

MODULE VI
CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

- VI.A. SOLID WASTE MANAGEMENT UNITS
- VI.A.1. The Permittee shall conduct a corrective action investigation, in accordance with Module VI, for each Solid Waste Management Unit (SWMU) specified in the Pennzoil RCRA Facility Assessment (RFA) Summary List (Attachment 6).
- VI.A.2. The Director may append additional Solid Waste Management Units to those in Pennzoil’s Summary List (Attachment 6), in accordance with Utah Admin. Code R3153-4.2., based on additional information received by the Permittee or the Director.
- VI.B. STANDARD CONDITIONS
- VI.B.1. Failure to submit the information required by Module VI or falsification of any submitted information is grounds for termination of this permit in accordance with Utah Admin. Code R315-3-4.4.
- VI.B.2. The Permittee shall sign and certify all plans, reports, notifications, and other submissions to the Director in accordance with Condition I.G.
- VI.B.3. The Permittee shall submit a paper copy and an electronic copy of each plan, report, notification, or other submissions required by Module VI to the Director.
- VI.B.4. Upon written approval from the Director, all plans and schedules required by the conditions in Module VI, shall be incorporated into Module VI of this permit in accordance with Condition VI.I. Any noncompliance with such approved plans and schedules shall be deemed noncompliance with this permit.
- VI.B.5. Upon written approval from the Director in accordance with Condition VI.I., the Permittee shall receive extension(s) of the specified compliance schedule due date(s) for the submittal(s) required by Module VI.
- VI.B.6. If the Director determines that further actions beyond those required by Module VI are warranted, the Permittee shall modify Module VI in accordance with Condition VI.I. to provide for those actions.

VI.B.7. All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to Module VI shall be maintained at a location proposed by the Permittee during the effective term of this permit.

VI.C. RCRA FACILITY INVESTIGATION

VI.C.1. The Permittee shall conduct a RCRA Facility Investigation (RFI) to determine the nature and extent of known and suspected releases of hazardous wastes and/or hazardous waste constituent(s) from each Solid Waste Management Unit (SWMU) at the Facility and to gather data to support the Corrective Action Plan. The Permittee shall conduct the RFI in accordance with the approved workplan required by Condition VI.C.2.

VI.C.2. The Permittee shall prepare and submit a RFI Workplan for review and approval by the Director.

VI.C.3. The Permittee shall conduct the RFI for the Solid Waste Management Units contained in Pennzoil's RFA Summary List (Attachment 6), in accordance with the schedule specified in Table VI-1.

VI.C.4. The RFI Workplan required by Condition VI.C.2 shall include the following plans, designated as Task II:

VI.C.4.a. Project management plan describing the technical approach to the investigation, schedules, milestone reports and personnel;

VI.C.4.b. Data Collection Quality Assurance Plan to establish and document all monitoring procedures;

VI.C.4.c. Data Management Plan to track investigation data and results;

VI.C.4.d. Health and Safety Plan for safe conduct of corrective action activities; and

VI.C.4.e. Community Relations Plan for public dissemination of information.

VI.C.5. The RFI Workplan required by Condition VI.C.2. shall provide for the following, designated as Task III.:

VI.C.5.a. Characterization of the environmental setting at the Former Pennzoil Roosevelt Refinery, including the hydrogeology, soils, surface water, sediment, and air;

