

TRANSMITTAL LETTER

MONTGOMERY WATSON



March 9, 2000

Project No. 1342602.02190200

To: Steve Pullen
New Mexico Environmental Department (NMED)
Hazardous and Radioactive Materials Bureau
2044 Galisteo
P.O. Box 26110
Sante Fe, New Mexico 87502



Sent by: John Pellicer
Montgomery Watson
1475 Pine Grove Rd.
P.O. Box 774018
Steamboat Springs, Colorado 80477

Delivered by:

Other:

- Mail
- Air Freight
- Hand Carried

- Fed-Ex
- _____
- _____

QUANTITY	ITEM	DESCRIPTION
1	Document	Draft Operations and Maintenance Plan
REMARKS: Steve, we have enclosed a draft hardcopy of the Triassic Park Operations and Maintenance Plan for your review. If you have any questions please call me.		

OPERATIONS AND MAINTENANCE PLAN

1.0 GENERAL

The Triassic Park hazardous waste facility will be a full-service Resource Conservation and Recovery Act (RCRA) Subtitle C waste treatment, storage, and disposal operation. The Facility will offer the RCRA-regulated services described in the following paragraphs: treatment, storage and disposal.

Support units and structures include a chemical laboratory, administration building, weigh scale area, maintenance shop, truck wash unit, clay processing area, clay liner material stock piles, daily cover stockpiles, stormwater retention basin, stormwater diversion ditches, perimeter vadose zone monitoring wells and access roads.

This Operations and Maintenance Plan refers to the treatment, storage and disposal units, and the site run-off and drainage control system.

1.1 TREATMENT

Two treatment processes will be used at the Facility, including an evaporation pond for managing wastewaters that meet LDR standards and a stabilization process for treating liquids, sludges, and solids to ensure that no free liquids are present and that LDR standards are met prior to placing wastes in the landfill.

1.2 STORAGE

Four aboveground storage tanks will be utilized to accumulate regulated bulk liquid hazardous wastes prior to stabilization. Two container storage areas (roll-off storage area and drum handling unit) will be used to stage waste at the Facility for treatment or disposal. These container storage units will ensure that waste is stored in compliance with RCRA requirements for permitted storage. Neither of the container storage units will be used for long-term storage of waste.

1.3 LAND DISPOSAL

A landfill will be utilized for the disposal of waste that meets LDR standards.

2.0 DESCRIPTION OF UNITS AND DRAINAGE SYSTEM

2.1 LANDFILL

The Phase IA of the landfill will have an area of approximately 47 acres and will have a capacity of approximately 553,200 cubic yards of waste. This unit has been designed as a double-lined landfill with a LCRS above the primary liner and a LDRS between the primary and secondary liners. A vadose zone monitoring system has also been included as a detection system for leaking in the secondary LDRS system. Leachate that collects in the sumps of the LCRS, LDRS and vadose zone will be pumped through a pipe to the surface of the landfill where it will be collected in temporary storage tanks located on a crest riser pad at the north end of the landfill.

A run-on/run-off system is contemplated to control water volume resulting from a 24-hour, 25-year storm. Run-on originating off site will be directed around or away from the proposed landfill area using unlined ditches. Run-off in the active portion of the landfill will be collected in the bottom of the landfill and pumped out within 24 hours of a storm event. Contaminated water will be treated either in the stabilization process or the evaporation pond. Run-off from the unit, but not from the active portion of the landfill will be directed to the stormwater collection basin located at the south end of the landfill (Dwg. 10).

A daily cover consisting of soil will be spread on top of the waste placement area to limit wind dispersal. Dust generation will be reduced by restricting traffic to predetermined haul roads on the surface of the daily cover and by applying small amounts of water spray to moisten the soil surface.

Access to the landfill will be provided by two roads located on the east and west slopes. During interim filling stages, the landfill will be partially lined to the axis of the access roads (Dwg. 10). A ramp will be provided to access the stormwater collection basin.

2.2 EVAPORATION POND

The evaporation pond will have an approximate operating capacity of 5.2 million gallons over an approximate area of 78,600 square feet. The evaporation pond has been designed as a double-lined unit with a LDRS between the primary and secondary liners. A vadose zone sump has been located beneath the liner system. Pumps will be used to transfer leachate collected in the sumps to tanker trucks. Leachate will either be returned to the evaporation pond, stabilized in the on-site treatment unit, or stored in one of the liquid waste storage tanks. The truck discharge and leachate collection stations are located on the south and east side of the pond. The pond is divided in two sections by a separator berm, providing two independent treatment areas in case repairs need to be completed in one of them.

A run-on/run-off system is contemplated to control water volume resulting from a 24-hour, 25-year storm. Run-on originating off site will be directed around the proposed evaporation pond into the site wide surface water diversion channels shown in Drawing 25. Run-off in the pond will be pumped out within 24 hours of a storm event with vacuum trucks. Contaminated water will be treated in the stabilization unit.

2.3 LIQUID WASTE STORAGE TANKS

The liquid waste receiving and storage unit will house four aboveground tanks. Each tank will have a capacity of approximately 9,000 gallons. The tanks will be double-walled and constructed of high density polyethylene. The tank system will be placed on a surrounding concrete base. The concrete area will be sloped to provide drainage to a sump. This concrete area will provide secondary containment for all ancillary equipment.

Liquids in the storage tanks will be transferred to the stabilization unit with tanker trucks. Tanker trucks will be parked over a concrete pad while discharging or removing liquids from the tanks.

2.4 STABILIZATION

The stabilization unit will consist of four in-ground double lined steel stabilization bins, two dry reagent silos, two liquid reagent tanks, and a water tank. Additionally, there will be a control room from which operations will be directed and coordinated. The stabilization bins will be located inside the stabilization building.

Waste may be offloaded directly from trucks into the stabilization bins or transferred from the drum handling unit or roll-off storage area. The bins will be covered while dry reagents are being added to control particulate air emissions. The cover will be removed and a backhoe positioned adjacent to the bin will mix the waste and reagents.

