

**ATTACHMENT II-8**

**SUPPLEMENTAL WASTE MANAGEMENT PLAN  
FOR  
F020-F023 AND F026-F028 WASTES**

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# SUPPLEMENTAL WASTE MANAGEMENT PLAN (SWMP)

## 1.0 INTRODUCTION

The Supplemental Waste Management Plan (SWMP) outlines the requirements for the management and ultimate landfill disposal of wastes with EPA Hazardous Waste Codes F020-F023 and F026-F028 at the Clean Harbors Grassy Mountain facility (CHGM). These wastes have been identified as hazardous wastes that are restricted from land disposal except as specifically provided otherwise by Utah Administrative Code (UAC) R315-268-Land Disposal Restrictions (LDR). These waste-specific management requirements supplement all other applicable CHGM regulatory and permit requirements.

NOTE: Special requirements apply to the disposal of listed dioxin- and furan- wastes at CHGM. These requirements are described in this SWMP, and all employees handling these wastes are to comply with this plan. Further, all employees are advised that the LDR limits for the disposal of wastes bearing waste codes F020-F023 and/or F026-F028 is 1 ppb of each regulated dioxin congener. Wastes exceeding these limits may not be disposed of at CHGM. CHGM may only store wastes that exceed the LDR limits at the facility prior to shipment to another facility for treatment. Questions regarding these limits, or this plan, should be directed to either the facility General Manager or the Environmental Compliance Manager.

CHGM will require generators to provide all LDR documentation required by UAC R315-268. Any load of waste with EPA Hazardous Waste Codes for dioxins, F020-F023 and/or F026-F028, that arrives at CHGM without all required documentation will be held at the waste receiving and sampling area. For such loads, the generator or treatment facility that shipped the waste will be contacted and asked to provide the missing documents. The waste may only be disposed of when the documentation is supplied, and the waste meets the LDRs.

## 2.0 WASTE ANALYSIS

In addition to Attachment II- RCRA-TSCA WAP, waste analysis data shall be provided for 20 percent of all listed dioxin (F020-F023 and/or F026-F028) waste shipments where the generator certifies that the waste meets treatment standards. Data supporting the certification shall be provided by the generator or the treatment facility prior to CHGM land disposing of the waste.

## 3.0 CONTAINERIZED STORAGE

Containerized wastes that are subject to this SWMP are also subject to Module III – Storage and Treatment in Containers of this permit. Storage units shall meet the requirements of UAC R315-264-175.

- “Drum containerized waste” refers to all waste containers that shall be stored within Container Management Units (CMU).
- “Bulk containerized waste” refers to all waste containers that are prohibited from storage within the CMU and shall be stored in the receiving area or the Bulk Solids Storage Unit (BSSU).

Supplemental management requirements are as follows:

1. All bulk containers that originate off-site shall have load liners for each load of wastes or waste treatment residues prior to shipment to CHGM. If such containers are received at CHGM without a load liner, CHGM will send the generator a warning, re-containerize the waste with a liner or place it within secondary containment, and place documentation in the operating record.
2. Containers of waste shall be managed to prevent or minimize the release of dust or particulates from the waste. No visible fugitive dust shall exit the waste management unit during waste handling. Dust control measures must be employed whenever there is a release of fugitive dusts or particulates from the waste, and waste handling will be suspended until the condition is corrected. All containers with the potential to release fugitive dust shall remain covered during transport and storage within the facility.
3. Drums of wastes shall be kept closed except when wastes are being added or removed (e.g., sampling or placing into stabilization tanks).
4. No more than one drum may be opened at a given time if drums containing potential fugitive emission wastes are opened outside of an enclosure where winds may mobilize the contents.
  - a. Drums that are emptied into the stabilization tanks shall be handled in a manner that minimizes the generation of dust. Water shall be available to mist or spray the contents of the drums as they are emptied into the tanks and shall be used as needed whenever fugitive dusts are observed.
  - b. Drums containing potential fugitive emission waste that are directly placed in a landfill shall be carefully handled so that they do not rupture or lose their integrity while exposed.
5. Bulk containers of waste shall be kept closed or always covered except when wastes are being added or removed (e.g., sampling or placing into stabilization tanks).
  - a. Bulk containers with the potential for fugitive emission may not be opened for sampling outside of an enclosure or other protection from winds.
  - b. Bulk containers that are emptied into the stabilization tanks or directly into the landfill shall be handled in a manner that minimizes the generation of dust. Water shall be available to mist or spray the contents of the containers as they are emptied into the tanks and shall be used as needed whenever fugitive dusts are observed.
  - c. Intact, bulk containers of wastes that are subject to this SWMP may be placed directly into the landfill cell for disposal. If such containers are directly placed in a landfill, they shall be handled so that they do not rupture or lose their integrity while exposed.

