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Salt Lake City, UT 84122  
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JUN 09 2005  
05.02029  
UTAH DIVISION OF  
SOLID & HAZARDOUS WASTE

June 6, 2005

Mr. Stephen Tuber  
Assistant Regional Administrator  
Region 8  
U.S. EPA  
999 18<sup>th</sup> Street, Suite 300  
Denver, Colorado 80202-2466

**Subject: Request for TSCA PCB Coordinated Approval**

Dear Mr. Tuber:

Clean Harbors Grassy Mountain, LLC requests a TSCA PCB Coordinated Approval as described in 40 CFR 761.77 for the TSCA units described in Attachment 1. The facility understands that approval of this request will remove the requirements for a separate TSCA financial assurance instrument to cover TSCA closure costs for the described units in Attachment 1.

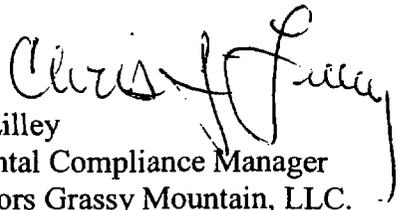
A copy of a letter from EPA confirming the EPA Identification Number issued to the facility for conducting PCB activities is attached. The Utah Division of Solid and Hazardous Waste (DSHW) is the facilities State waste management authority. The point of contact for Utah DSHW is Mr. Dennis Downs, Executive Secretary, and his telephone number is (801) 538-6170. A copy of the Utah DSHW permit is on file at Region 8.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the facility is aware of and will adhere to the TSCA PCB reporting and recordkeeping requirements in 40 CFR 761 Subparts J and K.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I can personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, and the verification that this information is true, accurate, and complete.

If you have any questions, please call me directly at (801) 323-8138.

Sincerely,

  
Mr. Chris Lilley  
Environmental Compliance Manager  
Clean Harbors Grassy Mountain, LLC.

cc: Ms. Erna Waterman, EPA Region 8  
Mr. Francis Tran, EPA Region 8  
~~Mr. Dennis Downs~~, Utah DSHW  
Mr. Richard Sprott, Utah DAQ  
Mr. Myron Bateman, Tooele County Health Department  
Grassy Mountain Master File

**Attachment 1**  
**TSCA Coordinated Approval Request**  
**and**  
**PCB Commercial Storage Approval Modification Request**

**1. Re-Name TSCA Cell B to TSCA/RCRA Cell B/6**

Currently, Grassy Mountain is in the process of re-permitting the TSCA Cell B with the Utah Division of Solid and Hazardous Waste as a combination RCRA/TSCA Cell. With approval of this request, Grassy Mountain will re-name the TSCA Cell B to TSCA/RCRA Cell B/6.

TSCA/RCRA Cell B/6 will fall within the requested TSCA Coordinated Approval request. The closure cost estimate for TSCA Cell B will remain unchanged as it exists today except to move under the RCRA permit as part of the TSCA Coordinated Approval.

**2. Add Stabilization Tanks 122-TN-001, 122-TN-002 and 122-TN-003 to TSCA Permit**

Currently, the stabilization tanks 122-TN-001, 122-TN-002 and 122-TN-003 are not permitted for TSCA materials. With approval of this request, TSCA materials that also require stabilization of RCRA materials may be stabilized in one or more of the described tanks prior to placement in the TSCA/RCRA Cell B/6. TSCA only materials will continue to be placed in either TSCA Cell Z or TSCA/RCRA Cell B/6. RCRA only materials will continue to be stabilized and placed in RCRA Cell 4, RCRA Cell 5 or RCRA Cell 7.

Materials shall be managed through the three stabilization tanks to prevent cross-contamination of RCRA and TSCA materials. A plan to prevent cross-contamination has been provided in the permit modification request provided to Utah DSHW and Region 8.

The stabilization tanks will fall within the requested TSCA Coordinated Approval request and be accounted for on the closure cost estimate for the RCRA permit. The closure cost estimate for the closure of the three stabilization tanks will increase by the PCB sampling and PCB analysis requirements.

**3. TSCA Leachate Collection Tanks**

With approval of the TSCA/RCRA Cell B/6 modification request, Grassy Mountain will require modification of the leachate collection procedures for the TSCA/RCRA Cell B/6. Currently, leachate collected from TSCA Cell X, Cell Y, Cell Z and Cell B is consolidated and stabilized in Cell B. With approval of this modification request, leachate removed from Cell X, Cell Y, Cell Z and Cell B/6 may be consolidated into one or more of the tanks 119-TN-001, 119-TN-002, 119-TN-003 or 119-TN-004. From the tanks, the leachate may then be stabilized in Cell B/6 or Cell Z, stabilized in one or more of the stabilization tanks, or sent for incineration disposal at the Aragonite facility.

The tanks 119-TN-001, 119-TN-002, 119-TN-003 and 119-TN-004 will not be included with the requested TSCA Coordinated Approval request.

**4. Coordinated Approval Request**

The requested TSCA Coordinated Approval will not apply to TSCA Cell X, Cell Y or Cell Z and financial assurance for the three TSCA Cells shall remain unchanged.

The requested TSCA Coordinated Approval will apply to the TSCA/RCRA Cell B/6, and the stabilization tanks 122-TN-001, 122-TN-002 and 122-TN-003.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
999 18<sup>TH</sup> STREET - SUITE 300  
DENVER, CO 80202-2466  
Phone 800-227-8917  
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05.03473  
OCT 24 2005

UTAH DIVISION OF  
SOLID & HAZARDOUS WASTE

Ref: 8P-P3T

OCT 21 2005

Shane Whitney  
Facility Manager  
Clean Harbors Grassy Mountain, LLC  
P.O. Box 22750  
Salt Lake City, UT 84122

Re: TSCA/RCRA Coordinated Approval

Dear Mr. Whitney:

This is in regards to Clean Harbors Grassy Mountain, LLC's letter, dated June 06, 2005, requesting a TSCA/RCRA Coordinated Approval for Landfill Cell B/6 and a PCB Commercial Storage Modification Approval. The U.S. Environmental Protection Agency (EPA) Region 8 has reviewed the modification request and the August 31, 2005 Class 3 Permit Modification, as revised (RCRA Permit), and hereby approves the request.

TSCA Cell B now becomes TSCA/RCRA Cell B/6. The PCB Commercial Storage is covered under the RCRA Permit. The TSCA financial assurance for closure of Cell B/6, and the storage and/or treatment of the TSCA/RCRA wastes are included in the RCRA Permit. Clean Harbors Grassy Mountain, LLC must notify EPA in writing within five (5) working days if it fails to meet the financial assurance requirement.

Enclosed are the TSCA/RCRA Coordinated Approval for Cell B/6, and the revised TSCA Cells X, Y, and Z Approval. If you have any questions regarding the letter or approval, please contact Francis Tran of my staff at 303 312-6036.

Sincerely,

Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

Encl.: Approvals

cc: Dennis R. Downs, UDEQ



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

IN THE MATTER OF ) APPROVAL OF CELLS X, Y & Z  
Clean Harbors Grassy Mountain, LLC, )  
a subsidiary of Clean Harbors, Inc., )  
hereinafter referred to as GMF ) APPLICATION FOR LAND  
with corporate offices located in ) DISPOSAL OF POLYCHLORINATED  
Braintree, Massachusetts ) BIPHENYL (PCB) WASTE

AUTHORITY

This Approval is issued to Clean Harbors Grassy Mountain, LLC pursuant to Section 6(e)(1) of the Toxic Substances Control Act of 1976 (TSCA), 15 U.S.C. 2601 et seq., and the Federal PCB Regulations, 40 C.F.R. Part 761.75. Conditions of this Approval supersede any conflicting elements of the Application.

EFFECTIVE DATE

This Approval shall be effective immediately, and shall expire March 1, 2008 for Cell Z. The Approval life is subject to extension as provided in Condition II.(5) of this Approval. The list of acceptable wastes is subject to expansion, upon a successful demonstration of compliance and corrective measures as outlined in Conditions III and IV, and subject to the provisions of Condition II.(4) of this Approval. The Approval conditions pertaining to closure and post-closure, including financial assurance, are not subject to this expiration date and shall remain in force for the period of time necessary to complete these activities. Cells X and Y are only subject to the post-closure conditions in this Approval.

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- A. Monitoring Well Location Map
- B. List of Chlorinated Organics
- C. List of Additional RCRA Groundwater Parameters
- D. Final Cap Profiles

DEFINITIONS

1. "Application" means the following documents submitted by Clean Harbors Grassy Mountain, LLC, formerly USPCI, to EPA Region 8 for approval.

Cell Z TSCA Approval Application, dated July 1991, was transmitted by cover letter dated July 8, 1991. Other documents which supplement the main application include: The Response to U.S. Environmental Protection Agency Comments - Landfill Cell Z TSCA Permit Application, dated September 1991; USPCI Grassy/Grayback Mountain Contingency Plan Revised March 11, 1992; April 16, 1992, letter and attachment describing the installation of Cell Z groundwater monitoring wells; May 20, 1992, letter and attachment describing the Penetrometer Test for solidified waste; July 22, 1992, letter containing an Action Plan for resolving Tentatively Identified Compounds; July 27, 1992, submittal of revisions to the Contingency Plan, Security Plan (Procedures to Prevent Hazards) and Employee Training Plan; Groundwater Sampling and Field Standard Operating Procedures submitted July 29, 1992, revised and dated January 15, 1992; revised Cell Z Waste Analysis Plan dated August 10, 1992; the October 28, 1992 submittal from William Shea to Pat Hull as it pertains to the revised closure and post-closure plans, the revised security plan, the revised training plan, the USPCI Analytical Services (Tulsa) Groundwater/Leachate Methods Compendium and the president's certification; the October 29, 1992 submittal from Randy Miller to Pat Hull as it pertains to the piezometer installation and exploration for new background monitoring wells; the November 25, 1992 letter from Dennis Romankowski to Pat Hull as it pertains to and lists sources for Tentatively Identified Compounds; the March 4, 1993 submittal from Edward Labus to Pat Hull which supplemented the piezometer installation information; the May 28, 1993 letter from Edward Labus to Pat Hull requesting a revision in the waste staging condition; the August 2, 1993 closure and post-closure cost estimates; the February 22, 2000 letter, from Gary L. Mossor to Kerrigan G. Clough, including a Submission of the Seismic Study for Cell Z, Approval of Mounding Application for Cell Z and Renewal of the Cell Z Operating Approval; and all construction certifications (see separate definition). These documents constitute the application and are incorporated by reference into this Approval.

2. "Construction Certifications" means for Cell Z which includes the following documents:

- CQC Construction Documentation for TSCA Landfill Cell Z, Tooele County, Utah Volume 1 of 1, March 1992

- CQA Construction Documentation for Embankment and Clay Liner Material, TSCA Landfill Cell Z, Grayback Mountain Facility, Knolls, Utah
  - CQC Construction Documentation for TSCA Landfill Cell Z, Tooele County, Utah Volume 1 of 1, Interim Submittal, March 8, 1992, through May 2, 1992
  - CQA Construction Documentation for Clay Liner and Secondary Geosynthetic Components, TSCA Landfill Cell Z, Grayback Mountain Facility, Knolls, Utah
  - CQC Construction Documentation for TSCA Landfill Cell Z, Tooele County, Utah Volume 1 of 2, Final Submittal, May 3, 1992, through June 15, 1992
  - CQC Construction Documentation for TSCA Landfill Cell Z, Tooele County, Utah Volume 2 of 2, Final Submittal, May 3, 1992, through June 15, 1992
  - CQA Construction Documentation for Remaining Secondary Geosynthetic Components and Primary Geosynthetic Components, TSCA Landfill Cell Z, Grayback Mountain Facility, Knolls, Utah
  - Letter dated June 22, 1992, Re: TSCA Cell Z - Grayback Mountain Facility, transmitting final CQA daily construction reports covering June 19 through June 22, 1992
  - Response from USPCI dated July 29, 1992 (with supplement dated August 3), to EPA comments on Cell Z construction
3. "EPA or EPA Region 8" means the United States Environmental Protection Agency Regional Office located in Denver, Colorado.
  4. "Operations" means the entire process of receiving, sampling, analyzing, solidifying (if applicable) and landfilling of PCB wastes, also including, but not limited to, activities such as construction, monitoring, recordkeeping, site security and personnel training.
  5. "PCB and PCBs" means polychlorinated biphenyl(s) as defined in 40 C.F.R. § 761.3.
  6. "PCB spill" has the same meaning as "spill", defined in EPA's PCB Spill Cleanup Policy in 40 C.F.R. § 761.123.
  7. "QA/QC" means quality assurance and quality control and refers to the formal procedures applied to laboratory operations and raw data in order to document and insure that accuracy and precision are within stated goals.
  8. "RCRA" means the Resource Conservation and Recovery Act.

9. "Staging" means storing inbound wastes, prior to release for disposal, in an area other than a TSCA Approved or TSCA interim status commercial storage building (40 C.F.R. 761.65).
10. "TSCA" means the Toxic Substances Control Act.
11. "UDEQ" means the Utah Department of Environmental Quality, Division of Solid and Hazardous Waste.
12. "GMF" means the Grassy Mountain Landfill Facility owned by Clean Harbors Grassy Mountain, LLC, a subsidiary of Clean Harbors, Inc., located at Exit 41 I-80 3 Miles East, 7 miles North of Knolls, Grassy Mountain, Utah 84029. The corporate offices are located in Braintree, Massachusetts.
13. "Leachate" for the purposes of solidification and disposal means water pumped from leachate collection and detection sumps, PCB wheel wash water and sediments and, at GMF's discretion, precipitation collected in PCB storage area containment sumps and waters collected during groundwater monitoring events.
14. All definitions contained in 40 C.F.R. §§ 761.3 and 761.123 are incorporated by reference into this Approval. Terms not defined in the regulations or in the Approval shall be defined by a generally accepted scientific or industrial meaning or a standard dictionary meaning.

CONDITIONS OF APPROVAL

I. Technical Requirements

(1) Soils. In accordance with 40 C.F.R. § 761.75(b)(1) and GMF's Design Engineering Report contained in the Application, the landfill soil shall have a high clay and silt content meeting the following standards:

- (i) compacted soil liner minimum thickness of 3 feet;
- (ii) compacted soil liner permeability of less than or equal to  $1 \times 10^{-7}$  cm/sec;
- (iii) >85% soil passing No. 200 Sieve ( >30% required by regulation);
- (iv) >30 liquid limit; and
- (v) >15 plasticity index.

(2) Synthetic membrane liners.

Cell Z: In accordance with 40 C.F.R. § 761.75(b)(2) and USPCI's Design Engineering Report contained in the application, the landfill shall have a double synthetic liner system composed of a lower 60 mil and an upper 80 mil high density polyethylene (HDPE) liner, each having a leachate collection system (single liner >30 mil thickness required by regulation).

(3) Hydrologic conditions. In accordance with 40 C.F.R. § 761.75(c)(4), the Regional Administrator is waiving the requirement in 40 C.F.R. § 761.75(b)(3) that the bottom of the landfill liner system be at least 50 feet from the historical high water table. The facility has groundwater monitoring wells and leachate collection systems.

(4) Flood protection. In accordance with 40 C.F.R. § 761.75(b)(4)(ii) and the Design Engineering Report contained in the Application, the landfill is above the 100-year floodwater elevation and runoff diversion structures are provided to handle in excess of a 24-hour, 25-year storm. Containment and treatment by evaporation is provided for storm water.

(5) Topography. In accordance with 40 C.F.R. § 761.75(b)(5), the landfill is located in an area of low to moderate relief.

(6) Water monitoring systems.

(i) In accordance with the waiver provisions of 40 C.F.R. § 761.75(c)(4), the requirement of 40 C.F.R. § 761.75(b)(6)(i) to sample groundwater to provide baseline data prior to commencing waste disposal operations under this Approval is subject to compliance schedule Conditions III.(1) and (2) of this Approval.

(ii) In accordance with 40 C.F.R. § 761.75(b)(6)(ii)(B), groundwater monitoring wells shall be cased, and the annular space between the monitor zone and the surface shall be backfilled and plugged for integrity. Wells shall have removable caps and may be evacuated and allowed to recharge prior to sampling. The Field Sampling Standard Operating Procedures (SOP) contained in the Application shall be followed. Attachment A of this Approval shows the locations of the groundwater monitoring wells.

(iii) In accordance with 40 C.F.R. § 761.75(b)(6)(iii), at a minimum, all water samples shall be analyzed for PCBs, pH, specific conductance and chlorinated organics (Attachment B, RCRA Class 1 volatile and semi-volatile parameters). The Application contains Sections 10 and 11 describing Groundwater, and the Monitoring Plan and Protocol respectively, and applies to cells X, Y and Z. The following lists the basic requirements and revisions and additional requirements imposed under the authority of 40 C.F.R. § 761.75(c)(3)(ii):

a. The groundwater wells described in the Application are all designated as monitoring wells ("MW") for the purposes of establishing the type and frequency of sampling and analysis.

The initial monitoring network for Cells X, Y and Z is Network-1 and consists of wells MW-2, MW-21, MW-22, MW-23, MW-36, MW-40A, MW-41, MW-53 through MW-57 in addition to MW-37A, MW-38, and MW-39.

The network includes background wells PZ-06 and PZ-07.