The nominal dimensions of the bins will be 25 feet long by 10 feet wide by 10 feet deep. The ends of the bins will be shaped to conform to the reach profile of the backhoe selected for the mixing. The bins will be contained in a concrete vault. The bins will be double-walled tanks with the space between the walls serving as LDRS. Shock absorbing coiled wire rope isolators will maintain separation between the bins. In order to ensure no fugitive dust emissions during stabilization processing, the bins and the stabilization building will be equipped with an exhausting ventilation system which will maintain a negative pressure inside the building. Dust will be removed from the exhaust air in the bag house located on the west side of the building. Collected dust will be processed in the stabilization facility.

2.5 DRUM HANDLING

The Facility will contain seven separate containment areas (cells). Each of the areas will have its own floor drain and containment sump, allowing incompatible wastes to be placed in separate cells. Two of the cells will be designed to accommodate only TSCA PCB wastes. The TSCA cells will be surrounded by a 6-inch concrete berm. The drums will be stored in an open-sided and roofed building to prevent run-on from precipitation.

Each cell will have a concrete floor that slopes toward a trench covered by a steel grating. Each trench will lead to a separate secondary containment sump for that where any spilled liquids will be accumulated. The trench and sump system include a double HDPE geomembrane liner and leak detection and leachate removal system.

2.6 TRUCK ROLL-OFF

Roll-off containers will be stored on an open pad. The pad will be divided into two sections. One section will hold tarped, DOT approved, lined roll-off containers with non-stabilized waste awaiting treatment at the stabilization unit. The other section of the pad is intended as a staging area for roll-off containers containing stabilized waste awaiting TCLP test results and landfill disposal approval.

The roll-off storage area is designed to store any non-stabilized waste that may contain free liquids. Secondary containment will be provided by a geomembrane liner. The floor will be sloped to a sump located in the corner of the storage area. The entire roll-off storage area will be surrounded by a 4 to 8 feet high berm.

2.7 RUN-OFF AND DRAINAGE CONTROL SYSTEM

Facility storm water control is provided by a network of surface water run-on and run-off diversion channels and collection and detention basins. A diversion channel located on the east of the Facility will provide run-on control from the east watershed area. To control the run-off from the facilities area, several collection channels and culverts will be built to divert discharges from storm events to a storm water detention basin. The location of the collection channels, culverts, and detention pond are shown on Drawing 25.

3.0 OPERATIONS

3.1 WASTE ACCEPTANCE

Prior to initiation of a shipment of waste to the Facility, the generator of the waste will provide a full characterization of its waste and receive approval from the Facility to ship the waste. The Facility will use the waste characterization data to perform the following activities:

- ensure that the waste can be accepted in accordance with the RCRA permit;
- verify that the Facility has the capability to properly treat and/or dispose of the waste;
- identify any safety precautions that must be taken to properly manage the waste;
- use the physical characteristics and chemical composition of the waste to determine the most effective treatment and disposal methods for the waste;
- select parameters to be tested to determine the formula for stabilization of appropriate wastes; and,
- select parameters to be tested upon arrival at the Facility to verify that the waste accepted is the waste characterized.

The following sections provide details of the waste acceptance procedures that will be implemented at the Facility.

3.1.1 Pre-Shipment Procedures

- A. Prior to entering into an agreement to manage a waste stream for a generator, the Facility will require the generator to supply enough data to determine the physical and chemical characteristics of the waste stream as well as the EPA waste codes applicable to the waste stream.
- B. The Facility will work with the waste generator to assure that all waste analyses and waste characterization information are provided to meet the applicable requirements 20 NMAC 4.1. If the data supplied are not adequate to provide a complete characterization of the waste stream, the Facility will either require additional data from the generator or will not accept the waste.
- C. Before a waste stream may be accepted by the Facility for treatment, storage, or disposal, the generator must provide the following information:
 - C.1 A completed Waste Profile Form (see Attachment B) or a comparable form approved by the Facility and signed by an authorized agent of the generator. The minimal parameters that the generator must include in the waste stream profile are provided in Table 4.2. The methods for characterization of these parameters are identified in Table 4.3.
 - C.2 A representative sample of the waste.
 - C.3 A description of the process that generated the waste.

- C.4 A Land Disposal Restriction Notification.
- C.5 All supporting data required by 40 CFR 268.7.
- C.6 If the waste is an LDR waste that the generator has been treated to applicable BDAT standards the generator must supply applicable LDR Certification specified in 40 CFR 268.7, a copy of the waste analysis plan required by 268.7, and the applicable LDR Certification and analytical data necessary to show compliance with 40 CFR 268.7.
- C.7 If the waste is an LDR waste that the generator has determined meets the BDAT treatment standards without any type of secondary treatment, applicable LDR Certification and analytical data necessary to show compliance with 40 CFR 268.
- C.8 Documentation that supports the information presented on the waste profile form.
- D. The representative sample submitted during the pre-acceptance process will be analyzed by an independent laboratory. Each waste with reactive properties will also be tested for compatibility with the landfill and surface impoundment containers. The analytical results will be compared with the generator's waste profile form, and the discrepancies will be resolved with the generator prior to approval being granted to the generator to ship the waste. Information from the waste profile form and analytical results will be compared with the Facility's permit to ensure that the waste is acceptable for storage, treatment and disposal at the Facility.
- E. The Facility will conduct required/supplemental analysis according to EPA or ASTM methods on all incoming hazardous waste to further characterize the waste. Supplemental analyses will be performed on all waste suitable for direct landfilling from the generator if slight discrepancies exist between the Waste Profile Form and the shipped waste. Sampling methods are described in Section 4.6. Required and supplemental analyses are indicated in Tables 4.4 and 4.5, respectively.
- F. The Facility may waive one or more of the analyses under the following conditions:
 - F.1 The waste is a portion of continuously shipped, well documented waste stream.
 - F.2 The waste has been approved for receipt by NMED on an emergency basis.
 - F.3 Facility personnel at the point of generation sampled, or oversaw the sampling of the waste and the required/supplemental analyses have been conducted.
 - F.4 A representative sample cannot be practically obtained.
 - F.5 Other factors are introduced which preclude the need for required/supplemental analyses.
 - F.6 The Facility will document the reason for the waiver of required/supplemental analyses.
- G. Generators will conduct random sampling and analyses of waste streams. The procedures for selecting and sampling waste are described in Section 4.6.

