

# SECTION 5

## Operations Plan

Dafter Sanitary Landfill  
Chippewa County, Michigan

Wenck File #0742-316

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## APPENDICES

- A Special Waste Acceptance Plan (SWAP)
- B Leachate Recirculation Plan
- C Gas Monitoring Plan

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# 1.0 Operation Plan

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## 1.1 INTRODUCTION

This Operation Plan has been prepared at the Dafter Sanitary Landfill (DSL), located in Dafter, Michigan, Chippewa County. The plan was prepared in accordance with the Michigan Department of Environmental Quality (MDEQ) Rule 299, Promulgated pursuant to Part 115 of Act 451. The format of this plan follows the requirements set forth in Rules 299.4426 (Rule 426) through 299.4438 (Rule 438), and Rule 299.4911(2) (Rule 911.2).

## 1.2 LANDFILL OPERATIONS (RULE 426)

### 1.2.1 Equipment (Rule 426(1))

Landfill operating equipment shall be properly maintained in-place to assure that operational procedures can be accomplished. Currently landfill equipment includes the following:

- Caterpillar 826 Compactor (2)
- Caterpillar 300B Dump Truck
- Caterpillar 6H Dozer
- International 570 Endloader
- Kubota Tractor
- Mack Truck w/ Trailer
- Mack Rolloff Truck

Equipment may be added or deleted from this list; however, adequate equipment will be maintained at the facility for proper operations. Backup equipment will be available through suitable arrangements with a local contractor to provide such equipment during equipment breakdown or peak loads. Additional equipment may be used for site construction projects.

### **1.2.2 Landfill Personnel (Rule 426(2))**

The landfill manager has overall responsibilities for the operation of the site. The manager will be experienced in the various aspects of the landfill daily operations in order to properly manage the site. The manager will be trained in the applicable local, state and federal regulations that affect the landfill operations. If the manager is not on-site, a designated person shall be responsible for ensuring proper site management.

In addition to the landfill manager, the site will employ a scale clerk, equipment operators and laborer(s). The scale clerk will be responsible to direct acceptable loads of waste to the working area of the landfill and typically provide administrative support. The equipment operators at the working area will direct where waste is to be unloaded. The equipment operators will then compact the waste and place cover as required. The equipment operators will also perform other duties associated with the operation of the landfill such as hauling daily cover, watering and grading roads and hauling leachate. The laborer(s) will perform various duties to assist the manager to ensure the site is properly managed. Site personnel will be trained so that they can properly perform their duties. Off-site company experts are also available to support the on-site personnel.

### **1.2.3 Dust and Blowing Paper (Rule 426(3))**

Fugitive dust will be controlled using a water truck when necessary. Temporary and permanent litter fences will be utilized to contain litter within the immediate area of the working face. Litter that escapes this area is to be collected as necessary. The entire area will be kept clean and orderly.

#### **1.2.4 Waste Compaction (Rule 426(4))**

Waste will be compacted when placed in the daily cell to minimize post-closure settlement. Large and bulky items will be deposited and compacted in a proper manner. See Section 1.4 for white goods discussion.

#### **1.2.5 On-Site Roads (Rule 426(5))**

Access roads are designed to allow for smooth traffic flow and not interrupted by ordinary inclement weather. The access roads will be operated to prevent the creation of nuisance conditions from fugitive dust.

#### **1.2.6 Active Work Area (Rule 426(6))**

The active work area shall be sloped, graded, and provide drainage to prevent the collection of standing water.

### **1.3 ACCESS REQUIREMENTS (Rule 427)**

DSL maintains proper security and signage, including hours of operation at the landfill gate to prevent unauthorized access. Hours of operations are typically 8:00 a.m. to 4:00 p.m. Monday through Friday. Fencing is maintained along the east, west and south property boundary and the landfill gate is locked during non-business hours. The site is inaccessible from the north due to the natural screening consisting of mostly wetlands. A scale clerk will be on duty during business hours. Vehicles entering DSL must stop at the gate area and check-in with the scale clerk. The contents of the load are ascertained by the scale clerk and properly weighed. A citizen drop-off area is provided for the general public.

#### **1.4 RECYCLING MATERIAL (Rule 428)**

No separation of recyclable materials will occur at the active cell. White goods will not be accepted. Scavenging or salvage of metals will not be permitted.

