

**MODULE VI**

**HAZARDOUS WASTE LANDFILLS**

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## MODULE VI - HAZARDOUS WASTE LANDFILLS

### VI.A. APPLICABILITY

VI.A.1. The Permittee shall only dispose of hazardous wastes in the following landfill cells and the rated capacities shall not exceed the following nominal volumes shown below, except as allowed in Condition VI.D.2. In addition, measuring from the top of the berm, the average height of waste will be less than or equal to the maximum allowed height of waste in the cell at closure as shown below. The Director has the authority to require the Permittee to conduct a survey of the cell to verify compliance with this condition.

Cell Number	Capacity (Cubic Yards) <sup>1</sup>	Max shoulder height of waste above the berm at closure, feet above avg. berm height	Maximum height of waste above the berm at closure, feet above avg. berm height
B/6	1,125,000	27.72	45.97
7	1,106,000	28.87	61.07
8	785,300	20.69	36.16
9	793,800	20.42	36.16
10	793,800	20.42	36.16
11	793,800	20.42	36.16
12	793,800	20.42	36.16
13	793,800	20.42	36.16

VI.A.2. The Permittee shall build and use Cells 8 through 13 in the following sequence: Cell 8, Cell 10, Cell 12, Cell 9, Cell 11 and Cell 13. In so doing, this will allow the use of monitoring wells MW-83, MW-84, MW-87, MW-88, MW-91 and MW-92 to function as shared points of compliance for the six cells. These wells will eventually be located on a common berm between the north three cells and the south three cells. See Drawing G-3 in the Landfill 8 through 13 Design Engineering Report and Section VII.A.5 and Condition VII.D.7.e of Module VII - Groundwater Monitoring Protection.

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<sup>1</sup> Volumes are approximate. The point of compliance is the height above the berm. The berm height is calculated by averaging elevations measured every 50 linear feet around the perimeter (berm) of the cell.

- VI.A.3. Landfill Cells 1, 2, 3, 4 and 5 have been closed and no additional wastes may be placed in these landfill cells.
- VI.A.4 Industrial Waste Cells 1 and 2 (IWC-1 and IWC-2) are included in this permit solely for the purposes of post-closure. These cells were originally designed and permitted for the disposal of non-hazardous waste, but have received small quantities of hazardous waste and as such are now regulated by this permit. These cells were closed in 1998.

**VI.B. WASTE IDENTIFICATION**

- VI.B.1. The Permittee shall dispose of the hazardous wastes listed in Attachment II – RCRA-TSCA WAP (WAP) Appendix 2 that meet LDR standards or approved variances in landfill cells 7, B/6 and 8. Cells B/6 and 8 are RCRA/TSCA disposal cells that may be used for disposal of the hazardous wastes listed in Attachment II – WAP Appendix 2 that meet LDR standards or approved variances, for RCRA/TSCA combined wastes, and/or for TSCA only wastes as approved.
- VI.B.2. The waste management practices specified in the Supplemental Waste Management Plan in Attachment II-8 shall apply to wastes F020, F021, F022, F023, F026, F027 and F028. On-site generated wastes derived from the handling of these residues shall also be managed according to the Attachment II-8.
- VI.B.3. The Permittee may dispose in Landfill Cells B/6, 7 and 8, the following wastes not specified by EPA waste code numbers providing that all free liquids are stabilized or removed and documented in the Operating Record:
- VI.B.3.a. Floor drain, wheel wash and sump residues.
- VI.B.3.b. Non-hazardous waste. Non-hazardous waste shall not be mixed with hazardous waste such that impermissible dilution occurs, as specified under Utah Admin. Code R315-268-3.
- VI.B.3.c. CERCLA Hazardous Wastes. The Permittee is authorized to receive wastes that arrive without EPA waste code numbers, provided that these wastes are from remediation sites regulated under CERCLA or are defined as hazardous waste by this permit. These wastes shall be managed as hazardous wastes and are subject to the terms of this permit.
- VI.B.4. Free liquids shall not be disposed in any of the landfill cells, except as provided by Condition VI.M.

