



## COUNTY OF ST. CLAIR

ENVIRONMENTAL SERVICES DEPARTMENT



Matthew Williams  
Landfill/Resource Recovery Manager

January 9, 2024

Mr. Iranna Konanahalli, Environmental Quality Analyst  
EGLE - Air Quality Division  
Southeast Michigan District Office  
27700 Donald Court  
Warren, Michigan 48092

**Subject: Smiths Creek Landfill (SCL), SRN N6207  
Blue Water Renewables, LLC  
Response to December 19, 2023, Violation Notice**

Dear Mr. Konanahalli:

The above referenced violation notice (VN) issued on December 19, 2023, is the third formal correspondence received from EGLE Air Quality Division regarding observations made during staff site visits on October 10 and 18, 2023 and an abbreviated methane screening conducted on October 18 by Mr. Kovalchick as documented in a report dated October 31, 2023.

In the VN, EGLE acknowledges receipt of responses to previous notices issued on October 25 and November 7, 2023, respectively and indicates that those responses did not fully identify the root cause(s) of documented odor events and did not include specific dates by which corrective actions would be completed. Further, EGLE has indicated that additional issues based on data submitted during corrective measure implementation to date has been considered in this most recent correspondence.

As EGLE staff is aware from continued direct correspondence including previous VN responses, weekly status updates and numerous in-person discussion since the referenced site visits, investigation into root causes and response actions have been conducted concurrently throughout this process. As such, definitive root cause conclusions and defined completion dates have also developed with our understanding of the conditions. We have attempted to offer projected completion dates for each response activity and have maintained consistent communication with EGLE on the progress toward resolution of identified issues.

The VN has been issued to both Smiths Creek Landfill (SCL) and Blue Water Renewables, LLC (BWR) in relation to renewable operating permit (ROP) N6207-2018. A total of eleven (11) issues are described in the VN associated with three (3) references provided as the premise for the findings. The information below is provided in response to the VN as requested. Ten (10) of the issues cited are applicable specifically to Smiths Creek Landfill, with one (1) issue related to the independently operated BWR facility co-located on the landfill property. This response is intended to address the landfill specific issues. The remaining issue will be addressed in a separate submittal by BWR.

The responses have been organized to address each of the issues and their associated regulatory citations provided in the table included in the VN dated December 19, 2023. Regulatory language for each rule citation has been included for reference and context. Additionally, at EGLE's request, planned and completed response actions have been summarized in a tabular format provided in Attachment 1 to this response.

#### Issue 1

Rule/Permit Condition Violated	Comments
Michigan Admin. Code Rule 336.1901 "Rule 901"	Verified SCL as the source of Rule 901 level odors. (See Reference 1)

#### **R336.1901**

*Notwithstanding the provisions of any other rule, a person shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:*

- (a) Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.*
- (b) Unreasonable interference with the comfortable enjoyment of life and property."*

**Reference 1:** *On October 10 and 18, 2023, EGLE staff detected intense landfill gas sulfur odor continuously at various locations, downwind of SCL of sufficient intensity and duration to be considered a violation of Rule 901. The Rule 901 violation is further corroborated by elevated methane and hydrogen sulfide (H<sub>2</sub>S) surface concentrations. Methane readings of 500 ppm or more above background at any location is considered an exceedance per 40 CFR 63.1958 or 40 CFR 63.1960. Please refer to the SEM inspection letter dated October 31, 2023 (SEM letter).*

**Response:** SCL agrees that certain off-site odors experienced since the first odor complaint was lodged have been the result of incomplete capture of gas by the GCCS. Off-site odors were first reported to EGLE on September 5, 2023, by SCL staff in an email time-stamped at 1:15pm, and independently by residents through the Pollution Emergency Alert System (PEAS). Since that time, the function of the extraction and collection system has been the focus of intense investigation, followed by execution of correction actions based on results of those evaluations.

We have coordinated with both EGLE and representatives of the St. Clair County Health Department to verify that impacts to off-site properties are aesthetic in nature and do not pose a health risk. Hydrogen sulfide surveys have been conducted by a third-party contractor (Tetra-Tech) beginning on January 2, 2024, We will share validated results as they become available as described in Attachment 1. We have also requested results of EGLE off-site monitoring from both the Michigan Department of Health and Human Services (MDHHS) and EGLE and are awaiting receipt of that data. SCL continues to investigate GCCS functionality and implement corrective actions to improve gas system performance in order to limit further potential disturbances of comfort to the surrounding community.

## Issue 2

NESHAP / MACT 4A 40 CFR 63.1958(d)(1)  40 CFR 63.1958 Operational standards for collection and control systems  Michigan Admin. Code Rule 336.1910 "Rule 910"	Failed to design and operate the gas collection control (GCCS) system as the methane concentration was detected above 500 parts per million (ppm) above background at the surface of the landfill.  Applied vacuum to the GCCS is inadequate particularly during periods when gas engines were shutdown and at Cell 8.  Quarterly surface emission monitoring (SEM) surveys are not covering all areas where the GCCS is present. (See Reference 2)
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**40 CFR 63.1958(d)(1)** : *"Operate the collection system so that the methane concentration is less than 500 parts per million (ppm) above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator must conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan must be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing."*

**Response:** We agree that detections >500 ppm were identified during the site visit referenced by EGLE. As previously communicated, corrective measures including augmentation of interim cover and wellfield adjustments, were successfully implemented within the time constraints specified in rule 63.1960 and all regulated locations were verified to be <500 ppm during 10-day and one-month re-checks required by NESHAP.

Based on the successful demonstration of measuring methane below the operational standard within regulatory timeframes, the methane concentrations identified in the October 18, 2023, abbreviated screening required corrective measures but do not constitute a violation of NESHAP requirements as stated in rule 63.1958(g). The corrective measures and re-checks are summarized in Attachment 1.

**40 CFR 63.1958(g):** *If monitoring demonstrates that the operational requirements in paragraph (b), (c), or (d) of this section are not met, corrective action must be taken as specified in § 63.1960(a)(3) and (5) or (c). If corrective actions are taken as specified in § 63.1960, the monitored exceedance is not a deviation of the operational requirements in this section.*

**Response:** EGLE has cited the general NESHAP requirements of 40 CFR 63.1958 and the performance standard of R336.1910 in its comment that applied vacuum to the GCCS was inadequate at the time of the site visits cited in the VN. While the issue is not specifically addressed in federal operational requirements, we agree that the presence of ambient gas off-site suggests incomplete gas capture by the GCCS at the

time of the EGLE site visits. As has been discussed in previous VN responses and numerous weekly updates, ensuring adequate gas collection across the GCCS has been the focus of much of the investigation and subsequent corrective measures implemented at SCL.

