

Attachment 1 Operation Plan

SECTION 3 - OPERATION PLAN

On October 9, 1991, the U.S. Environmental Protection Agency (EPA) announced revisions to the Criteria for Classification of Solid Waste Disposal Facilities. These revisions were developed in response to Subtitle D of the 1984 Hazardous Waste Amendments to the Resource Conservation and Recovery Act (RCRA). The Subtitle D regulations set forth revised minimum federal criteria for municipal solid waste landfills (MSWLFs), including facility design and operating criteria. The Subtitle D regulations set forth differing requirements for existing and new units (e.g., existing units are not required to remove wastes in order to install liners).

Subtitle D established a framework for federal, state, and local government cooperation in controlling the management of non-hazardous solid waste. The federal role in this arrangement is to establish the regulatory direction by providing minimum nationwide standards for protection of human health and the environment and by providing technical assistance to States for planning and developing their own environmentally sound waste management practices. However, the actual planning, direct implementation, and enforcement of solid waste programs under Subtitle D remain largely a state and local function.

On November 5, 1995, the State of Utah Department of Environmental Quality (UDEQ) issued final Administrative Rules entitled Solid Waste Permitting and Management Rules (R315-301 through 320) implementing Subtitle D at the state level. UDEQ has received authorization from EPA to implement and enforce the solid waste program.

TJ has prepared this Operation Plan to guide the daily operations at TJL. This document provides substantial discussion of operations at the landfill based on the operating criteria outlined in 40 CFR 258, Subpart C, and State of Utah Administrative Rules R315-301 through 320.

Portions of this Operation Plan are subdivided into separate discussions of the unlined landfill and the lined landfill. Since the unlined landfill accepted waste after October 9, 1993, its closure and post-closure care must follow more stringent state and federal regulations than those facilities which were closed prior to October 9, 1993.

3.1 SCHEDULE OF CONSTRUCTION

Future construction of the last lined landfill cell will be made according to the methodology

presented in the drawings contained in Appendix A - Drawings. These drawings show the conceptual configuration of the completed landfill and details for selected key elements of future landfill development. The proposed configuration was developed based on geologic/hydrogeologic conditions, geotechnical considerations, environmental assessment data, and operational considerations.

TJL has adopted the following definitions for clarification of the overall development cycle of the landfill:

- Cells – Cells represent the incremental excavation and associated liner construction at the base of the landfill. The lined landfill has been divided into nine (9) distinct Cells. The Cells are numbered 1, 2, 3, 4, 5 (Phase I), 5 (Phase II), 6A, 6B, and 6C and are oriented largely from west to east.
- Phases - Phases represent the incremental filling and associated final cover construction on the landfill. TJL has been divided into (8) distinct Phases. The Phases are lettered A through H and run west to east.

Drawings, specifications, and QA/QC Plans for Cells 1, 2, 3, 4, 5 (Phase I), Cell 5 (Phase II), 6A, and 6B have been previously submitted to Utah State DEQ Division of Waste Management and Radiation Control (DWMRC) for review and approval prior to construction. Cells 1, 2, 3, 4, 5 (Phase I), 5 (Phase II), 6A, and 6B have been constructed and have received waste. The last additional landfill Cell will be designed and constructed when the previous operational phase is nearing its intermediate capacity. Detailed drawings, specifications, and QA/QC plans will be developed for Cell 6C and each Phase of final cover construction and submitted to the DWMRC for review and approval prior to construction.

Drawing 2 – General Arrangement (Appendix A) shows the location of the remaining lined landfill cell, Cell 6C. Drawing 3 – Final Cover (Appendix A) shows the conceptual contour of the final cover and the relative locations of the closure Phases at TJL. Cell 6B is the cell currently being utilized for waste disposal at TJL. The construction of Cell 6C will be completed as required to meet the disposal needs of TJ and is anticipated to occur between 2024 and 2026.

The remaining capacity of Cell 6B plus the future Cell 6C have airspace for approximately 10 years of disposal, based on available fill volume, expected daily waste disposal rates, and an in-place density of 1,500 pounds per cubic yard (ppcy) of waste.

Surplus soil excavated from the development of Cell 6C will be used for daily, intermediate, and final cover or strategically stockpiled. At a minimum, enough soil will be stockpiled to construct the final cover for Phase G, Phase H, and final cover maintenance during the post closure care period.

3.2 DESCRIPTION OF HANDLING PROCEDURES

3.2.1 General

All waste entering the landfill is weighed and then monitored continually from the scale to the working face, PCC, HHW, or green waste facility by landfill personnel. Usually, two and sometimes three individuals will monitor the waste being off-loaded at the working face.

Section 3.10 discusses in detail the inspections of waste loads. Illicit material will be turned away and documented as such (to the SLCOH). Waste delivered to the PCC is continually monitored by Spotters to exclude hazardous waste and to separate recyclable and HHW materials.

After a vehicle leaves the scale house, the vehicle will be routed to the appropriate discharge location. Loads will be regularly surveyed at the tipping area by Spotters. The waste materials will be placed and compacted in two-foot increments to provide the waste compaction necessary to meet the design landfill capacity. The materials will be placed at the toe of the operational face and spread up slope with a trash compactor to provide relatively uniform sloping (maximum 3H: 1V slopes) lifts.

The daily module will consist of a series of 2-foot increments placed to a height of approximately 8 to 10 feet (lift). At the maximum height of 10 feet of waste material, the daily lift will be covered with 6" of daily cover soil.

