

MODULE VI - GROUNDWATER CORRECTIVE ACTION
CONDITIONS)

(GENERAL

VI.A. CORRECTIVE ACTION PROGRAM

VI.A.1. The Permittee shall maintain the ongoing corrective action program. The purpose of this program shall be to remove hazardous constituents from the groundwater and to monitor the migration of the hazardous constituents as outlined in Module V. The corrective action program shall follow the plan specified below:

VI.A.1.a. The Permittee shall maintain a groundwater treatment system. The system shall be capable of treating and removing the volatile organic hazardous constituents listed in Condition V.B.1.a., Table V-1 from the groundwater. The system shall inject the treated groundwater into the impacted aquifer.

VI.A.1.b. The Permittee shall sample the groundwater in the impacted aquifer, the groundwater as it enters and exits the groundwater treatment units, and measure the volume and rate of flow of groundwater through the groundwater treatment system as indicated in Module V, VII and VIII of this permit.

VI.A.1.c. The Permittee may submit for the approval of the Executive Secretary, a plan describing additional measures that may be used to enhance the removal of the hazardous constituents specified in Condition V.B.1.a., Table V-1 from the groundwater. This plan shall be submitted as needed. This plan shall consider several options for additional measures such as pulsed pumping, installation of extraction wells in hydrodynamically isolated areas, and additional characterization and modeling of contaminant transport in the fractured bedrock, or other impacted areas. The Permittee shall implement the additional measures within 90 days after approval of the measures by the Executive Secretary.

VI.A.1.d. In accordance with section VI.A.1.c., the Permittee has submitted and received approval from the Executive Secretary to implement an alternative measures evaluation of the ground water treatment system, as described in the “*Final Project Work Plan, Implementation of Alternative Measures, Industrial Waste Lagoon, dated May 2003*” (ref: attachment 4, section H.1.). This evaluation will be implemented following the Spring 2004 ground water sampling event and continue for up to three years. During this evaluation period, the existing pump and treat system will be maintained in a non-operational mode, along with sampling and analysis, and data reporting as described in the “*Final System Non-operation Test Proposal, Implementation of Alternative Measures, dated October 2003*” (ref: attachment 4, section H.2). Prior to implementation of the Alternative Measures Evaluation, the Permittee shall submit for the approval of the Executive Secretary, a Sampling and Analysis Plan, Site Safety and Health Plan, Staffing Plan, Inspection Schedule, and Contingency Plan that will be implemented during the three year evaluation. These plans, once approved by the Executive Secretary, will supercede other such requirements of this permit during the evaluation period.

VI.A.1.e. As required by section VI.A.1.d. the Permittee has submitted and received from the Executive Secretary approval of the "*Non-Operational Test Report in Support of the Implementation of Alternative Measures for Groundwater Contamination from the Former Industrial Waste Lagoon*" (ref: Attachment 4, Section H.3). Analysis conducted as part of the Non-Operational Test indicates that contamination at the plume's leading edge appears to have returned to a steady state, with plume advancement being retarded due to dispersion, diffusion, and low groundwater velocity. The Permittee shall, in conjunction with the completion of the Corrective Measures Study for Solid Waste Management Unit 58, evaluate alternative technologies and management strategies for addressing the Industrial Waste Lagoon (Main) plume and Solid Waste Management Unit 58 groundwater contamination as a combined unit. The Corrective Measures Study will be completed and corrective measures proposed and implemented in accordance with the schedule provided in Attachment 9 of this permit. During the completion of the Corrective Measures Study, the existing pump and treat system will be maintained in a non-operational mode, along with sampling, analysis, and data reporting as described in the "*Final System Non-Operation Test Proposal, Implementation of Alternative Measures, dated October 2003*" (ref: Attachment 4, Section H.2).

VI.B. CLOSURE OF GROUNDWATER TREATMENT SYSTEM

VI.B.1. Upon completion of the groundwater corrective action program required under Modules VI through VIII, the groundwater treatment system will be decommissioned in accordance with UAC R315-8-7.

VI.B.2. Decontamination of process areas, floors, walls, internal structures and equipment will be accomplished using a combination of high-pressure water and steam cleaning. Wipe samples shall be collected and analyzed to determine when decontamination is complete. All liquids generated from this process shall be collected into tanks or other approved containers. The collected liquids shall be disposed of off-site at an approved hazardous waste disposal facility.

VI.B.3. Exterior site areas (e.g., equipment staging areas, runoff accumulation areas, roadways and random soil surfaces) shall be sampled to ensure that they have not been contaminated. Any locations where contamination is discovered shall be characterized fully, and corrective action shall be taken if necessary.

VI.B.4. Prior to initiation of closure activities, notification to the Executive Secretary of the Permittee's intent to close the facility will be made. This notification will include a revised closure plan with necessary changes proposed, including decontamination standards, sampling protocols, and a detailed schedule for closure activities. Approval of the revised plan by the Executive Secretary will be required prior to starting closure activities. The closure procedures shall include, but not necessarily be limited to the following activities for each type of process equipment:

VI.B.4.a. Tanks - The interior and exterior of tanks shall be rinsed with high-pressure water or steam as required to remove residual contamination. Wipe samples shall be collected

from the interior and exterior of the tanks to determine if decontamination is complete. If standards are not met, additional rinsing will be conducted until wipe samples demonstrate successful decontamination.

VI.B.4.b. Process Pumps, Piping and Ancillary Equipment - All process pumps, piping, and ancillary equipment shall be disconnected and isolated to allow for cleaning. The interior and exterior of each component shall be rinsed with high-pressure water or steam to remove residual contamination. Wipe samples shall be collected from the interior and exterior of each component to determine if decontamination is complete. If standards are not met, additional rinsing will be conducted until wipe samples demonstrate successful decontamination.

VI.B.4.c. Process Areas, Floors, and Interior Walls shall be pressure-washed or steam-cleaned as necessary. Wipe samples shall be collected from cleaned surfaces and analyzed to determine if decontamination is complete.

VI.B.4.d. In some cases, adequate decontamination of surfaces may not be possible. Consequently, such items shall be considered hazardous waste and managed as such.

VI.B.4.e. Exterior site areas where known or potential releases may have occurred shall be sampled for residual contamination. If contamination is detected, further characterization and corrective action shall be initiated in accordance with Module IX.

VI.C. GROUNDWATER MANAGEMENT AREA

VI.C.1. The Permittee shall maintain a groundwater management program as a component of the Solid Waste Management Unit (SWMU) 58 corrective measures, to mitigate potential risks to both depot and off-site receptors of ground water contamination. This groundwater management program will be maintained until such time that permit conditions VII.H.1. and VIII.H.1. have been met.. The groundwater management program will be maintained as described in the “*Groundwater Management Area Plan, Northeast Boundary Plume*” (ref: attachment 4, section C.1.). A map showing the location of the Northeast Boundary Plume, Groundwater Management Area is provided in Attachment 8 of this permit.