The requirements of 40 CFR 63.1958 focus on the presence of negative pressure at wellheads in the GCCS. As has been previously communicated, we have historically operated the system to that standard and have determined that landfill gas emissions can still occur when in compliance with the standard. We agree that the GCCS was not operating optimally to prevent off-site odors at the time of the site visits.

Since the time of the site visits, significant efforts have been made toward increasing collection capacity across all areas of the GCCS to improve functionality. Most notably, SCL has procured and installed a supplemental blower and flare to increase gas collection at Cell 8 which is thought to be the primary source of excess gas that was not being captured by the GCCS during the period referenced in your letter. Also, an interceptor trench was constructed and connected to the supplemental flare as of December 22, 2023, as a further mechanism to increase gas control at Cell 8. A summary of significant actions taken to date are provided in Attachment 1. A graph of applied vacuum improvements as a result of corrective measures taken to date is provided as Attachment 2.

In addition to addressing federal NESHAP requirements, the implemented actions are also designed to consider recent revisions to P.A. 451, 1994, Part 115 (Part 115). Part 115 revised rules establish minimum expectations for available vacuum at all wells in the GCCS. The requirement will become effective upon EGLE approval of updated GCCS engineering and design plans due on March 29, 2024. Based on current vacuum measurements at wells/horizontal collectors located furthest from the blower, SCL's GCCS has been demonstrated to be capable to meeting the upcoming state-mandated requirements.

***R336.1910: "An air-cleaning device shall be installed, maintained and operated in a satisfactory manner and in accordance with these rules and existing law."***

***Reference 2: On October 18, 2023, methane exceedances were identified during the SEMs inspection along with measurable hydrogen sulfide emissions. SCL failed to detect these leaks via monitoring required under 40 CFR Part 63.1958(d).***

*SCL excluded Cell 8 from formal SEM inspections despite a GCCS in place and being a location identified as the main source of odors. This exclusion violates AQD Rule 910 which requires air pollution control equipment is installed and operating properly. According to data provided, Cell 8 is considered an active system with approximately 600 standard cubic feet per minute (scfm) of flow. Emissions generated from that system are required to be captured and controlled. The GCCS, comprised of various collectors and vacuum lines, is the method of conveyance of emissions to the control device(s). SEM inspections are the appropriate way to demonstrate the capture and control equipment are operating properly. Wellhead data and system vacuum data, referenced in the SEM letter, provides additional evidence of a compromised control system. This is indicative of air pollution control equipment not operating in a satisfactory manner in accordance with Rule 910.*

**Response:** EGLE has raised two concerns regarding implementation of SEM in this VN item. The first pertains to differences in detection of methane and hydrogen sulfide during the abbreviated surface

emissions screening conducted by EGLE on October 18, 2023. The second issue involves the areal extent of SEM monitoring required to demonstrate compliance with the performance standard for air cleaning device operation under R336.1910.

With respect to the first item, SEM scans conducted by the trained third-party technician (EIL) conform to the NESHAP and EPA Method 21 requirements as previously described in correspondence dated November 15, 2023. The portable infrared absorption analyzer used conforms to the equipment required by EPA Method 21, Section 6. Instrument calibration and response time checks are conducted and documented as required prior to each event. The unobstructed tip of the monitoring instrument is placed 5 – 10 cm above the landfill surface as required by §63.1960(c)(3). We agree that there was a disparity in the occurrence of detections between equipment and methods used during the informal screening on October 18, 2023, however, the equipment and methods used by SCL's contractor are appropriate and consistent with SEM requirements.

As expressed in previous VN response, the cone selectively used by EGLE during their methane screening on October 18, 2023, appears to be based on EPA's Tier 4 test methodology in §62.16718(a)(6) as opposed to Method 21 which guides SEM monitoring as specified in §63.1960(c)). Use of a wind barrier is not required during routine quarterly SEM surveys, nor is it an accepted industry practice. To our knowledge, it has not been demonstrated that the Tier 4 methodology equivalently measures ambient concentrations without artificially concentrating methane or other gases within the cone. We continue to rely upon data collected using appropriate equipment, procedures and properly trained personnel as outlined in NESHAP. Data collected using divergent methodologies may not allow for equivalent comparison.

With respect to the second item, Cell 8 does not yet meet the criteria triggering gas system operation since waste age within the cell is less than 5 years, and the bioreactor waste moisture content is less than 40%. EPA has previously concurred that installation and operation of a voluntary GCCS, as SCL would characterize the GCCS infrastructure in Cell 8, does not require compliance with operational standards until such time as the area requires controls (Applicability Determination Index (ADI) Control No. 0800065, EPA 9/26/2007). Although federal air regulations do not require implementation of monitoring activities such as SEM over the Cell 8 area until November 2024, we believe that there is value in conducting screening similar to the SEM required across the rest of the landfill. As such, SCL has voluntarily incorporated Cell 8 into the SEM screening process beginning in first quarter, 2024.

EGLE has stated in Reference 2 that "Wellhead data and system vacuum data, referenced in the SEM letter, provides additional evidence of a compromised control system". We recognize that EGLE's concerns in this regard are speculative and we have taken a systematic approach to determining if, and to what degree, system components may be compromised as suggested in the VN. The GCCS integrity has been comprehensively reviewed by qualified engineers. These evaluations have revealed specific areas of the GCCS which have been shown to be limiting system effectiveness, including a significant length of primary header with substantial settlement. Rehabilitation efforts have been conducted in the most critical areas identified allowing us to significantly increase collection capabilities. Additional renovation of aging portions of the infrastructure will be included as part of the updated Part 115 engineering plans to be submitted to EGLE in March 2024.

**Issue 3**

<b>Rule/Permit Condition Violated</b>	<b>Comments</b>
40 CFR 63.6 (e)(1)(i) 40 CFR 63.1955(c) 40 CFR 63.1962(b)(2)	Impaired wells in cell 3 and the interim cover portion of the landfill based on wellhead data. (See Reference 3)

**40 CFR 63.6(e)(1)(i):** “At all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source.”

*Reference 3: Wellhead data reviewed and referenced in the SEM letter, identifies multiple collection wells as being vapor locked, flooded, or otherwise impaired (i.e., wells that are low flow, high percent methane, have similar applied/available vacuum). 40 CFR 63.1962(b)(2) requires that vertical wells be constructed in such a manner as to address the occurrence of water within the landfill. SCL failed to propose how these wells will be investigated and remediated. Finally, the SEM letter identified surface emissions problems in the final cover portion of the landfill. This was a repeat finding from a prior Materials Management Division (MMD) inspection conducted on June 28, 2023.*

*Additionally, LandGEM gas generation curves submitted during the ROP renewal show gas generation rates at 9,178 actual cubic feet per minute (acfm) in 2023. According to an equipment inventory review, the collective control capacity is not adequate to handle the maximum gas generation. The inadequacy of the collective control capacity has necessitated further actions by SCL to address the issue, like installation of a rental flare and header for gas interceptor.*



**Response:** With respect to 40 CFR 63.6(e)(1)(i), Table 1 to Subpart AAAA, Part 63 of the NESHAP (see below) clarifies that the requirements of the cited rule apply only to MSW landfills prior to September 28, 2021. As such, we respectfully request removal of reference to 63.6(e)(1)(i) from the VN.