Waste delivered to the PCC is placed into roll-off containers by an Operator using a loader. Once the roll-off containers are full, a hook truck delivers the roll-off containers to the working face for disposal. Recyclables and green waste delivered to the PCC are placed into designated roll-off containers and routed to the appropriate facility. Greenwaste delivered to the Greenwaste area will be accepted by a Spotter who will ensure that the load consists of organic materials only.

3.2.2 Sequence of Development

The unlined landfill is historic in nature and was consequently constructed without a liner or leachate collection system. Waste has been added over the unlined landfill historical footprint to bring the elevation of the landfill to the final cover design topography. The final cover has been placed over a large portion of the unlined landfill cell. The final cover system details are presented on Drawing 5 – Details (Appendix A).

The following paragraphs describe the filling sequence for the remaining Phases of the TJL. This sequencing will result in the planned placement of wastes to maximize the stability of the fill at any time during operation of the landfill. The Operators will not deviate substantially from the sequencing plan without concurrence of the Project Manager.

The lined landfill has been designed to be constructed in nine (9) Cells. The constructed base of each lined landfill Cell is sloped toward the leachate collection/evaporation pond (LCEP). The LCEP system moves with the construction of each Cell of the lined landfill; always being located at the most down gradient point of the lined landfill. A leachate collection pipe (LCP) was installed in Cell 4 to assist with the transport of leachate to the active LCEP. Leachate is held in the LCEP until evaporated. In the event of a period of prolonged above normal precipitation; leachate will be pumped from the collection/evaporation pond and recirculated over the lined landfill to keep the head on the liner less than the required 12" and to maintain a 12" minimum freeboard in the LCEP. The LCEP is permanently marked to show the depth of leachate at any given time and to indicate remaining freeboard within the collection/evaporation pond.

3.2.2.1 Protective Soil Layer/Select Municipal Solid Waste Placement

After the completion of the liner system installation for each Cell; a one (1) foot thick layer of screened protective soil is placed over the liner components. The screened soil placement extends over the liner installed across the bottom of the Cell to help protect the liner from damage. A second two (2) foot layer of bank run material is then placed over the screened material to complete a three (3) foot protective layer in the base of the lined Cell. Drawing 5 - Details (Appendix A) illustrates the configuration of the bottom liner and the protective soils. The first MSW placed in a newly constructed Cell will be placed in a layer approximately 6 feet thick using only select MSW (side loader only). Objects capable of damaging the liner (i.e.: rebar, pipe, or other similar objects) are traditionally not in this waste and the solid waste will be compacted as a single lift, with no intermediate compaction to provide a six

(6) foot thick protective working surface over the protective soils.

Since the application of select waste over the one (1) foot thick layer of protective soil on the side slopes will take place incrementally as the level of MSW within the Cell raises, specific measures will need to be followed to minimize the potential of liner damage. The following procedure will be followed to ensure protection of the liner over the side slopes:

All Spotters and Operators involved with the placement of select MSW will have annual training delineating the screening and placement of the select MSW. The annual training documentation will identify the person receiving the training, date of training, and the name of the person providing the training. All training documents will be included in the operation record.

As the waste is placed, landfill equipment will spread the MSW in a layer approximately 1.5 - 2 feet thick. The Operator will perform the initial screening of the MSW as he/she spreads the MSW. A dedicated Spotter will perform the second screening of the MSW for objects capable of causing damage to the liner (i.e.: rebar, pipe, or other similar objects). All materials with the potential of damaging the liner through the one (1) foot thick soil layer will be removed from the MSW.

The Operations Supervisor will periodically observe the placement of the select MSW layer on the side slopes as a final screening of the select MSW. Drawing 5 – Details (Appendix A) illustrates the configuration of the Cell liner over the side slopes.

3.2.2.2 Development of Cells 1, 2, 3, 4, 5 (Phase I), 5 (Phase II), 6A and 6B

Construction

Cell 1 construction started the summer of 1997; stopped due to winter weather and was completed June of 1998. Excavation of Cells 2 and 3 was performed in conjunction with the placement of daily and intermediate cover in the unlined landfill and Cell 1. Additionally, various landscape and soil stockpile berms were constructed with soils from the Cell 2 and Cell 3 excavation. Liner construction of Cell 2 and Cell 3 was started prior to the complete filling of the Cell 1 area with Cell 2 construction being completed October of 2000 and Cell 3 being completed in the fall of 2002 respectfully. Cell 4 was constructed in the 2006 construction season. Cell 5 (Phase I) was constructed in the fall of 2011 with Cell 5 (Phase II) being constructed in June of 2012. Cell 6A was constructed in the fall of 2016 with the protective soil cover being

place in February of 2017. Cell 6B was constructed during the 2020 construction season with final construction documentation completed in the fall of 2020.

Waste Placement

Cell 1 was filled beginning at the north and working towards the south where possible. Waste was placed in 8- to 10-foot-thick lifts depending upon the volume of waste being handled at the facility. Each lift was completed across the entire area of Cell 1 and terminated at the east edge slope for Cell 2.

Cell 2 waste placement began along the western side where Cell 2 adjoined Cell 1. The landfill operation proceeded in a general west to east fashion with each successive lift being tied into Cell 1. Subsequent landfill Cell operations proceeded in a similar fashion to Cell 2 with the MSW being tied into waste previously placed. At no time shall waste be placed within the landfill Cells at slopes exceeding 2.5H:1V. As the operations within each Cell extend in elevation above the existing topography; each lift will extend toward the south slope, where they will coincide with the final cover elevations. Final cover slopes will not exceed 3H:1V as shown on Drawing 3 – Final Cover (Appendix A).

