

Odor Management Plan

For

Pitsch Sanitary Landfill

7905 Johnson Road

Belding, MI 4880

Prepared by:

RdL Engineering LLC

7350 Leyton Dr. SE

Grand Rapids, MI

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Rev 1

1.0 INTRODUCTION

The Pitsch Recycling and Disposal, Inc., DBA: Pitsch Sanitary Landfill (PSL) is a licensed solid waste disposal facility located at 7905 Johnson Rd, Belding, Michigan. PSL is a Type II sanitary landfill licensed under the provisions of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994 (PA 451), Part 115, Solid Waste Management, as amended (the Act). The PSL receives mostly demolition debris in addition to non-hazardous solid waste from residential, commercial, and industrial sources.

The Michigan Environment, Great Lakes and Energy (EGLE) Air Quality Division (AQD) has requested that PSL to develop and submit an Odor Management Plan.

This plan presents various procedures and protocols for detecting, preventing, and correcting odor events. Attachments are also included with targeted checklists for evaluating odor potential. In addition, various schedules for implementation have been included. It is the intent of this plan that the observation for potential off-site odor is an integral part of landfill operations. If a particular odor inspection is being conducted on a particular day during a weekly frequency, that does not mean that odor observation and minimization will not be undertaken the other 6 days in any given week.

This Plan has been prepared to provide guidance for procedures developed to enhance odor prevention, detection, and correction, as well as, public relations regarding odors from the PSL. More specifically, this Plan provides detailed information and descriptions of the following items regarding off-site odor from the PSL:

1. Identification of the major sources potentially contributing to off-site odor;
2. Operational responsibilities related to the prevention, detection, and correction of off-site odor;
3. Monitoring procedures for conditions causing off-site odor;
4. Response to an off-site odor event;
5. Employee Training
6. Record Keeping;
7. Community/Complaint response action.

"Nuisance" is defined in R 299.4104 (h) of the Part 115 Rules, as conditions that unreasonably interfere with the enjoyment of life and property, such as noise, blowing debris, odors, vectors, or pest animals. R 336.1901 of Part 55 prohibits the emission of an air contaminant in quantities that cause unreasonable interference with comfortable enjoyment of life and property. For purposes of this Plan, reference to off-site odor shall be considered an odor which has the potential to cause a nuisance condition.

The Supervisory personnel responsible overseeing this Plan is the Site Supervisor.

Citizen complaints and request for information about odor issues can be obtained by contacting the Landfill Supervisor at (616) 794-3050.

2.0 ODOR SOURCE IDENTIFICATION

A description of the materials and sources which have a potential to contribute to off-site odor is below:

- Incoming waste- the waste stream at the PSL mostly includes Demolition debris, MSW, and other non-hazardous waste. Off-site odor due to incoming waste is higher as the incoming loads are dumped on the active face that is covered daily.
- Landfill Waste – If additional waste is to be placed in an area that has not received waste in more than 30 days, landfill operators will scrap the daily/intermediate cover. If in place waste is exposed it has a potential to generate off site odor.
- Landfill Gas- Landfill gas has the potential to contribute to offsite odor. Insufficient daily/interim cover could lead to gas emissions. Gas emissions may also arise from the leachate collection system.
- Waste container and vehicle parking areas- The waste container drop off area and waste container storage area may also contribute to offsite odor.

3.0 OPERATIONS

Landfill operations

Operations at the PSL are conducted in an effort to minimize potential for offsite odor. The “Odor inspection checklist”, included is designated prevent possible odor emissions from occurring. The prevention detection and correction of offsite odors due to landfill operations shall be the responsibility of the Site Supervisor and operators.

- The operators will be responsible for observation of and advance preparation for any waste that has the potential to contribute to offsite odor upon disposal at the landfill active face. Preparation may include pre-dug pits, immediate burial of potential odor causing material, and placing daily cover. The scale house operator will advise the operators at the working face of the delivery of possible odor causing material.
- If site conditions such as wind, type of waste received and proximity to the property line are contributing to offsite odor, operators shall alter the size and configuration of the working face to reduce such potential.
- Daily and intermediate cover shall be placed in conformance with R 299.4429 of the part 115 Rules, to reduce the potential for offsite odors from areas that will not receive additional waste for 90 days.