#### **4.0 STABILIZATION TREATMENT TANK REQUIREMENTS**

1. Only the permitted Stabilization Treatment Tanks may be used for storage and/or further treatment of the wastes or waste treatment residues subject to the requirements of this SWMP. These units shall also meet the applicable containment and leak detection requirements of UAC R315-264-193.
2. Material being discharged into the stabilization tanks that has the potential to release dust will not be allowed to release visible fugitive dust in quantities that can be observed leaving the stabilization unit. If fugitive emissions require control, a water spray is available to mist

or wet the load as it is discharged and shall be used as needed whenever fugitive dusts are observed. If needed, the water spray will also be used to control dust during mixing. Waste loads shall be covered while being moved to the landfill cell if there is the potential to release fugitive dusts during transport.

3. Upgrades to the stabilization tanks, if any, shall be incorporated into this SWMP as they are adopted by permit Module IV (Storage and Treatment in Tanks).
4. Before changing the stabilization tank service from F020-F023 or F026-F028 wastes to other wastes, the tanks must be emptied and cleaned and so that the remaining volume in the tank is no more than 0.3% of the dioxin/furan treated residual waste, compared to the total tank capacity.
5. Prior to stabilizing other wastes, the unloading pad at the stabilization unit shall be swept or washed to remove any residual associated with the dioxin-related wastes.

## **5.0 LANDFILL DISPOSAL REQUIREMENTS**

1. Hazardous waste landfill cells utilized for the disposal of the wastes or waste treatment residues subject to the requirements of this SWMP shall meet the requirements of UAC R315-268-5(h)(2)(ii) and be in compliance with the design and construction requirements of Module VIII (Corrective Action Plan Development Procedures).
2. Hazardous waste landfill cells shall be operated in accordance with all applicable requirements of UAC R315-266 and Permit Module VIII including, but not limited to waste location, run-on/run-off, inspection, controlling wind dispersal, recordkeeping, and stabilization treatment requirements.
3. Wastes shall meet the treatment requirements set forth in UAC R315-268-40 to R315-68-49, applicable prohibitions set forth in RCRA Section 3004(d) and the free liquid requirements of permit Module VI prior to being accepted for further management and ultimate disposal in a CHGM.
4. All stabilized loads of dioxin- or furan- contaminated wastes that are stored in a landfill cell while awaiting confirmation of stabilization shall be prominently marked for easy identification. This marking shall consist of a stake or lath placed in the waste pile. The upper end of the lath shall be colored a bright red or blaze orange with tape, paint, flagging, or similar means.
5. When wastes are directly landfilled, operators shall exercise due caution to minimize or prevent the release of particulates from the load and their subsequent escape into the environment outside of the cell. Operators must follow the requirements of permit condition VI.G (Procedures to Control Wind Dispersal). No visible dust will be allowed beyond the boundary of the receiving unit during the unloading of material that has the potential to release significant quantities of dust. If fugitive emissions are a concern during unloading, a water spray will be used to mist or wet the load as it is discharged. Operators may use leachate for dust suppression in accordance with Permit Condition VI.H (Leachate for Dust Suppression).
6. All loads of F020-F023 and F026-F028 materials shall be managed to minimize potential fugitive emissions. All loads, including direct disposed or stabilized materials, shall be covered as soon as possible, but at least within 24 hours. Cover may be either temporary or

permanent. Temporary covers may consist of materials such as plastic sheeting, dust suppressing foam, or tarps, while permanent cover may be soils, rock, or other, non-potential fugitive emission wastes. Permanent covers shall be applied promptly after the removal of any temporary covers (within the same work shift).