3.2.2.3 Development of Cell 6C

Construction

Excavation for daily, intermediate, and final cover is being conducted in the Cell 6C area. The construction of Cell 6C will be far enough in advance to ensure that it is fully operational prior to the filling of Cell 6B. Drawings 2 – General Arrangement (Appendix A) shows the geometry and location of Cell 6C. Soil generated from the excavation of Cell 6C will be used for daily and intermediate cover and stockpiled in a temporary soil stockpile located outside the perimeter of the main landfill. The stockpiled soil will be used for final cover. The construction of Cell 6C is anticipated for some time between 2024 and 2026 depending on final cell excavation.

Cell 6C will be constructed in accordance with detailed construction drawings, specifications, and QA/QC plan which will be developed and submitted to the DWMRC for review and approval before construction begins.

Waste Placement

Cell 6C will be filled in the same general manner as the previous landfill cells with incoming

waste being tied into waste already placed. In general, each lift will be placed substantially across the bottom of the entire landfill cells before the next lift is started.

3.2.3 Infectious Wastes

TJL accepts some residential infectious waste because of accepting MSW. Residents with medical conditions occasionally dispose of infectious waste with their normal trash. TJL personnel are instructed to be aware of the possible presence of infectious wastes i.e., sharps and other items. As a general guideline Spotters are told to refrain from walking on non-compacted trash. Commercial infectious waste is not accepted at the TJL facility.

3.2.4 Special Wastes

3.2.4.1 Used Oil and Batteries

TJL is a "Used Oil Recycle Center". Waste oil is bulked and shipped to an oil reclamation facility. Automotive batteries are not accepted at the working face. TJL provides a pallet, within a plastic containment tub, in the PCC area where incoming batteries are stored until enough are generated to facilitate a pick up by a recycler.

3.2.4.2 Bulky Wastes

White goods are accepted at the landfill and are separated for recycling. All appliances containing refrigerants are segregated in a separate area. Refrigerant is removed per EPA guidelines and the appliances are loaded into the metal bin for recycling. TJL does not accept vehicles or vehicle parts. Persons seeking to dispose of used car bodies are encouraged to take the car directly to a metal recycler that is a certified dismantler.

3.2.4.3 Tires

TJL accepts small quantities of tires from the general public. Commercial haulers are prohibited from disposing of tires at TJL. Up to four passenger tires are accepted from the public with each load. A base fee is assessed for all passenger car tires TJL does not accept commercial tires with rims larger than 22". When sufficient quantities of tires are collected, a tire recycler is called, and the tires are removed from the facility for recycling.

3.2.4.4 Dead Animals

Large dead animals are not accepted at the landfill. When small dead animals are found in the waste; they are incorporated into the bottom of the working face. The incorporation of the carcasses into the landfill is accomplished by pushing up the toe of the face and depositing the animal in the bottom of the toe; waste or a minimum of 12" of cover soil is then pushed over

the top of the animal.

3.2.4.5 Asbestos Waste

Asbestos waste is not accepted at the TJL facility.

3.2.4.6 Grease Pit and Animal Waste By-Products

Grease pit and animal waste by-products are not accepted at the TJL facility.

3.3 LIQUIDS RESTRICTIONS

3.3.1 Bulk or Containerized Liquid Waste

Bulk or containerized liquid waste are not disposed of at TJL. Liquids restrictions are necessary because the disposal of liquids into landfills can be a significant source of leachate generation. By restricting the introduction of free liquids into the landfill, TJL personnel can minimize the leachate generation potential of the landfill. Reduction of free liquids should reduce the quantity of leachate to be managed in the landfill. The ban on containerized free liquids will also minimize the problem of subsidence and possible damage to the final cover upon deterioration of the waste containers. Leachate may be placed onto the lined landfill from the LCEP as a dust suppression technique or when the capacity of the LCEP is near the 12 inch of minimum freeboard level.

3.3.2 Liquid Household Waste

Restricting certain small volume liquids may be impractical and unnecessary to protect human health and the environment. For example, small amounts of liquid will be present in household wastes and may be difficult to effectively identify, separate, and restrict from disposal. The regulations allow disposal of products normally and reasonably associated with households or household activities that are in household containers (5 gallons or less). Spotters effectively remove all liquid HHW from loads delivered to the PCC.

3.3.3 Leachate and MSWLF Gas Condensate

Leachate and gas condensate collected as part of the gas recovery operations at TJL may be re-introduced into the lined landfill as a dust suppression technique or when the capacity of the LCEP nears the 12-inch freeboard levels. Operational experience of the leachate system over the past years indicates that the LCEP has more than adequate capacity to store leachate produced by the landfill during the winter months.

3.3.3.1 Leachate Handling Procedures

Leachate is to be removed as directed by the Project Manager. Because of the arid nature of the area, leachate removal has not been a practice. If TJL removes any leachate in the future, all Operators likely to be directly involved with the removal of leachate shall have initial and annual leachate handling training. The training documentation will identify the person receiving the training, date of training, and the name of the person providing the training. All training documents will be included in the operation record. Leachate shall be applied only to lined portions of the landfill only. Once leachate is loaded into the water truck, the entire load of leachate will be discharge onto the MSW located within the lined landfill or disposed of at a Publicly Owned Treatment Works (POTW). If the water truck is used for regular dust control in unlined areas, a full load of clean water will be placed on a lined cell area to clean the tank before the second clean load is used over unlined areas. The number of full loads of leachate either reintroduced into the landfill or taken to a POTW will be reported to a Compliance Coordinator for volume documentation.