#### **1.5 DAILY AND INTERMEDIATE COVER AND DISEASE VECTOR CONTROL (Rule 429)**

Vectors will be primarily controlled through the application of daily cover. Should nuisance vectors become a problem, supplemental vector control measures will be implemented.

At least 6 inches of daily soil cover, or an approved alternate cover, will be applied at the end of each working day. Daily (or intermediate) cover may be spread and stripped.

Both meet the following requirements:

- Provides matting/cover over waste
- Allows free movement of liquids and gases
- Is not hazardous
- Is not flammable
- Does not produce emissions

A minimum of 1 foot of interim cover consisting of compacted soil, will be applied to any area that waste will not be placed for 3 months. This 1 foot may include the 6-inch daily cover.

To minimize infiltration, interim cover may be placed on the landfill surface and manage run-off from the cover in accordance with Rule 299.4435.

## **1.6 PROHIBITED WASTE (Rule 430)**

DSL is currently authorized under MDEQ Operating License No. 8838, to accept waste classified as Type II by the State of Michigan which includes asbestos-containing waste, petroleum-impacted soils, and non-hazardous special wastes. The landfill is not authorized to accept bulk liquids or wastes that exhibit free liquids; regulated hazardous wastes; PCBs or PCB items, as defined in 40 CFR § 761.3; bulk or noncontainerized liquid waste; containers that hold liquid waste; sewage; materials that would adversely affect a liner or leachate collection and removal system; asbestos wastes; empty drums; used lead acid batteries; and yard clippings.

Prohibited or special waste shall be identified and handled in accordance with the Special Waste Acceptance Program (SWAP) provided in Appendix A. The SWAP will be updated periodically and will be kept in the Operating Record on-site.

At a frequency of at least one every month, an inspection report shall be completed for inclusion in the operating record. Any suspicious load shall be inspected upon identification according to the SWAP. Training of landfill personnel in prohibited and special waste procedures will be conducted as described in the SWAP.

Asbestos waste is acceptable for disposal at this landfill in accordance with 40 CFR § 61.154.

## **1.7 NOISE (Rule 431)**

No undue noise shall be created at the landfill. Any complaints of excessive noise shall be forwarded to the landfill manager for evaluation and action. The proposed expansion limits are set back a minimum of 100 feet from the property line. The landfill continuously maintains equipment utilized on-site. There are no adjacent residences or commercial businesses immediately surrounding the landfill work area.

## **1.8 LEACHATE HANDLING (Rule 432)**

### **1.8.1 Leachate Depth**

Leachate will be removed by dedicated pumps having sensors for automated pump operation. The system is designed to maintain the leachate depth on the liner not more than 1 foot for more than 7 days after a significant storm event (1.0 inches or more of rainfall in 24 hours).

### **1.8.2 Leachate Monitoring**

The leachate depth will be monitored regularly to ensure compliance with maximum leachate head levels. The leachate volumes will also be monitored regularly. Leachate water quality monitoring is discussed in the "Hydrogeologic Monitoring Plan" (HMP) prepared by NTH Consultants, dated August, 2001, provided in Section 6.

The monitoring frequency will be reduced from quarterly to annually for leachate from closed portions of the landfill, provided the criteria in Act 451 are met and MDEQ has issued approval.

### **1.8.3 Secondary Collection System Monitoring (Rules 432(3), 432(4))**

Due to the presence of the natural clay barrier, a secondary collection system was not required.

### **1.8.4 Leachate Collection Pipe Maintenance (Rule 432(5))**

The leachate collection system shall be maintained in proper working order, including cleaning or flushing of collection pipes, if necessary.



### **1.8.5 Leachate Disposal (Rules 432(6), 432(7))**

Leachate will be pumped from the sumps through a forcemain to the storage tank where it will be stored. Leachate will be transferred into a tanker truck and transported to a licensed treatment facility. DSL currently has an agreement with the Sault Saint Marie Wastewater Treatment Facility.

If the leachate level in the sump should rise faster than the ability to haul it off-site, leachate will be pumped from the storage tank back onto the active cell as an emergency measure, and only to ensure that leachate does not overflow the tank.

### **1.8.6 Leachate Recirculation (Rule 432(8))**

A modification to the existing Leachate Recirculation Plan is being proposed as part of this Application. A revised plan is provided in Appendix B.