EPA may require additional monitoring well(s) be installed if PCBs are detected and confirmed from a bottom sump at a level of one part per billion or higher in the leachate.

b. The quarterly parameters consist of groundwater elevations for all monitoring wells. The semi-annual parameters for the network with Cell Z, consist of PCBs, pH, specific conductance and chlorinated organics (Attachment B, RCRA Class 1

volatile and semi-volatile parameters) for all monitoring wells. Additionally, in accordance with the Application and 40 C.F.R. § 761.75 (c) (3) (ii), quarterly during the first year following installation and semi-annually thereafter, all monitoring wells shall be tested for the additional RCRA Class 3 parameters listed in Attachment C.

c. If PCBs or other chlorinated organics (Attachment B) are detected and verified with a follow up analysis (as indicated in Sections 10 and 11 of the Application describing Groundwater, and the Monitoring Plan and Protocol) in any of the groundwater monitoring wells listed above, GMF must develop a corrective action plan. This plan must assess a variety of appropriate corrective actions, including but not limited to, expanding the groundwater monitoring program, increasing the leachate removal frequency, closure of part or all of the cell and treatment of groundwater. The plan must be submitted for approval to EPA Region 8 within 90 days of the verification analysis. As an interim measure, while the plan is being developed and approved, all monitoring wells within the Network(s) of the well(s) with the detections, must be sampled and analyzed quarterly for PCBs, pH, specific conductance and chlorinated organics (Attachment B, RCRA Class 1 volatile and semi-volatile parameters).

d. All Tentatively Identified Compounds (TICs) will be resolved in accordance with the procedure identified in the July 22, 1992, submittal which has been incorporated as part of the Application and part of the Approval. This procedure is hereby revised to require that the investigative stage be conducted every time an analysis shows a TIC with a total area greater than 10% of the total area of the nearest internal standard. GMF shall conduct a forward library search using recent (not more than 3 years old) National Institute of Standards and Technology Mass Spectra. The computer's 10 best fit (Finnegan software or equivalent) matches must be reviewed and a record made of the 3 best matches to the TIC spectra. GMF shall report only the single best match and pursue a commercial source (all available catalogs, computer on-line databases, manufacturer traced with CAS #, or as specified and listed in USPCI's November 25, 1992, letter from Dennis Romankowski to Pat Hull) for a standard for that compound whenever a match exceeds 800 (Finnegan software or equivalent). Raw data

shall be reported to EPA in accordance with Condition I.(8)(v) of this Approval.

(iv) In accordance with 40 C.F.R. § 761.75(b)(6)(i)(B), surface water contained in the run-off pond (Section 4 of the Application) shall be subject to sampling as soon as possible, but within 24 hours, after rain storms (defined as greater or equal than 1/2 inch of rainfall in <24 hours), analysis for PCBs, pH, specific conductance and chlorinated organics (Attachment B, RCRA Class 1 volatile and semi-volatile parameters), and the recordkeeping and reporting requirements specified in Conditions I.(8)(iv) and (v) of this Approval. If surface water is not available throughout either the first half and/or last half of the year in sufficient quantities for the analyses required, GMF shall certify this in writing to EPA, along with a report of daily rainfalls on site, and submit this with each semi-annual analytical report in accordance with Condition I.(8)(v)c. of this Approval.

(v) The surface and ground water analytical procedures are subject to compliance schedule Condition III.(3) of this Approval.

(7) Leachate collection and analysis.

(i) In accordance with 40 C.F.R. § 761.75(b)(7), a leachate collection and monitoring system shall be installed above the landfill liner. The primary collection system shall be monitored monthly for quantity. Pursuant to 40 C.F.R. § 761.75 (c)(4) a waiver is granted to only require sampling and analysis of leachate from the primary and secondary leachate collection sumps semi-annually. Minimal analysis shall consist of PCBs, pH, specific conductance and chlorinated organics (Attachment B, RCRA Class 1 volatile and semi-volatile parameters). Each sump shall be discretely sampled and each sample shall be discretely analyzed. All leachate shall be either treated on site in accordance with the approved solidification process or disposed by another approved method.

(ii) The design of the compound leachate collection system shall meet the requirements of 40 C.F.R. § 761.75(b)(7)(ii) and the Design Engineering Report contained in the Application. The design specification requires a minimum of 3.0% slope for Cell Z towards the leachate collection sumps in order to provide the minimum 2% slope after settlement.

(iii) In accordance with the Water Collection, Leachate Systems and Solidification, Section 9 of the Application,

leachate from the primary and secondary systems shall be pumped and quantified weekly for active cells. GMF shall operate and maintain a rainfall gauge or other device to measure rainfall on site. In accordance with 40 C.F.R. § 761.75(c)(3)(ii), the leachate pumping and quantification frequency shall be increased to daily if the quantity of leachate in any sumps of the leak detection collection systems (middle and/or lower sumps) exceeds fifteen gallons per week. Weekly pumping and quantification may be resumed following one full week of daily compliance with the above requirements.

(iv) In accordance with the Water Collection, Leachate Systems and Solidification, Section 9 of the Application, the leachate monitoring plan consists of the following elements:

- a. Leachate is not approved for dust control.
- b. Leachate, if selected to solidify and landfill, shall pass the Paint Filter Liquids Test prior to landfilling.
- c. Leachate analytical procedures are subject to compliance schedule Condition III.(3) of this Approval.

(v) All Tentatively Identified Compounds (TICs) will be resolved in accordance with groundwater monitoring Condition I.(6)(iii)d. of this Approval.

(8) Chemical waste landfill operations.

(i) In accordance with 40 C.F.R. § 761.75(b)(8)(i), PCBs and PCB Items shall be placed in the landfill in a manner which will prevent damage to containers or articles. In order to assure that no wastes which are chemically incompatible with PCBs are placed in the landfill, this Approval specifically disapproves the disposal of any wastes or materials not specifically approved herein. No "staging" or storage of PCB waste is allowed in any active Cell under this Approval. "Staging" is restricted to areas outside the disposal cells to be designated by GMF. "Staging" of containers having capacity of 110 gallons or less in excess of five calendar days must be considered storage and must occur only in a TSCA Approved or TSCA interim status commercial storage building (40 C.F.R. § 761.65). "Staging" of containers having capacity of greater than 110 gallons (i.e. bulk transport equipment) in excess of ten calendar days must be considered storage and must occur only in a TSCA or RCRA Approved commercial storage building(40 C.F.R. § 761.65).

(ii) In accordance with 40 C.F.R. § 761.75(b)(8)(ii) and

the Application, the operation plan consists of the following elements:

a. A List of Approved Wastes. These waste listings do not preclude the acceptance of wastes containing asbestos, or wastes having PCB concentrations <50 ppm that are similar to those listed below. Liquid wastes authorized in this Approval for disposal must first be solidified according to this Approval prior to disposal in an approved cell.

1. Contaminated debris including rags, protective clothing and gear, container liners, pallets, sampling apparatus, demolition materials, etc.

2. Empty PCB containers, such as tanks or drums. Drained (if liquid contents <1000 ppm PCB), or drained and flushed (if liquid contents >1000 ppm PCB) PCB hydraulic machines. Drained PCB contaminated articles or electrical equipment. Drained and flushed PCB transformers. PCB small capacitors from generators other than those who manufacture or at any time manufactured PCB capacitors or PCB equipment and acquired the PCB capacitors in the course of such manufacturing.

3. Soils contaminated with PCBs.

4. Leachate from on-site operations of PCB disposal cells, provided the leachate is first solidified in accordance with this Approval.

5. Liquids from incidental sources, such as precipitation, condensation, leachate or load separation and are associated with PCB Articles or non-liquid PCB wastes, if information is provided to or obtained by GMF that shows that the liquids do not exceed 500 ppm PCB and are not an ignitable waste as described in Sec. 761.75(b)(8)(iii) or are non-regulated aqueous liquids. These must be solidified and meet the same requirements for solidification and disposal of leachate in this Approval.

6. Solid PCBs and non-RCRA regulated solids that are compatible with PCBs.

b. Waste Analysis Plan ("WAP"). The WAP as modified on February 24, 1997 and condition I. (8) (i) and (ii) of this Approval, is

incorporated by reference and approved with the following major elements:

1. All sampling and analyses necessary for final waste acceptance shall be conducted on-site at the Knolls, Utah facility or at a Utah State-approved laboratory. This includes all fingerprint analyses used to determine acceptability of each waste load. Preacceptance analysis may also be done off-site.

2. The WAP has not been approved for on-site PCB analysis, which is subject to the Waste Acceptance Expansion, Condition IV. of this Approval.

3. The WAP lists wastes proposed for acceptance in Cell Z. Condition (8)(ii)a. lists wastes which are approved. Some wastes are not appropriate for disposal in Cell Z, such as commercial chemicals, and other potential RCRA wastes.

4. The WAP requires that solidified leachate and other solidified liquids pass the Paint Filter Liquids Test prior to landfilling.

5. The pre-acceptance information from the generator must include a certification that the waste has not been deliberately diluted from an original PCB concentration  $\geq 50$  ppm or deliberately mixed with soil in order to avoid the incineration requirements of 40 C.F.R. § 761.60(a). The specific source of the waste, waste description, original PCB concentration and other chemical constituents of the waste must also be reported by the generator.

6. The load sheet described on page 23 of the WAP must be signed by the Laboratory Manager or the TSD Chemist designating that the waste is either accepted or rejected.

7. The handling and disposal of wastes containing asbestos shall meet the Clean Air Act requirements, 40 C.F.R. 61 Subpart M, and those requirements specified in Section 7.3.4 of the WAP.

c. Solidification. The solidification process shall follow the guidelines established in the Cell B Application and GMF shall maintain an operating log for the process containing the following items

(except that only items 3 through 7 need be kept for solidified leachate):

1. the result of the PCB analysis, if any;
2. a unique batch identification code;
3. the specific recipe for each batch;
4. the initial and final weights and volumes (as calculated or otherwise estimated, without a requirement for direct measurement);
5. the result of the Paint Filter Liquids Test; and
6. the date of solidification and disposal.

d. Waste Placement. Three-dimensional waste burial coordinates shall be established in accordance with the Waste Burial Coordinates, Section 6 of the Application.

e. Monitoring. Maintenance of the monitoring systems, sampling and analysis of surface water, leachate and groundwater, shall follow the conditions specified in other parts of this Approval.

f. Vehicle and Equipment Movement. The on-site movement of vehicles and equipment shall follow the plan contained in the Vehicle and Equipment Movement and Use of Roadways, Sections 7 and 8 of the Application and utilize the truck wheel wash located on the East ramp of the cell and for Cell Z utilize the truck wheel wash located between Cells X and Y.

g. Contingency Plan. GMF shall follow the July 2004 contingency plan contained in the RCRA Permit Application, as revised. In the event of a spill, release, disposal of a disapproved waste or any unauthorized transfer of PCB waste from a designated area, GMF shall notify EPA Region 8 within 24 hours of the incident by telephone and within 5 business days by written report, describing the incident, the operations involved, the cleanup actions and operational changes designed to prevent a reoccurrence. GMF shall also follow the PCB Spill Cleanup Policy contained in 40 C.F.R. 761 Subpart G.

If the incident involves a security breach, the acceptance of waste types involved in the incident, as well as any other similar waste types, is automatically suspended. A security breach may

be identified by GMF, by an independent security auditor or by EPA via a written notice from the Director of the Pollution Prevention, Pesticides and Toxics Program, Office of Partnerships and Regulatory Assistance. A security breach is defined herein as any unauthorized transfer of PCB waste from a designated area or as a failure to meet any of the provisions of the security plan or Condition I.(8)(ii)i. of this Approval. After GMF identifies implements and reports to EPA regarding corrective actions to prevent a reoccurrence, GMF may reinstate acceptance of the waste types involved in the incident.

If the incident involves an unapproved disposal, GMF will initiate a recovery operation to remove the unapproved waste. If the waste cannot be identified for removal, GMF will remove all waste identified within the disposal coordinates as delineated in Condition I.(8)(ii)d. of this Approval.

h. Health and Safety. GMF shall take all necessary precautionary measures to ensure that operation of the landfill is in compliance with all applicable safety and health standards, as required by federal, state and local regulations and ordinances. Any lost-time injury which occurs as a result of landfill operations must be reported by telephone to the Pollution Prevention, Pesticides and Toxics Program, Office of Partnerships and Regulatory Assistance, EPA Region 8 by the next business day. A written report describing the incident must be submitted to EPA Region 8 within 5 business days.

i. Security. A six-foot woven mesh fence with gates encloses the entire GMF. All gates are kept shut and locked except when being used and/or monitored by security and/or operations personnel. During business hours, site access is controlled through a single automated gate monitored by a site attendant. All site access is strictly enforced at all times. Perimeter fences are marked at appropriate intervals with required warning signs. The perimeter fence, gates and locks are inspected daily, including weekends and holidays. Inspection records shall be kept at the site and available upon EPA's request.

j. Personnel Training. GMF shall follow the employee training plan contained in the Employee

Training, Section 14 of the Application. GMF shall certify the successful completion of applicable training for each employee prior to that employee's handling or management of PCB wastes.

(iii) In accordance with 40 C.F.R. § 764.75(b)(8)(iii), ignitable wastes (flash point <140°F) shall not be disposed of in chemical waste landfill nor shall any other RCRA wastes be disposed in this landfill.

(iv) In accordance with 40 C.F.R. §§ 761.75(b)(8)(iv) and 761.75(c)(3)(ii), GMF shall maintain daily the following records. All records shall be maintained by the General Manager or any other company individual, specifically designated by title, whom the General Manager authorizes in writing. Such written authorization shall be maintained in the operating log. The operating log shall also contain the following:

a. The operating log required by Condition I.(8)(ii)c. of this Approval.

b. Records for the three dimensional burial coordinates for PCB waste required by Condition I.(8)(ii)d. of this Approval.

c. An annual document described in 40 C.F.R. § 761.180(b) which contains information on the type and quantity of PCBs and PCB items handled at the facility.

d. Records described in 40 C.F.R. § 761.180(d)(1), including daily site rainfall accumulations, surface water analyses and groundwater analyses and elevations obtained in accordance with 40 C.F.R. § 761.75(b)(6) and Condition I.(6) of this Approval.

e. Records of leachate quantities and analyses obtained in accordance with Condition I.(7) of this Approval. Included in these records shall be the site rainfall records required by Condition I.(7)(iii) of this Approval.

f. Records of all waste analysis obtained in accordance with Condition I.(8)(ii)b. of this Approval and the waste analysis plan, including records of all instrument calibrations, performance audits and corrective actions required in the sampling and analysis plan, and all preacceptance information and analyses from the generators.

g. Records of all facility inspections conducted in accordance with the security plan (procedures to prevent hazards) contained in the Application. These records shall include a videotape library from the closed circuit television cameras and all certifications required under Condition I.(8)(ii)i. of this Approval. The video tapes may be reused after they are reviewed and the certifications are made.

h. Records of all personnel training conducted in accordance with this Approval. Within 15 days of the end of each calendar quarter, GMF shall create a record which summarizes the complement of trained staff. The record shall address the availability of trained personnel for the key positions listed on page 14-8 of the Employee Training, Section 14 of the Application. GMF shall provide a narrative explaining any gaps or dual roles, and shall keep this record available for inspection.

i. Other records described in the Recordkeeping, Section 3 of the Application, all engineering certifications and all documents referenced in this Approval, including the Application, all revisions and all test methods or documents referenced therein. A copy of this Approval shall be maintained at the facility.

j. Records of any reportable spills of hydraulic oils or other liquids within the cell, and the disposition of the recovered material.

(v) In accordance with 40 C.F.R. § 761.75(c)(3)(ii), GMF shall submit the following reports to EPA Region 8 (with courtesy copies submitted to the Utah Department of Environmental Quality) initially in accordance with compliance Conditions III.(1) and (2) and then in accordance with the following schedule. All reports shall include a specific reference to the Approval condition requiring submittal. All reports shall be submitted by an officer of Clean Harbors Grassy Mountain, LLC, or any other company individual, specifically designated by title, whom an officer of Clean Harbors Grassy Mountain, LLC authorizes in writing. Such written authorization shall be submitted to the Director of the Pollution Prevention, Pesticides and Toxics Program, Office of Partnerships and Regulatory Assistance, EPA Region 8:

a. All engineering reports which certify construction of landfill components in accordance

with the Application, due within 60 days of the construction completion date or as otherwise required by the compliance schedule. This condition has been met as the facility had provided courtesy copies of CQA and CQC documents dated November 1993.

b. Semi-annual reports, due within 60 days of the end of the second and fourth calendar quarters, of the waste analysis and solidification records made in accordance with Condition I.(8)(iv)a of this Approval. This report shall include records of any reportable spills of liquids within the cell and copies of all gas chromatographic records pertaining to PCB analysis conducted as required by this Approval, as well as all QA/QC records associated with each PCB analysis.

c. Semi-annual reports, due within 60 days of the end of the second and fourth calendar quarters, of the records of surface water analyses and groundwater analyses for Attachment B and Attachment C Parameters, and groundwater elevations (including a groundwater contour map) required by Condition I.(8)(iv)d. of this Approval. The groundwater contour map shall include contours drawn from all available facility wide groundwater elevations. If the reports include the identification (including tentatively) of any compounds above the detection limit, then the report shall also include copies of all raw data pertaining to the analysis of each identified compound, as well as all QA/QC records associated with each analysis. The semi-annual reports of the Attachment B compounds shall be accompanied by the results of the analysis of the performance evaluation samples required by compliance Condition III.(3) of this Approval.

d. Semi-annual reports, due within 60 days of the end of the second and fourth calendar quarters, of the records of leachate quantities and analyses for Attachment B parameters required by Condition I.(8)(iv)e. of this Approval. The semi-annual reports of the Attachment B compounds shall be accompanied by the results of the analysis of the performance evaluation samples required by compliance Condition III.(3) of this Approval.

e. Annual reports, due July 15, of the records of all PCB wastes handled at the facility during the previous calendar year, as required by Condition

I.(8)(iv)c. of this Approval. This annual report shall also include as an attachment a revision to the closure and post-closure cost estimates, as well as the financial instrument, based on the previous year's inflation rate and any other information affecting the costs. No reduction in the funding level of the financial instrument may be implemented without the written approval of EPA.

f. Other reports such as spill or release reports, groundwater contamination reports, and corrective action plans as required by other conditions of this Approval or specified in the Application. Other reports may be required by EPA pursuant to 40 C.F.R. § 761.75(c)(2) or TSCA Section 11.

(9) Supporting facilities.

(i) A six foot high cyclone fence topped with barbed wire shall be maintained around the site to prevent unauthorized persons and animals from entering.