3.3.4 Containers Holding Liquid Waste

Containers holding liquid waste will not be disposed of in the landfill unless the container is "household size (less than five (5) gallons).

3.4 MONITORING AND INSPECTION SCHEDULE

3.4.1 Groundwater

TJL has submitted a Modified Corrective Action Plan on December 19, 2003, which was approved by the Division of Solid and Hazardous Waste (now, the Division of Waste Management and Radiation Control) on January 23, 2004. That plan summarized historic ground water monitoring activities at the TJL and the reasons why ground water sampling is no longer being performed at the facility. TJL has complied fully with the Modified Corrective Action Plan with a copy of the approval and the plan included as Appendix C.

3.4.2 Surface Water

Drainage control problems can result in accelerated erosion of a particular area within the landfill. Differential settlement of drainage control structures can limit their usefulness and may result in a failure to properly direct storm water off-site. Drawing 2 – General Arrangement (Appendix A) illustrates the location of the surface water drainage ditches and storm water pond. TJL staff will inspect the drainage system monthly. Temporary repairs will be made to observed deficiencies until permanent repairs can be scheduled. TJL or a contractor will

repair drainage facilities as required. The facility shall not cause a violation of any Utah Pollution Discharge Elimination System (UPDES) permit or standards from the discharges of surface water run-off, leachate or any liquid associated with the facility. The facility shall be in compliance with all provisions of the Clean Water Act. A copy of the current UPDES permit is included as Appendix D.

The Storm Water Pollution Prevention Plan details the inspection and operational requirements to follow at TJL to ensure that the facility is in compliance with the requirements of the UPDES permit. A copy of the Storm Water Pollution Prevention Plan is included as Appendix E .

3.4.3 Leachate Collection

The leachate collection system, installed in the lined landfill Cells consists of a layer of drain net (geosynthetic used for lateral flow of liquid) installed over the High Density Polyethylene (HDPE) and Geosynthetic Clay Liner (GCL) liners. The drain net is covered by protective soils and MSW. No maintenance or inspection of the drain net is required. The final leachate collection system components for Cell 6C will incorporate leachate collection pipes and the associated cleanouts. Once leachate collection pipes and cleanouts are installed, they will be inspected no less than quarterly by TJL staff for signs of deterioration. TJL or a contractor will make required repairs.

3.4.4 Landfill Gas Collection System

All landfill disposal operations produce some quantity of gas because of waste decomposition. However, it has also been shown that by reducing the available water coming in contact with the waste materials the quantity of gas generation is also reduced. For TJL, the semi-arid environment, depth to groundwater and the operational restrictions of no liquid waste disposal will serve to minimize the gas quantities generated. Any future landfill surface facilities will be constructed away from landfilling operations and existing structures have been equipped with methane monitoring equipment.

Gas control and monitoring requirements are detailed in Section 315-303-3. Explosive landfill gasses shall be monitored quarterly, and gas concentrations shall not exceed:

- 25% of the lower explosive limit for explosive gases in facility structures, excluding gas control or recovery system components.
- The lower explosive limit for explosive gases at the property boundary or beyond.

The landfill has thirteen gas monitoring wells; all thirteen of the wells presently show no measurable methane at ground level. Three of the wells, which are outside of the currently lined areas of the landfill, are showing methane within the boreholes. It is expected that these will fall below measurable levels as the final cover and Landfill Gas Collection Systems (LGCS) are installed in these areas. Landfill Gas inspection forms are included in Appendix F. The LGCS operation began construction in late 2004 with the construction of the Phase A cover. The LGCS included a flaring station that began operation in June 2005 with the landfill gas to energy plant being put online in April 2009. The LGCS system will be inspected quarterly according to those specifications and parameters listed in Utah Administrative Rules R315-303-2, Standards for Performance. The system will be repaired, and parts replaced as required to maintain system capabilities.

LGCS monitoring system will be followed throughout the post-closure maintenance period. Quarterly maintenance will include cutting weeds in a 2-foot radius around each monitoring location.

3.4.5 Landfill Leachate Collection/Evaporation Pond System

The Leachate Collection/Evaporation Pond (LCEP) system collects the leachate from all lined Cells and holds the leachate until evaporated. The pond has been constructed utilizing liner components identical to the lined landfill Cells with a secondary layer of GCL and 60 mil HDPE incorporated beneath the primary GCL layer. The uppermost (primary) liner consists of 60 mil HDPE membrane underlain by the GCL layers. Drawing 5 – Details (Appendix A) illustrates the materials utilized in the construction of the LCEP system.

The LCEP is located at the eastern edge (downgradient side) of the active landfill Cell. As new landfill Cells are constructed the location of the LCEP is moved accordingly. Drawing 2 – General Arrangement (Appendix A) show the location of the current LCEP. During the construction of Cell 4 a leachate pump was installed atop the HDPE plastic liner. The leachate pump is designed to keep leachate from collecting on top of the plastic liner by pumping accumulated leachate to the leachate pond.

3.4.6 Inspection Documentation

The results of all routine inspections of site facilities will be recorded on inspection forms. The inspection forms will be submitted to the Compliance Coordinator for inclusion in the landfill

operating records as required in Section R315-302-2(5) of the Rules. Appendix F - Landfill Forms contains the forms utilized at TJL to document the landfill operations.

