

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

EFFECTIVE DATE: February 3, 2023

ISSUED TO

C&C Expanded Sanitary Landfill

State Registration Number (SRN): N2896

LOCATED AT

14800 P Drive North, Marshall, Calhoun County, Michigan 49068

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-N2896-2023

Expiration Date: February 3, 2028

Administratively Complete ROP Renewal Application Due Between August 3, 2026 and August 3, 2027

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Rule 210(1) of the administrative rules promulgated under Act 451, this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-N2896-2023

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(1) of Act 451. Pursuant to Rule 214a of the administrative rules promulgated under Act 451, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

Rex Lane

Rex Lane, Kalamazoo District Supervisor

TABLE OF CONTENTS

A. GENERAL CONDITIONS.....	4
Permit Enforceability	4
General Provisions.....	4
Equipment & Design	5
Emission Limits.....	5
Testing/Sampling	5
Monitoring/Recordkeeping	6
Certification & Reporting	6
Permit Shield	7
Revisions	8
Reopenings.....	8
Renewals.....	9
Stratospheric Ozone Protection	9
Risk Management Plan.....	9
Emission Trading	9
Permit to Install (PTI)	10
B. SOURCE-WIDE CONDITIONS	11
C. EMISSION UNIT SPECIAL CONDITIONS	12
EMISSION UNIT SUMMARY TABLE.....	12
EUFLARE1	13
D. FLEXIBLE GROUP SPECIAL CONDITIONS.....	20
FLEXIBLE GROUP SUMMARY TABLE.....	20
FGLANDFILL-XXX.....	21
FGLANDFILL-AAAA	25
FGACTIVECOLL-XXX	31
FGACTIVECOLL-AAAA.....	35
FGOPENFLARE-XXX.....	43
FGOPENFLARE-AAAA.....	46
FGRULE290	49
FGCOLDCLEANERS.....	52
E. NON-APPLICABLE REQUIREMENTS	55
APPENDICES	56
Appendix 1. Acronyms and Abbreviations.....	56
Appendix 2. Schedule of Compliance.....	57
Appendix 3. Monitoring Requirements	57
Appendix 4. Recordkeeping	57
Appendix 5. Testing Procedures	57
Appendix 6. Permits to Install.....	57
Appendix 7. Emission Calculations	57
Appendix 8. Reporting	61
Appendix 9. Odor Management Plan	61

AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI are streamlined, subsumed and/or is state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in Subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"² **(R 336.1301(1))**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.

The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee 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.¹ **(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property.¹ **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
 - a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; “based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete.” The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
 - a. The applicable requirements are included and are specifically identified in the ROP.
 - b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
 - a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
- a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(9))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

C. EMISSION UNIT SPECIAL CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EULANDFILL	A Municipal Solid Waste (MSW) landfill that commenced construction, reconstruction, or modification after July 17, 2014. The MSW landfill has a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, and NMOC emissions equal to or greater than 34 Mg per year.	11-01-1981 03-15-2019	FGLANDFILL-XXX FGLANDFILL-AAAA
EUACTIVECOLL	This emission unit represents the active landfill gas collection system at the landfill that uses gas mover equipment to draw landfill gas from the wells and moves the gas to the control equipment.	08-01-1994 07-10-1999	FGLANDFILL-XXX FGLANDFILL-AAAA FGACTIVECOLL-XXX FGACTIVECOLL-AAAA
EUASBESTOS	Any active or inactive asbestos disposal site.	11-01-1981	FGLANDFILL-XXX FGLANDFILL-AAAA
EUFLARE1	Open flare is an open combustor without enclosure or shroud.	01-18-2013	FGLANDFILL-XXX FGLANDFILL-AAAA FGOPENFLARE-XXX FGOPENFLARE-AAAA
EUGWTS	Air stripper used for groundwater remediation.	01-01-1993	FGRULE290
EUCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv).	01-01-1990	FGCOLDCLEANERS

**EUFLARE1
 EMISSION UNIT CONDITIONS**

DESCRIPTION

3,000 CFM open flare for control of the landfill gas.

Flexible Group ID: FGLANDFILL-XXX, FGLANDFILL-AAAA, FGOPENFLARE-XXX, FGOPENFLARE-AAAA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	0% opacity ²	III.3	EU-FLARE1	SC V.2	R336.1301, 40 CFR 60.18(c)(1)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Net heating value of landfill gas	≥ 200 BTU/scf for non-assisted flares ²	NA	EU-FLARE1	SC V.1	40 CFR 60.18(c)(3)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate EUFLARE1 in accordance with 40 CFR 60.18.² **(R 336.1201(3))**
2. The permittee shall operate EUFLARE1 at all times when the collected gas is routed to it.² **(R 336.1201(3))**
3. EUFLARE1 shall be designed and operated with no visible emissions, as determined by the methods specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.² **(40 CFR 60.18(c)(1))**
4. EUFLARE1 shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f).² **(40 CFR 60.18(c)(2))**
5. EUFLARE1 shall be used only with the net heating value of the gas being combusted of 11.2 MJ/scm (300 BTU/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted of 7.45 MJ/scm (200 BTU/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f) and Appendix 7.² **(40 CFR 60.18(c)(3))**
6. Steam-assisted and non-assisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR 60.18(c)(4)(ii) and (iii)² **(40 CFR 60.18(c)(4)(i)):**