Table 1

Part 63 citation	Description	Applicable to subpart AAAA before September 28, 2021	Applicable to subpart AAAA no later than September 27, 2021
§ 63.6(e)(1)(i)–(ii)	Operation and maintenance requirements	Yes	No

**40 CFR 63.1955(c):**

*“At all times, beginning no later than September 27, 2021, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if the requirements of this subpart have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.”*

**Response:** 40 CFR 63.1955(c) establishes the general obligation for minimizing emissions through implementation of the operating standards in Part 63. Historically, monitoring criteria including temperature, negative pressure and oxygen content have been used exclusively to confirm compliance with Part 63 Subpart AAAA. Since the occurrence of off-site odors documented through SCL staff notification and PEAS beginning on September 5, 2023, we have expanded the operating parameters used to evaluate the performance of the GCCS. The performance parameters include evaluation of well vacuum based on the presence of balance gas in individual wells. We have also been reviewing data obtained from BWR weekly which provides a larger perspective on the function of the system as a whole through evaluation of wellfield vacuum and concentrations of methane at the fuel skid. Operations which consider this more robust set of data will allow SCL to better anticipate developing issues with both GCCS infrastructure and potential emissions going forward.

**40 CFR 63.1962(b)(2)**

*“Vertical wells must be placed so as not to endanger underlying liners and must address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors must be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices must be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any*

*gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.”*

**Response:** With respect to 40 CFR 63.1962(b)(2), The placement and design of vertical wells and lateral collectors have been detailed and approved by EGLE in previous RDDP permitting actions. We assume, therefore, that this citation is intended to address the assertion in Reference 3 that various wells in Cell 3 and the interim cover area may be compromised due to water infiltration. Specifically, the citation requires that liquids present in the landfill must be considered in the placement and management of vertical wells.

As has been discussed previously in meetings with EGLE staff, a prioritized approach has been used to assess the GCCS with preferential focus being placed on portions of the system identified as being the most likely impedance to system optimization. The primary source of the odors has been determined to be related to Cell 8 and our approach has been to preferentially address issues specifically related to that area in the effort to reduce off-site odors as quickly as possible. Work completed to date include rehabilitation of one of the main header lines as previously described in weekly reports and prior VN responses, installation/operation of a supplemental flare to address gas generation in Cell 8 and the most recent installation of the interceptor trench specifically designed to address gas related to Cell 8.

We agree that the potential presence of water in vertical wells in adjacent cells requires evaluation and correction if needed. Based on the age and gas generating potential of the waste in Cells 3 and the interim cover area, it is unlikely that water infiltration into those vertical wells, if present, is contributing significantly to off-site odors experienced at the site. Therefore, implementation of this action has been deferred until more critical actions have been completed as described above. Liquid measurements in vertical wells will be collected by February 29, 2024, and any required corrective measures will be discussed in the Part 115 GCCS Design Plan updates submitted to EGLE for approval on March 29, 2024.

#### Issue 4

Rule/Permit Condition Violated	Comments
40 CFR 63.1962(b)(2)	Failed to design an active collection system to handle the maximum expected gas flow rate from the entire area of the landfill. (See Reference 3)
40 CFR 63.1962(a)(3)	
40 CFR 63.1959(b)(2)(ii)(B)(1)	
40 CFR 63.1959 NMOC calculation procedures	

#### **40 CFR 63.1962(b)(2)**

*“Vertical wells must be placed so as not to endanger underlying liners and must address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors must be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices must be designed so as not to allow indirect short circuiting*



of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.”

**40 CFR 63.1962(a)(3)** “The placement of gas collection devices determined in paragraph (a)(1) of this section must control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (ii) of this section.

(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under § 63.1983(d). The documentation must provide the nature, date of deposition, location, and amount of asbestos or nondegradable material deposited in the area and must be provided to the Administrator upon request.

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material must be documented and provided to the Administrator upon request. A separate NMOC emissions estimate must be made for each section proposed for exclusion, and the sum of all such sections must be compared to the NMOC emissions estimate for the entire landfill.

(A) The NMOC emissions from each section proposed for exclusion must be computed using Equation 7:

$$Q_i = 2 k L_o M_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9}) \text{ (Eq. 7)}$$

Where:

$Q_i$  = NMOC emission rate from the  $i$ th section, Mg/yr.

$k$  = Methane generation rate constant, year<sup>-1</sup>.

$L_o$  = Methane generation potential, m<sup>3</sup>/Mg solid waste.

$M_i$  = Mass of the degradable solid waste in the  $i$ th section, Mg.

$t_i$  = Age of the solid waste in the  $i$ th section, years.

$C_{NMOC}$  = Concentration of NMOC, ppmv.  $3.6 \times 10^{-9}$  = Conversion factor.

(B) If the owner/operator is proposing to exclude, or cease gas collection and control from, nonproductive physically separated (e.g., separately lined) closed areas that already have gas collection systems, NMOC emissions from each physically separated closed area must be computed using either Equation 3 in § 63.1959(c) or Equation 7 in paragraph (a)(3)(ii)(A) of this section.

(iii) The values for  $k$  and  $C_{NMOC}$  determined in field testing must be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (the distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for  $k$ ,  $L_o$  and  $C_{NMOC}$  provided in § 63.1959(a)(1) or the alternative values from § 63.1959(a)(5) must be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in paragraph (a)(3)(i) of this section.”

