



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
WARREN DISTRICT OFFICE



Phillip Roos
DIRECTOR

November 14, 2023

VIA EMAIL

Matt Williams, Environmental Director
County of Saint Clair
6779 Smiths Creek Road
Smiths Creek, Michigan 48047

Dear Matt Williams:

SUBJECT: Violation Notice; Smiths Creek Landfill; St. Clair County
Fiscal Year 2023, Fourth Quarter Part 115 Inspection
Waste Data System Number: 452546

On September 25, 2023, the staff of the Department of Environment, Great Lakes, and Energy (EGLE), Materials Management Division (MMD), conducted an inspection of the Smiths Creek Landfill (Facility) located at 6779 Smiths Creek Road, Kimball, Michigan as well as an odor survey of the community surrounding the landfill. The inspection was performed to evaluate compliance of the Facility with Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, MCL 324.11501 et seq., as amended, and the administrative rules promulgated thereunder (Part 115). The odor survey was performed in response to several odor complaints from residents in the vicinity of the Facility.

Based on the inspection, MMD staff determined that the Facility is in violation of the following provisions of the Part 115 Administrative Rules:

1. R 299.4433(c) which states, *“That gases generated by the facility do not create a nuisance and are not otherwise in violation of part 55 of the act at the property boundary.”*

Since September 5, 2023, the Air Quality Division (AQD) and MMD have received, over 47 odor complaints from residents in the vicinity of the Facility. The complaints ranged from smelling intermittent, bad odors to severely bad odors that impacted residents' ability to enjoy their property. Staff of AQD and MMD have performed several odor inspections in the areas of the numerous complainants' homes and have noted landfill odors of various intensities at different times of the day.

The odor survey was performed in the neighborhoods adjacent to the landfill. Some odors were noted, but at the time, they did not seem to be as intense as the odors that the complainants described; however, a fairly unpleasant odor was noted in a ravine behind one resident's home. This odor constituted a nuisance under the Part 115 administrative rules.

In subsequent discussions and emails with you, AQD, and MMD, since the inspection, it has been determined that the Facility's gas extraction system has numerous deficiencies that need to be adequately addressed in order to prevent the release of excessive gas odors that migrate into the adjacent residents' community.

One of the primary concerns is that the gas extraction system does not have adequate capacity to manage all of the gas being generated by Cell 8 and possibly other portions of the landfill, and as a consequence, the excess gas is migrating off site and resulting in numerous odor complaints. This problem is exacerbated by the design of the gas collection lines that are mostly horizontal and it appears that some have settled and filled with liquids, thereby further preventing the extraction of gas.

The AQD staff sent a violation notice to you on October 25, 2023, for violating Part 55, Air Pollution Control, of NREPA, as documented during inspections on October 10 and 18, 2023. The violations of Part 55 also constitute a violation of the Part 115 administrative rules.

2. Section 11511(b)(5)(c)(iv) states that a Research, Development, and Demonstration Project (RDDP) must have *"An active gas collection and control system. The system shall be of adequate size for the anticipated methane production rates and to control odors. The system must be operational before the addition of any material to accelerate or enhance biostabilization of the solid waste."*

In the RDDP Smiths Creek Landfill Septage Bioreactor 2022 Annual Report, in Section 2.2 Gas Extraction System, it indicates that "two gas extraction lines on lift 2 and one on lift 4 were connected to the gas extraction manifold and operated as part of the active gas extraction system" and that "the remaining installed gas extraction lines on Lift 4 of Cell 8 have not yet been connected or operated as part of the active extraction system." The report indicates that 156,414 gallons of septage sludge had been placed in Cell 8 in 2022. It is not clear as to when the gas extraction system became fully operational. Please indicate if or when the remaining lines were connected and operated as part of the gas extraction system as well as how many lines were connected. If the lines are not connected, it is imperative that the lines be connected as soon as possible.

The MMD has reviewed the gas collection system as-built information and has raised concerns that the main gas header, providing vacuum from the gas-to-energy plant and primary flare station, is undersized for the current gas generation of the landfill and that the header is being subject, unnecessarily, to settlement/liquids accumulation by being installed within the solid waste boundary.

Based on multiple verified off-site nuisance odors from landfill gas, it is apparent that the effective capacity of the gas collection and control system in the RDDP subject portions of the landfill is not currently adequate.

In addition, there are multiple landfill cells that currently rely primarily on horizontal gas collectors to maintain gas control. What criteria is utilized by the Facility to determine when gas collection infrastructure is transitioned from horizontal to vertical gas collectors?

Section 11511(b)(9) states *"If the department determines that the overall goals of an RDDP, including, but not limited to, protection of the environment, natural resources, and the public health, safety, and welfare, are not being achieved, the department may order immediate termination of all or part of the operations of the RDDP or may order other corrective measures."*

It has been discussed that the RDDP injection of septage may be the reason for the recent odor complaints. Monitoring reports from AQD indicate that elevated concentrations of **hydrogen sulfide**, potentially resulting from the anaerobic breakdown of septage sludge in the landfill, have been detected atop the surface of the landfill.