- VI.C.5.b. Source characterization of all waste management units at the Former Pennzoil Roosevelt Refinery, including the nature of the unit and the type of waste placed in the unit as described by chemical and physical characteristics;
- VI.C.5.c. Contamination characterization, including analysis of hazardous waste and hazardous waste constituents from Solid Waste Management Units and the effects of such hazardous waste and hazardous waste constituents on groundwater, soils, surface water, sediment, air, subsurface gases; and
- VI.C.5.d. Potential receptor identification describing the potential for human and environmental impact from contaminant exposure from the facility;
- VI.C.6. The RFI Workplan required by Condition VI.C.2 shall include an RFI Report of all facility investigations, designated as Task IV. The objective of this task is to ensure that the investigation data are sufficient in quality and quantity to describe the nature and extent of contamination, potential threat to human health and the environment, and to develop a Corrective Action Plan. This RFI Report shall include:
- VI.C.6.a. Data analysis of the type and extent of contamination at each SWMU including sources and migration pathways;
- VI.C.6.b. Protection standards for groundwater, soil, or other relevant protection standards.
- VI.C.7. The RFI compliance schedules specified in Table VI-1, shall be modified in accordance with Condition VI.I.
- VI.D. INTERIM MEASURES
- VI.D.1. If, during the course of any activity initiated in compliance with the permit conditions of Module VI of this permit, the Director or the Permittee determines that a release or potential release of hazardous waste and/or hazardous waste constituent(s) from a Solid Waste Management Unit poses a threat to human health and the environment, the Permittee may be required to perform specific interim measures.
- VI.D.2. The Director shall notify the Permittee in writing of the requirement to perform the interim measures in accordance with Condition VI.D.1.
- VI.D.3. Within 30 calendar days after receiving the written notification requiring the Interim Measures Plan as specified in VI.D.2., the Permittee shall provide the Interim Measures Plan to the Director for review and approval. The 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 shall be incorporated into this permit. The Interim Measures Plan shall include, but not be limited to, the following:

- VI.D.3.a. A statement of the objectives of the interim measure explaining how the interim measure will mitigate a potential threat to human health (health and safety requirements) and the environment, is consistent with and integrated into any long term solution at Former Pennzoil Roosevelt Refinery, or both;
- VI.D.3.b. Data collection quality assurance and data management information;
- VI.D.3.c. Design plans and specifications, construction requirements, operation and maintenance requirements, project schedules, and final design documents;
- VI.D.3.d. Construction quality assurance objectives, inspection activities, sampling requirements, and documentation; and
- VI.D.3.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.
- VI.D.4. The Permittee may initiate interim measures in accordance with Conditions VI.D.5 and VI.D.6
- VI.D.5. In determining whether an interim measure is required, the Director shall consider the following:
 - VI.D.5.a. Time required to develop and implement a final remedy;
 - VI.D.5.b. Actual and potential exposure of human and environmental receptors;
 - VI.D.5.c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;
 - VI.D.5.d. The potential for further degradation of the medium absent interim measures;
 - VI.D.5.e. Presence of hazardous waste in containers that may pose a threat of release;
 - VI.D.5.f. Presence and concentration of hazardous waste in soils, including hazardous waste constituent(s), that have the potential to migrate to groundwater or surface water;
 - VI.D.5.g. Weather conditions that may affect the current levels of contamination;

- VI.D.5.h. Risks of fire, explosion, or accident; and
- VI.D.5.i. Other situations that may pose threats to human health and the environment.
- VI.E. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY IDENTIFIED SOLID WASTE MANAGEMENT UNITS
- VI.E.1. The Permittee shall notify the Director in writing, of any newly identified SWMU(s) not identified in Condition VI.A., within 30 calendar days of discovering the SWMU(s). The notification shall include the location of the new SWMU(s) and information on the suspected or known wastes at the site.
- VI.E.2. Within 150 calendar days following discovery of the SWMU(s), the Permittee shall submit a SWMU Assessment Plan to the Director for review and approval.
- VI.E.3. The SWMU Assessment Plan shall include:
- VI.E.3.a. A description of past and present operations at the unit(s); and
- VI.E.3.b. Any groundwater, surface water, soil (surface or subsurface strata), or air sampling and analysis data needed to determine whether a release of hazardous waste or hazardous waste constituents from such units has occurred. The SWMU Assessment Plan shall demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and shall include parameters sufficient to identify migration of hazardous waste and hazardous waste constituents from the newly discovered SWMU(s) to the environment.
- VI.E.4.. If the Director does not approve of the SWMU Assessment Plan, he shall provide a written notice to the Permittee of the Plan's deficiencies. The written notice will specify a due date for submittal of a revised assessment plan.
- VI.E.5. Upon approval by the Director, the SWMU Assessment Plan, shall be incorporated into this Permit in accordance with Condition VI.I.
- VI.E.6. The Permittee shall implement the approved SWMU Assessment Plan within 30 calendar days of approval.
- VI.E.7. Within 30 days of completion of the SWMU Assessment Plan, the Permittee shall submit a SWMU Assessment Report to the Director.