- VI.B.5. RCRA/TSCA Wastes. The Permittee may receive wastes that arrive with EPA waste codes and are also regulated by TSCA. These wastes are subject to the terms of this permit.
- VI.B.6. The Permittee may accept CAMU-eligible waste, as defined in Utah Admin. Code R315-264-552(a)(1) and (2) pursuant to R315-264-555 provided that:
- VI.B.6.a. The Permittee shall notify the Director and all persons on the public mailing list of the Permittee's intent to receive each CAMU-eligible waste stream pursuant to R315-264-555(e)(1) and (2).
- VI.B.6.b. The Permittee shall not place CAMU-eligible waste in a landfill cell until the Director notifies the Permittee that he/she does not object to its placement in a cell at the facility (R315-264-555(e)(4)).
- VI.B.6.c The Permittee follow all additional applicable conditions of R315-264-555.
- VI.C. GENERAL DESIGN AND CONSTRUCTION OF LANDFILL CELLS**
- VI.C.1. The Permittee shall design and construct landfill cells to meet the current (as of the date of the Permit) state and federal regulations for hazardous waste landfills.
- VI.C.2. Construction of each landfill cell shall follow the construction quality assurance (CQA) program as outlined in R315-264-19 and in Attachment VI-2, Appendix A of this Permit. The construction quality assurance plan shall cover all aspects of design and construction. The final design with installation procedures shall be approved by the Director prior to commencement of construction.
- VI.C.3. The CQA plan shall remain part of the permit throughout closure and post-closure activities. This CQA Plan is Appendix A of Attachment VI-2.
- VI.C.4. Field changes to the design or construction details may require a modification to the CQA plan. The "Change Control Procedures" in the CQA Plan shall be adhered to. If a modification to the CQA plan is necessary, as determined by the Director, construction may only proceed after the Director evaluates the impact of the change and approves the permit modification request. The Permittee shall document this field change and place a description of this modification in the facility's CQA plan and mail a copy to the Director within seven calendar days of the field change. All field change orders shall become a permanent record and be kept with the CQA document.
- VI.C.5. All Class 1 field modifications, affecting the CQA plan after construction has started, may be submitted to the Director in one Class 1 permit modification after completion of construction. This shall include all "as built" drawings and

any changes of materials used for construction and any changes to the procedures used to construct the landfill cell.

VI.C.6. All Class 2 and Class 3 permit modifications affecting the CQA plan, as specified in Utah Admin. Code R315-270-42, shall require Director approval after the appropriate public comment period.

VI.C.7. Subsequent modifications to the landfill cell, after completion of the initial construction period, shall be considered either a Class 1, 2 or 3 permit modification. All approved modifications to the CQA plan shall be documented and kept with the CQA plan so future changes; corrective action or closures can be evaluated with correct information.

#### **VI.D. GENERAL OPERATING REQUIREMENTS**

VI.D.1. The Permittee shall operate all landfill cells as required by Utah Admin. Code R315-264-300 through 317 and as specified in this permit.

VI.D.2. The Permittee shall not exceed the rated capacity of a landfill cell, except by a margin of five percent, nor shall the average waste elevation exceed the permitted final waste elevation except by a margin of one foot without written approval by the Director. These deviations shall be allowed for periods up to 24 hours and only after notification of closure as required by Condition II.O.4. and only for the purposes of grading with power equipment to gain final contours. In addition, waste elevations are allowed to be exceeded for a period up to 24 hours to facilitate the proper placement of wastes and cover during normal day-to-day operations.

VI.D.3. The Permittee shall repair any damage to the liner, including damage caused during landfill operations, by repairing the liner according to the liner repair procedures contained in the specific CQA Plan for the facility at the time the damage occurs. Documentation of repairs shall be submitted to the Director. The Director will review the documentation to verify that the repair was done in accordance with the CQA Plan.

VI.D.4. In accordance with Utah Admin. Code R315-264-301(a)(2) the leachate collection and removal system shall be operated in such a manner as to assure that the leachate depth over the primary liner does not exceed one foot.

VI.D.5. The Permittee shall submit to the Director on a quarterly basis (no later than 20 days following the end of the quarter), daily leachate collection/removal volumes for each applicable collection and detection sump. If the Permittee discovers the presence of liquid in the upper leak detection system (“B” risers) in quantities greater than 15 gallons per acre per day or if the Permittee discovers the presence of liquid in the lower leak detection system (“C” risers) in quantities greater than ten gallons per acre per day, the Permittee shall notify the Director within 72 hours of discovery.

VI.D.5.a. When an exceedance in the B or C risers occurs, a sample shall be obtained and analyzed for semi-volatile compounds. The analysis will be submitted to the Director within ten days following the facility's receipt of the data from the laboratory. The Permittee shall provide other information deemed necessary by the Director. Along with the analysis submittal, the Permittee shall submit a remediation plan to the Director outlining the steps to be taken to correct the problem (i.e., repair of liner, closure of landfill cell). Upon approval, the Permittee shall implement the plan within the time frame specified by the Director.