Landfill gas collection.

PSL is not required to maintain the passive landfill collection system. However already installed gas wells located near the working face will be maintained to assist in the prevention of offsite odors.

Residential waste drop off area

The area designated for residential/citizen drop off area will be maintained as necessary to prevent the potential for offsite odor. This will involve emptying containers as necessary, keeping area clean and monitoring wastes that are placed in drop off containers. The containers will be emptied every night as necessary.

4.0 ODOR MONITORING

The first step in the process of controlling odors is to determine if the odors are present and being generated onsite.

- Odors are identified by PSL personnel, through self-inspection and/or on the job observations;
- Odors identified by non PSL personnel. This could be drivers or citizens in drop off area;
- Through odor complaints to the Site Supervisor.

Odors Identified through Self-inspection

The primary objective of the Plan is to identify and mitigate odors from the landfill before the odors can have an impact on the surrounding community. This can be accomplished through self-inspections. Onsite personnel will continuously monitor the odor onsite and at the working face during working hours. If excessive odor is observed PSL personnel shall notify the Site Supervisor.

Self-inspections will be performed on a weekly basis by the Site Supervisor or his designated representative. Self-inspections consists of the individual touring the facility specifically to identify odors. Weather conditions will be considered when planning odor observations (early morning, low winds, etc.). The results will be documented on the forms provided. Any odors identified through self-inspection will be mitigated in accordance with the guidance provided in this Plan. An odor crossing property lines is the criteria for mitigation.

If PSL has received more complaints, regarding offsite odor, on two occasions in any 10-day period or notified by EGLE or Township officials. Monitoring of offsite odor shall be conducted daily when the facility is collecting waste. Daily self-inspections will continue until the potential problem is corrected and no complaints have been received for 30 days. After this time the facility shall suspend daily odor monitoring and resume weekly monitoring schedule.

Odors identified by non PSL individuals

Odor complaints brought to the attention of the Site Supervisor, or other PSL personnel, must be properly investigated. Upon receipt of an odor complaint, the following steps will be taken:

- The complaint will be investigated by the Site Supervisor or his designated representative
- If the complaint is made verbally (i.e. driver or onsite citizen) and the odor is ongoing, the complaint will be investigated as soon as possible. The investigation should include interviewing the complainant, completing the appropriate form, and a visit to the site of the alleged odor. During the visit to the location where the alleged odor was noted the PSL employee will try to verify the odor exists.
- If some time has elapsed since the occurrence of the odor, the complaint still must be investigated. The investigation must include a visit to the location, interviewing the complainant, if possible, and completing the appropriate form.

Monitoring for offsite odor shall be conducted by the Site Supervisor who can recognize the odors and identify the potential source. If an odor is detected which is likely contributing to the offsite odors, the following additional monitoring shall be conducted as necessary based on the type of odor:

- Leachate collection system risers, pump stations, manholes and vents shall be checked for leaks and spills;
- Active landfill working face will be continually monitored during operating hours for conditions that have potential to contribute to offsite odors including odorous incoming waste and odorous waste in place;
- Daily and interim cover shall be inspected in accordance with current regulations and PSL procedures. However, if the detection of offsite odor warrants, landfill personnel will monitor daily and interim cover for leachate breakout, erosion rills, settlement, adequate vegetation, stressed vegetation, depth and cover.
- Landfill personnel will monitor the waste containers located at the throw off area and the container storage area for presence of residual waste in containers.

Personnel conducting the odor monitoring shall complete the Odor Survey Form, which includes the name of the inspector, time and date of the inspection, description of the odor observed, location of odor onsite (if possible), odor inspection check list, and corrective action taken. All forms will be filed onsite.