**40 CFR 63.1959(b)(2)(ii)(B)(1)** An active collection system must: (1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control system equipment

**40 CFR 63.1959** NMOC calculation procedures

**Note** – Reference 3 included with response to Issue 3, above.

**Response:** As a point of clarification, Reference 3 cited in the VN states that gas generation curves associated with the 2023 ROP renewal show a gas generation rate of 9,178 acfm. The ROP application submitted to EGLE on November 16, 2022, contained the following projected gas generation rates through 2030:

Year	LFG Flow	LFG Flow SM	LFG Flow Combine
2020	7.794E+02	1.934E+03	2,714
2021	7.488E+02	2.001E+03	2,750
2022	7.195E+02	2.097E+03	2,817
2023	6.912E+02	2.266E+03	2,957
2024	6.641E+02	2.422E+03	3,086
2025	6.381E+02	2.566E+03	3,204
2026	6.131E+02	2.698E+03	3,312
2027	5.890E+02	2.821E+03	3,410
2028	5.659E+02	2.934E+03	3,500
2029	5.438E+02	3.039E+03	3,582
2030	5.224E+02	3.135E+03	3,658

Based on this model, flow in 2023 is projected to be 2,957 cfm versus the 9,178 cfm value cited in the VN. EPA's LandGEM model (Version 3.03) was utilized for gas generation rate calculations. Flow was modeled (using standard EPA factors) separately for the non-bioreactor and bioreactor areas, and then added together for a total projected gas flow rate. As indicated below, the calculations used to prepare the gas generation projections include gas managed via seven (7) solar flares (six (6) located in the closed area and one (1) at the southwest portion of the site). The flow volume attributed to the self-contained passive solar flares has been included as a conservative contingency in the Landgem model although it does not enter the active GCCS. We will be available to discuss any disparities in flow calculations or modeling which may have been prepared independently by EGLE staff.

SCL's current inventory of LFG control equipment includes the following:

Two Bluewater Plant Engines (550 cfm each):	1,100 cfm
10 inch/3 inch open flare:	2,200 cfm
Seven (7) Solar flares (90 cfm each):	630 cfm
Temporary Open Flare (current capacity):	500 cfm
<b>TOTAL COMBUSTION CAPACITY:</b>	<b>4,430 cfm</b>

The calculated design capacity of control equipment at the landfill is sufficient to combust collected gas through the period modeled in 2023 as indicated above. As has been discussed previously with EGLE staff, the lifespan of several of the GCCS components has been reached and equipment rehabilitation and/or replacement is required as a part of the corrective actions underway at the site. Proposed replacement

equipment and any significant system modifications will be evaluated to verify that they meet or exceed the design capacity required for current and near-future operation. We believe that the erroneous projected flow cited in Reference 3 negates the specific regulatory violations cited. While we agree that the control of off-site odors is paramount, the regulatory references are inapplicable to the issue and should be removed from the VN.

#### Issue 5

Rule/Permit Condition Violated	Comments
40 CFR 63.1960(c)(5)	Not noted or addressed on the monthly integrity monitoring for closed portion of the landfill contains standing water and dead vegetation. Some of these areas coincided with SEMs exceedances. (See Reference 3)

#### **40 CFR 63.1960(c)(5)**

*"The owner or operator must implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis."*

**Note** – Reference 3 included with response to Issue 3, above.

**Response:** Individual areas of eroded cover are known to be present on the closed area. This issue has been previously discussed with EGLE Materials Management Division (MMD) staff in response to observations made during a June 28, 2023, MMD inspection and communicated in correspondence dated July 11, 2023. Following that inspection and correspondence, excavation, and repairs to correct areas of standing water and erosion were initiated and a plan to make larger repairs including targeted re-grading and seeding was prepared. As the closed area is not a significant source of odors or SEM exceedances, the remaining work to correct the largely aesthetic issues related to cap repair were deferred when off-site odors became an issue after September 5, 2023. We plan to resume repairs to complete the necessary cap maintenance during second quarter, 2024 as weather allows.

The site performs monthly cover integrity inspections in accordance with the standard, and hard copies of those inspections were provided to EGLE during a site visit on October 4, 2023. Those reports indicate that conditions of standing water, erosion, distressed vegetation are being documented as applicable. In addition to cover integrity inspections conducted for NESHAP compliance, other routine inspections are conducted for a variety of purposes including SEM monitoring, Stormwater compliance, Part 115 compliance and Maintenance Housekeeping associated with SPCC planning which also document cover integrity issues which may be observed on the closed area. You are welcome to review these additional documents at the site.

**Issue 6**

Rule/Permit Condition Violated	Comments
R 336.1201 – “Rule 201” Permit to Install	Failed to satisfactorily demonstrate the non-enclosed combustor (open flare) installed on-site is exempt from an air-use permit.

**R 336.1201**

*“Except as allowed in R 336.1202, R 336.1277 to R 336.1291, or R 336.2823(15) a person shall not install, construct, reconstruct, relocate, or modify any process or process equipment, including control equipment pertaining thereto, which may emit any of the following, unless a permit to install that authorizes such action is issued by the department.*

*(a) Any air pollutant regulated by title I of the clean air act and its associated rules, including 40 C.F.R. § 51.165 and § 51.166, adopted by reference in R 336.1902.*

*(b) Any air contaminant.*

*A person who plans to install, construct, reconstruct, relocate, or modify any such process or process equipment shall apply to the department for a permit to install on an application form approved by the department and shall provide the information required in R 336.1203.”*

**Response:** Based on our contractor’s (EIL) discussions with EGLE staff on January 2, 2024, it is our understanding that the issue cited in the VN applies specifically to the supplemental flare installed at Cell 8. Prior to installation of the temporary flare in question, calculations were prepared to predict SO2 emissions for comparison against the established 40 ton/year SO2 PTI exemption level. Based on discussions with EGLE staff, it was determined that calculations using available weekly sulfur concentration data for 2023 from the main skid at the gas plant would offer a reasonable representation of conditions at the supplemental flare. As a result of that effort, PTI exemption demonstrations were submitted to EGLE on October 3, October 5 and October 30, 2023, respectively. However, when sulfur readings were collected from the temporary flare after it began combusting gas collected directly from Cell 8, they were noticeably higher than those measured for the system as a whole. As a result, a PTI application was submitted to EGLE on December 15, 2023, based on the results of Draeger tube testing conducted at the temporary flare. Further analyses are scheduled by January 31, 2023, to confirm results of the Draeger tube screening. Revisions to the PTI application will be made at that time if needed. Details of actions taken on this issue are provided in Attachment 1.

**Issue 7**

Rule/Permit Condition Violated	Comments
40 CFR 63.1955(c)	Failed to operate associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions. (See Reference 3)

**40 CFR 63.1955 (c)**

*"At all times, beginning no later than September 27, 2021, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if the requirements of this subpart have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source."*

**Note** – Reference 3 included with response to Issue 3, above.

**Response:** As indicated in the response to Issue 3, above, 40 CFR 63.1955(c) establishes the general obligation for minimizing emissions through implementation of the operating standards in Part 63. Corrective actions based on the enhanced set of performance data described in more detail under Issue 3 will continue to be implemented throughout the remainder of the correction measure implementation and going forward as a means of early detection of emerging performance issues that may affect system efficiency.

**Issue 8**

<b>Rule/Permit Condition Violated</b>	<b>Comments</b>
40 CFR 63.1958(e)(1)	Failed to operate the GCCS such that all collected gases are vented to a control system.