3.5 CORRECTIVE ACTION PLAN - GROUNDWATER

TJL entered into a Corrective Action Program as detailed in R315-308. A Modified Corrective Action Plan was submitted to DEQ and accepted on December 19, 2003, with approval being given by the Division of Waste Management and Radiation Control (formerly the Division of Solid and Hazardous Waste) on January 23, 2004. Appendix C contains the Division approval and the submitted Modified Corrective Action Plan for TJL.

3.6 CONTINGENCY PLANS

Contingency operations will be implemented should specific or unusual situations occur. The following subsections discuss such contingencies as fire, explosion, release of explosive gases, and failure of run-off containment. The Executive Director and Operation Supervisors have cellular phones and radios which will serve as the on-site mobile communications system for use in an emergency to communicate with the management offices and off-site personnel. The telephones located in the scale house and operations office which will serve as the back-up communication system.

3.6.1 Fire

3.6.1.1 Open Burning

Open burning of solid waste is prohibited except for the infrequent burning of limited items (e.g., agricultural wastes, land clearing debris, diseased trees, and debris from emergency cleanup operations). The open burning of these materials is not typically an ongoing practice and thus does not present a significant environmental risk.

EPA Subtitle D, Subpart C requires that TJL not violate applicable requirements of State Implementation Plans (SIPs) under Section 110 of the Clean Air Act (CAA). The CAA is the primary statutory authority for addressing air quality concerns. Section 111 of the CAA governs emissions from all MSWLF facilities. TJL understands that these infrequent acts of burning must be in compliance with applicable requirements under State of Utah SIPs and local open burning ordinances.

Open burning may be conducted in areas dedicated for that purpose at a distance from the

active face of the landfill so as to preclude the accidental burning of other solid waste or damage to liner systems.

3.6.1.2 Vehicle Fires

In the event that a disposal vehicle carrying a burning or smoldering load of waste enters the landfill site, the following actions will be taken:

- The vehicle will be directed to a designated section of the landfill away from any exposed waste and allowed to deposit the material. The designated area will vary depending on operational areas in use. The area will be readily accessible and within 1 or 2 minutes of the tipping area. The designated area will be isolated from the existing tipping area and will either be an excavated area with no underlying fill or at a location with a minimum of 1-foot of soil cover over underlying fill. In no case will a load thought to be burning be allowed to be dumped when the fill over the liner system is less than 10 feet thick.
- Once burning waste is removed from the vehicle, the application of cover soil by landfill earth-moving equipment or the application of water by the on-site water truck to extinguish the fire can be carried out. Smothering the fire with soil is the preferred method.
- Precautions will be taken throughout the entire fire-fighting operation including using a hot spot observer.
- If, at any time, additional assistance is required, local fire-fighting units will be contacted.

3.6.1.3 Ground Fire/Below Cover Fire

In the event that waste placed on the ground or waste that was previously covered erupts into fire the following actions will be taken:

- The waste on fire will be isolated from previously deposited waste as much as possible. This may be done by either moving burning wastes to another area or by concentrating the burning wastes using the landfill earth-moving equipment.
- Once burning material is separated from other exposed waste, the application of cover soil by landfill earth-moving equipment or the application of water by the on-site water tank truck to extinguish the fire can be carried out.
- Any vehicles and any equipment in the "fire zone" will be sprayed with water while working to quell the fire.

- Precautions should be taken throughout the entire fire-fighting operation, including using a hot spot observer.
- If, at any time, additional assistance is required, local fire-fighting units will be contacted.

3.6.2 Explosion

The concentration and subsequent ignition of landfill gas is not expected to be a significant problem at the site. In the event of an explosion at the landfill or in any structure associated with the landfill site the following actions will be taken:

- The affected area will be immediately closed and evacuated. All site equipment will be moved away from the scene, if possible.
- Access to the explosion area will be restricted to all non-emergency persons until cleared for re-entry by local emergency personnel.
- All landfill personnel will be accounted for.
- Local emergency personnel (fire, police) will be contacted and informed of the situation.
- The TJJ Executive Director will be informed about the situation.
- A determination of the origin of the explosion will be made if possible. If the source of the explosion can be determined, monitors will be set up to help detect the onset of future discharges.
- The TJJ Executive Director or his designee will act as the Public Spokesman and will be the only employee authorized to make statements regarding the event.
- The TJJ Executive Director will provide the necessary notices to the DWMRC Director.

3.6.3 Release of Explosive Gases

In the event that a release of explosive gases should occur at the landfill or in any structure associated with the landfill site the following actions will be taken:

- All personnel in the area, including those in surrounding buildings, will be evacuated immediately. In addition, site equipment will be moved away from the scene, if possible.
- All landfill personnel will be accounted for.
- Local emergency personnel (fire, police) will be contacted and informed of the situation.
- The TJJ Executive Director will be informed of the situation.
- The release area and surrounding area will be monitored with a combustible gas

indicator (CGI) by landfill personnel and readings documented for placement into the operating record.

- The area of the release will be restricted to all non-emergency persons until cleared for re-entry by local emergency personnel.
- The TJL Executive Director or his designee will act as the Public Spokesman and will be the only employee authorized to make statements regarding the event.
- The TJL Executive Director will provide the necessary notices to the DWMRC Director.

