



COUNTY OF ST. CLAIR



Smiths Creek Landfill

6779 Smiths Creek Road Smiths Creek, MI 48074 (810) 989-6981
scclandfill@stclaircounty.org

November 21, 2023

Mr. Aaron Darling
Geologist
Warren District Office
Materials Management Division
Dept. of Environment, Great Lakes, and Energy
27700 Donald Court
Warren, MI 48092-3700

Subject: Compliance Site Inspection; Smiths Creek Landfill, St. Clair County
WDS: 452546

Mr. Darling:

We are in receipt of your letter dated October 25, 2023, identifying observations made during the October 18, 2023 site inspection in the off-site areas in the vicinity of Smiths Creek Landfill (SCL). The site visit was conducted by staff of the Department of Environment, Great Lakes and Energy (EGLE) to determine compliance with the provisions of Part 115 of P.A. 451, 1994 (Part 115). Based on the site visit, you provided the following observations:

“Upon arrival at the Facility, four off-site survey locations were selected based on the wind direction. At the time of the inspection, there was a westerly wind blowing at approximately 5 mph. A constant landfill gas odor strong enough to cause a person to attempt to avoid it completely was experienced on the property of the Holy Trinity Monastery (Location 2). Residents of the monastery were interviewed and stated that the intensity and consistency of the odor were a regular occurrence and had been experienced since mid-summer 2023. It was also noted during the inspection that intermittent landfill gas odor was detectable approximately one mile east of the Facility at Location 4 on Pine River Road.”

Based on these observations, you have concluded that the condition is in conflict with R299.4433(1)(c) of Part 115 which states:

“The owner and operator of a type II landfill shall ensure all of the following: (c) 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.”





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The aforementioned letter requests a recapitulation of actions previously accomplished, ongoing corrective measure implementation and future planned actions anticipated to resolve odors beyond the property boundary of the landfill. As was noted, SCL has communicated regularly with the both the Materials Management Division (MMD) and Air Quality Divisions of EGLE since the initial Pollution Emergency Alert System (PEAS) notification was received.

On September 5, 2023, SCL notified Carolyn Parker, EGLE of the odors that had become apparent in the vicinity of the landfill. In her response on that same date, Ms. Parker advised SCL that EGLE had received a complaint via PEAS regarding off-site odors in the vicinity of the landfill. Since that time, intermittent odors have been detected off-site by residents and/or SCL staff, and confirmed on October 17 and 18, 2023 by EGLE staff. A comprehensive investigation of the issues contributing to the presence of odors has been conducted and significant ongoing efforts are being made to isolate and correct areas of ambient gas detection.

SCL has been working diligently to implement measures for restoring gas control and has been communicating on a weekly basis to inform EGLE staff of the strides being made towards resolution of the issues. In addition to communications with both EGLE AQD and Materials Management Division, SCL has reached out to residents through in-person contact, participation in public meetings attended by residents and publication of two update bulletins.

SCL has implemented a three-tiered approach to addressing the odor problem. The first critical action focused on identifying the potential source of odors and some initial troubleshooting actions. This included:

- Temporarily suspending septage injection pending resolution of the gas management issues.
- Connecting three additional gas extraction lines in Cell 8 to determine if additional collection efficiency could be achieved.
- Connecting six existing vertical gas extraction wells in Cell 7 to the gas system using above-ground lateral extraction lines.
- Reviewing system vacuum and flare operations data from DTE and identifying an issue with the flare programming which resulted in decreases in overall wellfield vacuum during engine downtime.
- Review of wellfield data and comparison to historical information which identified diminished vacuum to extraction lines in Cell 8.





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- Performing a comprehensive on-site engineering evaluation of vacuum at sampling points across the system and identifying header piping where vacuum loss observed was significantly more than anticipated.
- Increased wellfield monitoring to observe well performance.

The second tier of response included repairs and rehabilitation of under-performing portions of the existing system identified in the initial phase of the corrective actions and adding site improvements to help reduce ambient emissions. This included:

- Reprogramming flare controls to re-establish design operating conditions.
- Operational changes to condensate knock-out sumps pump set points to reduce the likelihood of condensate obstructions.
- Increasing the vacuum at the engine plant from 50 inches w.c. to 59 inches w.c.
- Placement of approximately 1,200 yards of clay to augment in-place cover overlying interim cover areas and outside slopes of active areas including Cell 8.
- Removal of orifice plates in Cell 8 wells to ensure maximum flow through the existing wellheads.
- Excavation and re-grading of approximately 2,100 feet of the primary header collection pipe across the center of the landfill to reduce obstructions and drain condensate with the intent of restoring design gas flow.

The third tier of concurrent measures has focused on improvements and enhancements to the existing GCCS infrastructure to correct the ambient gas detections issues and increase future system capabilities. The most notable features include the following:

- Installation of new, larger wellheads to increase gas flow and reduce pressure drops across the wellheads to maximize flow from Cell 8.
- Installation of a temporary supplemental flare and blower system to apply additional vacuum and gas control directly to the southwest side of the site (i.e., Cell 8). This system was first connected on 10/31/2023 and brought on-line on 11/1/2023. During start-up, operators and the flare supplier addressed numerous equipment issues including a malfunctioning check valve and initial lack of vacuum., Following repairs, lines in Cell 8 were added on 11/9/2023 (SCLGW-120), 11/10/2023 (SCLGW-112), and 11/15/2023 (SCLGW-121).





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- A supplemental perimeter gas collection trench system has been designed for Cell 8 and construction began on November 20, 2023.

As a result of these efforts, we have noted a substantial increase in the available vacuum at the wells in Cell 8, as documented in the data provided to EGLE on 11/20/2023. The increase in available vacuum in combination with larger wellheads, rehabilitation efforts, and the use of a supplemental blower and flare, has increased measured gas collection and destruction from approximately 1,250 scfm at the start of September to 1,980 scfm on 11/17/2023. This represents nearly 60% increase in gas collection since this issue was first identified. The construction and operation of the interceptor trench that is anticipated to be online in the next month is expected to further increase collection efficiency.

Since we began operation of the supplemental blower and flare, we have observed a noticeable decrease in odors on-site, which was corroborated by Mr. Irranna Konanahalli of the Air Quality Division during a follow-up call with me following his most recent on-site visit on 11/15/2023. SCL staff continue to assess off-site odors during daytime hours and have perceived a reduction in detectable odors as well. We are continuing our outreach to residents for feedback on their experience.

In the coming weeks we intend to perform a comprehensive engineering assessment to identify future potential upgrades and operational changes we can make to reduce the likelihood of recurrence. We remain committed to full resolution of this issue as soon as possible. Please do not hesitate to contact me should questions arise regarding the above responses or if further discussion is required.

Sincerely,
Smiths Creek Landfill

Matthew Williams
Landfill Manager

Cc: Kerry Hepting, St. Clair County
Terri Zick, CTI and Associates, Inc.
Erin Berish, CTI and Associates, Inc.