(ii) Vehicle and equipment movement and decontamination shall be in accordance with Section 7 of the Application Roads shall be maintained to and within the site which are adequate to support the operation and maintenance of the site without causing safety or nuisance problems or hazardous conditions.

(iii) The site shall be operated and maintained in a manner to prevent safety problems or hazardous conditions resulting from spilled liquids and windblown materials.

II. Administrative and Other Requirements

(1) Financial assurance. In accordance with 40 C.F.R. § 761.75(c)(3)(ii) and the closure and post-closure plans contained in the Application, GMF shall maintain an approved type of financial assurance mechanism to cover the costs of closure and post-closure maintenance and monitoring. The closure and post-closure cost estimates shall be adjusted annually for inflation and reported to EPA in accordance with Condition I.(8)(v)e. of this Approval. EPA must approve in writing any reduction in the coverage of the financial assurance mechanism.

(2) Closure and post-closure plan. In accordance with 40 C.F.R. § 761.75(c)(3)(ii) and the closure and post-closure plans including the construction quality assurance plan, revision dated July 3, 1997, closure and post-closure cost estimates), GMF shall provide closure and post-closure care

and maintenance that include the following major components:

(i) Cell Z Closure plan. Profiles of the final cap are shown in Attachment D of this Approval. No interim cap or subsidence period is expected to be required prior to placement of the final cap. Following items are the major elements of the closure plan:

a. A 265 day closure schedule beginning on the date of receipt of the final volume of waste. This schedule contains adequate allowance for all contingencies and is fully enforceable. Any request for an extension of the schedule or modification of the plan requires written approval by EPA and such request does not suspend the deadline for closure.

b. A soil sampling and excavation plan to remove and dispose PCB contaminated soils on the access roads and potential exposure areas.

c. A two foot thick compacted clay cap which meets the technical specifications contained in Conditions I.(1)(ii) through (v) of this Approval or Geosynthetic Clay Liner (GCL) that meets the requirements in the CQA plan.

d. A 60 mil HDPE cap with a drainage net and non-woven geotextile.

e. Two feet of additional soil cover.

f. Four inches of gravel cover.

g. A final cap with a minimum slope of 0.63% on the discharge channels, and a maximum slope of 5% on the closure cap. The final closure cap profiles are shown in Attachment D of this Approval.

h. Outlet piping to convey rainfall runoff down the embankments.

i. A final closure report including all engineering certifications, due within 45 days after completion of closure.

j. Submittal of copies of the notices in the deed to the property and to the local land authority, due within 90 days of completion of closure.

(ii) Post-closure for cells X, Y, and Z. The post-closure

plan includes the following major components:

a. Subsidence monitoring, consisting of annual instrument surveys and review of foundation settlement as monitored by the three instruments referred to in the Cell Z construction certification documents, if functioning. Records of the measured subsidence shall be kept for the period of post-closure and reported to EPA with the next submittal of the groundwater and leachate report.

b. Groundwater monitoring for post-closure years 1-8, consisting of semi-annual sampling and analysis for the wells and parameters specified in Condition I.(6) of this Approval. Semi-annual reports due within 60 days after the end of the second and fourth calendar quarters shall be sent to EPA. For post-closure years 9-30, groundwater monitoring consisting of annual sampling and analysis for the wells and parameters specified in Condition I. (6) of this Approval. Annual reports (years 9-30), due within 60 days after the end of the fourth calendar quarter, shall be sent to EPA.

c. Leachate monitoring, consisting of pumping and quantification at the minimum frequency shown in the following table.

<u>POST-CLOSURE YEARS</u>	<u>FREQUENCY</u>
1	Weekly
2 - 3	Every Other Week
4-5	Monthly
6	Every Other Month
7	Quarterly
8	Semi-Annually
9 - 30	Annually

Sampling and analysis for the parameters specified in Condition I.(7)of this Approval will be done quarterly for all secondary sumps and semi-annually for primary (upper) sumps for post-closure years 1-5 and semi-annually for all primary and secondary sumps for post-closure years 6-8, and annually for post-closure years 9-30. Semi-annual reports (years 1-8), due within 60 days after the end of

the second and fourth calendar quarters, shall be sent to EPA. Annual reports (years 9-30), due within 60 days after the end of the fourth calendar quarter, shall be sent to EPA. A report including an evaluation on the leachate quantity projection and detected PCBs concentrations during the post-closure year 1-8 period shall also be submitted to EPA. The report is due within 60 days from the end of the 8<sup>th</sup> post-closure year.

d. Cap maintenance, consisting of erosion control and differential settlement correction to maintain an overall minimum 2% slope across the cap.

e. The post-closure plan specifies the inclusion of post-closure costs associated with groundwater sampling and analysis under this Approval.

(3) Ownership transfer.

(i) GMF must notify EPA Region 8 in writing at least 30 days before transferring ownership of the PCB landfill. This notice shall include a notarized affidavit signed by the transferee which states that the transferee is willing to abide by all conditions of GMF's EPA approval. It is GMF's responsibility to include in the notification the name, corporate structure, address, telephone number, and other pertinent information about the transferee. GMF must also submit a report of approved disposal activities including quantities, concentrations (as required) and disposal cell coordinates of PCB wastes disposed prior to the transfer, and a description of the equipment, other property or operating staff involved in the transfer. The transferee must provide a written certification attesting to having a full complement of trained staff and a financial assurance instrument for closure and post-closure prior to conducting any PCB disposal operations. If GMF and the transferee fail to provide EPA with the required written documentation on the date of the notice of intended transfer, this Approval shall not be transferable.

(ii) Within 30 days of receipt of the notification and affidavit required above, EPA Region 8 will either issue an amended Approval substituting the transferee's name for GMF or require the transferee to apply for a new disposal Approval. In the latter case, the transferee will be notified by EPA whether it must cease all PCB disposal operations or whether it may continue operations and abide by GMF's EPA Approval until EPA issues a decision on the new Application.

(4) Modifications or additions. GMF shall apply to EPA in writing for prior written approval for any major design or operating modifications or additions of the operating Approval. For the purpose of this Approval, "major" shall be defined as any change to the capacity, design, waste type, waste analysis, solidification process, leachate collection, groundwater monitoring plan or any other changes affecting overall performance or environmental impact. Application must be made at least 90 days but no sooner than 120 days prior to the planned change. Specific issues which are anticipated to elicit modification requests are outlined in the Corrective Measures in Condition IV. of this Approval and are excluded from the advance notice requirement. Minor modifications include such items as a well replacement. Minor modifications require written approval from EPA but are not subject to the advance notice requirement.

(5) Extensions. GMF shall apply to EPA in writing for any extension of the operating Approval. Application for an extension must be made at least 90 days, but no sooner than 120 days, prior to the expiration date. EPA will respond to the request for an extension 30 days prior to the expiration date, provided GMF has complied with the Application period described above. There is no automatic extension of this Approval unless EPA fails to respond in writing to a request for an extension.

(6) Severability. The conditions of this Approval are severable, and if any provision of this Approval or Application of any provision is held invalid, the remainder of this Approval shall not be affected thereby.

(7) Modification, suspension or revocation. EPA reserves the right to modify, suspend or revoke this Approval for cause. Cause includes imminent hazard, new information which bears on the design, construction or operation of the facility or promulgation of new regulations. Cause also includes the failure to meet any and all conditions of this Approval, including schedules imposed in the compliance conditions.

(8) Confidential information. This Approval, the Application, revisions and all referenced documents are not protected as confidential business information. In accordance with the regulations contained in 40 C.F.R. Part 2, Subpart B (41 Federal Register, 36905, September 1, 1976 and 43 Federal Register, 39997, September 8, 1978), GMF is entitled to assert a business confidentiality claim covering any information submitted under this Approval. If such a confidentiality claim is not asserted with any submittal, EPA may make this information available to the public without further notice to GMF. Information subject to a business confidentiality claim may be made available to the public only to the extent set

forth in the above cited regulations. Any such claim for confidentiality must conform to the requirements set forth in 40 C.F.R. § 2.203(b).

(9) EPA Region 8 contacts. All written reports shall be sent to the Director, Pollution Prevention, Pesticides and Toxics Program, Office of Partnerships and Regulatory Assistance, EPA Region 8, 999 18th Street - Suite 300, Denver, Colorado, 80202-2466. All telephone reports to EPA Region 8 shall also be made to the Director of the Pollution Prevention, Pesticides and Toxics Program. As of the date of issuance of this Approval, the Program Director is Sadie Hoskie. The current Program Director's telephone number is (303) 312-6390.

### III. Compliance Schedule

(1) The second calendar quarter of 1996 shall be the subject of the first surface water analyses (Attachment B) and groundwater analyses (Attachments B and C) report required by Condition I.(8)(v)c. of this Approval. This condition has been met.

(2) The second calendar quarter of 1996 shall be the subject of the first report of monthly groundwater elevations, including the first contour map, required by Condition I.(8)(v)c. of this Approval and shall be due August 31, 1996. The new groundwater monitoring network shall be reflected in the report for the fourth calendar quarter of 1996. This condition has been met.

(3) At least 30 days prior to use of a laboratory other than or in addition to a currently authorized laboratory for groundwater analyses, GMF shall submit a certification signed by the an Officer of Clean Harbors Grassy Mountain, LLC, that GMF has implemented a laboratory oversight program for laboratories performing analysis for GMF which are not subject to GMF control nor GMF imposition of QA/QC procedures. The oversight program shall establish an initial review of the off-site laboratory's methods, QA/QC and Standard Operating Procedures, with periodic reviews to evaluate any changes. It shall also include corrective action procedures. The oversight program shall include quarterly performance evaluation samples which GMF shall provide to the off-site laboratory for analysis. GMF shall submit to EPA a narrative description of the oversight program prior to its implementation.

### IV. Waste Acceptance Expansion

If GMF desires to test for PCBs or other organics in its on-site laboratory, it must submit a modification request, including a revised WAP, in writing to the Assistant Regional

Administrator, Office of Partnership and Regulatory Assistance. Upon receipt of the request, EPA may conduct on-site laboratory audits to verify laboratory adequacy and acceptability for organic analyses prior to a decision on the modification of this Approval. The scope of these on-site audits will include the presentation of PCB standards, or check samples in various matrices, or for spiking into actual wastes, for same day analysis by GMF personnel assigned to the site. Observation of QA/QC procedures, personnel interviews, and/or review of existing records may also be included in these on-site audits.

#### APPROVAL STATEMENT

1. Approval to dispose of PCBs is hereby granted to Clean Harbors Grassy Mountain, LLC, a subsidiary of Clean Harbors, Inc., subject to the conditions contained herein, and consistent with the materials and data included in the Application filed by the company. The Application submitted by Clean Harbors Grassy Mountain, LLC is expressly incorporated as a condition of this Approval. EPA reserves the right to impose additional conditions when it has reason to believe that the continued operation of the GMF PCB landfill presents an unreasonable risk to public health or the environment, or when statutory or regulatory amendments are made. Any such proposed additional conditions shall be preceded by reasonable advance notice to GMF and opportunity for GMF to comment on the proposed modifications. Any departure from the conditions of this Approval or the terms expressed in the Application must receive prior written authorization from the EPA Region 8 Assistant Regional Administrator of the Office of Partnerships and Regulatory Assistance, which will constitute an amendment to this Approval.

2. This Approval to dispose of PCBs does not relieve GMF of the responsibility to comply with all applicable federal, state and local regulations. Violations of any applicable regulations will be subject to enforcement action and may result in termination of this Approval. This Approval may be rescinded at any time for failure to comply with the conditions contained herein or the terms of the Application, failure to disclose all relevant facts, falsification of any record required by this Approval, or for any other reasons which the EPA Region 8 Assistant Regional Administrator of the Office of Partnerships and Regulatory Assistance, deems necessary to protect public health and the environment.

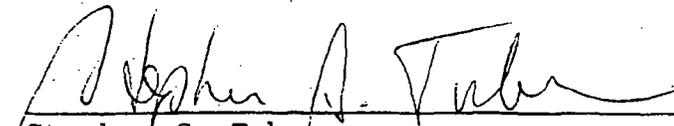
3. GMF shall be responsible for the actions of any authorized GMF employees when those actions are within the scope of constructing, operating or maintaining the landfill, and shall assume full responsibility for compliance with all applicable federal, state and local regulations including, but not limited to, any advance or emergency notification and accident reporting requirements.

4. This Approval is conditional upon the ongoing consent of GMF to allow EPA employees or agents, upon presentation of credentials to enter onto the site, and inspect, sample, copy records or otherwise monitor the GMF PCB landfill activities at any reasonable time for the purposes of determining compliance with this Approval.