3.1.2 First-Time Waste Acceptance Procedure

- A. When a waste has been approved for treatment and/or disposal at the Facility, the waste may be scheduled for shipment. Twenty-four hour notice will be required from each generator prior to waste shipment. This time will enable the Facility to prepare for receipt of the waste. Such preparation will include ensuring that adequate capacity exists in the storage areas or treatment units, preparing for sample collection and fingerprint analyses, and preparing all necessary documentation on the waste shipment. If adequate capacity to receive the waste is not available, the generator will be told not to ship the waste until notified by the Facility.
- B. Upon arrival at the Facility, the waste will be analyzed to determine if it matches the Waste Profile Form and representative sample (Table 4.4). If discrepancies are noted, the waste will be further analyzed using supplemental analyses methods (Table 4.5). In addition, the Facility may specify any testing that is deemed necessary to ensure that the waste is properly characterized.
- C. Any waste that does not meet the waste acceptance criteria will be returned to the generator.

3.1.3 Ongoing Waste Acceptance Procedure

- A. Confirmatory analyses will be performed according to Section 4.1.8.1.
- B. Upon completion of the required analyses, the Facility may elect to perform supplemental analyses (Table 4.5).
- C. The Facility will conduct random sampling and analysis of incoming hazardous waste.

3.2 WASTE HANDLING

This section refers to the general procedures and analyses that will be performed once a waste stream has been accepted in the Facility. Specific procedures for waste handling within each unit are addressed in specific sections for each unit.

3.2.1 Incoming Load Procedures

- A. When a waste shipment arrives at the Facility, the truck will be routed to a parking area outside the Facility gate while documents are reviewed. Required documentation will include a waste manifest, an LDR certification, and a copy of the Waste Profile Form (or waste profile number if the form is already on file). The paperwork will be reviewed for completeness and checked against the waste shipment to verify that the numbers of containers and waste labels match the description on the manifest.
- B. If the paperwork is in order, the truck will be routed to the truck sample station, a staging area inside the Facility gate.
- C. If a discrepancy is found in the paperwork, the Facility will contact the generator for resolution prior to acceptance of the load and will reject the load if the discrepancy cannot be resolved (generally in less than 24 hours). During the time the discrepancy is being resolved, the waste shipment will remain in a secure area inside the Facility gate.
- D. In those instances where a discrepancy with the manifest cannot be resolved within 15 days of receiving the waste, a letter will be submitted to NMED describing the discrepancy and the attempts to reconcile it. A copy of the manifest or shipping paper at issue also will be

provided to NMED, as specified in 40 CFR 264.72(b). All discrepancy resolutions will be documented in writing and maintained in the Facility operating record.

3.2.2 Ongoing Complete Waste Analysis

- A. If one or more waste shipments in a calendar year from any single generator do not match the fingerprint tests, full sample analyses of each waste stream from the generator will be performed annually.
- B. If all waste shipments in any given calendar year from a single generator match the fingerprint analyses, full sample analyses of each waste stream from that generator will be performed biennially.
- C. On an annual basis, the Facility will randomly sample and analyze a minimum of 10% of the incoming waste streams that are to be directly landfilled. The sampled will be split into a minimum of two aliquots. One will be retained and the other analyzed for conformance to the LDR requirements. If the results of the analysis indicate that the waste does not conform with the applicable LDR requirements, the Facility will immediately contact the generator and suspend the placement of that waste stream into the landfill. Disposal of the waste stream will be discontinued until the discrepancy regarding compliance with the LDR requirements has been resolved and the generator has demonstrated that its ongoing program for compliance with LDR requirements is adequate.

3.2.3 Waste Tracking

- A. A Facility specific number will be assigned to each waste stream. The designated number will identify the generator, a sequential number specific to the substance and source and the delivery date.
- B. The number will be recorded on: (1) all incoming paperwork from the generator; (2) samples received from the generator; (3) samples taken on site; and (4) site-generated records.

3.2.4 Compliance With Regulations for Storage, Treatment and Disposal

- A. Additional analyses may be required dependent on the interim and final disposition of the waste.
- B. Containers will be inspected to ensure that the integrity of the container is suitable for storage.
- C. Containerized wastes that are not compatible will be segregated within the storage area. Storage procedures within each storage unit are detailed in the following sections.
- D. Solid wastes that exceed 500 ppmw of volatile organics will only be stored in DOT containers approved for shipment of hazardous waste. No wastes which exceed 500 ppmw of volatile organics will be stored in the liquid waste tanks.
- E. A second representative sample of any waste that will require stabilization prior to placement in the landfill will be supplied by the generator. This sample will be used for bench-scale testing to determine regulated constituent leaching based on varying admixes and ratios. The stabilization process will result in a dry and structurally stable material that is suitable for compaction and landfilling.

- F. Wastes that are treated on site in the solidification unit will be tested after treatment and before disposal to verify that LDR standards have been met.
- G. No wastes will be placed in the landfill until those wastes meet applicable LDR standards. All information obtained to document LDR compliance will be maintained in the Facility operating record.
- H. Wastes that carry more than one characteristic or listed waste code will be treated to the most stringent treatment requirements for each hazardous waste constituent of concern prior to disposal in the landfill. When wastes with differing treatment standards are combined solely for the purpose of treatment, the most stringent treatment specified will be met for each constituent of concern in the combined waste prior to land disposal.
- I. Prior to disposal, hazardous wastes contained in lab packs will be treated to meet applicable treatment standards for each waste type.
- J. Reactive hazardous waste will not be placed in the landfill until it has been rendered non-reactive by treatment.
- K. F001 – F005 spent solvents will not be disposed of in the landfill unless applicable treatment standards, set forth in 40 CFR 368 Subpart D, are met.
- L. “California List Wastes” will not be accepted at the Facility unless they can be treated to LDR standards.
- M. Wastes containing PCBs in concentrations greater than or equal to 50 ppm will be prohibited at this Facility, as will soils contaminated with PCBs greater than 500 ppm.
- N. The Facility will accept contaminated debris only in the cases where that debris will remain hazardous after it has been treated in accordance with 40 CFR 268.45(b) or (c).

