

#### IV. **PLAN OF OPERATIONS**

##### A. **On-site waste handling procedures**

The CVWRF construction and demolition Class VI landfill will be under the direction of Jeremy Bland, Landfill Manager for Construction Waste Management (CWM). He will have overall responsibility for the site including monitoring and reporting.

The minimum area needed to accommodate the unloading of the anticipated daily construction and demolition waste materials is approximately 100 feet by 150 feet. The active working face will be about 150 feet wide. The landfill will use the area fill method of operation. Incoming waste material will be compacted using a landfill compactor or bulldozer. The compaction equipment actually spreads out the waste material and compacts in 2-foot lifts to ensure maximum density, especially on side slopes. Due to the largely non-degradable nature of construction and demolition waste the active face will not be covered. However, as the fill increases in elevation, side slopes will be covered with a final cover layer of 2-feet to minimize the potential for infiltration into the landfill contents.

All traffic coming into the landfill for disposal purposes will be weighed and counted at the scale house. Signs at the entrance of the facility will direct traffic to the proper unloading areas for each material type. A spotter then will control traffic at the active face and will direct vehicles where to unload. In general, the spotter/load checker will observe all loads (contractors, general public, municipal delivers, etc.) randomly at the working face. However, in addition to the random inspection, the spotter/load checker will make an effort to inspect "suspicious" loads (i.e., loads from haulers with a history of containing hazardous and/or prohibited waste loads, loads from business that generate hazardous wastes, loads that look unusual in any way, etc.) A Waste Inspection Report as showing in Appendix G will be submitted to SLVHD, if suspicious or hazardous/prohibited loads are observed entering the landfill. The spotter/load checker will be a full time employee of Construction Waste Management and will inspect at least five loads at random each week.

##### B. **Schedule for inspection and monitoring**

Incoming construction and demolition waste materials will be inspected on random basis. The waste hauler vehicles will initially be given a cursory check as they enter the landfill and pass the weigh scale. In addition to the random checks, at least five vehicles each week will be subject to a detailed inspection. The next level of inspection occurs at the

landfill active face where in the spotter directs the hauler to the disposal location and performs a second visual inspection. At this time the spotter will be able to actually observe the contents of the hauler's load and determine whether or not any hazardous and/or prohibited wastes have been brought into the landfill. The spotter will also check ten random loads per week as they are deposited at the face to ensure that no wastes other than construction and demolition waste materials are disposed of at the landfill.

Monitoring consists of ensuring that the landfill is operated in conformance with this plan as efficiently as possible. Monitoring functions include, compaction reports, daily/monthly summary of waste materials volumes (yards and tons) disposed of in the landfill, groundwater and surface water monitoring, reporting to the directors of SDSHW and SLVHD, and documentation of employee training and reports of any accidents occurring at the site.

C. Contingency plans for fire and explosion

The landfill will employ common measures for fire control (explosion is not considered an issue as explosive wastes are prohibited from entering the landfill). Large earth moving equipment and an abundance of earthen material should be sufficient to contain any fire that could occur as most of the combustible wood materials will be pulled out of the waste stream and recycled. Water for fire protection will also be supplied by an extension of the 10-inch main from Magna water and an on-site 4,000-gallon water truck will be available at all times. The Salt Lake County Unified Fire Protection District has determined that these five prevention measures are adequate.

In addition, for fire protection the landfill equipment and vehicles will be provided with portable fire extinguishers. The office and maintenance facility will also be equipped with fire extinguishers for dealing with small fires. All site personnel will be trained in proper use of on-site fire fighting equipment. Small fires occurring on the landfill will be extinguished using soil materials or the on-site water truck.

D. Dust and fugitive emissions control plan

Dust will be controlled by: 1) grading and watering the haul and maintenance roadways, 2) applying a fine water spray on soil cover work areas when conditions might cause the formation of fugitive dust, 3) using low dust emission materials when construction roadways and pads, 4) Applying water or planting temporary vegetative cover where conditions

might cause recurrent problems with fugitive dust and erosion and 5) planting and maintaining vegetative cover on compacted fill slopes.