5. Operation of the landfill by GMF will constitute an acceptance of and agreement to all conditions of this Approval.

OCT 21 2005

Date

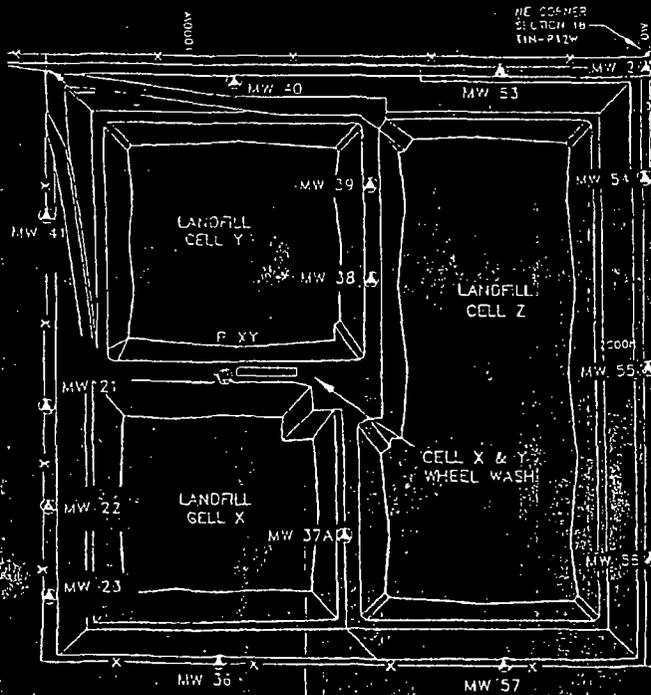
  
\_\_\_\_\_  
Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

**ATTACHMENT A**

Monitoring Well Location Map



GRASSY MOUNTAIN FACILITY

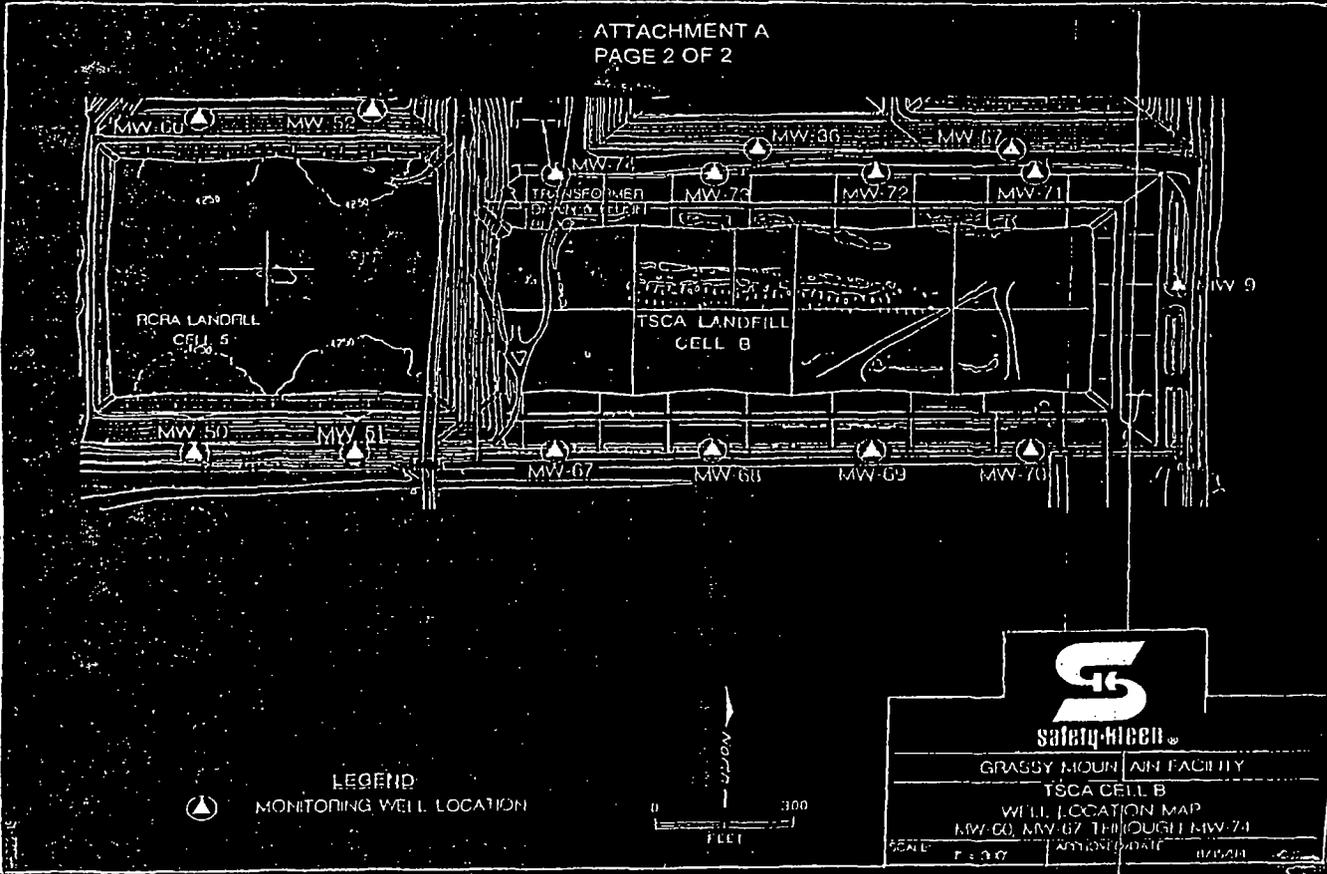


- ⊙ EXISTING WELL
- ⊙ EXISTING MONITORING WELL

- ⊙ MONITORING WELL LOCATIONS CELLS X AND Y
- ⊙ MONITORING WELL LOCATIONS CELL Z

ATTACHMENT A  
PAGE 1 OF 2

ATTACHMENT A  
PAGE 2 OF 2



**ATTACHMENT B**  
List of Chlorinated Organics

ATTACHMENT B  
CHLORINATED ORGANICS

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
<b>VOLATILE ORGANICS</b>	<b>TSCA ATTACHMENT B CHEMICALS</b>			
Acetone	67-64-1	100	100	SW-846 8260B
Acrolein	107-02-8	5	200	SW-846 8260B
Acrylonitrile	107-13-1	5	20	SW-846 8260B
Benzene	71-43-2	5	5	SW-846 8260B
Bromodichloromethane	75-27-4	5	5	SW-846 8260B
Bromoform (Tribromomethane)	75-25-2	5	5	SW-846 8260B
Bromomethane	74-83-9	10	10	SW-846 8260B
2-Butanone (MEK)	78-93-3	100	100	SW-846 8260B
Carbon disulfide	75-15-0	5	5	SW-846 8260B
Carbon tetrachloride	56-23-5	5	5	SW-846 8260B
Chlorobenzene	108-90-7	5	5	SW-846 8260B
Chloroethane	75-00-3	10	10	SW-846 8260B
2-chloroethyl vinyl ether	110-75-3	n/a	5	SW-846 8260B
Chloroform	67-66-3	5	5	SW-846 8260B
Chloromethane	74-87-3	10	10	SW-846 8260B
Cyclohexane	110-82-7	n/a	20	SW-846 8260B
Dibromochloromethane	124-48-1	5	5	SW-846 8260B
1,2-Dibromo-3-chloropropane	96-12-8	5	5	SW-846 8260B or 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
1,2-Dibromoethane	106-93-4	5	5	SW-846 8260B
Dibromomethane (methylene bromide)	74-95-3	5	5	SW-846 8260B
cis-1,4-Dichloro-2-butene	1476-11-5	n/a	20	SW-846 8260B
Dichlorodifluoromethane	75-71-8	5	5	SW-846 8260B
1,1-Dichloroethane	75-34-3	5	5	SW-846 8260B
1,2-Dichloroethane	107-06-2	5	5	SW-846 8260B
trans-1,2-Dichloroethene	156-60-5	5	5	SW-846 8260B
1,1-Dichloroethene	75-35-4	5	5	SW-846 8260B
1,2-Dichloropropane	78-87-5	5	5	SW-846 8260B
cis-1,3-Dichloropropene	10061-01-5	5	5	SW-846 8260B
trans-1,3-Dichloropropene	10061-02-6	5	5	SW-846 8260B
Ethylbenzene	100-41-4	5	5	SW-846 8260B
Ethyl methacrylate	97-63-2	5	20	SW-846 8260B or 8270C
Methyl iodide (Iodomethane)	74-88-4	5	20	SW-846 8260B
Methacrylonitrile	126-98-7	5	20	SW-846 8260B
Methylene chloride (Dichloromethane)	75-09-2	5	90	SW-846 8260B
Methyl methacrylate	80-62-6	5	20	SW-846 8260B
4-Methyl-2-pentanone (MIBK)	108-10-1	50	50	SW-846 8260B
Pentachloroethane	76-01-7	5	100	SW-846 8260B or 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
Propionitrile (Ethyl cyanide)	107-12-0	5	250	SW-846 8260B
Styrene	100-42-5	5	5	SW-846 8260B
1,1,1,2-Tetrachloroethane	630-20-6	5	5	SW-846 8260B
1,1,2,2-Tetrachloroethane	79-34-5	5	5	SW-846 8260B
Tetrachloroethene	127-18-4	5	5	SW-846 8260B
Toluene	108-88-3	5	5	SW-846 8260B
1,1,1-Trichloroethane	71-55-6	5	5	SW-846 8260B
1,1,2-Trichloroethane	79-00-5	5	5	SW-846 8260B
Trichloroethene	79-01-6	5	5	SW-846 8260B
Trichlorofluoromethane	75-69-4	5	5	SW-846 8260B
Vinyl acetate	108-05-4	5	5	SW-846 8260B
Vinyl chloride	75-01-4	10	10	SW-846 8260B
total Xylenes	1330-20-7	5	15	SW-846 8260B
Acetonitrile	75-05-8	100	100	SW-846 8260B
1,4-dioxane	123-91-1	150	500	SW-846 8260B
isobutyl alcohol	78-83-1	50	250	SW-846 8260B
<b>SEMIVOLATILE COMPOUNDS</b>	<b>TSCA ATTACHMENT B CHEMICALS</b>			
Acenaphthene	83-32-9	10	10	SW-846 8270C
Acenaphthylene	208-96-8	10	10	SW-846 8270C
Acetophenone	98-86-2	10	10	SW-846 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
2-Acetylaminofluorene	53-96-3	10	10	SW-846 8270C
Aniline	62-53-3	10	10	SW-846 8270C
Anthracene	120-12-7	10	10	SW-846 8270C
Benzenethiol	108-98-5	n/a	100	SW-846 8270C
Benzidine	92-87-5	n/a	100	SW-846 8270C
Benzoic Acid	65-85-0	n/a	25	SW-846 8270C
Benz(a)anthracene	56-55-3	10	10	SW-846 8270C
Benzo(a)pyrene	50-32-8	10	25	SW-846 8270C
Benzo(b)fluoranthene	205-99-2	10	10	SW-846 8270C
Benzo(g,h,i)perylene	191-24-2	10	10	SW-846 8270C
Benzo(k)fluoranthene	207-08-9	10	10	SW-846 8270C
Benzyl alcohol	100-51-6	20	50	SW-846 8270C
bis(2-Chloroethoxy)methane	111-91-1	10	10	SW-846 8270C
bis(2-Chloroethyl) ether	111-44-4	10	10	SW-846 8270C
bis(2-Chloroisopropyl) ether (2,2'-oxybis(1-Chloropropane))	108-60-1	10	10	SW-846 8270C
bis(2-Ethylhexyl) phthalate	117-81-7	10	35	SW-846 8270C
4-Bromophenyl phenyl ether	101-55-3	10	10	SW-846 8270C
Butyl benzyl phthalate	85-68-7	10	25	SW-846 8270C
p-Chloroaniline	106-47-8	20	20	SW-846 8270C
Chlorobenzilate	510-15-6	10	300	SW-846 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
4-Chloro-3-methylphenol (p-Chloro-m-cresol)	59-50-7	20	25	SW-846 8270C
2-Chloronaphthalene	91-58-7	10	10	SW-846 8270C
2-Chlorophenol	95-57-8	10	25	SW-846 8270C
4-Chlorophenyl phenyl ether	7005-72-3	10	10	SW-846 8270C
Chrysene	218-01-9	10	10	SW-846 8270C
2-Methylphenol (o-Cresol)	95-48-7	10	25	SW-846 8270C
3-Methylphenol (m-Cresol)	108-39-4	10	25	SW-846 8270C
4-Methylphenol (p-Cresol) or m + p	106-44-5	10	25	SW-846 8270C
Diallate	2303-16-4	10	20	SW-846 8270C
Dibenz(a,h)anthracene	53-70-3	10	10	SW-846 8270C
Dibenzofuran	132-64-9	10	10	SW-846 8270C
Di-n-butyl phthalate	84-74-2	10	25	SW-846 8270C
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	10	10	SW-846 8270C
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	10	10	SW-846 8270C
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	10	10	SW-846 8270C
3,3'-Dichlorobenzidine	91-94-1	20	20	SW-846 8270C
2,4-Dichlorophenol	120-83-2	10	25	SW-846 8270C
2,6-Dichlorophenol	87-65-0	10	10	SW-846 8270C
o,o-Diethyl 0-2-pyrazinylphosphorothic acid (Thionazin and Zinaphos)	297-97-2	10	10	SW-846 8270C
Diethyl phthalate	84-66-2	10	10	SW-846 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
Dimethoate	60-51-5	10	100	SW-846 8270C
3,3'-Dimethylbenzidine	119-93-7	10	10	SW-846 8270C
p-Dimethylaminoazobenzene	60-11-7	10	10	SW-846 8270C
7,12-Dimethylbenz(a)anthracene	57-97-6	10	10	SW-846 8270C
alpha, alpha-Dimethylphenethylamine	122-09-8	10	50	SW-846 8270C
2,4-Dimethylphenol	105-67-9	10	25	SW-846 8270C
Dimethyl phthalate	131-11-3	10	10	SW-846 8270C
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol) (2-methyl-4,6-dinitrophenol)	534-52-1	50	50	SW-846 8270C
2,4-Dinitrophenol	51-28-5	50	50	SW-846 8270C
2,4-Dinitrotoluene	121-14-2	10	10	SW-846 8270C
2,6-Dinitrotoluene	606-20-2	10	10	SW-846 8270C
Di-n-octyl phthalate	117-84-0	10	20	SW-846 8270C
Ethyl methanesulfonate	62-50-0	10	10	SW-846 8270C
Famphur (for groundwater only)	52-85-7	10	10	SW-846 8270C
Fluoranthene	206-44-0	10	10	SW-846 8270C
Fluorene	86-73-7	10	10	SW-846 8270C
Hexachlorobenzene	118-74-1	10	10	SW-846 8270C
Hexachlorobutadiene	87-68-3	10	10	SW-846 8270C
Hexachlorocyclopentadiene	77-47-4	10	10	SW-846 8270C
Hexachloroethane	67-72-1	10	10	SW-846 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
Hexachlorophene	70-30-4	10	400	SW-846 8270C
Hexachloropropene	1888-71-7	10	10	SW-846 8270C
Indene	95-13-6	n/a	10	SW-846 8270C
Indeno(1,2,3-cd)pyrene	193-39-5	10	10	SW-846 8270C
Isodrin	465-73-6	10	10	SW-846 8270C
Isophorone	78-59-1	10	10	SW-846 8270C
Isosafrole	120-58-1	10	10	SW-846 8270C
Kepone	143-50-0	10	100	SW-846 8270C
Methapyrilene	91-80-5	10	20	SW-846 8270C
3-Methylcholanthrene	56-49-5	10	10	SW-846 8270C
1-Methylnaphthalene	90-12-0	n/a	10	SW-846 8270C
2-Methylnaphthalene	91-57-6	10	10	SW-846 8270C
Naphthalene	91-20-3	10	10	SW-846 8270C
1,4-Naphthoquinone	130-15-4	10	20	SW-846 8270C
1-Naphthylamine	134-32-7	10	10	SW-846 8270C
2-Naphthylamine	91-59-8	10	10	SW-846 8270C
4-Nitroaniline (p-nitroaniline) (4-nitrobenzenamine)	100-01-6	50	50	SW-846 8270C
Nitrobenzene	98-95-3	10	10	SW-846 8270C
2-Nitrophenol (o-Nitrophenol)	88-75-5	10	25	SW-846 8270C
4-Nitrophenol (p-Nitrophenol)	100-02-7	10	25	SW-846 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
N-Nitroso-di-n-butylamine	924-16-3	10	10	SW-846 8270C
N-Nitroso-di-n-propylamine	621-64-7	10	10	SW-846 8270C
N-Nitrosodiethylamine	55-18-5	10	10	SW-846 8270C
N-Nitrosodimethylamine	62-75-9	10	10	SW-846 8270C
N-Nitrosodiphenylamine	86-30-6	10	10	SW-846 8270C
N-Nitrosopiperidine	100-75-4	10	10	SW-846 8270C
N-Nitrosopyrrolidine	930-55-2	10	10	SW-846 8270C
5-Nitro-o-toluidine	99-55-8	10	10	SW-846 8270C
Parathion	56-38-2	10	10	SW-846 8270C
Pentachlorobenzene	608-93-5	10	10	SW-846 8270C
Pentachloronitrobenzene	82-68-8	10	10	SW-846 8270C
Pentachlorophenol	87-86-5	50	50	SW-846 8270C
Phenacetin	62-44-2	10	10	SW-846 8270C
Phenanthrene	85-01-8	10	10	SW-846 8270C
Phenol	108-95-2	10	25	SW-846 8270C
2-Picoline	109-06-8	10	10	SW-846 8270C or 8240
Pronamide	23950-58-5	10	10	SW-846 8270C
Pyridine *	110-86-1	10	10	SW-846 8270C or SW-846
Quinoline	91-22-5	NA	10	SW-846 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
Safrole	94-59-7	10	10	SW-846 8270C
Sulfotepp	3689-24-5	10	10	SW-846 8270C
1,2,4,5-Tetrachlorobenzene	95-94-3	10	10	SW-846 8270C
Thionazin (o,o,-Diethyl-o-2-pyrazinyl phosphorothioate)	297-97-2	10	10	SW-846 8270C
o-Toluidine	95-53-4	10	10	SW-846 8270C
1,2,4-Trichlorobenzene	120-82-1	10	10	SW-846 8270C
2,4,6-Trichlorophenol	88-06-2	10	25	SW-846 8270C
1,3,5-Trinitrobenzene (sym-Trinitrobenzene)	99-35-4	10	10	SW-846 8270C

ATTACHMENT C  
List of Additional RCRA Groundwater Parameters

ATTACHMENT C  
LIST OF ADDITIONAL RCRA GROUNDWATER PARAMETERS

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analytical Method *
<b>METALS (TOTALS)</b>				
Arsenic	7440-38-2	500	500	SW846 6010B or 7060
Barium	7440-39-3	20	20	SW846 6010B
Beryllium	7440-41-7	3	3	SW846 6010B
Cadmium	7440-43-9	40	40	SW846 6010B
Chromium	7440-47-3	70	70	SW846 6010B
Copper	7440-50-8	60	60	SW846 6010B
Lead	7439-92-1	40	50	SW846 6010B
Mercury	7439-97-6	2	2	SW846 7470A
Nickel	7440-02-0	50	50	SW846 6010B
Selenium	7782-49-2	750	750	SW846 6010B or 7740
Silver	7440-22-4	70	70	SW846 6010B
Zinc	7440-66-6	20	250	SW846 6010B
<b>INORGANIC COMPOUNDS</b>				
Sulfide ***	18496-25-8	10000	5,000	EPA 376.1
Total Organic Carbon ***	n/a	n/a	3,000	SW-846 9060 / EPA 415.1
pH ***	n/a	n/a	n/a	EPA 150.1
Total Dissolved Solids ***	n/a	n/a	21,000	EPA 160.1
Total Suspended Solids ***	n/a	n/a	10,000	EPA 160.2
Turbidity **	n/a	n/a	n/a	
<b>GROSS CATIONS/ANIONS</b>				
Bicarbonate alkalinity	71-52-3	n/a	5,000	EPA 310.1
Chloride	16887-00-6	n/a	1,000	EPA 300.0
Fluoride	16984-48-8	n/a	500	EPA 300.0
Sulfate	14808-79-8	n/a	5,000	EPA 300.0
Calcium	7440-70-2	n/a	1,000	SW-846 6010B / EPA 200.7
Magnesium	7439-95-4	n/a	100	SW-846 6010B / EPA 200.7
Potassium	7440-09-7	n/a	1,000	SW-846 6010B / EPA 200.7
Sodium	7440-23-5	n/a	1,500	SW-846 6010B / EPA 200.7

\* or equivalent SW846 or EPA methods. These or the current published method may be used.

\*\* Statistical analysis not required.

\*\*\* Statistical analysis not required but the value versus time plot will be reviewed for anomalies.

**ATTACHMENT D**  
Final Cap Profiles





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

IN THE MATTER OF ) COORDINATED APPROVAL  
Clean Harbors Grassy Mountain, LLC, ) OF TSCA/RCRA LANDFILL CELL B/6  
a subsidiary of Clean Harbors, Inc., )  
hereinafter referred to as GMF ) APPLICATION FOR LAND DISPOSAL  
with corporate offices located in ) OF POLYCHLORINATED BIPHENYL (PCB)  
Braintree, Massachusetts ) WASTE

AUTHORITY

This Coordinated Approval and Waiver of Technical Requirements (Approval) is issued to GMF pursuant to Section 6(e) of the Toxic Substances Control Act of 1976 (TSCA), 15 U.S.C. 2601 *et seq.*, and the Federal PCB Regulations, 40 CFR Parts 761.75 and 761.77. Conditions of this Approval supersede any conflicting elements of the Application.

WAIVER OF TECHNICAL REQUIREMENTS

The United States Environmental Protection Agency Region 8 (EPA) waives the requirement at 40 CFR § 761.75(b)(3) to permit the bottom of the TSCA/RCRA Landfill Cell B/6 to be above the historical high water table compared to at least 50 feet as required. EPA also waives the requirement at 40 CFR §§ 761.75 and (6)(iii) and (7) to permit the frequencies of groundwater and leachate sampling and analyses for PCBs, pH, specific conductance and chlorinated organics to be performed semi-annually. EPA believes that the operations of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs when the requirements at 40 CFR §§ 761.75(b)(3), (6)(iii) and (7), are waived. In particular, Cell B/6 has a triple High Density Polyethylene (HDPE) liner with leachate collection and groundwater monitoring systems.

GMF is authorized under 40 CFR § 761.65(b)(2)(iii) to store PCBs and PCB items designated for disposal in accordance with a permit issued by the Utah Department of Environmental Quality authorized under Section 3006 of the Resource Conservation and Recovery Act (RCRA).

EFFECTIVE DATE

This Coordinated Approval shall become effective immediately and, including future modifications, shall expire on August 31, 2015, which coincides with the expiration date of the RCRA permit.

## DEFINITION

- 1) "Application" means the following documents submitted by GMF for approval:

Cell B TSCA Approval Application, Volumes 1, 2, and 3, dated August 1995, as amended by the "Response to Notice of Deficiencies," dated September 1995, and the following supplemental information dated October 5, 1995, November 15, 1995, February 23, 1996 and March 7, 1996, and all applicable EPA policies, guidance, and technical references.