VI.D.6. Vehicles (e.g. trucks, backhoes, cranes, etc.) exiting restricted areas shall have their wheels/ tracks washed at the wheel wash facility located at the exit of the restricted area(s). Restricted areas are identified on the site drawing found in Attachment II-1.

VI.D.7. The Permittee shall follow the waste analysis requirements contained in Condition II.E.

VI.D.8. Treated wastes may be temporarily "put" onto a liner or in a container (put-pile) within a hazardous waste landfill cell while awaiting laboratory (verification) analyses. The liner shall be visible on all sides of the waste so as to prevent commingling with the waste in the landfill and other put-piles. "Temporarily" shall mean six months or less. Such wastes shall be labeled with a tracking number and located in such a manner that allows complete retrieval of the waste should the waste analyses subsequently determine that the waste does not meet the treatment standards of Utah Admin. Code R315-268. No more than 250 put-piles may exist at any one time and wastes making up a put-pile shall be disposed within one year of receipt at GMF.

**VI.E. MANAGEMENT OF RUN-ON/RUNOFF CONTROL FACILITIES**

The Permittee shall manage all landfill cells with run-on and runoff control systems as required by Utah Admin. Code R315-264-301(h) and (i) in order to not exceed required design capacity specified in Attachment VI-4

**VI.F. INSPECTIONS**

The Permittee shall conduct inspections of all active and closed landfill cells in accordance with Condition II.G.

**VI.G. PROCEDURES TO CONTROL WIND DISPERSAL OF WASTES**

VI.G.1. The Permittee shall comply with the requirements of Utah Admin. Code R315-264-301(j) by covering material subject to wind dispersal within 24 hours of placement in the cell. The cover shall be maintained until additional wastes

are applied to that portion of the cell. The cover shall consist of one of the following:

- a. Heavier bulk material (greater density);
- b. Mechanically-sprayed water;
- c. Dust-suppressing foam;
- d. Other suitable material as approved by the Director.

VI.G.2. Water shall not be sprayed to the extent that ponding occurs in the landfill.

VI.G.3. The Permittee shall cease operation of the landfill cell(s) (i.e. transporting waste into the cell and heavy vehicle movement within the cell, except for equipment utilized to control wind dispersal) when windy conditions exist that cause dust and any other waste to leave the cell(s).

VI.G.4. For purposes of compliance with Condition VI.G., all material within the berm of the operational hazardous waste landfill cells is considered to be hazardous waste.

VI.G.5. Leachate may be used for dust suppression in controlling wind dispersal, as provided in Section VI.H. of this module.

#### **VI.H. LEACHATE FOR DUST SUPPRESSION**

VI.H.1. Leachate can be used for dust suppression in Cells B/6 and 7.

VI.H.2. Leachate used for dust suppression shall not leave the cell where it is generated.

VI.H.3. Leachate used for dust suppression shall not be stored and must be distributed the same day it is collected. Should the cell not require dust suppression, or weather conditions prohibit its immediate use, the leachate shall be managed as multi-source leachate (F039).

VI.H.4. A pump and sprinkler system may be used to distribute leachate within the cell provided that an accurate method of measuring the total volume of leachate is used and the volume documented, as required by Condition VI.D.5.

VI.H.5. Leachate used for dust suppression shall be held in the vehicle or portable tank from which it will be distributed. If a pump is used to distribute the leachate, it must be pumped directly from the vehicle or portable tank in which it was collected.

VI.H.6. Leachate used for dust suppression shall not be applied to the extent that ponding occurs.

VI.H.7. Leachate used for dust suppression shall not leave the lined portion of the cell.



VI.H.8. Leachate used for dust suppression shall be analyzed twice annually for the constituents listed in the table below. Should a maximum concentration as identified in the table be exceeded, the leachate shall no longer be used for dust suppression, but shall be managed as multi-source leachate (F039):

Constituent	Maximum Concentration
Total HOC <sup>1</sup>	100 ppm
Arsenic	5.0 mg/l
Barium	100.0 mg/l
Cadmium	1.0 mg/l
Chromium	5.0 mg/l
Mercury	0.2 mg/l
Lead	5.0 mg/l
Selenium	1.0 mg/l
Silver	5.0 mg/l
<sup>1</sup> The total of the constituents found in Appendix 4 of the Waste Analysis Plan.	