- VI.E.8. The SWMU Assessment Report shall describe all results obtained from the implementation of the approved SWMU Assessment Plan. For each newly listed SWMU, the Report shall provide:
- VI.E.8.a. The SWMU location, identified on a map;
- VI.E.8.b. The type and function of the SWMU, including general dimensions and a structural description;
- VI.E.8.c. The period during which the SWMU was operated; and
- VI.E.8.d. A list of all wastes managed at the SWMU and results of all sampling and analysis used to determine whether releases of hazardous wastes and hazardous waste constituents have occurred, are occurring, or are likely to occur from the unit.
- VI.E.9. Based on the results of SWMU Report, the Director shall determine the need for further investigations at specific unit(s) included in the SWMU Assessment. If the Director determines that such investigations are needed, the Director shall require the Permittee to prepare a plan for such investigations. This plan shall be reviewed for approval in accordance with the RFI Workplan under Condition VI.C.
- VI.E.10. Within fifteen (15) days of discovery, the Permittee shall notify the Director in writing of any release(s) of hazardous waste and hazardous waste constituents discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities undertaken during the RFI. Such releases may be from already documented or newly identified SWMUs. The Director shall require further investigation of the new releases. A plan for such investigation will be reviewed for approval by the Director.
- VI.F. CORRECTIVE ACTION PLAN
- VI.F.1. Based on the results of the RFI, the Permittee shall submit to the Director, for review and approval, a Corrective Action Plan (CAP) for all SWMUs that have been identified to have had a release of hazardous waste and hazardous waste constituents. The purpose of the CAP is to develop and evaluate corrective action alternatives and to outline one or more alternate corrective measures which will satisfy the target cleanup objectives.
The CAP shall include:
- VI.F.1.a. Target cleanup objectives;
- VI.F.1.b. Corrective action(s) which shall satisfy target cleanup objectives;

- VI.F1.c. Summary of all corrective measure alternatives examined for the CAP; and
- VI.F.1.d. Schedule for implementation of the corrective action(s) according to the time frame and schedule of this Permit.
- VI.F.2. The Permittee shall submit the CAP in accordance with the schedule specified in Table VI-2.
- VI.F.3. The Director will approve, or disapprove and provide comments to the Permittee, as to the corrections or modifications needed to the CAP.
- VI.F.4. Upon receipt of comments, the Permittee shall submit a new CAP for the Director's approval.
- VI.F.5. The Director shall consider performance, reliability, implementability, safety, human health, and the environmental impact of the measure(s) in approving the CAP.
- VI.F.6. Upon approval of the CAP, the Permittee shall implement the corrective action(s) according to the schedule as approved in the CAP. The approved schedule for the CAP shall be incorporated in Table VI-2, Corrective Action Compliance Schedule.
- VI.F.7. The Permittee shall furnish or retain all personnel, materials, and services necessary for the implementation of the CAP.
- VI.G. DETERMINATION OF NO FURTHER ACTIONS
- VI.G.1. The Permittee may petition the Director to terminate the schedule of compliance for Corrective Action of SWMUs (Module VI) as a Class 3 permit modification in accordance with Condition I.D.2.
- VI.G.2. The Permittee may petition the Director for a no further action determination for a SWMU. The petition shall contain information based on the RCRA Facility Investigation demonstrating that there are no releases of hazardous waste or hazardous waste constituent(s) that pose a threat to human health or the environment from SWMUs at the Former Pennzoil Roosevelt Refinery, Duchesne County, Utah.
- VI.G.3. A determination of no further action, in accordance with Condition VI.G.1, 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 a SWMU at the Former

Pennzoil Roosevelt Refinery, Duchesne County, Utah. In such a case, the Director shall initiate either a modification to the Corrective Action Schedule of Compliance (Module VI) in accordance with Condition I.D. or rescind the determination of VI.G.1.