**40 CFR 63.1958(e)(1)**

*"Beginning no later than September 27, 2021, operate the system in accordance to § 63.1955(c) such that all collected gases are vented to a control system designed and operated in compliance with § 63.1959(b)(2)(iii). In the event the collection or control system is not operating:*

- (i) The gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within 1 hour of the collection or control system not operating; and*
- (ii) Efforts to repair the collection or control system must be initiated and completed in a manner such that downtime is kept to a minimum, and the collection and control system must be returned to operation."*

**Response:** Gases collected by the GCCS are conveyed directly to either a flare or BWR engines for destruction. The flare, located in the northwest portion of the property, is equipped with a 3" supply line and a 10" line. During normal operation, gas is directed to the engines and the 3" flare line is open and available to direct gas to the flare when the volume exceeds that required for engine operation. During times of engine shutdown and when flow exceeds a threshold volume, the 10" line automatically opens to allow additional gas to be routed to the flare.

Each of the supply lines of the primary flare, supplemental flare and the gas plant are equipped with failsafe valves that automatically shut down gas mover equipment if the control devices are not operating, to prevent uncombusted gas from being vented to the atmosphere. As an example of this control feature, on September 11, 2023, during odor troubleshooting efforts, it was determined that the 10" supply line was not automatically opening during engine downtime. As a result, the system automatically throttled overall vacuum to the wellfield, reducing overall flow to the control device.

All collected gases at SCL are directed exclusively to a control device equipped with safeguards as described above to prevent venting to the atmosphere. Therefore, this regulatory citation is not applicable, and we request its removal from this VN.

#### Issue 9

Rule/Permit Condition Violated	Comments
40 CFR 63.1962(c)	Failed to ensure the gas mover equipment was sized to handle the maximum gas generation flow rate expected as the landfill gas was not conveyed through the collection header pipe.

#### **40 CFR 63.1962 (c)**

*"Each owner or operator seeking to comply with § 63.1959(b)(2)(iii) must convey the landfill gas to a control system in compliance with § 63.1959(b)(2)(iii) through the collection header pipe(s). The gas mover equipment must be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:*

*(1) For existing collection systems, the flow data must be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (c)(2) of this section must be used.*

*(2) For new collection systems, the maximum flow rate must be in accordance with § 63.1960(a)(1)."*

**Response:** "Gas mover equipment" as defined under 40 CFR 63.1990 is "...the equipment (i.e. fan, flower, compressor) used to transport landfill gas through the header system." The manufacturer curve for gas mover equipment demonstrates that the equipment is capable of managing the volume of gas being generated. As part of the ongoing system evaluation, we are also evaluating the actual gas curves to verify that the equipment continues to perform in accordance with manufacturer's specifications in real-world conditions. This evaluation will be completed by January 31, 2024

The re-assessment of system design calculations prepared by our consultant and verified by two separate Senior Professional Engineers continues to demonstrate that the overall system is adequately sized to manage the predicted gas flow under normal conditions. As discussed previously with EGLE staff and in prior VN responses, our investigation has revealed that settlement of significant lengths of primary header sections impeded collection, and subsequent rehabilitation has been conducted to restore normal flow conditions.



As previously communicated to EGLE, our investigation has demonstrated that a primary cause of odors has been related to reduced vacuum reaching Cell 8. Header rehabilitation has been conducted, which significantly improved vacuum at the far reaches of the GCCS, and addition of the supplemental blower and flare have significantly improved collection and destruction capabilities specific to Cell 8.

We are currently assessing scenarios under which the flow from Cell 8 may be directed to the Supplemental flare as a long-term solution as well as the alternate scenario of re-integrating the flow into the main header for destruction in the BWR engine plant. The gas mover system itself, as defined by rule, continues to be adequately sized and functioning appropriately for current and projected flows. We are coordinating with BWR to evaluate future system configuration and needs based on the above referenced scenarios.

#### Issue 10

Rule/Permit Condition Violated	Comments
40 CFR 63.1981(e)	Failed to revise the design plan prior to expanding the GCCS in a way not consistent with the design plan submitted.

#### **40 CFR 63.1981(e)**

***“Revised design plan.** Beginning no later than September 27, 2021, the owner or operator who has already been required to submit a design plan under paragraph (d) of this section must submit a revised design plan to the Administrator for approval as follows:*

- (1) At least 90 days before expanding operations to an area not covered by the previously approved design plan.*
- (2) Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted to the Administrator according to paragraph (d) of this section.”*

**Response:** Prior to the effective date of NESHAP revisions (September 27, 2021) which includes requirements for GCCS plan revisions under the above conditions, several revisions were submitted to EGLE (and previously Michigan Department of Environmental Quality - MDEQ) in conjunction with Part 115 actions. We agree that the current GCCS design differs from the GCCS Design Plan approved by EPA in 2002; however, each of the GCCS revisions was submitted to EGLE for review and approval as part of multiple bioreactor permit applications.

Subsequent GCCS construction events have conformed to the EGLE approved design plans. No design revisions for SCL’s current GCCS have occurred since September 27, 2021. As such, the provisions of 40 CFR 63.1981(e) have not been triggered and SCL continues to operate in compliance with the referenced NESHAP rule.

SCL agrees that a formal updated GCCS plan would be beneficial and potentially required based on the developing design of header system upgrades described above. Therefore, SCL will be preparing an update to the GCCS plan as part of the system design upgrades currently underway. An updated GCCS design/engineering plan is required by March 29, 2024, pursuant to amended Part 115 requirements. An

updated GCCS design plan prepared pursuant to the NESHAP will be prepared/submitted within two months of EGLE's approval of the Part 115 plan.

### **SEM Compliance Plan**

The VN requests implementation of a compliance plan to ensure compliant completion of SEM events. Specifically, the letter requests the following details:

- a. Survey of all areas of the landfill inside the limits of the waste disposal boundary in accordance with 40 CFR 63.1958(d)(1).
- b. Problem areas identified during the monthly cover integrity inspections required under 40 CFR 63.1960(c)(5) should be surveyed during SEM inspections and the results documented.
- c. Ensure SEMs are conducted where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover are observed in accordance with 40 CFR 63.1958(d)(1).
- d. Document all SEM hits via photography and location after it has been addressed. It should be clear in the documentation how each SEM exceedance was resolved.

As described in the response to Issue 2, above, SCL has agreed to voluntarily include SEM evaluation of Cell 8 as part of routine SEM events, beginning January 2024. The events will be informed by results of monthly cover integrity inspections, and those locations identified during the monthly assessments will be included as specific points in the SEM. Consistent with current procedures, the SEM technician will continue to consider areas of cover with the potential for elevated gas based on visual indicators. Finally, documentation will be enhanced to include photographs or other details which describe the location and nature of exceedances. Follow-up documentation of detected exceedances will include a brief description of the measures taken to resolve the issue along with recheck results.