Letter, dated June 06, 2005, from Mr. Chris Lilly to Mr. Stephen Tuber, requesting a TSCA PCB Coordinated Approval.

Class III Permit Modification RCRA Permit, August 31, 2005, as amended.

- 2) "EPA" means the U.S. Environmental Protection Agency Region 8.
- 3) "ARA" means the Assistance Regional Administrator, Office of Partnerships and Regulatory Assistance, EPA Region 8.
- 4) "RCRA Permit" means the State Issued Part B Permit of Landfill Cell B/6 issued to GMF by the State of Utah Department of Environmental Quality, Division of Solid and Hazardous Waste on August 31, 2005.
- 5) "TSCA" means the Toxic Substances Control Act of 1976, 15 U.S.C. 2601, *et seq.*

## CONDITIONS OF APPROVAL

- 1) GMF shall operate in accordance with the RCRA Permit issued by the Utah Department of Environmental Quality, Division of Solid and Hazardous Waste. Specific requirements for PCB waste management are included in Module X and Attachments II-WAP & II-PCB WAP of the RCRA Permit.
- 2) GMF shall submit, semi-annually, groundwater and leachate monitoring data to EPA. The detection limits and report schedule will be the same as that required by the RCRA Permit. The reports must include, at a minimum, groundwater elevations for monitoring wells, analyses for PCBs, pH, specific conductance and chlorinated organics and volumes of leachate collected from the sumps. The data may be submitted in an electronic format.
- 3) GMF shall submit to EPA on a quarterly basis (no later than 20 days following the end of the quarter), leachate collection/removal volumes for each leachate collection or leak detection sump. The data may be submitted in an electronic format. If liquid is found in the second-lowest leak detection system in quantities greater than 15 gallons per acre per day, or in the lowest leak detection system in quantities greater than 10 gallons per acre per day, GMF shall notify EPA within 72 hours of discovery.

- 4) GMF shall notify the ARA in writing within seven days after the discovery of PCBs at concentration of 1 ppb or above, or other chlorinated organics listed in Attachment II of the RCRA Permit are detected equal or above the critical levels at the lowest leachate sump or monitoring well. If the detection at a monitoring well is verified with a follow-up analysis, GMF must conduct a corrective action as outlined in the RCRA Permit and report to EPA all the correction activities.
- 5) GMF shall notify the ARA in writing at least 30 days before transferring ownership of Cell B/6. This notice must include a notarized affidavit signed by the transferee which states that the transferee is willing to abide by all conditions of this approval. The transferring ownership shall be handled in accordance with 40 C.F.R. § 761.65(j).
- 6) GMF shall request an approval from the ARA of any application it makes for modification of the design/construction or closure of the B/6 cell such as increase in capacity, mounding and closure caps at the same time it makes such application with the State.
- 7) GMF shall maintain financial assurance for closure of Cell B/6 and/or of the PCB storage facility. GMF shall notify to EPA in writing within five (5) working days if it fails to be in compliance with the financial assurance requirements.
- 8) GMF shall notify EPA in writing at least 60 days prior to the date it expects to begin closure of Cell B/6 and/or the commercial storage of PCBs.
- 9) GMF must comply with all applicable PCB regulations including, but not limited to marking, storage, notification, manifesting, annual document logs, and annual reports as a commercial storage/disposer.

Notifications to EPA required under this approval will be sent to:

Ms. Sadie Hoskie, Director  
Pollution Prevention, Pesticides and Toxics Program  
U.S. Environmental Protection Agency Region 8  
999 18<sup>th</sup> Street, Suite 300  
Denver, CO 80202

- 10) This TSCA Approval is subject to GMF having provided EPA with all material facts necessary for determinations made herein. Any misrepresentation or omission by GMF of any material fact in GMF's application for this TSCA Approval, or the application for the RCRA Permit, shall constitute sufficient cause for EPA to revoke, suspend and/or modify this TSCA Approval, in addition to any other legal or equitable relief or remedy EPA may choose to pursue under applicable law.
- 11) The requirements of RCRA Permit referenced in this TSCA Approval are incorporated into

this TSCA Approval with the full force and effect as if fully set forth herein. GMF shall notify EPA, in writing, in advance of any pending amendment to the RCRA Permit requirements referenced in this TSCA Approval which involves the conditions found at 40 CFR § 761.75, or of any new provision concerning PCB waste which is not included under 40 CFR § 761.75, which also requires approval, or which would be less stringent than a requirement of the PCB regulations. For other modifications of existing conditions affecting PCB waste requirements, GMF must notify EPA before or within five calendar days of the changes in the RCRA Permit. Where GMF has notified EPA of the amendment as required, any amendment of the RCRA Permit will be automatically incorporated as an amendment to this TSCA Approval as of the date such amendment takes effect in the Permit unless otherwise specified in writing by EPA.

#### APPROVAL STATEMENT

- 1) EPA finds that the operations to be authorized under this TSCA Approval, conducted in accordance therewith, will not present an unreasonable risk of injury to health or the environment. This TSCA Approval may be revoked, suspended and/or modified at any time if EPA determines that implementation of this TSCA Approval presents an unreasonable risk of injury to health or the environment. Nothing in this letter is intended, or is to be construed, to prejudice any right or remedy concerning the operation of the GMF otherwise available to EPA under section 6(e) of TSCA, 15 U.S.C. § 2605 and/or 40 CFR Part 761.
- 2) GMF shall be responsible for the actions (or the failure to act) of all individuals who implement or are otherwise involved in any activities taken pursuant to or otherwise required under this TSCA Approval. GMF's acceptance of this TSCA Approval constitutes GMF's agreement to comply with 1) all conditions and terms of this TSCA Approval, and 2) all applicable provisions of federal, state or local law. Any failure by GMF to comply with any condition or term of this TSCA Approval shall constitute a violation of said approval, which has been issued pursuant to 40 CFR §§ 761.77 and 761.75. Any such violation(s) may result in an action by EPA for any legal or equitable relief or remedy available under applicable law. Any such violation might also result in EPA revoking, suspending and/or modifying this TSCA Approval.
- 3) This Approval is conditional upon the ongoing consent of GMF to allow EPA employees or agents, upon presentation of credentials to enter onto the site, and inspect, sample, copy records or otherwise monitor the GMF's PCB activities at any reasonable time for the purpose of determining compliance with this Approval.

  
Stephen S. Tuber  
Assistant Region Administrator  
Office of Partnerships and Regulatory Assistance

OCT 21 2005  
Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

IN THE MATTER OF ) APPROVAL OF CELLS X, Y & Z  
Clean Harbors Grassy Mountain, LLC, ) AND WAIVER OF TECHNICAL REQUIREMENTS  
a subsidiary of Clean Harbors, Inc., ) APPLICATION FOR LAND DISPOSAL OF  
hereinafter referred to as GMF ) POLYCHLORINATED BIPHENYL (PCB)  
with corporate offices located in ) WASTE  
Norwell, Massachusetts )

AUTHORITY

This Approval is issued to Clean Harbors Grassy Mountain, LLC pursuant to Section 6(e)(1) of the Toxic Substances Control Act of 1976 (TSCA), 15 U.S.C. 2601 *et seq.*, and the Federal PCB Regulations, 40 C.F.R. Section 761.75. Conditions of this Approval supersede any conflicting elements of the Application and previous Approvals by EPA.

WAIVER OF TECHNICAL REQUIREMENTS

Pursuant to its authority under 40 C.F.R. § 761.75(c)(4), the United States Environmental Protection Agency, Region 8 (EPA), waives the technical requirement at 40 C.F.R. § 761.75(b)(3) to permit the bottom of the TSCA Landfill Cells X, Y & Z to be less than 50 feet above the historical high water table. EPA also waives the requirements at 40 C.F.R. §§ 761.75 (b)(6)(iii) and (7) to permit the frequencies of groundwater and leachate analyses for PCBs, pH, specific conductance and chlorinated organics to be performed annually. EPA believes that the operations of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs when the requirements at 40 C.F.R. §§ 761.75(b)(3), (6)(iii) and (7), are waived. In particular, Cells X, Y & Z have a double High Density Polyethylene (HDPE) liner with leachate collection and groundwater monitoring systems.

EFFECTIVE DATE

This Approval shall be effective immediately, and shall expire March 1, 2013, for Cell Z. The Approval life is subject to extension as provided in Condition II.(5) of this Approval. The list of acceptable wastes is subject to expansion, upon a successful demonstration of compliance and corrective measures as outlined in Conditions III and IV, and subject to the provisions of Condition II.(4) of this Approval. The Approval conditions pertaining to closure and post-closure, including financial assurance, are not subject to this expiration date and shall remain in force for the period of time necessary to complete those activities. Cells X and Y are only subject to the post-closure conditions in this Approval.

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### Attachments

- A. Monitoring Well Location Map
- B. List of Chlorinated Organics
- C. List of Additional RCRA Groundwater Parameters
- D. Final Cap Profiles

## DEFINITIONS

1. "Application" means the following documents submitted by Clean Harbors Grassy Mountain, LLC, formerly USPCI and Safety Kleen, to EPA Region 8 for approval:
  - Cell Z TSCA Approval Application, dated July 1991, was transmitted by cover letter dated July 8, 1991. Other documents which supplement the main application include: the Response to the U.S. Environmental Protection Agency's Comments - Landfill Cell Z TSCA Permit Application, dated September 1991;
  - USPCI Grassy/Grayback Mountain Contingency Plan, revised March 11, 1992; April 16, 1992 letter and attachment describing the installation of Cell Z groundwater monitoring wells;
  - Letter, dated May 20, 1992, and attachment describing the Penetrometer Test for solidified waste;
  - Letter, dated July 22, 1992, containing an Action Plan for resolving Tentatively Identified Compounds;
  - Submittal of the July 27, 1992 revisions to the Contingency Plan, Security Plan (Procedures to Prevent Hazards) and Employee Training Plan;
  - Groundwater Sampling and Field Standard Operating Procedures, submitted on July 29, 1992, revised and dated January 15, 1992;
  - Revised Cell Z Waste Analysis Plan, dated February 10, 2010;
  - Submittal from William Shea to Pat Hull, dated October 28, 1992, as it pertains to the revised closure and post-closure plans, the revised security plan, the revised training plan, the USPCI Analytical Services (Tulsa) Groundwater/Leachate Methods Compendium and the president's certification;
  - Submittal from Randy Miller to Pat Hull, dated October 29, 1992, as it pertains to the piezometer installation and exploration for new background monitoring wells;
  - Letter from Dennis Romankowski to Pat Hull, dated November 25, 1992, as it pertains to and lists sources for Tentatively Identified Compounds;
  - Submittal, dated March 4, 1993, from Edward Labus to Pat Hull, which supplemented the piezometer installation information;
  - Letter from Edward Labus to Pat Hull, dated May 28, 1993, requesting a revision in the waste staging condition;
  - Closure and post-closure cost estimates, dated August 2, 1993 and revised July 3, 1997;
  - Letter from Gary L. Mossor to Kerrigan G. Clough, dated February 22, 2000, including a Submission of the Seismic Study for Cell Z, Approval of Mounding Application for Cell Z and Renewal of the Cell Z Operating Approval; all construction certifications (see separate definition);
  - Letter from William F. Connors to Stephen Tuber, dated January 21, 2010, requesting the groundwater and leachate monitoring frequencies be performed annually, and the attachment, dated June 24, 2009, providing the technical justification for the groundwater modification request; and
  - The Spill Prevention, Control, and Countermeasures (SPPC) Plan, dated May 30, 2010.

These documents constitute the application and are incorporated by reference into this Approval.

2. "Construction Certifications" means the following documents pertaining to Cell Z:
  - CQC Construction Documentation for TSCA Landfill Cell Z, Tooele County, Utah Volume 1 of 1, March 1992;
  - CQA Construction Documentation for Embankment and Clay Liner Material, TSCA Landfill Cell Z, Grayback Mountain Facility, Knolls, Utah;
  - CQC Construction Documentation for TSCA Landfill Cell Z, Tooele County, Utah Volume 1 of 1, Interim Submittal, March 8, 1992, through May 2, 1992;
  - CQA Construction Documentation for Clay Liner and Secondary Geosynthetic Components, TSCA Landfill Cell Z, Grayback Mountain Facility, Knolls, Utah;
  - CQC Construction Documentation for TSCA Landfill Cell Z, Tooele County, Utah Volume 1 of 2, Final Submittal, May 3, 1992, through June 15, 1992;
  - CQC Construction Documentation for TSCA Landfill Cell Z, Tooele County, Utah Volume 2 of 2, Final Submittal, May 3, 1992, through June 15, 1992;
  - CQA Construction Documentation for Remaining Secondary Geosynthetic Components and Primary Geosynthetic Components, TSCA Landfill Cell Z, Grayback Mountain Facility, Knolls, Utah;
  - Letter dated June 22, 1992, Re: TSCA Cell Z - Grayback Mountain Facility, transmitting final CQA daily construction reports covering June 19 through June 22, 1992; and
  - Response from USPCI, dated July 29, 1992 (with supplement dated August 3), to EPA with comments on Cell Z construction.
3. "EPA or EPA Region 8" means the United States Environmental Protection Agency Regional Office located in Denver, Colorado.
4. "GMF" or "the site" means the Grassy Mountain Landfill Facility owned by Clean Harbors Grassy Mountain, LLC, a subsidiary of Clean Harbors, Inc., located at Exit 41 I-80 and 3 Miles East and 7 miles North of Knolls, Grassy Mountain, Utah 84029. The corporate offices are located in Norwell, Massachusetts.
5. "Leachate" for the purposes of solidification and disposal means water pumped from leachate collection and detection sumps, PCB wheel wash water and sediments and, at GMF's discretion, precipitation collected in PCB storage area containment sumps and waters collected during groundwater monitoring events.
6. "Operations" means the entire process of receiving, sampling, analyzing, solidifying (if applicable) and landfilling of PCB wastes, including, but not limited to, activities such as construction, monitoring, recordkeeping, site security and personnel training.
7. "PCB" means polychlorinated biphenyl as defined in 40 C.F.R. § 761.3.
8. "PCB spill" has the same meaning as "spill" as defined in EPA's PCB Spill Cleanup Policy in 40 C.F.R. § 761.123.

9. "QA/QC" means quality assurance and quality control, and refers to the formal procedures applied to laboratory operations and raw data in order to document and ensure that accuracy and precision are within stated goals.
10. "RCRA" means the Resource Conservation and Recovery Act.
11. "Security breach" means the security system fails to detect or prevent any unauthorized person who accesses the landfill site, or a discovery of failure to meet any of the provisions of the security plan.
12. "Staging" means storing inbound wastes, prior to release for disposal, in an area other than a TSCA-approved or TSCA interim status commercial storage building (40 C.F.R. § 761.65).
13. "TSCA" means the Toxic Substances Control Act.
14. "UDEQ" means the Utah Department of Environmental Quality, Division of Solid and Hazardous Waste.
15. "WAP" means the Clean Harbors Grassy Mountain, LLC Cell Z Waste Analysis Plan, dated February 10, 2010.
16. Definitions contained in 40 C.F.R. §§ 761.3 and 761.123 are incorporated by reference into this Approval. Terms not defined in the regulations or in the Approval shall be defined by a generally accepted scientific or industrial meaning or a standard dictionary meaning.

## CONDITIONS OF APPROVAL

### I. Technical Requirements

- (1) Soils. In accordance with 40 C.F.R. § 761.75(b)(1) and GMF's Design Engineering Report contained in the Application, the landfill soil shall have a high clay and silt content meeting the following standards:
  - (i) compacted soil liner with a minimum thickness of 3 feet;
  - (ii) compacted soil liner with a permeability of less than or equal to  $1 \times 10^{-7}$  cm/sec;
  - (iii) >85% soil passing No. 200 Sieve;
  - (iv) >30 liquid limit; and
  - (v) >15 plasticity index.
- (2) Synthetic membrane liners. In accordance with 40 C.F.R. § 761.75(b)(2), synthetic membrane liner must have a minimum thickness of 30 mils. USPCI documented in the Application that the landfill cells had been constructed with a double synthetic liner system composed of a lower 60 mils and an upper 80 mils high density polyethylene (HDPE) liner, each having a leachate collection system.
- (3) Hydrologic conditions. In accordance with 40 C.F.R. § 761.75(c)(4), the Regional Administrator is waiving the requirement in 40 C.F.R. § 761.75(b)(3) that the bottom of the landfill liner system be at least 50 feet from the historical high water table. The facility has groundwater monitoring wells and leachate collection systems.
- (4) Flood protection. In accordance with 40 C.F.R. § 761.75(b)(4)(ii) and the Design Engineering Report contained in the Application, the landfill is above the 100-year floodwater elevation, and runoff diversion structures are provided to handle in excess of a 24-hour, 25-year storm. Containment and treatment by evaporation is provided for storm water.
- (5) Topography. In accordance with 40 C.F.R. § 761.75(b)(5), the landfill is located in an area of low to moderate relief.
- (6) Water monitoring systems.
  - (i) In accordance with the waiver provisions of 40 C.F.R. § 761.75(c)(4), the requirement of 40 C.F.R. 761.75(b)(6)(i) to sample groundwater to provide baseline data prior to commencing waste disposal operations under this Approval is subject to Compliance Schedule Conditions III.(1) and (2) of this Approval, and these Conditions have been met.
  - (ii) In accordance with 40 C.F.R. § 761.75(b)(6)(ii)(B), groundwater monitoring wells shall be cased and the annular space between the monitor zone and the surface shall be backfilled with Portland cement or an equivalent material and plugged

with Portland cement for integrity. Wells shall have removable caps and may be evacuated and allowed to recharge prior to sampling. The Field Sampling Standard Operating Procedures (SOP) contained in the Application shall be followed. Attachment A of this Approval shows the locations of the groundwater monitoring wells.