7. Compatibility Considerations. CHGM shall fingerprint these wastes in accordance with permit Attachment II (WAP). CHGM shall resolve any anomalies detected during fingerprinting prior to placement of the wastes in the landfill cell. For example, if a waste were to exhibit a reactive characteristic during fingerprinting that was not exhibited during pre-acceptance testing (e.g., produced sulfides), the source of the characteristic must be determined and the need for any additional treatment evaluated.
  - a. As with all other wastes, CHGM evaluates the compatibility of the waste with other wastes in the landfill or with materials of construction of containers or tanks.
  - b. The reagents used to stabilize the wastes subject to this SWMP are the same reagents used for other waste received at CHGM. Therefore, these wastes will remain compatible with other wastes, the landfill liners, and the leachate systems after stabilization.
8. CHGM shall identify grid locations in every cell where wastes managed under this SWMP are placed. CHGM shall analyze leachate from the uppermost sumps serving those grids for dioxins and furans bi-annually in accordance with the Waste Analysis Plan (WAP).

## **6.0 REGULATORY REQUIREMENTS**

UAC R315-264-317 prohibits placement of dioxin containing wastes in a landfill unless it is operated in accordance with a waste-specific management plan that has been approved by the Director and meets the requirements of UAC R315-264. The factors to consider are discussed below.

1. UAC R315-264-317(a)(1): The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through the soil or to volatilize or escape into the atmosphere.
  - a. CHGM cannot predict the total volume of wastes subject to this SWMP that will be managed during the life of the facility. However, the waste volume received and disposed of is tracked and documented in the operating record.
  - b. Wastes are mostly solid, such as soil and similarly inert non-incinerable material. Wastes may not contain free liquids, or they must be stabilized at CHGM. Waste may receive further treatment for stabilization of heavy-metal components.
  - c. Waste may be dusty. CHGM shall minimize dust migration in accordance with Permit Conditions VI.G and VI.H.
  - d. The RCRA landfill cells have been designed to prevent waste migration through the soil. Dioxin containing wastes are not volatile and have a low likelihood of air emissions. Additionally, dioxins must have a concentration < 1 ppb for acceptance at CHGM. When dioxin coded wastes are sent to CHGM for disposal, they are treated in one of the following ways:
    - 1) Containerized waste is placed directly into the landfill in the containers;
    - 2) Bulk waste is placed directly into the landfill;

- 3) Bulk or containerized waste is first stabilized and/or treated to remove liquids and/or to stabilize regulated metal constituents.
2. UAC R315-264-317(a)(2): The attenuative properties of underlying and surrounding soils or other materials.
  - a. The facility is located within the lakebed of glacial Lake Bonneville. This formation is a low-permeability ( $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ ) silty clay deposit that contains no potable water. The water within the formation contains total dissolved solids that range between 50,000 and 100,000 mg/l. Because the sediments have a very flat hydraulic gradient and extremely high sodium concentrations, groundwater movement is very slow. The facility receives approximately 6 inches of precipitation per year and the evaporation rate is over 48 inches per year. There are no rivers or streams within 20 miles of the facility and the nearest body of water is the Great Salt Lake 30 miles to the east.
  - b. The hazardous waste landfill cells exceed the design and construction requirements of UAC R315-264-30. Design elements include the addition of a third synthetic liner and an additional leak detection system in Cell 7.
3. UAC R315-264-317(a)(3): The mobilizing properties of other materials co-disposed with these wastes.
  - a. CHGM has addressed the possibility of waste mobilization due to co-disposal in two ways.
    - 1) Most wastes CHGM receives are either basic as received or are stabilized using basic materials such as lime or cement kiln dust. As a result, most of the materials placed in the landfill cells are chemically basic or neutral-to-basic and all are fully compatible with the wastes in the cell.
    - 2) All wastes disposed of in the cells must meet applicable LDRs.
4. UAC R315-264-317(a)(4): The effectiveness of additional treatment, design, or monitoring requirements.
  - a. No specific additional treatment is required for the F020-F023 and F026-F027 constituents. However, CHGM has treatment recipes for all hazardous waste streams and monitors treatment effectiveness to ensure that all applicable constituents (e.g., heavy metals) have been treated to the standards specified by UAC R315-268.
  - b. All units receiving the subject wastes must be in compliance with all secondary containment and leak detection requirements of UAC R315-264-30.
  - c. Groundwater and leachate monitoring requirements are addressed in Permit Module VII and Attachment II-7.
  - d. Additional sampling and analysis are conducted on 20 percent of all incoming loads that carry an F028 waste code.