VI.H.8.a. The Halogenated Organic Compounds (HOCs), identified in Appendix 4 of the Waste Analysis Plan (WAP), shall be analyzed utilizing SW-846 methods 8260 and 8270, as modified. In the event of an exceedance, discreet samples will be obtained and analyzed from each sump of the cell.

VI.H.8.b. Prior to using leachate for dust suppression, a composite sample shall be collected from each cell where leachate will be used. The sample shall be taken from the collection tank or vehicle the first time the leachate is used in an approved cell. The sample shall be analyzed for the HOCs, identified in Appendix 4 of the WAP and the metals listed in the table above, a copy of the analytical results shall be provided to the Director within 30 days of receipt by Grassy Mountain.

VI.H.8.c. After the initial sample, a composite sample of leachate shall be collected and analyzed twice per year from each cell where leachate is used. The first sample shall be taken within five days of September 1 and the second sample within five days of March 1. The samples shall be analyzed for the HOCs, identified in Appendix 4 of the WAP and the metals listed in the table above, a copy of the analytical results shall be provided to the Director within 30 days of receipt by Grassy Mountain.

VI.H.8.d. In the event a maximum concentration, as identified in the table above, is exceeded the Permittee may sample and analyze the individual leachate collection risers of the landfill cell. The analysis shall consist of the parameters listed in the table. Leachate from the individual collection risers

that exceed the established limits shall be managed as multisource leachate (F039) and prohibited for use as dust suppression.

- VI.H.8.e. All constituents listed in Appendix 4 of the of the WAP shall be analyzed for, with the exception of 3- Chloropropionitrile, which is not detected with Method 8260 or Method 8270.

## **VI.I. SURVEYING AND RECORDKEEPING**

The Permittee shall comply with the surveying and recordkeeping requirements of Utah Admin. Code R315-264-309 for all landfill cells.

- VI.I.1. The Permittee shall maintain a three-dimensional grid disposal system in the operating record for recording the approximate location of the specific waste disposed of in each cell, as required by Utah Admin. Code R315-264-309(b).

- VI.I.2. Clean Harbors maintains the information required by the above citation in the company's web-based data system (currently known as Win Web), in the Grassy Mountain Facility's waste information management system, and in hard copy. Within 60 days following notification of transfer of ownership or final closure, all data required in Utah Admin. Code R315-264-309(b) shall be provided to the Director in a media format determined at that time.

## **VI.J LEACHATE SAMPLING AND ANALYSIS**

The leachate from landfill cells that contain both RCRA and TSCA waste streams (currently Cells B/6 and 7) shall have the leachate from the sumps individually sampled and analyzed at a minimum for PCBs, pH, specific conductance and chlorinated organics (Class 1 volatile and semi-volatile compounds) annually.

Annual reports shall be submitted within 60 days after sampling has been completed.

## **VI.K. SPECIAL REQUIREMENTS for IGNITABLE/REACTIVE WASTE**

The Permittee shall comply with all management provisions pertaining to ignitable and reactive wastes as required by Utah Admin. Code R315-264-312.

## **VI.L. ENCAPSULATION OF REACTIVE WASTES**

The Permittee shall not encapsulate and dispose of reactive wastes in landfill cells.

**VI.M. RESTRICTIONS ON LIQUIDS IN LANDFILLS**

VI.M.1. The Permittee shall comply with all provisions of R315-264-314 pertaining to free liquid wastes. Containerized, solidified, or treated waste shall not contain free liquids as determined by the Paint Filter Liquids Test (SW-846, Method 9095) before being placed in a landfill cell as required by R315-264-314(b).

VI.M.2. The Permittee shall stabilize all bulk and containerized liquids (except small lab. vials) prior to placement into a landfill unit. Materials used to stabilize waste shall not be biodegradable in accordance with Utah Admin. Code R315-264-314(c).

**VI.N. SPECIFIC REQUIREMENTS FOR CONTAINERS**

VI.N.1. The Permittee shall comply with Utah Admin. Code R315-264-315 concerning the burial of containers in landfill units.

VI.2. The Permittee shall comply with Utah Admin. Code R315-264-316 concerning the disposal of small containers of hazardous waste in overpack drums and lab packs.

**VI.O. CLOSURE/POST-CLOSURE**

VI.O.1. The Permittee shall close all landfill cells and provide post-closure care as required by Condition II.O, Utah Admin. Code R315-264-110, Utah Admin. Code R315-264-310, the applicable portions of Attachment II-7 (Closure Plan) and Attachment VI-2, Appendix A (CQA Plan).