3.3 GENERAL PROCEDURES FOR HAZARDOUS WASTE GENERATED AT THE FACILITY

- A. Areas of the Facility that might be expected to generate hazardous waste are shown in Table 4.7. These areas will be inspected in accordance with the requirements of Section 5 of Volume 1.
- B. During these required inspections, if waste materials are identified, they will be removed from the system, characterized, and managed according to the waste analysis plan. Management of spill residues that do not require the implementation of the contingency plan will be managed in accordance with site procedures. Spills or releases that require implementation of the contingency plan will be managed in accordance with the requirements of the plan.
- C. Leachate collected in the unit sumps will be pumped into tanker trucks. It will then be tested to assure compliance with LDR requirements defined in 40 CFR Part 268 for F039 listed wastes. Based on the test results, the frequency of sampling and required parameters for leachate analysis will be determined. Leachate that meets applicable LDR requirements will be placed in the evaporation pond. Leachate that does not meet applicable LDR requirements will be treated before landfilling.

- D. Wastes will be treated at the stabilization unit prior to disposal in the landfill and may be sampled and characterized to determine an appropriate treatment mixture prior to their acceptance.
- E. After wastes have been treated at the stabilization unit, they will be retested prior to placement in the landfill to determine if they meet LDR requirements. All solidified wastes will be tested for the presence of free liquids using the paint filter test and will be analyzed for other parameters determined by the characterization of the waste before solidification. For most materials, the TCLP extraction method will be performed, followed by an analysis of the leachate for the appropriate parameters (refer to EPA test method 1311, 40 CFR Part 261, Appendix II).

3.4 LANDFILL OPERATION

3.4.1 Records

- A. The Facility will maintain complete records of the wastes disposed of in the landfill. The documentation will contain results of waste analyses, waste compatibility analyses and waste handling compliance. Additional documentation will register the exact location of a waste within a three-dimensional grid system. Grid spacing will be a minimum of 50 feet.
- B. Records of inspections of the landfill will be maintained in an operating record kept in the administration building.
- C. Preventative maintenance information will be documented and kept in the operating record in the administration building.
- D. Maintenance performed on the structures and equipment part of the landfill unit will be documented in the operating record kept in the administration building.

3.4.2 Procedures for Ignitable/Reactive Wastes

- A. Reactive wastes will be treated or mixed prior to placement in the landfill so that the resulting waste mixture no longer meets the definition of reactive waste.
- B. Ignitable waste will be treated or mixed prior to placement in the landfill so that the resulting waste mixture no longer meets the definition of ignitable waste.
- C. Reactive wastes will be separated from sources of reaction.

3.4.3 Waste Placement

- A. The landfill will be accessed by means of ramps indicated in Drawing 10.
- B. The active areas of the landfill will be accessed by temporary roadways that will be established on top of the waste and daily cover.
- C. Incompatible wastes will be spaced at least one grid distance to prevent commingling.
- D. Lab packs may be placed in the landfill only if they meet the requirements in 40 CFR 264.316. Lab packs will not be accepted if incompatible wastes are placed within the same lab pack or if reactive wastes have not been treated to render them non-reactive.

- E. Bulk and containerized wastes will not be placed in the landfill unless they meet the requirements in 40 CFR 264.314.
- F. Containers less than 90% full will be crushed, shredded, or otherwise reduced in volume to the maximum extent possible prior to placement in the landfill.
- G. Wind dispersal will be controlled with a daily cover consisting of soil spread on top of the waste with a minimum thickness of 0.5 feet.
- H. Dust generation will be reduced by applying small amounts of water spray to moisten the soil surfaces. The water will be applied with a water truck equipped with a pump, piping and an array of nozzles that spray very small water droplets. The frequency of the water application will depend on the climate and traffic. Sufficient moisture will be applied to all soil surfaces on an as needed basis to prevent wind erosion. However, the application of water will be limited so that ponding in the landfill does not occur.

3.4.4 Operation of Leachate Collection and Detection Systems

- A. Pumpable liquid in the LCRS, LDRS and vadose sump will be removed in a timely manner to prevent the head on the respective liners from exceeding 12 inches above the floor liner system. The depression in the sump will be used to provide sufficient head to activate the pumps.
- B. The leachate collected from the sumps will be temporarily stored in tanks.
- C. Overfilling of the tanks will be controlled with high-level control switches which will automatically shut down the sump pumps. An alarm will be activated that will notify personnel that the system requires maintenance. Volume of leachate pumped will be monitored by means of cumulating flow meters. Total liquids pumped will be recorded after each pumping event.
- D. The leachate collection tanks will be used as 90-day storage units and managed accordingly.
- E. Once the leachate levels in the riser crest pad tanks exceed 50 percent of the holding capacity the liquids will be removed by tanker truck to the main liquid waste storage tanks.

3.4.5 Inspection and Monitoring

- A. Inspections will be performed according to the schedule matrix indicated in Table 5.1.
- B. The schedule matrix will be expanded, as necessary, to reflect new equipment or changes to existing equipment inspection frequencies.
- C. The landfill and associated equipment will be inspected weekly and after storms.
- D. The LCRS, LDRS and vadose sumps will be checked daily for the presence of liquid. Pressured transducers will be used to measure the presence of liquids in the sump. The elevation of the transducer will be determined during installation. The transducer elevation combined with the fluid pressure on the transducer will allow calculation of the fluid elevation at any time.