Other fugitive emissions are usually present in the form of: odors. MSW landfills are notorious for the unique smell of: organic material decomposition. However, in the case of: a construction and demolition waste landfill, organic materials should be minimal. Some wood and green waste from small construction sites may enter the landfill, but most of: these degradable materials will be diverted to the CVWRF composting facility for use as a bulking agent. In the event of: unlikely odors, an odor-masking agent will be kept on-site and used as appropriate to control fugitive odors.

E. Litter control plan

The construction and demolition waste landfill processes waste material quite different from that of: a municipal solid waste landfill. Materials typically are heavier and bulkier so they tend to remain in place after discharge from the hauler's vehicle. However, litter control is important to maintain a well-operated site and eliminated unsightly conditions. Therefore, the following litter control measures will be implemented at the CVWRF construction and demolition waste landfill:

- prevent the site from becoming unsightly, and litter catch screens and other means or necessary, if: required, to
- Routine litter collection programs both within the landfill perimeter (daily), as well as off-site (weekly), and
- Special operating practices may be required to control wind blown litter during high winds which can occur at the site, i.e., the working face may require soil cover to prevent litter from escaping from the landfill.

F. Procedures from excluding hazardous and restricted waste from entering the landfill

Construction and demolition waste materials may contain materials unsuitable for disposal in an unlined landfill. Regulations prohibit the disposal of: the following materials to a construction and demolition waste landfill:

- Hazardous wastes
- PCBs
- Bio-hazardous wastes
- Lead-acid batteries

- Used oil/filters
- Yard trash
- Whole tires
- Household wastes
- Food wastes
- Asbestos
- Mercury containing lamps and devices
- Cadmium containing batteries

It is important that the operator as well as employees at the site learn recognition of these types of waste materials and prevent them from being disposed of in the landfill. Incoming waste materials will undergo load checking (as described above) to insure that physical contaminants such as, hazardous and prohibited wastes are less than one percent of the construction and demolition waste material received at the landfill. Load checking will include both visual observations of incoming loads and load sorting to qualify the percentage of hazardous and prohibited waste materials. Proper recognition of these types of prohibited waste materials is discussed in the following sections of this plan.

1. Load checking activities:

- Waste hauler notification (including public customers)

Load checking activities fall into three categories:

- Site surveillance
- Load inspections

Hauler notification: A key component of the non-conforming load checking program will be notifying waste haulers that certain wastes are unacceptable for disposal at the landfill. This will be accomplished through fliers and casual discussions with the waste haulers. Waste haulers will also be notified that they retain responsibility for any prohibited wastes detected in their loads. Additional notification procedures include signs posted at the front gate and verbal communication (such as the scale house operator inquiring about the waste hauler's load).

Site surveillance: All employees have a duty to ensure that prohibited waste do not enter the landfill. As such they must pay attention to all loads entering the site and report any unusual wastes containers, covered loads and suspicious loads. If an employee notices any prohibited waste he/she will immediately notify the site manager and the load will be inspected again. The waste hauler must then demonstrate to the site manager's and/or site foreman's satisfaction that the waste is acceptable by

presenting material safety data sheets (MSDS), laboratory tests, or other proof of acceptability. If a more detailed review of the waste load is required, a more thorough inspection will be performed. As the hauler's vehicle leaves the facility, the spotter/equipment operator may survey the load again to ensure that prohibited wastes identified earlier were not unloaded.

**Load inspections:** Load inspections involve a more thorough examination of the waste stream than surveillance. Waste inspections will be conducted on a random day each week or as required by the appropriate regulating agency. All inspections will be documented on the Waste Inspection Report Form. Waste loads can also be randomly or intentionally selected for inspection. The load checker instructs the hauler to unload the vehicle contents onto a designated area. The load checker will then inspect and carefully examine the waste for the presence of prohibited wastes. Any material suspected of being prohibited or hazardous will be returned to the hauler for proper disposal. If the waste hauler is not on-site, or if the waste is from an unknown or recalcitrant generator, the waste will be stored in the landfill's hazardous materials storage containers until removal.