3.6.4 Failure of Run-Off Containment

In the event of a failure of the run-off containment system that has been designed to minimize the potential for off-site release of surface water that contacts operational portions of the landfill the following actions will be taken:

- Landfill personnel will immediately suspend filling operations if containment failure is in an active fill area.
- Landfill personnel will use earth-moving equipment to construct temporary earthen berms in an effort to divert the flow of surface water away from the failure area and toward a holding area.
- The Project Manager will conduct damage assessment. A decision will be made as to whether the damage can be rectified by on-site personnel.
- If the damaged area cannot be reconstructed by on-site personnel, TJL will contact a contractor to initiate repairs to the existing system.
- The TJL Executive Director will provide the necessary notices to the DWMRC Director.

3.7 CONTINGENCY PLAN FOR ALTERNATIVE WASTE HANDLING

It is not anticipated that an alternative waste handling and disposal system will be necessary. Based on historical operations and a history of only closing down the site one time (a fire in the area), landfilling operations should not have to be suspended due to inclement weather conditions or interruption of service. The site soils, including those planned for daily cover, consist of silty to clayey gravel; these soils are easily placed over a wide range of moisture and weather conditions. Additionally, flooding of the disposal area or access road is unlikely as this design has been arranged to provide positive drainage away from the facility at all times. With the size of the landfill and the quantity of multi-use equipment available to the operators, equipment breakdown that would stop operations is unlikely. Alternate equipment could be hired on a temporary basis within 4 to 8 hours. TJL believes that their past operating experience and cautious operating procedures will negate the need for alternate waste handling plans.

In the event of a major unforeseen circumstance, a reciprocal agreement has been made with

the Salt Lake Valley Solid Waste Management Facility to accept each other's waste in the unlikely event of a facility closure so waste could be diverted to their facility.

3.8 MAINTENANCE PLAN

The following subsections offer a description of the maintenance of installed equipment including groundwater monitoring systems and leachate and the landfill gas collection system.

3.8.1 Groundwater Monitoring System

The groundwater monitoring system that was monitored from 1994 until 2004 is no longer functional. All five (5) wells have become dry; Appendix C - Modified Corrective Action Plan, summarizes the changes in the groundwater monitoring program at TJL. All laws and regulations will be followed with regards to the abandonment of any wells. No maintenance of the groundwater wells is planned.

3.8.2 Leachate Collection/Evaporation Pond System

The Leachate Collection/Evaporation Pond (LCEP) system, installed as part of the lined landfill design, must be maintained so that it operates during the operational life and closure and post-closure periods. The system will be inspected no less than quarterly by TJL staff for signs of deterioration. TJL or a contractor will make required repairs. Future cleanouts can be used to internally inspect the main collection pipe when it is installed using in-line camera equipment. If necessary, these cleanouts can also be used to jet the pipe clean to re-establish flow. The drain net installed as part of the LCEP is not required to be inspected or maintained.

3.8.3 Landfill Gas Collection System (LGCS)

The LGCS will be inspected no less than quarterly. The gas collection system will be repaired, and parts replaced as required to maintain system operation. The program described below for inspecting and maintaining the LGCS will be followed during the post closure maintenance period.

Quarterly maintenance will include cutting weeds in a 2-foot radius around each well. Preventive maintenance will be performed on all mechanical equipment at manufacturer recommended intervals. These tasks include cleaning, lubrication, and replacement of worn parts.

3.8.4 Facilities

Signs, roads, fences, etc, will be inspected on a monthly basis and repairs made as necessary.

3.9 DUST, LITTER, DISEASE AND VECTOR CONTROL

3.9.1 Dust Control

Unpleasantness, dust, and odor will be controlled by (1) timely placement of daily, intermediate, and final soil cover over the refuse fill; (2) proper maintenance of haul roads (grading and watering); (3) application of water spray or dust palliative on soil-covered work areas, soil excavation areas, and soil stockpile areas where conditions may result in fugitive dust; (4) application of water or planting of temporary vegetation on intermediate soil cover when conditions might create fugitive dust; (5) planting and maintenance of vegetated cover on completed fill slopes; and paving of access roads as appropriate. Appendix G – Fugitive Dust Plan contains information on the site-specific dust control measures.

While the landfill is in operation, placing daily and intermediate soil cover will control odors from the refuse. The installation of the low-permeability cap layer and the LGCS should effectively control odors.

3.9.2 Litter Control

The Executive Director will continue the ongoing litter collection program in order to minimize the impacts of litter on and surrounding the site. This program consists of various activities designed to reduce windblown litter, as well as other site features and operations that help to reduce windblown litter.

TJL has instituted the following activities specifically designed to reduce amounts of windblown litter:

- Enforcing the State law requiring all loads of waste delivered to the landfill be fully tarped. Waste loads delivered to the landfill that are not fully tarped are charged at double the standard tipping rate. This requirement to fully tarp and secure loads will minimize the potential for debris blowing out of vehicles.
- Minimizing the size of the active face reduces the area of wastes exposed to wind.
- Maintaining permanent perimeter fencing and maintaining temporary litter fences

downwind from the active face. The height and length of the temporary fences can be adjusted to maximize their effectiveness in trapping windblown litter.

- Timely application of daily and intermediate soil cover.
- Compaction of refuse layers at a maximum thickness of 2 feet to hold freshly deposited refuse to underlying landfill layers.

Site and surrounding area inspections will be conducted routinely, and any windblown litter will be collected. Debris will continue to be collected from the sides of the roads leading to the landfill. The landfill personnel will continually patrol the fence line both inside and outside to collect windblown debris.