- E. The average daily flow in the LDRS sump will be calculated in accordance with the Response Action Plan (Section 2.5.3.9). The Response Action Plan will be implemented if leaks are detected.
- F. The leachate collection tank will be inspected according to the procedures indicated in Section 5.2.5.
- G. Ancillary equipment will be inspected according to the manufacturer recommended programs.
- H. Surveys of the active landfill surface area and the riser pipes with an OVM or comparable device will be performed quarterly to detect the presence of organic compounds.
- I. The landfill will be inspected by properly-trained personnel for items such as spills, leaks, odors, wind-blown particulate matter, deterioration of the landfill itself, malfunction or improper operation of the run-on/run-off control systems.
- J. Inspections will be documented in inspection checklists that will be kept for at least 3 years.
- K. If deterioration or any other abnormalities are noted, the inspector's supervisor will be notified and will determine the appropriate course of action for correction. If the supervisor is not available, the EC will be summoned to make the determination.
- L. The stormwater and contaminated water basin will be inspected to ensure that liquid has not accumulated. The collection systems will be emptied as quickly as possible to ensure that the design capacity of the system is not exceeded. Vacuum trucks will be used to empty the basins. Contaminated water that meets applicable LDR requirements will be placed in the evaporation pond. Contaminated water that does not meet applicable LDR requirements will be treated before landfilling.

3.5 EVAPORATION POND OPERATION

3.5.1 Records

- A. Results of waste analyses will be maintained in an operating record kept in the administration building.
- B. The Facility will maintain complete records of the wastes disposed of in the evaporation pond.
- C. Inspection records will be maintained in the inspection log for the evaporation pond. This log will be kept in the administration building.
- D. Preventative maintenance information will be documented and kept in an operating record in the administration building.
- E. Maintenance performed on the structures and equipment part of the evaporation pond will be documented in the operating record kept in the administration building.
- F. The average daily flow rate to the sump system will be calculated and recorded weekly during the active life of the evaporation pond to ensure that ALR for the evaporation pond (1,000 gpd) is not exceeded.

3.5.2 Procedures for Ignitable/Reactive Wastes

- A. Wastes that are ignitable, reactive, and/or incompatible will not be placed in the evaporation pond at the same time.

3.5.3 Waste Placement

- A. Off site and on site waste will be analyzed according to the Waste Analysis Plan to ensure that the waste acceptance criteria specified in the RCRA permit are met and to identify any safety precautions that must be taken to properly manage the waste. Hazardous waste which may be placed in the evaporation pond includes all wastes listed in Part A of the application (Volume I), provided that LDR treatment standards are met prior to placement of the wastes.
- B. Approved off site waste and on site leachate tanker trucks will transport the waste to the tanker discharge pad at the evaporation pond.
- C. Tanker trucks will be unloaded directly into the evaporation pond through a series of hoses, valves and pipes.
- D. The pond is separated in two independent sections by a separator berm. In the event that a leak should occur in one section of the pond, liquids could be pumped into the other section until repairs are completed.
- E. Two feet of freeboard will be maintained in the evaporation pond at all times.
- F. Sludge will be removed by vacuum trucks and treated in the stabilization unit. Sludge will be removed on a routine basis to maintain the level of waste in the pond below the maximum operational level.
- G. The vacuum trucks will park on the concrete pad during sludge removal. Sludge will be removed by means of pumps and flexible hosing.
- H. Run-off in the pond will be pumped out within 24-hours of a storm event with vacuum trucks. Contaminated water will be disposed of in compliance with appropriate regulations.
- I. Site personnel will be present during all fluid discharge and transfer operations to ensure that pond overtopping does not occur in the event of equipment malfunction or other human error.

3.5.4 Operation of Leachate Detection and Vadose Zone Monitoring Systems

- A. Pumps located in the LDRS pipe and vadose zone sump will be used to remove leachate accumulating in the leachate collection systems. When leachate accumulates it will be pumped to a tanker truck and either returned to the evaporation pond, stabilized in the onsite treatment unit, or stored in one of the liquid waste storage tanks. Any time liquids are detected at a specified level, the sump pump will be activated and the liquid will be removed. The pump activation level will be related to the pump selected.
- B. All pumpable liquids in the sumps will be removed in a timely manner to maintain the head on the bottom liner below 12 inches above the floor liner. The depression in the sump will be used to provide sufficient head to activate the pumps.

- C. The volume of liquids removed from the sumps will be recorded in cumulating flow meters. Total liquids pumped will be recorded after each pumping event.

3.5.5 Inspection and Monitoring

- A. Inspections will be performed according to the schedule matrix indicated in Table 5.1.
- B. The freeboard level will be routinely inspected to ensure that approved or acceptable freeboard levels are maintained and that overtopping does not occur.
- C. Elevation rods, survey monuments, staff gauges, flow meters and fluid level transducers will be used to measure and record liquid handling volumes.
- D. Liquid elevations will be checked periodically by visual observation against the staff-gauges. The data will be recorded on standard forms and filed with the operating records.
- E. Flow meters will be used to record volumes of liquids discharged into the pond and removed from the sumps. Transducers located in the sumps will provide a liquid level reading in the sumps. The elevation of the transducers will be determined during installation. The transducer elevation combined with the fluid pressure above the transducer will allow calculation of the fluid elevation at any time.
- F. Inspections will occur on a weekly basis and after storms to detect evidence of deterioration, malfunction, improper operation of overtopping control systems or sudden drops in liquid levels in the pond.
- G. If liquid losses exceed daily evaporation losses and no other reasonable explanation is found, then that section of the pond will be shut down and authorities at the NMED will be notified immediately.
- H. Weekly visual inspections will be conducted to verify the integrity of the liners and associated systems. Visible portions of the leachate collection pipes and pump will be visually inspected for deterioration.
- I. The concrete pad for tanker discharge will be visually inspected weekly for accumulation of liquids.
- J. The area around the pond will be inspected weekly for any signs of deterioration, leaks or erosion. The evaporation pond berm will be inspected for any sign of abnormal deterioration, which may include excessive sloughing or the development of significant cracks.

3.6 LIQUID WASTE STORAGE OPERATION

3.6.1 Records

- A. The results of each daily inspection will be documented in a daily operating record.
- B. The quantity of waste received and the date each period of accumulation begins will be documented for each tank.
- C. Inspection records will be maintained in the Facility operating record, which will be kept in the administration building.

- D. Maintenance performed on the structures and equipment part of the storage tank unit will be documented in the operating record kept in the administration building.