Under the amended Part 115 regulations, SCL is required to submit an updated GCCS/engineering plan and an updated SEM plan. SCL will provide an updated SEM plan to EGLE by the March 29, 2024, due date specified in EGLE's March 22, 2023, Advisory Letter to Michigan Landfills. The amended plan will include the items listed in this VN response.

### **Asbestos Placement**

While not considered to be a factor in resolution of the odor issue currently being addressed, EGLE has requested information regarding NESHAP Subpart M, Asbestos. We assume this request is related to any potential disturbance of asbestos containing waste as a function of investigating or rehabilitating gas collection infrastructure within the waste mass. Specifically, EGLE has requested documentation of compliance with Rules 40 CFR 61.154(b)(1) and 61.154 (f).

The letter requests photos of warning signs which are referenced in 40 CFR 61.154(b)(1) if present. In lieu of warning signs, SCL manages disposal operations such that all asbestos waste received for disposal is covered with at least 6" of non-asbestos material no later than the end of each operating day in accordance with 40 CFR 61.154(c)(1).

SCL isolates regulated asbestos containing material (ACM) from non-exempt generators in surveyed pits to limit the potential for future exposure of disposed ACM. As a matter of policy, SCL requires both friable and non-friable materials to be managed in conformance with Subpart M. A copy of the asbestos disposal locations at SCL is provided in Attachment 3. The location of specific asbestos disposal areas is used to

determine whether notification and special handling procedures for excavated materials is required under 40 CFR 61.154(j) during activities such as gas well installation or repairs.

### **Summary and Conclusion**

SCL and St. Clair County have made significant strides toward identification of root causes of off-site gas detections and restoration of full control of landfill gas. As a result, we have observed noticeable improvement of conditions on-site and both AQD and MMD EGLE staff visiting the site in December 2023 have verbally indicated that they recognize improvement in off-site odors.

We remain committed to instituting additional controls, system improvements and procedures as necessary to sustainably minimize off-site odor impacts in the future. Measures implemented to date and upcoming actions are documented in Attachment 1. We will continue to update EGLE weekly with details of our advancements.

If you have questions regarding our progress or this submittal, please contact me at (810) 989-6979.

Sincerely,  
Smiths Creek Landfill

A handwritten signature in black ink, appearing to read "Matt Williams", with a stylized flourish at the end.

Matt Williams  
Director, Smiths Creek Landfill

Cc/via e-mail:

Annette Switzer, EGLE  
Christopher Ethridge, EGLE  
Brad Myott, EGLE  
Jenine Camilleri, EGLE  
Joyce Zhu, EGLE  
Robert Joseph, EGLE  
Gina, McCann, EGLE  
Mike Kovalchick, EGLE  
Aaron Darling, EGLE  
Mary Carnagie, EGLE  
Kerry Kelly, EGLE  
Matthew Karl, EGLE  
Vrajesh Patel, EGLE  
Erin Berish, CTI  
Laura Niemann, EIL  
Terri Zick, CTI

Attachments

## Attachment 1 - Corrective Measure Implementation

Date	End Date	Activity	Sub-Tasks / Comments
SURFACE EMISSIONS MONITORING			
8/1/2023	8/1/2023	SEM Monitoring	3rd Quarter SEM event performed by EIL (Cell 8 not yet subject to routine SEM per NESHAP standard)
10/18/2023	10/18/2023	EGLE Split-Screening	EGLE performs abbreviated methane screening on-site; EIL shadows and performs full SEM event
10/27/2023	10/27/2023	SEM Follow-Up	Landfill operators addressed EGLE methane detections reported based on October 18th SEM audit; Areas previously identified as having significant methane detections during EGLE SEM audit rechecked to verify effectiveness of corrective measures
11/3/2023	11/3/2023		locations from the joint quarterly SEM and EGLE methane/H2S screening resulted in three (3) locations still above 500ppm; the second 10-day recheck was conducted Friday and the remaining three locations passed.
11/10/2023	11/10/2023		SEM second 10-day recheck for NESHAP-subject landfill areas, conducted with all regulated locations <500ppm (30-day recheck scheduled for Fri 11/17)
11/16/2023	11/16/2023		30-day recheck for SEM screening (including both NESHAP-subject areas and those in Cell 8) passed at all monitored spots on 11/16
1/9/2024	3/29/2024	Prepare revised SEM Monitoring Plan	Revisions to procedures including addition of Cell 8 to the SEM screening program and additional documentation of exceedences implemented during Q1, 2024 SEM event will be incorporated into GCCS plan to be submitted to EGLE by 3/29/24
GCCS Expansion			
9/11/2023	9/11/2023	GCCS expansion	Above-ground lateral connection to GW-85 & GW-88
9/15/2023	9/15/2023		GW-117 brought online
week ending 10/20/2023	10/20/2023		Connected SCLGW-86 & SCLGW-89 using above ground lateral lines
week ending 11/10/2023	11/10/2023		GW-120 connected to supplemental flare, achieving 25" applied vacuum
week ending 11/17/2023	11/17/2023		GW-112 connected to supplemental flare, achieving 25" applied
			GW-121 added to supplemental flare flow on Wednesday 11/15 (the third collector added)
week ending 12/15/2023	12/15/2023		GW-112 removed from supplemental flare and placed back into GCCS
10/6/2023	12/22/2023		GW-116 connected to the supplemental flare to maximize H2S extraction
Interim Cover Enhancements			
9/29/2023	9/29/2023	Augmentation of interim cover	Interceptor trench constructed and connected to control system via supplemental flare near Cell 8
9/29/2023	9/29/2023		Additional cover improvements completed based on odor survey
12/1/2023	12/1/2023		Cell 8 enhanced cover application
12/4/2023	12/8/2023		Additional cover placed in Cell 8
Ongoing	Ongoing		Cover enhancements to be completed as needed based on SEM and other observations