Procedures for handling alternative (special) wastes

- G. The CVWRF will not be accepting any alternative (special) wastes.
- H. Training and safety plans

The operator will insure that competent and well-trained personnel operate the construction and demolition waste facility. The operator will maintain records that document the training and examination of facility personnel. Following are guidelines for training of operations personnel at the landfill site:

- Site manager: The site manager referred to in the industry as the Manager of Landfill Operations (MOLO) will be responsible for all activities at the site including supervision of employees, record keeping, safety, training, as well as the day-to-day operation of the facility. The site manager may be required to demonstrate to the SDSHW and SLVHD that he/she has the competence and skill to operate the facility in full compliance with its permit and operating plan. The site manager should be required to take management and waste handling training courses to ensure that he site will be operated in accordance with all laws and regulations for a Class VI landfill site.

The Solid Waste Association of North America (SWANA) offers several training and certification courses. These courses are offered at several locations through the country and provide essential knowledge for the MOLO. The owner/operator should also consider having its MOLO certified by SWANA or any state offering MOLO training. In today's world, not enough emphasis can be placed on training.

- Other construction and demolition on-site employees (scale house operators, equipment operators, spotters, and laborers) should also receive training in landfill operations including health and safety issues, the importance of the plan of operation, equipment operation and maintenance and proper sanitation practices.
- All on-site personnel will be required to take safety training. This training should be designed to assist landfill personnel how to identify, and correct landfill health and safety issues. The training should include topics, such as, response to medical emergencies, safe equipment operation, public safety, first aid, contingency plans, and OSHA issues.

Copies of the landfill safety plans and emergency preparedness plan are included in Appendix F.

#### I. Plans for recycling

The volume of recyclable materials generated in the service area will vary considerably over time. Therefore, the quantity of recyclable materials shipped off-site will also vary. The types of recyclable materials expected to arrive at the landfill include: metal, such as, rebar, structural steel and white metal, concrete and asphalt aggregate materials, wood waste and dimensional lumber, asphalt shingles and sheet rock. Recycling plans for each type of material are as follows;

- Metals. Metals and other ferrous materials will be segregated from the construction and demolition waste stream and stored in 35 yd<sup>3</sup> bins. When about 70 yd<sup>3</sup> accumulates on-site, the material will be delivered to a metal recycler. The maximum volume stored on-site will be 70 yd<sup>3</sup>. Maximum storage time will be one year, and
- Concrete and asphalt. Concrete and asphalt will be diverted from the waste stream and stockpiled on-site in the recycling yard. Rock crushing and screening equipment will be used to make a uniform aggregate material. Concrete and asphalt materials will be used to on-site for construction of all weather roadways, such as, tipping pads and access roads. If market conditions exist, these materials will be taken off-site and sold for alternative purposes, and

- Wood waste. Wood will be accepted and recycled as possible. Dimensional lumber may be salvaged if a commercial value for this type of waste material can be developed. Wood stored on-site will not be allowed to accumulate consistent with local fire codes. The Salt Lake County Unified Fire District regulates combustible waste piles and limits any on-site storage of these types of material to less than 10,000 yd<sup>3</sup>. Piles should not be greater than 20-feet high, or 40-feet wide and 125-feet long with a minimum distance between piles of 20-feet.
- Dimensional lumber. Dimensional lumber will only represent a small fraction of the recycled materials received at the landfill. This is largely due to demolition contractors recycling at their job site. A designated area will be maintained for any dimensional lumber received and it will be removed off-site as soon as possible, and
- Asphalt shingles and sheet rock. Currently there are no plans to recycle these two types of materials. They will be disposed of in the landfill as received.

## V. CLOSURE REQUIREMENTS

### A. Closure schedule:

A detailed closure schedule will be prepared as part of the final closure and post-closure maintenance and monitoring plan. The following provides a summary of the currently anticipated closure schedule.

- Signage posted at all points of access consistent with regulatory requirements at the time of closure. These signs will be placed at least 60-days prior to closure, state the date of closure, identify alternative waste disposal locations, and remain for at least 180 days after receiving the final load of construction and demolition waste materials, and,
- A public notice will be placed in a local newspaper with general circulation at least 6 days prior to closure, and
- Preparation and completion of construction and quality assurance (QC/QA) activities will likely occur at the time each phase of closure takes place. Assuming that each closure phase will cover approximately 15 to 20 acres, it is anticipated that it will require about three to four months to complete. Due to Utah's weather climate, closure activities will commence in May and continue over the summer of the same year until complete, and