3.6.2 Procedures for Ignitable/Reactive Wastes

- A. Only the waste types approved for a tank system will be placed in the tanks. No new waste types will be placed into an existing tank system unless:
- A.1 The compatibility of the new waste type with the prior contents of the tank is determined by testing or documentation.
 - A.2 The existing tank system is cleaned or flushed to the extent necessary to ensure compatibility with the new waste type.
- B. Ignitable or reactive wastes will not be placed into any tank system unless the tank system is protected from sources of ignition by measures including but not limited to the following: signs prohibiting smoking, open flames or welding; an inert atmosphere blanket; enclosed vents isolated from sources of ignition.

3.6.3 Waste Placement and Storage

- A. Each storage tank will be clearly marked with a description of the contents and records will be kept documenting the quantity of waste received, and the date each period of accumulation begins.
- C. Only the waste types approved for a tank system will be placed in the tanks. No new waste types will be placed into an existing tank system unless:
- B.1 The compatibility of the new waste type with the prior contents of the tank is determined by testing or documentation.
 - B.2 The existing tank system will be cleaned or flushed to the extent necessary to ensure compatibility with the new waste type.
- D. The tanks will be operated at ambient pressure and temperature when storing liquids. One of the following feed mechanisms for tank systems or an equivalent transfer mechanism will be used.
- C.1 Pump transfer: liquids will be pumped into or out of the tank through permanent or temporary transfer lines.
 - C.2 Gravity drain: liquids will be allowed to drain by gravity through permanent or temporary transfer lines.
- E. Appropriate controls and practices will be used to prevent spills from and overfills of the tank or containment systems.
- F. Spill prevention will be primarily maintained by hard-plumbed piping. When transfer lines are not hard plumbed or when open-ended lines are used, one or more of the following spill prevention controls or an equivalent device will be used as described in Section 2.3.3.
- G. Response to releases from tank systems will be initiated immediately upon discovery, and regulations specified in 20 NMAC 4.1 Subpart V, 40 CFR 264.196(d) or 40 CFR 264.56 will be followed as appropriate (see Section 5.0), including notification to the Hazardous and Radioactive Materials Bureau (HRMB) of the New Mexico Environment Department (NMED) and National Response Center (NRC). The secondary containment tank will be

emptied by pumping fluids from the drainage port located near the base of the tank or by use of a vacuum truck.

- H. Transfer of liquids from the liquid waste storage tanks to the stabilization unit will be accomplished by tanker trucks approved for liquid waste transfer. Tanker trucks will be cleaned following a transfer operation to ensure that subsequent transfers do not result in mixing of incompatible or reactive wastes.
- I. The contingency plan for leaks or spills is indicated in Section 6.3.5.2.

3.6.4 Inspection and Monitoring

- A. The floor and berm of the concrete area will be inspected regularly for gaps and cracks.
- B. Daily visual inspection will be used to detect releases to the secondary containment.
- C. Inspections will be performed according to the schedule matrix indicated in Table 5.1. Inspections will focus on: (1) overfill control; (2) equipment condition to detect signs of corrosion or releases of waste from the tanks or ancillary equipment; and (3) data gathered from monitoring and leak detection equipment. A typical inspection checklist is provided in Appendix I in Volume II.
- D. Ancillary equipment, monitoring and leak detection systems will be inspected daily.

3.7 OPERATION OF STABILIZATION UNIT

3.7.1 Records

- A. Inspection records will be maintained in the administration building. The results of each daily inspection will be documented in a daily operating record.
- B. Maintenance performed on the structures and equipment part of the stabilization unit will be documented in the operating record kept in the administration building.

3.7.2 Procedures for Ignitable/Reactive Wastes

- A. Prior to treating wastes, waste characteristics will be analyzed to ensure that proper measures can be taken to safely manage ignitable, reactive, and incompatible wastes.
- B. If ignitable or reactive wastes are placed in the bins, they will be immediately mixed with sufficient quantities of fly ash and/or cement to render them non-ignitable or non-reactive.

3.7.3 Waste Placement and Treatment

- A. Operations in the stabilization building will be directed and coordinated from the control room.
- B. As indicated in Section 4.0, wastes will be tested prior to stabilization to determine the appropriate reagent formula.
- C. Wastes may be offloaded directly from trucks into the stabilization bins or transferred from the drum handling unit or roll-off storage area. Waste receiving will involve positioning the

- loaded waste hauler at the end of the bin, dumping the waste load, and washing out any residue left in the truck bed into the bin.
- D. The bins will be covered while dry reagents are being added to control particulate air emissions. Reagent addition involves placing a cover on top of the bin, connecting ventilation and dry reagent delivery ducts, and injecting reagents into the bin. Reagent delivery to the bins will be controlled by a process controller system which will automatically sequence and deliver the necessary quantities of reagent based on a predetermined waste processing recipe.
- E. A backhoe positioned adjacent to the bin will mix the waste and reagents.
- F. Following mixing, the waste will be sampled and a paint filter test will be conducted to ensure that no free liquids are present. If necessary, samples will be gathered for toxicity characteristic leachate procedure (TCLP) testing. If the paint filter test is passed, the backhoe will load the stabilized waste into a waste hauler (roll-off truck) and the trucks roll-off cover will be positioned over the waste. The stabilized waste will be stored temporarily at the roll-off unit while tests are completed to determine how and if the material can be disposed of in the landfill.
- G. When the waste is sufficiently mixed, it will be tested according to the Waste Analysis Plan (Section 4.0). It will then be placed in a roll-off container and transferred to the roll-off storage area to cure.
- H. The backhoe bucket and stabilization bin will be thoroughly cleaned before a load of waste which is not compatible with the waste previously stabilized in that bin is mixed. After the last bin load of a specific stabilization mixture has been loaded out, Facility personnel will use a high-pressure water hose located near the bins to rinse the backhoe bucket and the bin walls. The rinsing will cause residual clods of stabilized waste to fall to the bottom of the bin along with the rinse water. Reagents will then be added to the bin at the same mixture proportions and the remaining waste and rinse water will be stabilized, tested for free liquid, and loaded out before a different waste stabilization mixture is processed in that bin.
- I. Releases into the LDRS will be detected within 24 hours by liquid sensing instruments or inspection. Accumulated liquids will be removed within 24 hours of detection. The secondary containment will be emptied by pumping accumulated liquids into a temporary storage tank or into another stabilization bin by portable pumps.
- J. In case a breach should occur in a bin, such bin will be removed from service and repaired.
- K. Spill and overflow prevention will be accomplished by continuous direct monitoring of transfer operations.
- L. The stabilization bins will be operated at ambient temperature and pressure.
- M. Reagents will either be pumped from reagent tanks or manually fed.
- N. Liquid hazardous wastes will be pumped from vacuum or tanker trucks. Other wastes may be manually transferred from the incoming waste hauler truck or from the container storage areas.
- O. The contingency plan for leaks or spills is indicated in Section 6.3.5.2.
- P. Dust will be removed from the exhaust air in the bag house. Collected dust will be processed in the stabilization bins.