VI.H. REPORTING REQUIREMENTS

VI.H.1. The Permittee shall submit to the Director written semi-annual progress reports of all activities conducted pursuant to Tables VI-1 and VI-2 of Module VI.

VI.H.2. The semiannual progress reports shall contain:

VI.H.2.a. A description of the work completed;

VI.H.2.b. Summaries of all findings and all raw data;

VI.H.2.c. Summaries of all problems encountered during the reporting period and actions taken or to be taken to rectify problems; and

VI.H.2.d. Projected work for the next reporting period.

VI.H.3. The Permittee shall maintain copies of other reports, drilling logs, and data at a local repository proposed by the Permittee during the effective period of this permit. The Permittee shall provide copies of the said reports, logs, and data to the Director upon request.

VI.H.4. As specified under Condition VI.B.6., 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 supporting information.

VI.I. MODIFICATION OF THE CORRECTIVE ACTION SCHEDULE OF COMPLIANCE (MODULE VI)

VI.I.1. A request for modifications of the final compliance dates pursuant to the permit conditions in Module VI shall be submitted to the Director for approval, in accordance with Condition I.D.1. Final compliance dates in the Corrective Action Schedule of Compliance include:

VI.I.1.a. The compliance date(s), as specified in Table VI-1, for submittal of the RCRA Facility Investigation Final Report (Task IV);

- VI.I.1.b. The compliance date(s), as specified in Table VI-2, for submittal of the final Corrective Action Plan, in accordance with Condition VI.F.2.;
- VI.I.1.c. Compliance dates specified in Table VI-2, for implementing the approved plans and reports; and
- VI.I.1.d. Compliance dates for quarterly submittal of progress reports.

TABLE VI-1

RCRA Facility Investigation Compliance Schedule

The Permittee shall perform the activities as outlined below:

<u>Activity</u>	<u>Date Submitted or Due Date</u>
1. Submit Task I - Current conditions report	Current Conditions Report - June 14, 1993
2. Submit Draft Task II – RFI workplan and Task III schedule of Activities	Phase I RFI Work Plan - November 17, 1995. Addendum Phase I RFI Work Plan – July 31, 2000
3. Begin Task II - RFI workplan and Task III - Facility Investigation	Phase I RFI began in July 1996 Addendum Phase I RFI began in April 2001
4. Submit Task IV – Investigation Analysis	RFI Phase I Report submitted April 7, 1997 Addendum Phase I RFI Report submitted June 14, 2002
5. Progress Reports on Task I through IV	Semi-annually, starting 180 calendar days after approval of RFI Work Plan, until completion of all RFI work.
6. Submit Tasks II and III Final and Summary reports	RFI Phase I Report submitted April 7, 1997 Addendum Phase I RFI Report submitted June 14, 2002

TABLE VI-2

Corrective Action Compliance Schedule

The Permittee shall prepare reports for the Corrective Action Plan as described below presenting the results of the CAP.

	<u>Facility Submission</u>	<u>Due Date</u>
1.	Draft Corrective Action Plan (CAP).	Within 180 days of the Director’s approval of the RFI Report.
2.	Final CAP.	Within sixty (60) days of receiving the Director’s comments.
3.	CAP Construction and Implementation reports.	As specified in CAP as approved of by the Director.
4.	Draft CQA (Construction Quality Assurance) program plan.	Prior to construction.
5.	Final CQA (Construction Quality Assurance) program plan.	Within sixty (60) days of the Director’s approval of draft CQA plan.
6.	Construction of corrective measures.	As approved in final CAP.
7.	Corrective measure construction report.	Ninety (90) days following completion of construction.
8.	Progress Reports.	Semi-annually; starting 180 calendar days after the approval of the CAP, until a Site Management Plan or a No Further Action Designation is approved by the Director.