## Attachment 1 - Corrective Measure Implementation

Communications with EGLE and Community			
9/5/2023	9/5/2023	Notifications and Updates	SCL notifies EGLE of odor issue identified
10/3/2023	10/3/2023		SCL meets with EGLE (Aaron Darling - MMD) to provide an update
10/4/2023	10/4/2023		SCL meets with EGLE (Iranna Konanahalli - AQD) to provide an update; provided hard copies of requested documents
10/5/2023	10/5/2023		SCL submits data to EGLE including most recent gas system monitoring data, gas system drawing, and as-built table
10/10/2023	10/10/2023	Site Visit	EGLE - AQD makes a site visit
10/19/2023	10/19/2023	Notifications and Updates	Teams call held with EGLE to share header vacuum deficiency analysis and steps taken to date
10/16/2023	10/20/2023		Sent out a letter to neighbors in Kimball Township updating them with progress
10/25/2023	10/25/2023	Correspondence	NOV Received from EGLE - MMD NOV Received from EGLE - AQD
10/21/2023	10/27/2023	Notifications and Updates	Provided a complete data set for GCCS for 2023 to date as follow-up to Cell 8 data previously provided
10/30/2023	11/3/2023	Correspondence	Received EGLE's October 18th AQD Inspection and methane screening survey results
11/7/2023	11/7/2023		NOV Received from EGLE - AQD
11/6/2023	11/10/2023	Notifications and Updates	Provided update to St. Clair County Board of Commissioners (BOC) and participating representatives of Kimball Township and local residents at BOC meeting on Thu 11/9
11/14/2023	11/14/2023	Correspondence	NOV received from EGLE - MMD
10/25/2023	11/15/2023		Response provided to EGLE - AQD for NOV dated 10/25/2023
11/15/2023	11/15/2023	Site Visit	EGLE AQD staff site visit
11/13/2023	11/17/2023	Notifications and Updates	Met with Kimball Township to discuss upcoming Town Hall meeting  Participated in EGLE conference call with MMD, AQD, MDHHS, and SCC Health Dept
10/25/2023	11/21/2023	Correspondence	Response provided to MMD NOV dated 10/25/2023
11/22/2023	11/22/2023		Requested extension for response to 2nd MMD NOV letter
11/20/2023	11/24/2023	Notifications and Updates	Participated in a Kimball Township "Town Hall" meeting Monday, 11/20; Met with MMD staff (12/1) to discuss odor mitigation and GCCS design
11/7/2023	11/29/2023	Correspondence	Response provided to EGLE - AQD NOV dated 11/7/2023
11/14/2023	12/7/2023		Response provided to EGLE - MMD for NOV dated 11/14/2023
11/15/2023	12/7/2023		Response provided to EGLE NOV (MMD dated 11/15/23)
12/11/2024	12/11/2023	Site Visit	MMD and AQD Site Visit
12/19/2023	12/19/2023	Correspondence	Received NOV from EGLE AQD
12/20/2023	12/20/2023	Site Visit	EGLE AQD and AQD staff site visit; staff indicated no detected odors
12/19/2023	1/9/2024	Correspondence	Response provided to EGLE - AQD NOV dated 12/19/2023
10/19/2023	Ongoing	Correspondence	Weekly updates documenting progress and detailing upcoming activities will continue until issues are resolved.

## Attachment 1 - Corrective Measure Implementation

Coordination with BWR			
9/12/2023	9/12/2023	Operational coordination	Data requested from BWR to review overall vacuum performance of wellfield
9/14/2023	9/14/2023		SCL requests BWR to increase wellfield vacuum to 55"
10/13/2023	10/13/2023		Vacuum increased from 55" to 59" on the wellfield Automatic flare override removed; PLC revision at flare to ensure proper function moving forward
10/23/2023	10/27/2023		detections observed during screening conducted by EGLE on October 18th. BWR reported: Materials required to upgrade condensate draining system to control methane release (1" 316 Stainless Steel line and 1" ball valve) have been ordered and will be installed on the bottom of each engine muffler. The upgrade will allow BWR to drain condensate weekly in a controlled manner while eliminating a methane pathway from the current open condensate drain system.
9/5/2023	Ongoing		Coordination with BWR on system performance and configuration
Vacuum Investigation / Corrective Measures			
9/14/2023	9/19/2023	Vacuum Evaluation Activities	Background Field investigation of vacuum across wellfield
9/26/2023	9/26/2023		Orifice plates removed from Cell 8 wells to increase flow
10/13/2023	10/13/2023		Vacuum increased from 55" to 59" on the wellfield
9/29/2023	9/29/2023		Sampling ports installed in dripleg riser pipes; Pumping of MH-2 to troubleshoot flow to western header; Grade of P1 assessed for
9/29/2023	9/29/2023		Tested 3" wellhead and improved vacuum; Adjusted on/off levels in condensate tank at main blower/skid to ensure no blockage of gas flow
11/6/2023	11/10/2023		applied vacuum
9/11/2023	9/15/2023	Temporary Blower / Flare	SCL staff evaluate flare system; Flare issues resolved by manually throttling back 3" line to allow 10" line to open
9/26/2023	9/26/2023		Temporary blower/flare identified & two quotes received - LFG Technologies flare selected
10/2/2023	10/2/2023		Conceptual design for flare and interceptor trench prepared
10/9/2023	10/9/2023		CTI on-site to finalize blower/flare skid location in the field and to support design of temporary flare controls
10/13/2023	10/13/2023		PLC revision at flare to ensure proper function moving forward Electrical installation for temporary blower/flare started
10/23/2023	10/27/2023		Completed construction of a pad for the temporary flare; Developed engineering recommendations to integrate cell 8 temporary flare into the GCCS including phase-in monitoring of methane and balance gas levels during ramp-up for safe & effective re-balancing of the system; Temporary flare received and set in position on pad; Fabricated and installed a portion of piping infrastructure necessary to support connecting Cell 8 collectors connected to the temporary flare.
10/30/2023	11/3/2023		Preparations for, and start-up of temporary supplemental flare: -Drip leg for the temporary flare piping installed 10/30/23 -Piping for the temporary flare completed 10/31/23 - Temporary flare start-up 11/1/23; troubleshooting to evaluate lack of vacuum - 3 wells connected to the temporary flare for start-up re-connected to main GCCS. - LFG Technologies conducted adjustments and repairs 11/2/23