3.7.4 Inspection and Monitoring

- A. Inspections will be performed according to the schedule matrix indicated in Table 5.1.
- B. Each stabilization bin will be visually inspected once each operating day.
- C. At least once per month, the daily visual inspection will be conducted on empty bins to ensure integrity of the bins and welds.
- D. An annual sonic test will be conducted to ensure the thickness of the inner tank and outer shell is maintained.
- E. Ancillary equipment and monitoring systems will be inspected once each operation day.

3.8 DRUM HANDLING OPERATION

3.8.1 Records

- A. Records of inspections of the drum handling unit will be maintained in an operating record kept in the administration building.
- B. The results of all container storage analyses, trial tests, waste compatibility analyses, and ignitable and reactive waste handling documentation pertaining to compliance will be maintained in the Facility operating record.
- C. Maintenance performed on the structures and equipment part of the drum handling unit will be documented in the operating record kept in the administration building.

3.8.2 Procedures for Ignitable/Reactive Wastes

- A. Ignitable or reactive wastes will be protected from any sources of ignition or reaction.
- B. If ignitable wastes are handled, special precautions will be instituted, including the use of special non-sparking bung wrenches or other tools for opening drums.

3.8.3 Waste Placement and Storage

- A. All containers being stored will be clearly marked with hazardous waste labels which will be clearly visible while containers are being stored.
- B. All containers will remain closed during storage except when they are sampled.
- C. Handling procedures will be developed to ensure that containers are not opened, handled, or stored in a manner that may cause them to rupture or leak.
- D. Wastes stored will be placed in individual storage cells segregated by waste type and compatibility. Labels will be added to each section of the unit to identify the type of waste to be stored.
- E. Two of the cells will be designed to accommodate only TSCA PCB wastes.
- F. Containers will be managed according to the conditions indicated in Section 2.2.10.

- G. Aisle spacing will be maintained to assure inspectability and accessibility for operational and emergency equipment to containers. A minimum 30-inch aisle space will be maintained between double rows of containers. Containers will be stored in single rows only if they are against a wall or other barrier that prohibits inspection from all sides.

3.8.4 Operation of Leachate Collection and Detection Systems

- A. Liquids present in the LCRS and LDRS sumps will be sampled and analyzed to determine the nature and concentration of waste constituents. An appropriate treatment and disposal method will be selected in accordance with Section 4.0.
- B. Pumpable quantities of liquids will be removed with a vacuum truck.
- C. Leaks and spills will be removed from the sumps in a timely manner.

3.8.5 Inspection and Monitoring

- A. Inspections will be performed according to the schedule matrix indicated in Table 5.1.
- B. The floor will be inspected regularly to determine if any gaps or cracks have developed or if the epoxy coating has been damaged.
- C. The leachate collection and removal system (LCRS) and leak detection and removal system (LDRS) sumps will be checked regularly for the presence of liquid.
- D. Drum storage areas will be visually inspected at least once a week for leaking containers and deterioration of the containers and containment area. If a container is found to be in poor condition, the inspector's supervisor will be notified, who will arrange to transfer the hazardous waste to a new container, repair the existing container as specified by the manufacturer, or place the container in an overpack drum.
- E. Containers with more than 500 ppmw volatile organic compounds will be inspected at least once a month for cracks, holes or gaps in the container, cover or closure devices. Defects detected will be repaired according to 40 CFR 264.1086(d)(4)(iii).
- F. Weekly visual inspections will be performed to identify the status of warning signs, condition of containers and labels, availability and accessibility of spill control and PPE, and the adequacy of aisle space and access/egress routes.
- G. Secondary containment areas will be inspected weekly. Inspections will focus on (1) the condition of the sump pits and trenches to ensure that they are free of cracks or gaps and are sufficiently impervious to contain leaks, spills, and accumulated liquids until the collected material is detected and removed; and, (2) pump operation.
- H. Ancillary equipment will be inspected according to manufacturer recommended programs.

3.9 OPERATION OF TRUCK ROLL-OFF UNIT

3.9.1 Records

- A. Results of container waste analyses, trial tests, waste compatibility analyses, and ignitable and reactive waste handling documentation pertaining to compliance will be maintained in the Facility operating record.

- B. Records of inspections of the roll-off storage unit will be maintained in an operating record kept in the administration building.
- C. Maintenance performed on the structures and equipment part of the roll-off storage unit will be documented in the operating record kept in the administration building.

3.9.2 Procedures for Ignitable/Reactive Wastes

- A. Ignitable or reactive wastes will be protected from any sources of ignition or reaction.