Based on the bulk of the complainants' subsequent comments after the odor survey, the odors seem to be consistent with the rotten egg odor of hydrogen sulfide.

You indicated that septage liquids have not been injected into Cell 8, but that septage sludges had been placed in the cell. You also indicated that injection of septage liquids into the landfill has temporarily ceased while the odor control problems are being addressed via the installation of temporary flares and an aboveground lateral gas line. It should be noted that additional remedies and actions have been taken, since the September inspection, that have been described in your weekly update reports and other emails. While it is important to stop all injections of septage liquids and sludges into the landfill cells; be aware that if the odor problems are not resolved soon, **the approvals for the operation of the RDDP may be rescinded.**

Please submit a response to this letter by November 30, 2023, with information regarding the Facility's actions taken and planned to address the above items. A copy of the MMD inspection report, has been enclosed with this letter for your reference.

This Violation Notice does not preclude nor limit EGLE's ability to initiate any other enforcement action under state or federal law as deemed appropriate.

Should you require further information regarding the matters discussed in this letter, please contact me at 586-494-5051 or by email at ParkerC9@Michigan.gov.

Sincerely,



Carolyn Parker
Senior Environmental Engineer
Warren District Office
Materials Management Division
586-494-5051

Enclosure

cc/enc: David Richmond, St. Clair County Health Department
Mary Carnagie, EGLE
Joyce Zhu, EGLE
Greg Morrow, EGLE
Iranna Konanahalli, EGLE
Robert Joseph, EGLE
Aaron Darling, EGLE

Michigan Department of Environment, Great Lakes, and Energy
Materials Management Division
Part 115 - Landfill Evaluation Report

Name of Facility SMITHS CREEK LANDFILL			Facility Number 452546		License # and Expiration Date 9561 6/20/2024	
Facility Address 6779 Smiths Creek Rd, Kimball, MI			Facility Contact : Name -- Phone Number Matt Williams 810-989-6979			
LEGEND: (C) = Compliance (V) = Violation (NE) = Not Evaluated (*) = See Note (--) = Does not Apply						
General Operations				Leachate / Stormwater Management		
C	A.	Miscellaneous Operational Issues	C	J.	Surface Water Discharge	
C	B.	Blowing Debris, Dust, Odor & Vector Control	C	K.	Protection of Surface Waters	
V	C.	Gas Monitoring & Migration	C	L.	Leachate Control / Management	
	D.	Are there any exceedances of the LEL?	NE	M.	Leachate Volume / Head Records	
Prohibited Waste Restrictions			--	N.	Secondary Volume / ARF / RFR Records	
			Daily / Interim / Final Cover			
NE	E.	Hazardous Waste / Liquids / Yard Waste / Other Materials Prohibited for Disposal	*	O.	Adequacy of Daily Cover	
NE	F.	Random / Suspicious Load Records	Yes	P.	Are Alternate Daily Cover Materials Used?	
NE	G.	Load Inspection During Evaluation	Yes	Q.	Is the Use in Compliance with Approved Plan?	
0	# of Loads Inspected 0 yds. Volume of Loads		*	R.	Period and Adequacy of Interim Cover	
Permit and License Compliance			Yes	S.	Are all lifts exposed for 90 days covered with interim cover?	
			C	T.	Completion of Area / Final Cover	
V	H.	Operations Conform to Permit, License, Order Conditions & Construction Certifications				
V	I.	Operations Conform to Approved Hydrogeo, Monitoring, Engineering and Operational Plans				
REMARKS:						
<p>C-- In response to several recent odor complaints in the community near Smiths Creek Landfill, we did an odor survey, driving around sniffing for unpleasant odors in the Yager Street area. The worst odor we smelled was in a ravine behind a resident's house. He happened to be in his driveway when we stopped by and asked to go on his property. After the survey, we went to SCLF for an inspection. Matt Williams said the odor problems were due to excessive landfill gas generation. The bulk of the odor complaints were from residents living on Richmond, Smiths Creek, and Yager Roads. They had also got one from a resident east of the landfill. Matt said the odor problems were due to excess landfill gas generation. The landfill currently is incapable of collecting all of the gas at the site in violation of Rule 433(c). Matt said lateral gas lines had been installed and he was bringing in a second blower and temporary flare. He gave us an 11" x 17" copy of the "Site Gas System Plan" and the "Cell 8 Gas Extraction System " plan. While we were in Matt's office, Greg Morrow called to relay an odor complaint that had just come in; subsequently, we did another odor survey in the areas southwest of the landfill and returned to complete the inspection of the landfill.</p> <p>O, R--There were interim cover areas on the westside of the landfill that need to have rill erosion repaired and the areas re-vegetated. The daily cover was sparse in the area around the large motorboat that was perched in the active fill area.</p>						
Person Interviewed Matt Williams, Travis Heslop			Date of Inspection 9/25/2023		Time of Inspection\Odor Surveys ~1:00 PM -5:13 pm	
Inspected By Carolyn Parker, Aaron Darling			Representing EGLE - MMD			

