Final Report.
Submit Site Management Plan	Within 60 days of acceptance of the Risk Assessment Report.
Submit Corrective Action Plan	Within 90 days of acceptance of the Phase II RFI Final Report or within 90 days of acceptance of the Risk Assessment Report.
Submit Cleanup Management Report	Within 180 days of approval of the Site Management Plan or Corrective Action Plan.
Submit Certification of Completion	Within 60 days of completion of approved Site Management or Corrective Action.
Submit Progress Reports for field activity and until the submittal of an applicable final report.	Every 90 days beginning from approval of an applicable activities associated with Phase I and Phase II, Corrective Action, Site Management, and SWMU Assessment.
Submit Release Report	Within 15 days of discovery
Submit SWMU/AOC Notification	Within 30 days of identification of newly identified SWMU
Submit SWMU Assessment Plan	Within 90 days of identification of newly identified SWMU
Submit SWMU Assessment Report	Within 120 days of approval of SWMU Assessment Plan.
Document Amendment	Within 90 days of approval or acceptance of preceding document.
Revised Documents	Within 90 days after comments are issued.