3.9.3 Waste Placement and Storage

- A. Containers being stored will be clearly marked with hazardous waste labels which identify the contents of each container as well as the date of receipt (accumulation date). All labels will be clearly visible while containers are being stored.
- B. All containers will remain closed during storage, except when waste is removed or added.
- C. Containers will be managed according to the conditions indicated in Section 2.2.10.
- D. Container storage and handling procedures will be developed to ensure that containers are not opened, handled, or stored in a manner that cause them to rupture or leak.
- E. The unit is divided in two sections. One section will hold tarped, U.S. Department of Transportation (DOT) approved, lined, roll-off containers with non-stabilized waste awaiting treatment. The other section will be a staging area for roll-off containers containing stabilized waste TCLP test results and landfill disposal approval.
- F. Waste will be characterized and screened as part of the waste acceptance procedures. This procedure will prevent incompatible wastes from being stored in the same roll-off containers that are delivered to the site.
- G. Materials from a single stabilization batch will not be mixed with material from a different batch.
- H. Hazardous waste will be compatible with the container or liner as defined by the following conditions:
 - H.1 All containers used to store hazardous waste will be made of, or lined with, material that will not react with, or otherwise be incompatible with, the waste being stored so that the ability of the container to hold waste is not impaired.
 - H.2 Hazardous waste will not be placed in an unwashed container that has previously held incompatible waste or material.
- I. Individual bins will be physically separated from each other by a minimum of 1 foot and will be stored inside the covered steel roll-off bins and the HDPE bed liners.
- J. Incompatible solid wastes stored within the container storage areas will be separated by a distance of at least 10 feet unless separated by a berm.
- K. Roll-off containers will be spaced 4 feet apart and 4 feet from the edge of the berm.

- L. Operational staff will visually observe trucks leaving the area for excessive accumulation of waste on the tires and/or truck body. If excessive accumulation is noted, the truck will be routed to the truck wash for cleaning.
- M. Roll-off containers will be covered before exiting the stabilization unit and will remain covered while they are staged in the roll-off storage area.
- N. Containers which are received for disposal, but are found to contain free liquids upon inspection, free liquids will be removed with a vacuum truck, characterized and managed in accordance with stabilization procedures.
- O. Liquids collected on the surface of the sump or in the sump drainage gravel will be removed by vacuum truck.
- P. Samples of sump liquids will be chemically analyzed to determine the presence and concentration of any waste constituent. After this determination, an appropriate method of treatment or disposal will be selected in accordance with the criteria prescribed in the Waste Analysis Plan (Section 4.0).
- Q. Leaks, spills and precipitation will be removed from the sump as soon as possible.
- R. In the case of a leak, the liquids in the roll-off container will be stabilized and the stained soil will be excavated and handled as a potential hazardous waste.

3.9.4 Inspection and Monitoring

- A. Inspections will be performed according to the schedule matrix indicated in Table 5.1.
- D. Container storage areas will be visually inspected at least once a week for leaking containers and deterioration of the containers and containment area. All inspection information will be recorded and any problems noted during the inspection will be resolved in a timely manner.
- E. Identified leaks will be resolved as described in Section 2.2.10.
- F. Containers with more than 500 ppmw volatile organic compounds will be inspected at least once a month for cracks, holes or gaps in the container, cover or closure devices. Defects detected will be repaired according to 40 CFR 264.1086(d)(4)(iii).
- G. Weekly visual inspections will be performed to identify the status of warning signs, condition of containers and labels, availability and accessibility of spill control and PPE, and the adequacy of aisle space and access/egress routes.

4.0 MAINTENANCE

4.1 LANDFILL

- A. The landfill structure will be maintained through a routine preventative maintenance program which will be fully defined in the final operations plan.
- B. Preventative maintenance will involve regular visual inspections of the landfill liner where feasible and review of leachate collection and analysis results.
- C. Defects detected in the liner systems will be repaired according to the procedures indicated in the Construction Specifications: Sections 02710, 02775 and 02780. Soil surfaces that need to be repaired will be removed and placed according to the Construction Specifications: Sections 02226 and 02119.
- D. Equipment such as pumps, generators, electrical lighting, and warning systems, will be subject to manufacturer recommended maintenance programs.
- E. Preventive maintenance information will be documented and any deviation from normal conditions will be closely tracked and corrected as necessary.

4.2 EVAPORATION POND

- A. If a section of the evaporation pond must be removed from service, flow of waste to that section will be stopped by draining the pond to below the level of the leak, surface leakage will be contained, and all necessary steps will be taken to repair the liner system and prevent future failure.
- B. Preventative maintenance will involve regular visual inspections of the evaporation pond liner where feasible and review of leachate collection analysis results.
- C. Defects detected in the liner systems will be repaired according to the procedures indicated in the Construction Specifications: Sections (HDPE, Geonet). Soil surfaces that need to be repaired will be removed and placed according to the Construction Specifications: Sections(clay liner).
- D. Equipment such as pumps, generators, electrical lighting, and warning systems, will be subject to manufacturer recommended programs.

4.3 LIQUID WASTE STORAGE

- A. Should gaps or cracks develop in the concrete, repairs will be scheduled immediately. The nature of the repair will depend on the extent of the cracking and could range from the application of chemically resistant epoxy fillers or coatings to the replacement of portions of the concrete floor.
- B. If a release occurs from the primary tank system, the tank will be removed from service immediately. Wastes in the tank will be removed within 24 hours to the extent necessary to prevent further release and allow inspection and repair of the tank system. All released materials will be removed from the secondary containment as soon as possible and within 24 hours of detection.

- C. The tank system will be repaired or replaced prior to returning it to service. An independent New Mexico registered professional engineer will certify major repairs. The certification will be submitted to the NMED within seven days after the tank system is returned to service.
- D. Tanks, pumps, generators, electrical lighting and warning systems will be maintained according to manufacturers recommended programs.

4.4 STABILIZATION UNIT

- A. If a release occurs from a primary tank system, the tank will be removed from service and all materials will be removed from the tank or secondary containment within 24 hours or as soon as reasonably possible. The tank system will be repaired prior to return to service. Major repairs will be certified by an independent New Mexico registered professional engineer. The certification will be submitted to the NMED within seven days after the tank system is returned to service.
- B. Equipment such as pumps, generators, electrical lighting, and warning systems, will be subject to manufacturer recommended maintenance programs.

4.5 DRUM HANDLING UNIT

- A. Should cracks or gaps develop in the concrete, repairs will be scheduled immediately. The nature of the repair will depend on the extent of the cracking and could range from the application of chemically resistant epoxy fillers or coatings to the replacement of portions of the concrete floor.
- B. Equipment such as pumps, generators, electrical lighting, and warning systems, will be subject to manufacturer recommended maintenance programs.

4.6 ROLL-OFF CONTAINER STORAGE UNIT

- A. Equipment such as pumps, generators, electrical lighting, and warning systems, will be subject to manufacturer recommended maintenance programs.