3.9.3 Disease and Vector Control

TJL personnel will use appropriate technologies to prevent or control on-site populations of disease vectors (e.g., rodents, insects) in an effort to protect human health and the environment. TJL personnel will be responsible for maintaining control of vectors at the landfill through continued use of appropriate daily cover procedures. Professional extermination personnel and services may be used to control vectors if it is found that daily operation procedures are insufficient.

The primary method of vector control is to eliminate conditions favorable for the production of vectors through proper compaction and daily covering of waste. Should the landfill personnel notice the presence of vectors, cover material will be applied more frequently. Pesticides will only be used as necessary, and very sparingly.

As with vector control, the preliminary method of controlling birds is to eliminate conditions favorable to their existence. This can be accomplished by utilizing, but not limited to, one or more of the following methods:

- Minimizing the size of the active face; this is the most effective control method. This, along with more frequent and heavier compaction and frequent covering of the waste, will reduce the area available for the birds to feed.
- Avoiding the accumulation of water in depressions, ponds, or holding areas near the fill.
- Using noise-frightening or other techniques that provide a solution.

3.10 WASTE INSPECTION/EXCLUSIONS

A waste control program designed to detect and deter attempts to dispose of hazardous and other unacceptable wastes will continue to be implemented at TJJ. The program is designed to protect the health and safety of employees, customers, and the general public, as well as to protect against contamination of the environment. The landfill is open for public and private disposal. Signs posted near the landfill entrance clearly indicate (1) the types of wastes that are accepted; (2) the types of wastes not accepted at the site; (3) hours of operation; and (4) the emergency phone numbers.

All vehicles delivering wastes to the site must stop at the scale house. Waste haulers are required to comply with the rules established by TJJ and can lose the right to use the facilities if they violate these rules. Scalehouse personnel will inquire as to the contents of each incoming load to screen for unacceptable materials. Any vehicle suspected of carrying unacceptable materials (liquid waste, sludges, or hazardous waste) will be prevented from entering the disposal site unless the driver can provide evidence that the waste is acceptable for disposal at the site. TJJ reserves the right to refuse service to any suspect load. Vehicles carrying unacceptable materials will be required to exit the site without unloading. If a load is suspected of containing unacceptable materials, the following information will be recorded (if possible): date, time, name of the hauler, driver, telephone number, license plate, and source of waste. The scale house personnel will then notify the Spotters by radio that a load is suspect, that load will be further inspected at the landfill tipping area before final disposal is allowed.

After a vehicle leaves the scale house, site personnel will route the vehicle to the appropriate discharge location. Loads will be regularly inspected at the tipping area. If a load contains inappropriate or unacceptable material, the driver will be required to reload the material and remove it from the landfill site. If the driver is not immediately identified, the area where the unacceptable material was discharged will be cordoned off. The unacceptable material will be moved to a designated area for identification and preparation for proper disposal. If landfill personnel discover regulated hazardous or PCB waste, TJJ will ensure that the wastes are treated, stored, or disposed of in accordance with RCRA, and/or applicable State of Utah requirements.

TJJ personnel will also conduct detailed inspections of loads delivered to the landfill. The detailed inspections will be conducted on a random basis designed to detect illegal or inadvertent disposal of unacceptable wastes. The working face Spotter will visually observe every load during tipping and a minimum of 1% of all loads entering the landfill will be

screened in detail. The scale house software randomly (approximately every 25 loads) notifies the scale house attendant that an inspection is required. The scale house attendant notifies the Spotter who notifies the driver of the selected load that an inspection of the load is required. The Spotter will direct the driver to the proper location to discharge the load.

The selected load will be spread using the compactor or dozer to a maximum thickness of 1 foot. TJ personnel trained in waste screening will perform a detailed inspection of the load to determine if unacceptable materials are present in the waste.

If there is unacceptable waste in a load, the inspector will determine whether the driver should have been aware of the unacceptable wastes. If the driver could or should have recognized the unacceptable wastes, the inspector will issue a violation notice; if the unacceptable wastes are camouflaged, no violation notice will be prepared; however, the driver will be consulted and the route will be determined. For commercial haulers, the first violation for unacceptable wastes will result in a warning to the hauler; the second violation will result in suspension of landfill access. TJL personnel will issue a warning to the company on the suspension of any driver(s). In addition, TJL personnel will warn companies if repeated, apparently intentional violations are suspected; the warning will specify the violation under consideration, the action(s) required by the company, and the penalty(s) for additional violations. TJL may suspend all disposal privileges at TJL facilities of companies that repeatedly violate TJL rules. A suspended driver or company may not use the landfill during the period of the suspension.

The SLVHD and the TJL Executive Director will be notified if an unacceptable waste is discovered at the facility. The TJL Executive Director will be responsible for notifying the DWMRC Director and the transporter of the waste within 24 hours of discovery. This notification will include the date of discovery, type of unacceptable waste, approximate volume, and depth and location within the landfill. A copy of notification will be retained in the landfill operating record. If hazardous or PCB-containing waste is discovered, the Operations Supervisor will also restrict the inspection area from public access and from facility personnel, and will assure proper cleanup, transport, and disposal of the waste.