5.0 RESPONSE TO DETECTION/ NOTIFICATION OF OFFSITE ODOR

If the facility detects or is notified of an offsite from the landfill, the following procedures will be implemented by landfill personnel:

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- To the extent possible, identify the odor type as landfill gas, decomposing waste, leachate, or odor due to incoming waste stream.
- Determine the odor source using the following:
 1. Using available weather data determine the wind direction at the time of the odor was identified.
 2. Using the plan view of the landfill draw a line in the direction of the wind and intersecting the location where the odor was identified.
 3. If the facility is in an upwind position compared to the location where the odor was identified, then determine the facility features and activities along the vector.
 4. Compare the identified odor to any odors generated along the wind vector in an upwind position and determine the source of the odor.
- Perform the following mitigation measures based on the source of the odor:

If the odor originates from an incoming waste stream, one or more of the following will be selected to mitigate the odor:

- Require that the waste stream generator treat the waste stream to eliminate the odors prior to delivery to the landfill
- Change the disposal location of the waste onsite (move further upwind, behind a wind break, or other spatial mitigation method).
- Immediately Cover objectionable waste upon delivery to the working face
- Restrict the times when an objectionable waste stream can be delivered to the site
- Stop taking the waste
- Use odor masking or neutralizing agents

If the odor originates from the decomposing waste in general, one or more of the following methods will be selected to mitigate the odor:

- Place additional cover soil on material
- Repair cracking and erosion in daily and interim cover
- Stop reintroducing leachate to the landfill

6.0 TRAINING

Operators and employees will be trained annually on the contents of this Plan. Employees will be trained to recognize conditions at the working face which could contribute to offsite odor as discussed. Employees will be trained to respond accordingly to objectionable waste being disposed of at the working face. One or more of the PSL employees will be trained to conduct odor monitoring. The training to conduct odor monitoring shall include discussion about recognizing odor types, determining the source of the odor, completing an odor monitoring survey, and responding accordingly as discussed in this Plan. A memo which includes the

topics covered and the employees present at the training will be completed by the person responsible for the training, and a copy will be maintained in the site operating record.

7.0 RECORD KEEPING

As discussed following EGLE approval of this Plan, odor survey forms will be completed weekly and maintained in the site operating record. If PSL receives a complaint regarding an offsite odor, monitoring for offsite odor shall be conducted daily until the problem is corrected and there have been no complaints for 30 days. If this is the case daily odor surveys will be completed and maintained in the operating record. Daily and interim cover inspection will be completed daily.

Odor survey forms and complaint investigations will be maintained in the operating record for 1 calendar year.

8.0 PUBLIC RELATIONS

All odor complaints brought to the attention of the Site Supervisor by individuals other than PSL employees must be investigated and documented. The PSL has an open door policy in regard to odor complaints. A site employee will be available to interview odor complainants during operating hours and complainants can leave a message regarding odors with the scale house operator or the voice mail for the site.

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Odor Survey Form

Date: _____

Time of inspection: _____

Name of inspector: _____

Weather conditions:

Temperature: _____

Wind Direction: _____

Approximate wind speed: _____

Approximate Humidity: _____

Were there any odor detections at the landfill property lines: Yes___ No ___

If yes Please describe:

Location: _____

Odor description: _____

Possible source: _____

Were there any odors detected at or near the working face: Yes: ___ No: _

If yes describe: _____

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Targeted Odor inspection Check List

Location	Objectionable noted	Description of corrective action
North, South, East, West, Property line	Yes No	
Working Face	Yes No	
Leachate collection system (Manhole, pump station)	Yes No	
Leachate load out	Yes No	
Throw off containers	Yes No	
Container Storage	Yes No	
Daily cover	Yes No	
Interim cover	Yes No	
Erosion areas	Yes No	

Complainant Investigation/ Interview

Interviewer Name: _____ Inspection/interview date: _____

Complaint Date and Time: _____ Inspection/ interview: Time: _____

Complainant Name and
Address: _____

Location of Complaint: _____

Weather conditions: _____

Wind direction and approximate speed at time of complaint:

What time was odor observed: _____

Describe the Characteristics of the odor: What did smell like? How strong?

In what way did the odor disturb or annoy you? _____

Do you know anyone else disturbed by the odor? How do you know?

Besides making a complaint did you take any action in response to the odor? (for
example: Shut windows, stay indoors, cancel outdoor activities)

Do you detect the odor now? _____

How often do you detect the odor? _____

How long does the odor incident last? _____

Is the odor always basically the same or does it differ in intensity _____

Verified complaint: _____ Unverified Complaint _____

Did Complainant request feedback? _____

Was feedback given, what date provided: _____