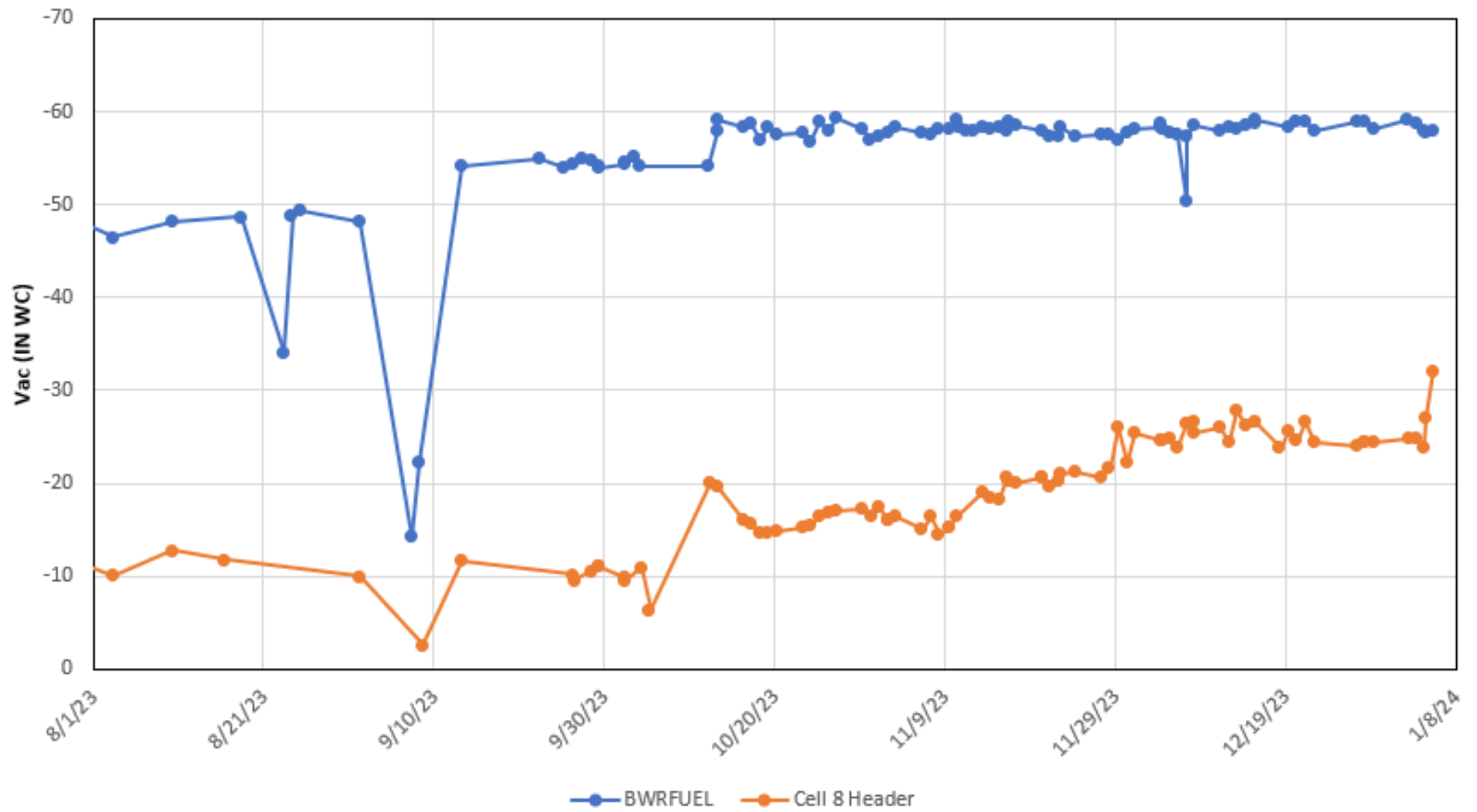


## Attachment 1 - Corrective Measure Implementation

11/6/2023	11/10/2023	Temporary Blower / Flare	Blower check valves replaced on temporary flare skid and adequate blower performance confirmed on 11/9 - Applied 25" vacuum on GW-120 - Applied 25" vacuum on GW-112 - Achieved uninterrupted flare operation on Thursday into Friday
11/15/2023	11/15/2023		GW-121 added to supplemental flare (the third collector added)
11/27/2023	11/27/2023		In-line flowmeter added to temporary flare for improved flow measurement accuracy
12/11/2023	12/15/2023		Wells connected to Temporary flare changed to maximize H2S capture (GW 112 replaced by GW116)
1/4/2024	Ongoing		Evaluate feasibility of larger flare to maximize flow and gas control until GCCS upgrades are selected
Other Actions			
9/22/2023	9/22/2023	Septage Receipt	Septage injection voluntary stopped by SCL
10/16/2023	10/20/2023	Odor neutralization System	Received approval and issued a PO for an odor neutralization system
12/4/2023	12/15/2024		Site installs and begins operations of odor neutralization system
10/3/2023	3/29/2024	Part 115 GCCS Design Plan	CTI prepares re-design of GCCS; EIL incorporates re-design into Part
3/29/2024	2 months after EGLE approval of Part 115 GCCS plan	Updated NESHAP GCCS Design Plan	EIL will prepare amended GCCS Design Plan for NESHAP pending EGLE approval of Part 115 plan.
PTI Demonstration/Application			
10/3/2023	10/3/2023	Exemption Demonstration	EIL submits permit exemption for temporary blower/flare based on available 2023 H2S data from BWR
10/5/2023	10/5/2023		PTI exemption resubmitted by EIL incorporating comments from CTI
12/15/2023	12/15/2023	PTI Application/Additional Information	EIL submits PTI application for temporary blower/flare based on actual H2S readings observed at the flare - much higher than those reported by BWR at the front of the landfill
1/2/2024	1/15/2024		that SCL is at the extreme northernmost edge of the SO2 nonattainment area, and that maximum SO2 source-wide emissions will need to be less than 90 tons/year versus the 225 tons/year requested in PTI application. Site will therefore select an appropriate gas treatment/control technology to remove some H2S from LFG prior to combustion in the temporary flare. Additional information/revised sourcewide limit will be submitted to EGLE.

Interceptor Trench			
10/6/2023	10/6/2023	Interceptor trench for enhanced gas control at Cell 8	Interceptor trench conceptual design approved by SCL and parts are ordered to minimize time delay
10/30/2023	11/3/2023		Gas Interceptor Trench pre-bid meeting and subsequent addenda are completed
11/6/2023	11/10/2023		Bids received and contractor approved for the Gas Interceptor project
11/10/2023	11/17/2023		Pre-construction meeting for Gas Interceptor trench. Contractor began mobilization of equipment
11/30/2023	11/30/2023		8" Header installation completed
12/8/2023	12/8/2023		Interceptor Drain construction
12/4/2023	12/8/2023		Drip leg, manifold and tie-ins installed
12/22/2023	12/22/2023		Interceptor trench connected to temporary flare and slight vacuum
12/22/2023	ongoing		Vacuum on interceptor trench adjustments to maximize flow and minimize air infiltration
1/15/2024	Weather dependent		Added additional low permeability clay overlying trench to minimize infiltration of air to allow greater vacuum to be applied to the trench to maximize gas collection
1/15/2024	TBD		Interceptor trench
Other GCCS Improvements and Rehabilitation Efforts			
11/29/2023	11/7/2023	Drip leg rehabilitation	Installed new condensate drain lines / drip leg for Cell 7 vertical wells
10/16/2023	10/20/2023	Header rehabilitation	Exposed and regraded an additional 500 LF of header piping
10/21/2023	10/27/2023		Completed the re-grading associated with main gas header begun prior week
2/15/2024	2/29/2024	Liquid Level Evaluation	Liquid level investigation in vertical wells
2/15/2024	2/29/2024	Header Rehabilitation	area

Attachment 2: Vacuum



# Attachment 3 - Asbestos Locations