Following is a list of unacceptable wastes:

- Hazardous wastes (excepting those wastes that are normally and reasonably associated

with households or household activity that are in household containers). Examples of hazardous wastes include:

1. Lead acid batteries (automotive, boat, RV).
2. Paint thinner, degreasing solvents, used oil or kerosene, or un-rinsed container thereof.
3. Pesticides, herbicides, or un-rinsed containers thereof.
4. Fluorescent light ballasts (PCB free labeled), electrical transformers, or fluids from these.
5. Commercial quantities of florescent and CFL tubes.

(These items listed to this point are directed to the HHW facility if they are of a residential nature. All business hazardous waste generators are directed to the Salt Lake County HHW facility which is equipped to process small generator waste.)

- Radioactive materials or materials contaminated by radioactive substances.
- Acutely hazardous waste, per 40 CFR 261.33.
- Wastes containing PCBs.
- Friable asbestos containing materials.

3.11 RECYCLING PROGRAM

TJL maintains bins and segregates recyclable materials at the PCC. TJL currently (based on market) maintains bins for segregation of greenwaste, steel, aluminum, tires, batteries, cardboard, plastic, paper, and electronics. When the bins are full, they are all hauled from the site for recycling.

A horizontal grinder is used at the greenwaste facility to grind clean material as a feed stock for the composting operation. TJL is actively encouraging all users of the landfill to take all clean green waste to the grinding facility. Incentive for waste diversion is achieved through a reduced tippage rate for the grinding site. The scale house personnel and site signage directs the appropriate vehicles to the greenwaste drop off area. This material is processed into wood chips and compost that may be purchased by the general public.

3.12 TRAINING PROGRAM

Personnel at the landfill are placed into broad classes based upon the work duties to be performed. In general, all landfill personnel will be required to complete a 40-hour HAZWOPPER

equivalency training class and annually complete a landfill specific refresher. TJJ personnel will keep First Aid/CPR training current. Operation Supervisors will maintain current SWANA-MOLO training. Operation Supervisors will also attend select classes on landfill monitoring, landfill safety, and general OSHA safety training. Formal job descriptions and work procedures are in place to guide each of the landfill personnel through a job orientation and evaluation process.

TJJ personnel are trained on the identification of unacceptable wastes including liquid wastes, sludge, potential regulated hazardous waste, and PCB wastes. The training will emphasize methods of identifying containers and labels typical of hazardous and PCB waste. Training will also address the proper handling of unacceptable waste. All employees will receive on the job training in landfill operations and waste screening. This training will include operations and safety training. New employees will receive initial training before starting work and full HAZWOPPER equivalency training during their first twelve (12) months of employment.

3.13 RECORDKEEPING

TJJ personnel will maintain an operating record (pursuant to the State of Utah Administrative Rule R315-302) which is available at the landfill office. The operating record will include at a minimum the following information:

- The weight or volumes of each vehicle, daily number of vehicles entering the landfill and if available, the types of wastes received.
- List of the deviations in operation from the approved Plan of Operation.
- Training and notification procedures.
- Ground water sampling and analysis results (when applicable).
- Gas monitoring results.
- Site inspection log.
- Other records as indicated in Section R315-302-2.

In addition to the Operating Record, the following data is maintained on site:

- Closure Plan.
- Post-Closure Plan.
- Cost estimates and Financial Assurance.

Records will be kept throughout the life of the facility, including the post-closure care period. Documents will be organized, legible, dated, and signed by the appropriate personnel. The information in the operating record will be available to citizens through the Utah Government

Records Access Management Act (GRAMA).

3.14 SUBMITTAL OF ANNUAL REPORT

TJL personnel will submit a copy of its annual report to the DWMRC Director by March 1 of each year for the most recent calendar year of facility operation. The annual report will include facility activities during the previous year and will include, at a minimum, the following information:

- Name and address of the facility.
- Calendar year covered by the report.
- Annual quantity, in tons, and estimated in-place density in pounds per cubic yard of solid waste handled for each type of treatment, storage, or disposal facility, including applicable recycling facilities.
- Update to the financial assurance mechanism.
- Ground water monitoring results (when applicable).
- Gas monitoring results.
- Results of leachate system monitoring and disposal.
- Training programs completed.
- Statement on changes or approved changes to the Modified Corrective Action Plan.

3.15 INSPECTIONS

The Compliance Coordinator, or his/her designee, will inspect the facility to prevent malfunctions and deterioration, operator errors, and discharges that may cause or lead to the release of wastes to the environment or to a threat to human health. These inspections will be conducted on a quarterly basis, at a minimum. An inspection log will be kept as part of the operating record. This log will include at least the date and time of inspection, the printed name and handwritten signature of the inspector, a notation of observations made, and the date and nature of any repairs or corrective actions. Inspection records will be available to the DWMRC Director or an authorized representative upon request.

3.16 RECORDING CLOSURE WITH COUNTY RECORDER AND THE STATE OF UTAH DIVISION OF WASTE MANAGEMENT AND RADIATION CONTROL

Plats and other data, as required by the County Recorder, will be recorded with the Salt Lake

County Recorder as part of the record of title no later than 60 days after certification of closure. Additionally, TJI personnel will submit proof of record of title filing to the DWMRC Director.

3.17 STATE AND LOCAL REQUIREMENTS

TJI personnel will maintain compliance with all applicable state and local requirements including zoning, fire protection, water pollution prevention, air pollution prevention, and nuisance control. The South Jordan Conditional Use, Zoning Map, and Future Land Use Plans are included in Appendix H - Local Land Use.

3.18 ASBESTOS CONTAINING MATERIALS

TJI does not knowingly accept waste materials containing friable asbestos.