DEFINITIONS

- A. The landfill shall control public access and shall supervise the unloading of all solid waste. [Rule 315(3&4), 427, 430(1)]
On-site roads shall be constructed and operated to allow unrestricted traffic flow and prevent fugitive dust nuisance. [Rule 315(5&10), 426(5)] The burning of solid waste is prohibited (certain exceptions). The burning is to be in designated areas only and with the permission of the Solid Waste Control Agency. Suitable measures shall be available to extinguish accidental fires. [Rule 315(9), 434(2&3)] The facility shall maintain adequate equipment to operate the landfill. [Rule 315(1), 426(1)] Landfill operation shall not result in excessive or objectionable noise. [Rule 315(14), 431] The facility may separate recyclable materials. The operation must be consistent with the requirements for processing plants. The salvaging must not interfere with waste disposal. Scavenging is prohibited. [Rule 315(11), 428] (For Type III) Facilities that do not contain liners in compliance with Rule 307 shall test representative samples of waste on an annual basis and submit the results of those tests to the director. [Rule 311]
- B. The facility shall take measures to control dust, blowing litter, odors, and disease vectors. The entire area shall be kept clean and orderly. [Rule 315(5&12), 426(3), 429(9)]
- C. The facility shall ensure that the concentration of methane gas is not > 25% of the Lower Explosive Limit (LEL) in structures and the leachate collection system. The concentration of methane shall not be more than the LEL at the property boundaries and gases shall not create a nuisance or a violation of Part 55. The facility must implement a routine methane monitoring program. [Rule 315(5) 433(1-3)]
- D. In the facility operating record are monitoring results indicative of the compliance since the last inspection date. [YES / NO]
- E. The facility shall supervise the unloading of all waste and not accept regulated hazardous waste, PCB's, bulk liquid waste, liquid waste containers, sewage, materials that would adversely effect the liner, asbestos waste (unless approved), empty drums, lead acid batteries, or more than a de minimus quantity of whole tires, beverage containers or yard wastes as specified in Part 115. [Rule 315(4&8), 430(1&2)]
- F. In the facility operating record, are records of random/suspicious load inspections available since the last inspection? Do those records demonstrate compliance?
- G. During the inspection document the number of loads inspected, quantity of waste inspected, and compliance status.
- H. Landfill operations must conform to conditions in the construction permit and operating license and comply with final orders and compliance plans contained in final orders.
- I. The landfill must be operated in accordance with previously approved hydrogeologic, engineering, and operational plans. [Rule 904, 905, 906, 907, 910, 911]
- J. The active work area must be sloped, graded, and provided with drainage facilities to prevent the collection of standing water. A surface water monitoring plan must be implemented for any water that may receive runoff from the active face. [Rule 315(13), 426(6), 436(2)]
- K. The facility shall not discharge pollutants into waters of the United States in violation of Part 31 or NPDES permit. [Rule 306(2), 436(1)]
- L. The facility shall remove leachate to ensure that the leachate head is not more than 1' on the liner (excluding the collection sump), remove liquids from the secondary collection system to minimize head on the liner, and inspect the system to assure proper operation. The leachate must be disposed of in compliance with Part 31. [Rule 308, 315(16&17), 432]
- M. In the facility operating record, are leachate volume available since the last inspection. Do those records demonstrate compliance?
- N. In the facility operating record, are secondary collection volumes and flow rates available since the last inspection. Do those records demonstrate compliance?
- O. At least 6" of earthen daily cover must be placed at the end of each operating day. If alternative daily cover is used, it must be approved by the director. If the daily cover is low permeability soil, it must be scraped back daily. If daily cover does not meet the performance standards, it must be modified. [Rule 316(1), 429(1-5, 8)]
- P. Are alternate daily cover materials (ADCM's) utilized at the facility? [YES / NO]
- Q. Is the use of the ADCM's in compliance with the approved plan? [YES / NO]
- R. Any lift that will be exposed for 3 or more months must have 1' of compacted cover that can include the 6" daily cover. Runoff must be handled as leachate unless the area has received approved interim cover. [Rule 316(2), 429(6&7)]
- S. Are all lifts that will not receive addition waste within 90 days covered with at least 1' of soil? [YES / NO]
- T. The landfill must be brought up to final grade as soon as possible. The final cover must be repaired to correct the effects of settling subsidence, erosion, and other events. The slopes of the final cover must be sufficient to prevent the ponding of water and excess erosion. The final cover must be stabilized with appropriate vegetation. [Rule 317, 448, 449(1), 425(7-9)]