- (iii) In accordance with 40 C.F.R. § 761.75(b)(6)(iii), at a minimum, all water samples shall be analyzed for PCBs, pH, specific conductance and chlorinated organics (Attachment B, RCRA Class 1 volatile and semi-volatile parameters). The Application contains Sections 10 and 11 describing Groundwater, and the Monitoring Plan and Protocol respectively, and applies to cells X, Y and Z. The following lists the basic requirements and revisions and additional requirements imposed on GMF under the authority of 40 C.F.R. § 761.75(c)(3)(ii):

- (a) The groundwater wells described in the Application are all designated as monitoring wells ("MW") for the purposes of establishing the type and frequency of sampling and analysis.

The initial monitoring network for Cells X, Y and Z is Network-1 and consists of wells MW-2, MW-21, MW-22, MW-23, MW-36, MW-40A, MW-41, MW-53 through MW-57 in addition to MW-37A, MW-38, and MW-39.

The network includes background wells PZ-06 and PZ-07.

EPA may require that additional monitoring well(s) be installed if PCBs are detected and confirmed from a bottom sump at a level of one part per billion or higher ( $\geq 1.0$  ppb) in the leachate.

- (b) The annual parameters shall consist of groundwater elevations, PCBs, pH, specific conductance, chlorinated organics (Attachment B, RCRA Class 1 volatile and semi-volatile parameters), and additional RCRA Class 3 parameters listed in Attachment C for all monitoring wells in the network with Cell Z.
- (c) If total PCBs are detected at a concentration of 1 part per billion (ppb) or above, or if other chlorinated organics (Attachment B) are detected at concentrations equal to or above the Maximum Contaminant Levels (MCLs) at any leachate sump or monitoring well and verified with a follow up analysis (as outlined in Sections E.1.f through h of RCRA Permit Part B Permit Module VII), GMF shall submit a proposed corrective action plan as outlined in the RCRA Part B Permit to EPA for approval. This plan shall assess a variety of appropriate corrective actions, including but not limited to: expanding the groundwater monitoring program, increasing the leachate removal frequency, and closure of part or all of the cell and treatment of groundwater. The plan shall be submitted for approval to EPA Region 8 within 90 days of the verification analysis. As an interim measure, while the plan is being developed and approved, all monitoring wells within the Network(s) of the well(s) with the detections, shall be sampled and analyzed quarterly for PCBs, pH, specific conductance and chlorinated organics (Attachment B, RCRA Class 1 volatile and semi-volatile parameters).

- (d) All Tentatively Identified Compounds (TICs) shall be resolved in accordance with the procedure identified in the July 22, 1992, submittal which has been incorporated as part of the Application and part of the Approval. This procedure is hereby revised to require that the investigative stage shall be conducted every time an analysis shows a TIC with a total area greater than 10% of the total area of the nearest internal standard. GMF shall conduct a forward library search using recent (not more than 3 years old) National Institute of Standards and Technology Mass Spectra. The computer's 10 best Fit (Finnegan software or equivalent) matches shall be reviewed and a record made of the 3 best matches to the TIC spectra. GMF shall report only the single best match and pursue a commercial source (all available catalogs, computer on-line databases, manufacturer traced with CAS #, or as specified and listed in USPCI's November 25, 1992 letter from Dennis Romankowski to Pat Hull) for a standard for that compound whenever a match exceeds 800 (Finnegan software or equivalent). Raw data shall be reported to EPA in accordance with Condition I.(8)(v) of this Approval.
- (iv) In accordance with 40 C.F.R. § 761.75(b)(6)(i)(B), surface water contained in the run-off pond (Section 4 of the Application) shall be subject to sampling as soon as possible, but within 24 hours, after rain storms (defined as greater or equal than 1/2 inch of rainfall in <24 hours), analysis for PCBs, pH, specific conductance and chlorinated organics (Attachment B, RCRA Class 1 volatile and semi-volatile parameters), and the recordkeeping and reporting requirements specified in Conditions I.(8)(iv) and (v) of this Approval. If surface water is not available throughout either the first half and/or last half of the year in sufficient quantities for the analyses required, GMF shall certify this in writing to EPA, along with a report of daily rainfalls on site, and submit this with each annual analytical report in accordance with Condition I.(8)(v)(c) of this Approval.
- (v) The surface and ground water analytical procedures are subject to compliance schedule Condition III.(3) of this Approval.
- (7) Leachate collection and analysis.
- (i) In accordance with 40 C.F.R. § 761.75(b)(7), a leachate collection and monitoring system shall be installed above the landfill liner. The primary collection system shall be monitored monthly for quantity. Pursuant to 40 C.F.R. § 761.75(c)(4), a waiver is granted to allow the physicochemical characteristics, i.e., sampling and analyses, of leachate from the primary and secondary leachate collection sumps to be monitored annually. Minimal sampling and analyses shall consist of PCBs, pH, specific conductance and chlorinated organics (Attachment B, RCRA Class 1 volatile and semi-volatile parameters). Each sump shall be discretely sampled and each sample shall be discretely analyzed during the third quarter (between June and September). All leachate collected in accordance with the requirements in Condition I.(7)(iii) of this Approval shall be either treated on site in accordance with the approved solidification process or disposed by another approved method.
- (ii) The design of the compound leachate collection system shall meet the requirements of 40 C.F.R. § 761.75(b)(7)(ii) and the Design Engineering Report contained in the Application. The design specification requires a minimum of

3.0% slope for Cell Z towards the leachate collection sumps in order to provide the minimum 2.0% slope after settlement.

- (iii) In accordance with the Water Collection, Leachate Systems and Solidification, Section 9 of the Application, leachate from the primary and secondary systems shall be pumped and quantified weekly for active cells. GMF shall operate and maintain a rainfall gauge or other device to measure rainfall on site. In accordance with 40 C.F.R. § 761.75(c)(3)(ii), the leachate pumping and quantification frequency shall be increased to daily if the quantity of leachate in any sumps of the leak detection collection systems (middle and/or lower sumps) exceeds 15 gallons per week. Weekly pumping and quantification may be resumed following one full week of daily compliance with the above requirements.
  - (iv) In accordance with the Water Collection, Leachate Systems and Solidification, Section 9 of the Application:
    - a. GMF shall not use leachate for dust control.
    - b. If GMF selected to solidify and landfill leachate, said leachate shall pass the Paint Filter Liquids Test prior to landfilling.
    - c. GMF shall comply with the leachate analytical procedures in Compliance Schedule Condition III.(3) of this Approval.
  - (v) All Tentatively Identified Compounds (TICs) shall be resolved in accordance with groundwater monitoring Condition I.(6)(iii)(d) of this Approval.
- (8) Chemical waste landfill operations.
- (i) In accordance with 40 C.F.R. § 761.75(b)(8)(i), PCBs and PCB Items shall be placed in the landfill in a manner which will prevent damage to containers or articles. In order to assure that no wastes which are chemically incompatible with PCBs are placed in the landfill, this Approval specifically prohibits the disposal of any wastes or materials not specifically approved herein. No "staging" or storage of PCB waste is allowed in any active cell under this Approval. "Staging" is restricted to areas outside the disposal cells to be designated by GMF. "Staging" of containers having capacity of 110 gallons or less in excess of five calendar days shall be considered storage and shall occur only in a TSCA Approved or TSCA interim status commercial storage building (40 C.F.R. § 761.65). Staging of containers having capacity of greater than 110 gallons (i.e. bulk transport equipment) in excess of ten (10) calendar days shall be considered storage and shall occur only in a TSCA or RCRA Approved commercial storage building (40 C.F.R. § 761.65).
  - (ii) In accordance with 40 C.F.R. § 761.75(b)(8)(ii) and the Application, the operation plan shall consist of the following elements:
    - (a) A List of Approved Wastes. These waste listings do not preclude the acceptance of wastes containing asbestos, or wastes having PCB concentrations <50 ppm that are similar to those listed below. Liquid wastes authorized in this Approval for disposal shall first be solidified according to Condition I.(8)(ii)(c) of this Approval prior to disposal in an approved cell.

1. Contaminated debris including: rags, protective clothing and gear, container liners, pallets, sampling apparatus, demolition materials, etc.
  2. Empty PCB containers, such as tanks or drums; drained/draind and flushed PCB-contaminated articles or electrical equipment.
    - A. Hydraulic machines containing PCBs shall be managed in accordance with 40 C.F.R. § 761.60(b)(3):
      - i. If the hydraulic machine is filled or contained by liquids containing <1000 ppm PCBs, it shall be drained in accordance with the WAP.
      - ii. If the hydraulic machine is filled or contained by liquids containing >1000 ppm PCBs, it shall be drained and flushed in accordance with the WAP and 40 C.F.R. § 761.60(b)(3)(ii).
    - B. PCB transformers shall be drained and flushed in accordance with the WAP and 40 C.F.R. § 761.60(b)(1)(i)(B).
  3. PCB small capacitors.
  4. Soils contaminated with PCBs.
  5. Leachate from on-site operations of PCB disposal cells provided the leachate is first solidified in accordance with this Approval.
  6. Liquids from incidental sources, such as precipitation, condensation, leachate or load separation, and that are associated with PCB Articles or non-liquid PCB wastes, if information is provided to or obtained by GMF that shows that the liquids do not exceed 500 ppm PCB and are not an ignitable waste as described in 40 C.F.R § 761.75(b)(8)(iii) or are non-regulated aqueous liquids. These liquids shall be solidified to meet the same requirements for solidification as leachate in this Approval and disposed in the same manner.
  7. Solid PCBs and non-RCRA regulated solids that are compatible with PCBs.
- (b) Waste Analysis Plan ("WAP"). The WAP as modified on February 10, 2010, and condition I. (8) (i) and (ii) of this Approval, is incorporated by reference and approved with the following major elements:
1. All sampling and analyses necessary for final waste acceptance shall be conducted on-site at the Knolls, Utah facility or at a Utah-approved laboratory. This includes all fingerprint analyses used to determine acceptability of each waste load as specified in the WAP. Pre-acceptance analysis may also be done off-site.
  2. The WAP has not been approved for on-site PCB analysis, which

is subject to the On-Site Testing for Waste Acceptance, Condition IV. of this Approval.

3. The WAP lists wastes proposed for acceptance in Cell Z. Condition (8)(ii)(a) lists wastes which are approved. Some wastes are not appropriate for disposal in Cell Z, such as wastes that are not chemically compatible with PCBs, and other potential RCRA wastes.
  4. The WAP requires that solidified leachate and other solidified liquids pass the Paint Filter Liquids Test prior to landfilling.
  5. The pre-acceptance information from the generator shall include a certification that the waste has not been deliberately diluted from an original PCB concentration  $\geq 50$  ppm or deliberately mixed with soil in order to avoid the incineration requirements of 40 C.F.R. § 761.60(a). The specific source of the waste, waste description, original PCB concentration and other chemical constituents of the waste shall also be reported by the generator.
  6. The load sheet described on page 23 of the WAP shall be signed by the Laboratory Manager or the TSD Chemist designating that the waste is either accepted or rejected.
  7. The handling and disposal of wastes containing asbestos shall meet the Clean Air Act requirements, 40 C.F.R. 61 Subpart M, and the requirements specified in Section 7.3.4 of the WAP.
- (c) Solidification. The solidification process shall follow the procedures described in the Cell B/6 Application. GMF shall maintain an operating log for the process containing the following items (except that only items 3 through 7 need be kept for solidified leachate):
1. the results of the PCB analysis, if any;
  2. a unique batch identification code;
  3. the specific recipe for each batch;
  4. the initial and final weights and volumes (as calculated or otherwise estimated, without a requirement for direct measurement);
  5. the result of the Paint Filter Liquids Test; and
  6. the date of solidification and disposal.
- (d) Waste Placement. Three-dimensional waste burial coordinates shall be established in accordance with the Waste Burial Coordinates, Section 6 of the Application.
- (e) Monitoring. Maintenance of the monitoring systems, sampling and analysis of surface water, leachate and groundwater shall follow the conditions specified in other parts of this Approval.
- (f) Vehicle and Equipment Movement. The on-site movement of vehicles and equipment shall follow the plan contained in the Vehicle and Equipment Movement and Use of Roadways, Sections 7 and 8 of the

Application, and utilize the truck wheel wash located between Cell X and Cell Y.

- (g) Contingency Plan. In the event of a spill, release, disposal of a disapproved waste, any unauthorized transfer of PCB waste from a designated area, or a fire occurred at the landfill site, GMF shall follow the July 2004 Contingency Plan contained in the RCRA Permit Application, as revised. GMF shall notify the PCB Notification Hotline, Clean Harbors Grassy Mountain, LLC, EPA Region 8, within 24 hours of the incident. A written report, describing the incident, operations involved, cleanup actions and operational changes designed to prevent a reoccurrence shall be submitted to the Director of the Pollution Prevention, Pesticides and Toxics Program, Office of Partnerships and Regulatory Assistance, EPA Region 8, within 15 calendar days. Such corrective measures shall be performed in accordance with PCB Spill Cleanup Policy contained in 40 C.F.R. 761 Subpart G.

If the incident involves a security breach, GMF shall initiate the corrective action and GMF may automatically suspend the operations until the problem is corrected. GMF shall notify the PCB Notification Hotline at 303-312-6400 within 24 hours of the incident. After taking appropriate corrective measures, GMF may resume acceptance of the approved wastes unless notified of additional conditions by EPA pursuant to Paragraph 1 in the Approval Statement of this Approval. A written report, describing the incident, operations involved, cleanup actions and operational changes designed to prevent a reoccurrence shall be submitted to the Director of the Pollution Prevention, Pesticides and Toxics Program, Office of Partnerships and Regulatory Assistance, EPA Region 8, within 15 calendar days from the date of the incident.

If the incident involves an unapproved disposal, GMF shall initiate a recovery operation to remove the unapproved waste. If the waste cannot be identified for removal, GMF shall remove all waste identified within the disposal coordinates as delineated in Condition I.(8)(ii)(d) of this Approval.

- (h) Health and Safety. GMF shall take all necessary precautionary measures to ensure that operation of the landfill is in compliance with all applicable safety and health standards, as required by federal, state and local regulations and ordinances. GMF shall report to EPA at the PCB Notification Hotline at 303-312-6400 within 24 hours of the incident any lost-time injury which occurs as a result of landfill operations. A written report describing the details of the incident shall be submitted to the Director of the Pollution Prevention, Pesticides and Toxics Program, Office of Partnerships and Regulatory Assistance, EPA Region 8 within 15 calendar days.
- (i) Security. A six foot high cyclone fence topped with barbed wire shall enclose the entire GMF. All gates shall be kept shut and locked except when being used and/or monitored by security and/or operations personnel. During business hours, site access shall be controlled through a single automated gate monitored by a site attendant. All site access

restrictions shall be strictly enforced at all times. Perimeter fences shall be marked at appropriate intervals with required warning signs. The perimeter fence, gates and locks shall be inspected daily, including weekends and holidays. Inspection records shall be kept at the site and available upon EPA's request.

- (j) Personnel Training. GMF shall follow the employee training plan contained in the Employee Training, Section 14 of the Application. GMF shall certify the successful completion of applicable training for each employee prior to that employee's handling or management of PCB wastes.
- (iii) In accordance with 40 C.F.R. § 761.75(b)(8)(iii), ignitable wastes (flash point <140°F) shall not be disposed of in a chemical waste landfill nor shall any other RCRA wastes be disposed in this landfill.
- (iv) In accordance with 40 C.F.R. §§ 761.75(b)(8)(iv) and 761.75(c)(3)(ii), GMF shall maintain the following daily records. All records shall be maintained by the General Manager or another company individual who has been specifically designated by written authorization of the General Manager. Such written authorization and reports shall be maintained in the operating log. The operating log shall also contain the following:
  - (a) Solidification records required by Condition I.(8)(ii)(c) of this Approval.
  - (b) Records for the three dimensional burial coordinates for PCB waste required by Condition I.(8)(ii)(d) of this Approval.
  - (c) An annual document described in 40 C.F.R. § 761.180(b) which contains information on the type and quantity of PCBs and PCB items handled at the facility.
  - (d) Records described in 40 C.F.R. § 761.180(d)(1), including daily site rainfall accumulations, surface water analyses and groundwater analyses and elevations obtained in accordance with 40 C.F.R. § 761.75(b)(6) and Condition I.(6) of this Approval.
  - (e) Records of leachate quantities and analyses obtained in accordance with Condition I.(7) of this Approval. Included in these records shall be the site rainfall records required by Condition I.(7)(iii) of this Approval.
  - (f) Records of all waste analysis obtained in accordance with Condition I.(8)(ii)(b) of this Approval and the waste analysis plan, including records of all instrument calibrations, performance audits and corrective actions required in the sampling and analysis plan, and all pre-acceptance information and analyses from the generators.
  - (g) Records of all facility inspections conducted in accordance with the security requirements as described in Condition I.(8)(ii)(i) of this Approval.
  - (h) Records of all personnel training conducted in accordance with this Approval. Within 15 days of the end of each calendar quarter, GMF shall create a record which summarizes the complement of trained staff. The

record shall address the availability of trained personnel for the key positions listed on page 14-8 of the Employee Training, Section 14 of the Application. GMF shall provide a narrative explaining any gaps or dual roles, and shall keep this record available for inspection.