## **APPENDIX 1**

### **ANALYTICAL PROCEDURES AND FREQUENCIES**



TEST METHODS AND FREQUENCIES	LOAD FROM GENERATOR	BATCH FROM STABILIZATION
FINGERPRINT TEST(S) AND DATA VALIDATION	<p>All current fingerprint tests, as specified in Part B Permit, Attachment II-RCRA-TSCA WAP.</p> <p>All data from the facility generating the waste must be reviewed and validated for compliance with LDR standards before the waste is accepted for disposal. The checklist for compliance with these standards (attached) must be satisfactorily completed for each load.</p>	Residues from wet or dry scrubbers shall be kept separate and shall not be mixed with slag or ash.
ANALYTICAL TEST METHOD(S)	<p>For fingerprinting, Methods shall be those specified in the WAP.</p> <p>SW-846 Method 8280 shall be performed on each matrix as specified below.</p>	As specified in WAP
EXTRACTION METHOD(S)	Standard Prep Method for Method 8280	SW-846 Method 1311 (TCLP) followed by analysis for metals as required by the WAP for LDR Standards.
FREQUENCY OF TESTS	<p>Every load shall be fingerprinted. A load is defined as one truck or one rail car.</p> <p>For Method 8280, CHGM shall analyze the first load received and must also analyze at least one sample per year from each generator.</p>	In accordance with the WAP. Air pollution control device residues shall be kept covered until test results are known. Storage piles in the landfill shall be identified and marked with a bright red or blaze orange-colored lath.

**DIOXIN AND FURAN-CONTAMINATED WASTES: LDR ANALYTICAL DATA VERIFICATION CHECKLIST FOR SW-846 METHOD 8280**

Manifest No.	Date Received	Date this Checklist Completed
Generator/TSDf Name	EPA ID No.	GM Profile No.
<u>LABORATORY DATA</u> : Indicate Data Validity with Y. IF ANY ANSWER IS NO, CONSULT WITH THE GENERAL MANAGER BEFORE MANAGING THE LOAD!!!		
If the certification specifies compliance with the LDR standards for dioxins and furans, is Laboratory Data attached which demonstrates that compliance (< 1 ppb for each congener)? *		
Place numerical values in right hand column, indicate data validity with Y. IF ANY ANSWER IS NO, CONSULT WITH THE GENERAL MANAGER BEFORE MANAGING THE LOAD!!!		
Were samples extracted within 30 days and analyzed within 45 days of collection?		
Method detection limits (MDL) reported		
Does Quantification Report contain MDLs as detection limit?		
Is the Laboratory QA/QC data package attached*? The QA/QC package must include data on instrument calibration, calibration reagents, analytical blanks, matrix spikes, surrogates, duplicates, check standards, and detection limits achieved		
Are instrument calibration data included?		
Are initial calibration standards those specified in Paragraph 6.2 of Method 8280 (copy of method attached)?		
Is percent relative standard deviation of the relative response factors for each calibration standard <input type="checkbox"/> 15%?		
Were laboratory "Method Blanks" run? (Method 8280, section 7.2)		
Were method blanks reported with no interferences?		
Were recovery standards added to the samples prior to injection? (Method 8280, section 10.2)		
Was the concentration of the recovery standards the same as calibration standards used to measure RFs? (Method 8280, section 10.2)?		
Load Checklist completed by:	_____ (Printed Name)	_____ (Signature)
Load Approved for acceptance under SWMP? (Yes/No) ==>		
* IF THIS DATA DOES NOT MEET LDR STANDARDS, OR IF QA/QC DATA IS NOT ATTACHED, THIS LOAD MAY NOT BE DISPOSED UNTIL LDR INFORMATION IS OBTAINED. <u>CONTACT THE SHIPPER.</u>		