## **1.9 EXPLOSIVE GAS MANAGEMENT (Rule 433)**

The proposed Gas Management Plan for DSL is provided in Appendix C. This plan is designed to ensure the following:

- Concentration of methane gas is less than 25 percent of the LEL in facility structures and leachate collection system.
- Concentration of methane gas is less than the LEL at or beyond the facility property boundary.
- Gases generated by the facility do not create nuisance.

The Plan consists of quarterly monitoring along the property line and quarterly monitoring of facility structures, both with a combustible gas indicator. Horizontal migration of gas is not

expected at this facility since surrounding soils are of relatively low permeability, and the passive, vertical vent systems installed at closure provide a preferential path for vertical migration of landfill gas rather than horizontal. Permanent monitoring devices are also located in the facility structures.

If monitoring results indicate the lower explosive limit (LEL) for methane has been exceeded (over 5 percent methane) at the property boundary or that a facility structure's interior exceeds 25 percent of the LEL for methane, the following steps will be taken:

1. The site manager will be notified.
2. Site personnel will be informed of the danger.
3. Site personnel will be instructed to extinguish any open flame and warned to avoid creating electrical sparks such as turning equipment or lights on or off.
4. Telephones will be removed from wall jacks to avoid the ringer creating a spark.
5. The MDEQ director (or designee) will be notified of the occurrence and of the action taken.
6. Documentation of the event will be placed in operating record within 7 days of detection.
7. A remediation plan for the methane gas releases will be implemented within 60 days of detection and a copy of this plan will be placed in the operating record. The director (or designee) will be notified upon implementation of the plan.

#### **1.10 AIR CRITERIA (Rule 434)**

Open burning will be prohibited on the landfill site, except for the infrequent burning of agricultural wastes, silvicultural wastes, land-clearing debris, diseased trees, or debris from emergency cleanup operations. This type of burning shall only be conducted under approval of the solid waste control agency (and other appropriate authorities) and shall only be conducted in designated areas away from the active fill area.

### **1.11 STORMWATER RUN-ON AND RUN-OFF (Rule 435)**

Stormwater will be diverted from the working face through the use of temporary berms and contouring. Stormwater that comes in contact with waste at the working face (e.g., precipitation falling on the working face) will be confined to working area and managed as leachate.

Run-on and run-off control shall be conducted to divert stormwater from the active cell and also to avoid creating areas of ponded water. To prevent soil erosion, ditches, sediment traps, and berms used to control storm water shall be stabilized by seeding and mulching by utilizing check dams, or by other appropriate means. Inactive areas of the landfill shall also be stabilized to prevent soil erosion.

The run-on and run-off control systems have been designed for the 24-hour, 25-year storm event and are discussed in the Design Report.

### **1.12 SURFACE AND GROUNDWATER PERFORMANCE (Rule 436)**

The operation of the DSL will not result in discharge of pollutants into any of the adjacent stream or wetland areas. Sedimentation basins will intercept all of the run-off from the landfill before discharging to adjacent stream or wetland area. A pump will be used to remove pore drain water from the pore water collection sump. The pore drain water will be pumped directly into the surface water management system and handled with run-off. DSL currently has an NPDES permit for the discharge from the sedimentation basins. DSL will comply with the requirement of this permit.

The groundwater will be sampled, analyzed and reported in accordance with the HMP provided in Section 6. The HMP may periodically be updated and modified with MDEQ approval.

### **1.13 ACTION FLOW RATES – SECONDARY COLLECTION SYSTEMS (Rule 437)**

Due to the presence of the natural soil barrier, a secondary collection system is not required.

### **1.14 RECORDKEEPING REQUIREMENTS (Rule 438)**

The operating record kept at the landfill or authorized location shall be carefully maintained and shall include the following items:

- 1) Locational restriction demonstrations
- 2) Inspection records, training procedures, and notification procedures related to prohibited wastes
- 3) Gas monitoring results
- 4) Design documentation for placement of leachate or gas condensate
- 5) Groundwater monitoring results
- 6) Records of waste quantities
- 7) Closure and post-closure plans
- 8) Financial assurance and cost estimates

Upon request by the MDEQ director (or designee), information in the Operating Record shall be furnished or made available for inspection.