- (i) Other records described in the Recordkeeping, Section 3 of the Application, all engineering certifications and all documents referenced in this Approval, including the Application, all revisions and all test methods or documents referenced therein. A copy of this Approval shall be maintained at the facility.
  - (j) Records of any reportable spills of hydraulic oils or other liquids within the cell, and the disposition of the recovered material.
- (v) In accordance with 40 C.F.R. § 761.75(c)(3)(ii), GMF shall submit the following reports to EPA Region 8 (with courtesy copies submitted to the Utah Department of Environmental Quality): a) the initial reports in accordance with compliance Conditions III.(1) and (2); and b) all other the reports required under this Condition with the following schedule. The reports shall include a specific reference to the Approval Condition requiring submittal. The reports shall be submitted by an officer of Clean Harbors Grassy Mountain, LLC, or any other company employee who has been specifically designated by written authorization of an officer of Clean Harbors Grassy Mountain, LLC. Such written authorization and reports shall be submitted to the Director of the Pollution Prevention, Pesticides and Toxics Program, Office of Partnerships and Regulatory Assistance, EPA Region 8:
- (a) All engineering reports which certify construction of landfill components in accordance with the Application shall be due within 60 days of the construction completion date or as otherwise required by the compliance schedule. This condition has been met as the facility provided courtesy copies of CQA and CQC documents in November 1993.
  - (b) First Quarter Annual reports shall be due within 60 days from the last day of the groundwater sampling event performed during the first quarter of the calendar year. First Quarter Annual reports shall include the following waste characterization and operational data: the waste analysis and solidification records made in accordance with Condition I.(8)(iv)(a) of this Approval, records of any reportable spills of liquids within the cell, and copies of all gas chromatographic records pertaining to PCB analysis conducted as required by this Approval, as well as all QA/QC records associated with each PCB analysis.
  - (c) First Quarter Annual reports shall also include the following environmental data: the records of surface water analyses and groundwater analyses for Attachment B and Attachment C Parameters, and groundwater elevations (including a groundwater contour map) required by Condition I.(8)(iv)(d) of this Approval. The groundwater contour map shall include contours drawn from all available facility wide groundwater elevations. If the reports include the identification (including tentatively) of any compounds above the detection limit, then the report shall also include copies of all raw data pertaining to the analysis of each

identified compound, as well as all QA/QC records associated with each analysis. The annual reports of the Attachment B compounds shall be accompanied by the results of the analysis of the performance evaluation samples required by Condition III.(3) of this Approval.

- (d) Third Quarter Annual reports shall be due within 60 days from the last day of the leachate sampling event performed during the third quarter of the calendar year. Third Quarter Annual reports shall include the records of leachate quantities and analyses for Attachment B parameters required by Condition I.(8)(iv)(e) of this Approval. The annual reports of the Attachment B compounds shall be accompanied by the results of the analysis of the performance evaluation samples required by Condition III.(3) of this Approval. The First Quarter Annual report required by Condition I.(8)(v)(b) and (c) shall be included with the submittal as part of this Third Quarter Annual report.
  - (e) Annual reports required under 40 C.F.R. § 761.180(b) of the records of all PCB wastes handled at the facility during the previous calendar year, as required by Condition I.(8)(iv)(c) of this Approval shall be due on July 15 of each year. This annual report shall also include as an attachment a revision to the closure and post-closure cost estimates, as well as the financial instrument, based on the previous year's inflation rate and any other information affecting the costs. No reduction in the funding level of the financial instrument shall be implemented without the written approval of EPA.
  - (f) Other reports, such as spill or release reports, groundwater contamination reports, and corrective action plans as required by other conditions of this Approval or specified in the Application, shall be prepared and submitted in accordance with those requirements. Other reports may be required by EPA pursuant to 40 C.F.R. § 761.75(c)(2) or TSCA Section 11.
- (9) Supporting facilities.
- (i) A six foot high cyclone fence topped with barbed wire shall be maintained around the site to prevent unauthorized persons and animals from entering.
  - (ii) Vehicle and equipment movement and decontamination shall be conducted in accordance with Section 7 of the Application. Roads to and within the site shall be maintained in a manner that supports the operation and maintenance of the site without causing safety or nuisance problems or hazardous conditions.
  - (iii) The site shall be operated and maintained in a manner to prevent safety problems or hazardous conditions resulting from spilled liquids and windblown materials.

## II. Administrative and Other Requirements

- (1) Financial assurance. In accordance with 40 C.F.R. 761.75(c)(3)(ii), GMF shall maintain an EPA-approved financial assurance including the closure and post-closure plans contained in the Application. The closure and post-closure cost estimates shall be adjusted annually for inflation and reported to EPA in accordance with Condition

I.(8)(v)(e) of this Approval. GMF shall not reduce the scope and amount of its financial assurance mechanism without EPA's prior written approval.

- (2) Closure and post-closure plan. In accordance with 40 C.F.R. § 761.75(c)(3)(ii) and the closure and post-closure plans (including the construction quality assurance plan, revision dated July 3, 1997, closure and post-closure cost estimates), GMF shall provide closure and post-closure care and maintenance that include all of the following major components:

- (i) Cell Z Closure plan. Profiles of the final cap shall conform to Attachment D of this Approval. The following items are the major elements of the closure plan:
  - (a) Closure of Cell Z shall be completed within 265 calendar days of receipt of the final volume of waste. This schedule contains adequate allowance for all contingencies and is fully enforceable. Any request for an extension of the schedule or modification of the closure plan that requires written approval by EPA and that such request would not suspend the deadline for closure shall be made at least 30 calendar days prior to the deadline or modification.
  - (b) PCB-contaminated soils on the access roads and any of the potential contaminated surface areas shall be sampled, excavated, and disposed-of in accordance with the Cell Z closure plan.
  - (c) A two-foot thick compacted clay cap that meets the technical specifications contained in Conditions I.(1)(ii) through (v) of this Approval or Geosynthetic Clay Liner (GCL) that meets the requirements in the CQA plan shall be installed and maintained.
  - (d) A 60-mils HDPE cap with drainage net and non-woven geotextile shall be installed and maintained over the clay cap stipulated in sub-paragraph c above.
  - (e) Two feet of additional soil cover shall be placed over the HDPE cap and drainage net and geotextile stipulated in sub-paragraph (d) above.
  - (f) Four inches of gravel cover shall be installed and maintained over the soil cover stipulated in sub-paragraph (e) above.
  - (g) The final cap shall have a minimum slope of 0.63% on the discharge channels, and a maximum slope of 5% on the closure cap. The final closure cap profiles shall conform to Attachment D of this Approval.
  - (h) Outlet piping shall convey rainfall runoff down the embankments.
  - (i) A final closure report including all engineering certifications shall be provided to EPA within 45 days after completion of closure.
  - (j) GMF shall submit copies of the notices in the deed to the property and to the local land authority, due within 90 days of completion of closure.
- (ii) Post-closure for cells X, Y, and Z. The post-closure plan includes the following major components:

- (a) GMF shall perform subsidence monitoring, consisting of annual instrument surveys and review of foundation settlement as monitored by the three instruments referred to in the Cell Z construction certification documents. Records of the measured subsidence shall be kept for the period of post-closure and reported to EPA with the next submittal of the annual groundwater and leachate report.
- (b) GMF shall perform groundwater monitoring for post-closure for at least 30 years from the date of the closure of Cell Z. The annual reports shall be due within 60 days from the last day of the groundwater sampling event.
- (c) GMF shall perform leachate monitoring, consisting of pumping and quantification at the minimum frequency shown in the following table.

<u>POST-CLOSURE YEARS</u>	<u>FREQUENCY</u>
1	Weekly
2 - 3	Every Other Week
4-5	Monthly
6	Every Other Month
7	Quarterly
8	Semi-Annually
9 - 30	Annually

GMF shall sample and analyze for the parameters specified in Condition I.(7) of this Approval on an annual basis at all sumps according to the same schedule of the leachate sampling required by Condition I.(8)(v)(d) of this Approval. Annual reports including an evaluation of the leachate quantity and detected PCBs concentrations, due within 60 days from the last day of the groundwater sampling event, shall be sent to EPA.

- (d) GMF shall perform all necessary maintenance, consisting of erosion control and differential settlement correction to maintain an overall minimum 2% slope across the cap.
  - (e) GMF's financial assurance shall include all post-closure costs associated with groundwater sampling and analysis required under this Approval.
- (3) Ownership transfer.
- (i) GMF shall notify EPA Region 8 in writing at least 30 calendar days before transferring ownership of the PCB landfill. This notice shall include a notarized affidavit signed by the transferee which states that the transferee is willing to abide by all conditions of GMF's EPA approval. GMF shall include in the notification the name, corporate structure, address, telephone number, and other pertinent information about the transferee. GMF shall also submit a report of

approved disposal activities including: quantities, concentrations (as required) and disposal cell coordinates of PCB wastes disposed prior to the transfer, and a description of the equipment, other property and operating staff involved in the transfer. The transferee shall provide a written certification attesting to having a full complement of trained staff and a financial assurance instrument for closure and post-closure prior to conducting any PCB disposal operations. If GMF and the transferee fail to provide EPA the required written documentation in the notice, this Approval shall not be transferable until such time as EPA may, in its sole discretion, approve the transfer.

- (ii) Within 30 days of receipt of the notification and affidavit required above, EPA Region 8 may either issue an amended Approval substituting the transferee's name for GMF or require the transferee to apply for a new disposal Approval. In the latter case, the transferee will be notified by EPA whether it shall cease all PCB disposal operations or whether it may continue operations and abide by GMF's EPA Approval until EPA issues a decision on the new Application.
- (4) Modifications or additions. GMF shall apply to EPA in writing for prior written approval for any major design or operating modifications or additions to the operating Approval. For the purpose of this Approval, "major" shall be defined as any change to the capacity, design, waste type, waste analysis, solidification process, leachate collection, groundwater monitoring plan or any other changes affecting the GMF's overall performance or environmental impact. Application shall be made at least 90 calendar days but no sooner than 120 calendar days (advance notice) prior to the planned change. Minor modifications include such items as a well replacement. Minor modifications require written approval from EPA but are not subject to the advance notice requirement. No modification shall be made unless an approval is issued by EPA.
- (5) Extensions. GMF shall apply to EPA in writing for any extension of the operating Approval. Application for an extension shall be made at least 90 days, but no sooner than 120 days, prior to the expiration date. EPA expects to respond to the request for an extension 30 days prior to the expiration date, provided GMF has complied with the Application period described above. There shall be no automatic extension of this Approval.
- (6) Severability. The conditions of this Approval are severable, and if any provision of this Approval or Application of any provision is held invalid, the remainder of this Approval shall not be affected thereby.
- (7) Modification, suspension or revocation. EPA reserves the right to modify, suspend or revoke this Approval for cause. Cause includes imminent hazard, new information which bears on the design, construction or operation of the facility or promulgation of new regulations. Cause also includes the failure to meet any and all conditions of this Approval, including schedules imposed in the Compliance Schedule.
- (8) Confidential information. This Approval, the Application, revisions and all referenced documents are not protected as confidential business information. In accordance with the regulations contained in 40 C.F.R. Part 2, Subpart B, GMF is entitled to assert a business confidentiality claim covering any information submitted under this Approval. If such a confidentiality claim is not asserted with

any submittal, EPA may make this information available to the public without further notice to GMF. Information subject to a business confidentiality claim may be made available to the public only to the extent set forth in the above cited regulations. Any such claim for confidentiality shall conform to the requirements set forth in 40 C.F.R. § 2.203(b).

- (9) Notification. All written reports shall be sent to the Director of the Pollution Prevention, Pesticides and Toxics Program at the following address:

U.S. Environmental Protection Agency, Region 8 (8P-P3T)  
1595 Wynkoop Street  
Denver, CO 80202-1129  
Attention: PCB Program

Telephone notification shall be reported to the PCB Notification Hotline, EPA Region 8, at 303-312-6400, within the specified time frame in this Approval.

Except that notifications and/or reports required under 40 CFR §§ 761.207 through 761.218 shall be submitted to the PCB Technical Enforcement Program at the same address. The data shall be submitted in an Excel and/or PDF format.

### III. Compliance Schedule

- (1) The second calendar year quarter of 1996 shall be the subject of the first surface water analyses (Attachment B) and groundwater analyses (Attachments B and C) report required by Condition I.(8)(v)(c) of this Approval. This condition has been met.
- (2) The second calendar year quarter of 1996 shall be the subject of the first report of monthly groundwater elevations, including the first contour map, required by Condition I.(8)(v)(c) of this Approval and shall be due August 31, 1996. The new groundwater monitoring network shall be reflected in the report for the fourth calendar quarter of 1996. This condition has been met.
- (3) At least 30 days prior to use of a laboratory other than or in addition to a currently authorized laboratory (i.e., a laboratory that is certified by the National Environmental Laboratory Accreditation Program for water analyses) for groundwater and leachate analyses, GMF shall submit to EPA a certification signed by an Officer of Clean Harbors Grassy Mountain, LLC, that GMF has implemented a laboratory oversight program. The oversight program shall establish an initial review of the laboratory's methods, QA/QC and Standard Operating Procedures, with periodic reviews to evaluate any changes and/or corrective action procedures. The oversight program shall also include quarterly performance evaluation samples which GMF shall provide to the laboratory for analysis. GMF shall submit to EPA a narrative description of the oversight program prior to its implementation.

### IV. On-Site Testing for Waste Acceptance

If GMF desires to test for PCBs or other organics in its on-site laboratory, it shall submit a modification request, including a revised WAP, in writing to the Assistant Regional Administrator, Office of Partnership and Regulatory Assistance. Upon receipt of the request, EPA may conduct on-site laboratory audits to verify laboratory adequacy and

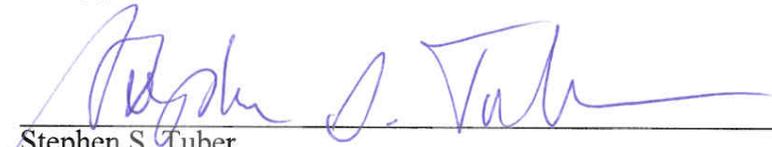
acceptability for organic analyses prior to a decision on the modification of this Approval. The scope of these on-site audits may include the presentation of PCB standards, or check samples in various matrices, or for spiking into actual wastes, for same day analysis by GMF personnel assigned to the site. Observation of QA/QC procedures, personnel interviews, and/or review of existing records may also be included in these on-site audits.

### APPROVAL STATEMENT

1. Approval to dispose of PCBs is hereby granted to Clean Harbors Grassy Mountain, LLC, a subsidiary of Clean Harbors, Inc. ("the company"), subject to the conditions contained herein, and consistent with the materials and data included in the Application filed by the company. EPA reserves the right to impose additional conditions when it has reason to believe that the continued operation of the GMF PCB landfill presents an unreasonable risk to public health or the environment, or when statutory or regulatory amendments are made. Any such proposed additional conditions shall be preceded by reasonable advance notice to GMF and opportunity for GMF to comment on the proposed modifications. Any departure from the conditions of this Approval or the terms expressed in the Application shall receive prior written authorization from the EPA Region 8 Assistant Regional Administrator of the Office of Partnerships and Regulatory Assistance, which will constitute an amendment to this Approval.
2. This Approval to dispose of PCBs does not relieve GMF of the responsibility to comply with all applicable federal, state and local regulations. Violations of any applicable regulations will be subject to enforcement action and may result in termination of this Approval. This Approval may be rescinded at any time for failure to comply with the conditions contained herein or the terms of the Application, failure to disclose all relevant facts, falsification of any record required by this Approval, or for any other reasons that the EPA Region 8 Assistant Regional Administrator of the Office of Partnerships and Regulatory Assistance, deems necessary to protect public health and the environment.
3. GMF shall be responsible for the actions of any authorized GMF employees when those actions are within the scope of constructing, operating or maintaining the landfill, and shall assume full responsibility for compliance with all applicable federal, state and local regulations including, but not limited to, any advance or emergency notification and accident reporting requirements.
4. This Approval is conditional upon the ongoing consent of GMF to allow EPA employees or agents, upon presentation of credentials, to enter onto the site and inspect, sample, copy records or otherwise monitor the GMF PCB landfill activities at any reasonable time for the purposes of determining compliance with this Approval.
5. Operation of the landfill by GMF shall constitute acceptance of and agreement to all conditions of this Approval.

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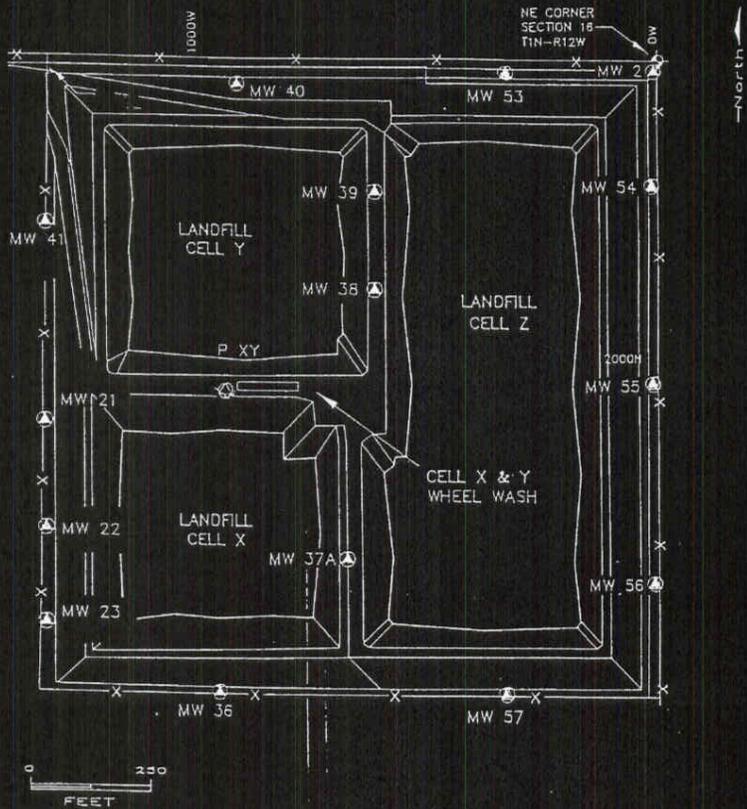
Date

  
\_\_\_\_\_  
Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

**ATTACHMENT A**  
Monitoring Well Location Map



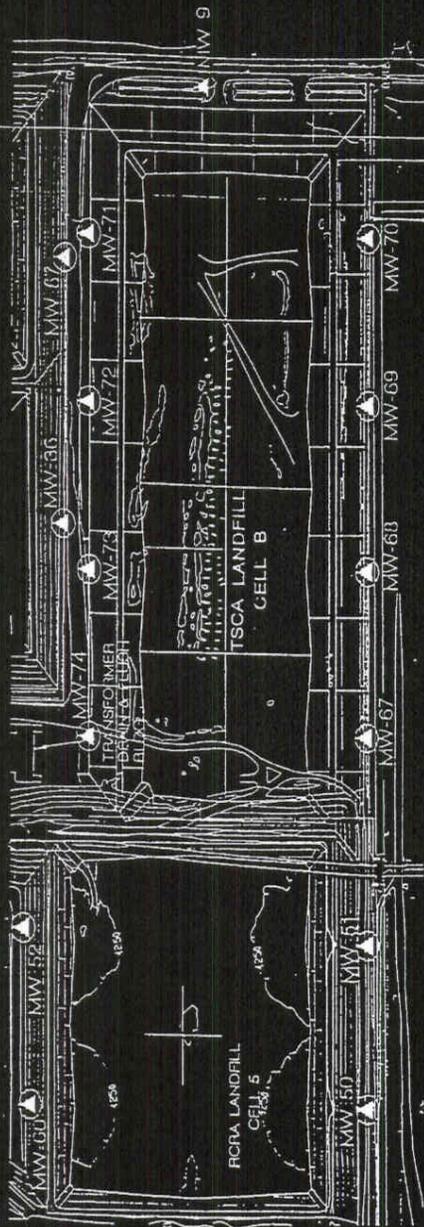
GRASSY MOUNTAIN FACILITY



- ⊙ EXISTING WELL
- ⊕ EXISTING MONITORING WELL

MONITORING WELL LOCATIONS  
CELLS X AND Y  
MONITORING WELL LOCATIONS  
CELL Z

ATTACHMENT A  
PAGE 2 OF 2



LEGEND  
MONITORING WELL LOCATION




**Safety-Kleen**<sup>®</sup>  
GRASSY MOUNTAIN FACILITY  
TSCA CELL B  
WELL LOCATION MAP  
MW-60, MW-67 THROUGH MW-74  
SCALE: T = 300' APPROVED/DATE: 01/5/04

**ATTACHMENT B**  
List of Chlorinated Organics

**ATTACHMENT B  
CHLORINATED ORGANICS**

<b>ANALYTE</b>	<b>CAS Number</b>	<b>App. IX PQL (ug/L)</b>	<b>Critical Level (ug/L)</b>	<b>Analysis Method</b>
<b>VOLATILE ORGANICS</b>	<b>TSCA ATTACHMENT B CHEMICALS</b>			
Acetone	67-64-1	100	100	SW-846 8260B
Acrolein	107-02-8	5	200	SW-846 8260B
Acrylonitrile	107-13-1	5	20	SW-846 8260B
Benzene	71-43-2	5	5	SW-846 8260B
Bromodichloromethane	75-27-4	5	5	SW-846 8260B
Bromoform (Tribromomethane)	75-25-2	5	5	SW-846 8260B
Bromomethane	74-83-9	10	10	SW-846 8260B
2-Butanone (MEK)	78-93-3	100	100	SW-846 8260B
Carbon disulfide	75-15-0	5	5	SW-846 8260B
Carbon tetrachloride	56-23-5	5	5	SW-846 8260B
Chlorobenzene	108-90-7	5	5	SW-846 8260B
Chloroethane	75-00-3	10	10	SW-846 8260B
2-chloroethyl vinyl ether	110-75-3	n/a	5	SW-846 8260B
Chloroform	67-66-3	5	5	SW-846 8260B
Chloromethane	74-87-3	10	10	SW-846 8260B
Cyclohexane	110-82-7	n/a	20	SW-846 8260B
Dibromochloromethane	124-48-1	5	5	SW-846 8260B
1,2-Dibromo-3-chloropropane	96-12-8	5	5	SW-846 8260B or 8270C
1,2-Dibromoethane	106-93-4	5	5	SW-846 8260B
Dibromomethane (methylene bromide)	74-95-3	5	5	SW-846 8260B
cis-1,4-Dichloro-2-butene	1476-11-5	n/a	20	SW-846 8260B
Dichlorodifluoromethane	75-71-8	5	5	SW-846 8260B
1,1-Dichloroethane	75-34-3	5	5	SW-846 8260B
1,2-Dichloroethane	107-06-2	5	5	SW-846 8260B
trans-1,2-Dichloroethene	156-60-5	5	5	SW-846 8260B
1,1-Dichloroethene	75-35-4	5	5	SW-846 8260B
1,2-Dichloropropane	78-87-5	5	5	SW-846 8260B
cis-1,3-Dichloropropene	10061-01-5	5	5	SW-846 8260B
trans-1,3-Dichloropropene	10061-02-6	5	5	SW-846 8260B
Ethylbenzene	100-41-4	5	5	SW-846 8260B
Ethyl methacrylate	97-63-2	5	20	SW-846 8260B

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
				or 8270C
Methyl iodide (Iodomethane)	74-88-4	5	20	SW-846 8260B
Methacrylonitrile	126-98-7	5	20	SW-846 8260B
Methylene chloride (Dichloromethane)	75-09-2	5	90	SW-846 8260B
Methyl methacrylate	80-62-6	5	20	SW-846 8260B
4-Methyl-2-pentanone (MIBK)	108-10-1	50	50	SW-846 8260B
Pentachloroethane	76-01-7	5	100	SW-846 8260B or 8270C
Propionitrile (Ethyl cyanide)	107-12-0	5	250	SW-846 8260B
Styrene	100-42-5	5	5	SW-846 8260B
1,1,1,2-Tetrachloroethane	630-20-6	5	5	SW-846 8260B
1,1,2,2-Tetrachloroethane	79-34-5	5	5	SW-846 8260B
Tetrachloroethene	127-18-4	5	5	SW-846 8260B
Toluene	108-88-3	5	5	SW-846 8260B
1,1,1-Trichloroethane	71-55-6	5	5	SW-846 8260B
1,1,2-Trichloroethane	79-00-5	5	5	SW-846 8260B
Trichloroethene	79-01-6	5	5	SW-846 8260B
Trichlorofluoromethane	75-69-4	5	5	SW-846 8260B
Vinyl acetate	108-05-4	5	5	SW-846 8260B
Vinyl chloride	75-01-4	10	10	SW-846 8260B
total Xylenes	1330-20-7	5	15	SW-846 8260B
Acetonitrile	75-05-8	100	100	SW-846 8260B
1,4-dioxane	123-91-1	150	500	SW-846 8260B
isobutyl alcohol	78-83-1	50	250	SW-846 8260B
SEMIVOLATILE COMPOUNDS	TSCA ATTACHMENT B CHEMICALS			
Acenaphthene	83-32-9	10	10	SW-846 8270C
Acenaphthylene	208-96-8	10	10	SW-846 8270C
Acetophenone	98-86-2	10	10	SW-846 8270C
2-Acetylaminofluorene	53-96-3	10	10	SW-846 8270C
Aniline	62-53-3	10	10	SW-846 8270C
Anthracene	120-12-7	10	10	SW-846 8270C
Benzenethiol	108-98-5	n/a	100	SW-846 8270C
Benzidine	92-87-5	n/a	100	SW-846 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
Benzoic Acid	65-85-0	n/a	25	SW-846 8270C
Benz(a)anthracene	56-55-3	10	10	SW-846 8270C
Benzo(a)pyrene	50-32-8	10	25	SW-846 8270C
Benzo(b)fluoranthene	205-99-2	10	10	SW-846 8270C
Benzo(g,h,i)perylene	191-24-2	10	10	SW-846 8270C
Benzo(k)fluoranthene	207-08-9	10	10	SW-846 8270C
Benzyl alcohol	100-51-6	20	50	SW-846 8270C
bis(2-Chloroethoxy)methane	111-91-1	10	10	SW-846 8270C
bis(2-Chloroethyl) ether	111-44-4	10	10	SW-846 8270C
bis(2-Chloroisopropyl) ether (2,2'-oxybis(1-Chloropropane))	108-60-1	10	10	SW-846 8270C
bis(2-Ethylhexyl) phthalate	117-81-7	10	35	SW-846 8270C
4-Bromophenyl phenyl ether	101-55-3	10	10	SW-846 8270C
Butyl benzyl phthalate	85-68-7	10	25	SW-846 8270C
p-Chloroaniline	106-47-8	20	20	SW-846 8270C
Chlorobenzilate	510-15-6	10	300	SW-846 8270C
4-Chloro-3-methylphenol (p-Chloro-m-cresol)	59-50-7	20	25	SW-846 8270C
2-Chloronaphthalene	91-58-7	10	10	SW-846 8270C
2-Chlorophenol	95-57-8	10	25	SW-846 8270C
4-Chlorophenyl phenyl ether	7005-72-3	10	10	SW-846 8270C
Chrysene	218-01-9	10	10	SW-846 8270C
2-Methylphenol (o-Cresol)	95-48-7	10	25	SW-846 8270C
3-Methylphenol (m-Cresol)	108-39-4	10	25	SW-846 8270C
4-Methylphenol (p-Cresol) or m + p	106-44-5	10	25	SW-846 8270C
Diallate	2303-16-4	10	20	SW-846 8270C
Dibenz(a,h)anthracene	53-70-3	10	10	SW-846 8270C
Dibenzofuran	132-64-9	10	10	SW-846 8270C
Di-n-butyl phthalate	84-74-2	10	25	SW-846 8270C
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	10	10	SW-846 8270C
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	10	10	SW-846 8270C
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	10	10	SW-846 8270C
3,3'-Dichlorobenzidine	91-94-1	20	20	SW-846 8270C
2,4-Dichlorophenol	120-83-2	10	25	SW-846 8270C
2,6-Dichlorophenol	87-65-0	10	10	SW-846 8270C
o,o-Diethyl 0-2-pyrazinylphosphorothic acid (Thionazin and Zinaphos)	297-97-2	10	10	SW-846 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
Diethyl phthalate	84-66-2	10	10	SW-846 8270C
Dimethoate	60-51-5	10	100	SW-846 8270C
3,3'-Dimethylbenzidine	119-93-7	10	10	SW-846 8270C
p-Dimethylaminoazobenzene	60-11-7	10	10	SW-846 8270C
7,12-Dimethylbenz(a)anthracene	57-97-6	10	10	SW-846 8270C
alpha, alpha-Dimethylphen- Ethylamine	122-09-8	10	50	SW-846 8270C
2,4-Dimethylphenol	105-67-9	10	25	SW-846 8270C
Dimethyl phthalate	131-11-3	10	10	SW-846 8270C
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol) (2-methyl-4,6-dinitrophenol)	534-52-1	50	50	SW-846 8270C
2,4-Dinitrophenol	51-28-5	50	50	SW-846 8270C
2,4-Dinitrotoluene	121-14-2	10	10	SW-846 8270C
2,6-Dinitrotoluene	606-20-2	10	10	SW-846 8270C
Di-n-octyl phthalate	117-84-0	10	20	SW-846 8270C
Ethyl methanesulfonate	62-50-0	10	10	SW-846 8270C
Famphur (for groundwater only)	52-85-7	10	10	SW-846 8270C
Fluoranthene	206-44-0	10	10	SW-846 8270C
Fluorene	86-73-7	10	10	SW-846 8270C
Hexachlorobenzene	118-74-1	10	10	SW-846 8270C
Hexachlorobutadiene	87-68-3	10	10	SW-846 8270C
Hexachlorocyclopentadiene	77-47-4	10	10	SW-846 8270C
Hexachloroethane	67-72-1	10	10	SW-846 8270C
Hexachlorophene	70-30-4	10	400	SW-846 8270C
Hexachloropropene	1888-71-7	10	10	SW-846 8270C
Indene	95-13-6	n/a	10	SW-846 8270C
Indeno(1,2,3-cd)pyrene	193-39-5	10	10	SW-846 8270C
Isodrin	465-73-6	10	10	SW-846 8270C
Isophorone	78-59-1	10	10	SW-846 8270C
Isosafrole	120-58-1	10	10	SW-846 8270C
Kepone	143-50-0	10	100	SW-846 8270C
Methapyrilene	91-80-5	10	20	SW-846 8270C
3-Methylcholanthrene	56-49-5	10	10	SW-846 8270C
1-Methylnaphthalene	90-12-0	n/a	10	SW-846 8270C
2-Methylnaphthalene	91-57-6	10	10	SW-846 8270C

ANALYTE	CAS Number	App. IX PQL (ug/L)	Critical Level (ug/L)	Analysis Method
Naphthalene	91-20-3	10	10	SW-846 8270C
1,4-Naphthoquinone	130-15-4	10	20	SW-846 8270C
1-Naphthylamine	134-32-7	10	10	SW-846 8270C
2-Naphthylamine	91-59-8	10	10	SW-846 8270C
4-Nitroaniline (p-nitroaniline) (4-nitrobenzenamine)	100-01-6	50	50	SW-846 8270C
Nitrobenzene	98-95-3	10	10	SW-846 8270C
2-Nitrophenol (o-Nitrophenol)	88-75-5	10	25	SW-846 8270C
4-Nitrophenol (p-Nitrophenol)	100-02-7	10	25	SW-846 8270C
N-Nitroso-di-n-butylamine	924-16-3	10	10	SW-846 8270C
N-Nitroso-di-n-propylamine	621-64-7	10	10	SW-846 8270C
N-Nitrosodiethylamine	55-18-5	10	10	SW-846 8270C
N-Nitrosodimethylamine	62-75-9	10	10	SW-846 8270C
N-Nitrosodiphenylamine	86-30-6	10	10	SW-846 8270C
N-Nitrosopiperidine	100-75-4	10	10	SW-846 8270C
N-Nitrosopyrrolidine	930-55-2	10	10	SW-846 8270C
5-Nitro-o-toluidine	99-55-8	10	10	SW-846 8270C
Parathion	56-38-2	10	10	SW-846 8270C
Pentachlorobenzene	608-93-5	10	10	SW-846 8270C
Pentachloronitrobenzene	82-68-8	10	10	SW-846 8270C
Pentachlorophenol	87-86-5	50	50	SW-846 8270C
Phenacetin	62-44-2	10	10	SW-846 8270C
Phenanthrene	85-01-8	10	10	SW-846 8270C
Phenol	108-95-2	10	25	SW-846 8270C
2-Picoline	109-06-8	10	10	SW-846 8270C or 8240
Pronamide	23950-58-5	10	10	SW-846 8270C
Pyridine *	110-86-1	10	10	SW-846 8270C or SW-846 8260B + A32
Quinoline	91-22-5	NA	10	SW-846 8270C
Safrole	94-59-7	10	10	SW-846 8270C
Sulfotepp	3689-24-5	10	10	SW-846 8270C

<b>ANALYTE</b>	<b>CAS Number</b>	<b>App. IX PQL (ug/L)</b>	<b>Critical Level (ug/L)</b>	<b>Analysis Method</b>
1,2,4,5-Tetrachlorobenzene	95-94-3	10	10	SW-846 8270C
Thionazin (o,o,-Diethyl-o-2-pyrazinyl phosphorothioate)	297-97-2	10	10	SW-846 8270C
o-Toluidine	95-53-4	10	10	SW-846 8270C
1,2,4-Trichlorobenzene	120-82-1	10	10	SW-846 8270C
2,4,6-Trichlorophenol	88-06-2	10	25	SW-846 8270C
1,3,5-Trinitrobenzene (sym-Trinitrobenzene)	99-35-4	10	10	SW-846 8270C

ATTACHMENT C  
List of Additional RCRA Groundwater Parameters

**ATTACHMENT C  
LIST OF ADDITIONAL RCRA GROUNDWATER PARAMETERS**

<b>ANALYTE</b>	<b>CAS Number</b>	<b>App. IX PQL (ug/L)</b>	<b>Critical Level (ug/L)</b>	<b>Analytical Method *</b>
<b>METALS (TOTALS)</b>				
Arsenic	7440-38-2	500	500	SW846 6010B or 7060
Barium	7440-39-3	20	20	SW846 6010B
Beryllium	7440-41-7	3	3	SW846 6010B
Cadmium	7440-43-9	40	40	SW846 6010B
Chromium	7440-47-3	70	70	SW846 6010B
Copper	7440-50-8	60	60	SW846 6010B
Lead	7439-92-1	40	50	SW846 6010B
Mercury	7439-97-6	2	2	SW846 7470A
Nickel	7440-02-0	50	50	SW846 6010B
Selenium	7782-49-2	750	750	SW846 6010B or 7740
Silver	7440-22-4	70	70	SW846 6010B
Zinc	7440-66-6	20	250	SW846 6010B
<b>INORGANIC COMPOUNDS</b>				
Sulfide ***	18496-25-8	10000	5,000	EPA 376.1
Total Organic Carbon ***	n/a	n/a	3,000	SW-846 9060 / EPA 415.1
pH ***	n/a	n/a	n/a	EPA 150.1
Total Dissolved Solids ***	n/a	n/a	21,000	EPA 160.1
Total Suspended Solids ***	n/a	n/a	10,000	EPA 160.2
Turbidity **	n/a	n/a	n/a	
<b>GROSS CATIONS / ANIONS **</b>				
Bicarbonate alkalinity	71-52-3	n/a	5,000	EPA 310.1
Chloride	16887-00-6	n/a	1,000	EPA 300.0
Fluoride	16984-48-8	n/a	500	EPA 300.0
Sulfate	14808-79-8	n/a	5,000	EPA 300.0
Calcium	7440-70-2	n/a	1,000	SW-846 6010B / EPA 200.7
Magnesium	7439-95-4	n/a	100	SW-846 6010B / EPA 200.7
Potassium	7440-09-7	n/a	1,000	SW-846 6010B / EPA 200.7
Sodium	7440-23-5	n/a	1,500	SW-846 6010B / EPA 200.7

\* or equivalent SW846 or EPA methods. These or the current published method may be used.

\*\* Statistical analysis not required.

\*\*\* Statistical analysis not required but the value versus time plot will be reviewed for anomalies.

**ATTACHMENT D**  
Final Cap Profiles