- a. Steam-assisted and non-assisted flares designed for and operated with an exit velocity, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 BTU/scf).² **(40 CFR 60.18(c)(4)(ii))**
- b. Steam-assisted and non-assisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4) less than the velocity, V_{max} , as determined by the method specified in 40 CFR 60.18(f)(5), and less than 122 m/sec (400 ft/sec) are allowed.² **(40 CFR 60.18(c)(4)(iii))**
7. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in 40 CFR 60.18(f)(6).² **(40 CFR 60.18(c)(5))**
8. Flares used to comply with provisions of 40 CFR Part 60, Subpart A shall be operated at all times when emissions may be vented to them.² **(40 CFR 60.18(e))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame for EU-FLARE1.² **(R 336.1201(3))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4).² **(R 336.1201(3))**
2. Method 22 of Appendix A to 40 CFR Part 60 shall be used to determine the compliance of EUFLARE1 with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.² **(40 CFR 60.18(f)(1), R 336.1201(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep up-to-date, readily accessible records for the life of the open flare of the data listed below in SC VI.2. as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five years. Records of the open flare vendor specifications shall be maintained until removal.² **(R 336.1201(3))**
2. The permittee shall maintain records regarding the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the open flare pilot flame or open flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.² **(R 336.1201(3))**
3. The following records for the flare shall be maintained onsite:
 - a. Records indicating presence of flare pilot flame.² **(40 CFR 60.18(f)(2))**
 - b. The net heating value of the gas being combusted in the flare shall be calculated and recorded using the equation provided in Appendix 7.² **(40 CFR 60.18(f)(3))**
 - c. The actual exit velocity of the flare shall be calculated and recorded by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Federal Reference Test Methods 2, 2A, 2C, or 2D as appropriate, by the unobstructed (free) cross sectional area of the flare tip.² **(40 CFR 60.18(f)(4))**

- d. The maximum permitted velocity, Vmax, for flares complying with 40 CFR 60.18(c)(4)(iii) shall be calculated and recorded using the equation provided in Appendix 7.² **(40 CFR 60.18(f)(5))**
- e. The maximum permitted velocity, Vmax, for air-assisted flares shall be calculated and recorded using the equation provided in Appendix 7.² **(40 CFR 60.18(f)(6))**

See Appendix 7

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be postmarked or received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Report shall be postmarked or received by appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVFLARE1	14 ²	42 ²	R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENT(S)

- 1. The permittee must comply with all applicable provisions of the federal Standards of Performance for Municipal Solid Waste Landfills that commenced construction, reconstruction, or modification after July 17, 2014 as specified in 40 CFR Part 60, Subpart XXX. Each permittee must comply with the provisions of 40 CFR 60.763, 40 CFR 60.765, and 40 CFR 60.766; or the provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961. Once the permittee begins to comply with the provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, the permittee must continue to operate the collection and control device according to those provisions and cannot return to the provisions of 40 CFR 60.763, 40 CFR 62.60.765 and 40 CFR 60.766. **(40 CFR 60.762(b)(2)(iv), 40 CFR Part 60, Subparts A and XXX)**
- 2. The permittee shall comply with all applicable provisions of 40 CFR Part 63 Subpart A and AAAA “National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills as they apply to EU-FLARE1.² **(40 CFR Part 63 Subpart A and AAAA, R 336.1201(3))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUASBESTOS EMISSION UNIT CONDITIONS

DESCRIPTION

This landfill is actively accepting or has accepted asbestos waste in the past.

Flexible Group ID: FGLANDFILL-XXX, FGLANDFILL-AAAA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. If the landfill accepts asbestos-containing waste materials from a source covered under 40 CFR 61.149, 40 CFR 61.150, or 40 CFR 61.155, the permittee shall meet the following operational requirements: **(40 CFR 61.154)**
 - a. Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of 40 CFR 61.154(c) or (d) must be met. **(40 CFR 61.154(a))**
 - b. Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of 40 CFR 61.154(c)(1) must be met. **(40 CFR 61.154(b))**
 - i. Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. **(40 CFR 61.154(b)(1))** The warning signs must:
 - (1) Be posted in such a manner and location that a person can easily read the legend. **(40 CFR 61.154(b)(1)(i))**
 - (2) Conform to the requirements of 51 cm by 36 cm (20 inches by 14 inches) upright format signs specified in 29 CFR 1910.145(d)(4) and 40 CFR 61.154(b)(1). **(40 CFR 61.154(b)(1)(ii))**
 - (3) The permittee shall display the legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in 40 CFR 61.154(b)(1). Spacing between any two lines must be at least equal to the height of the upper of the two lines. **(40 CFR 61.154(b)(1)(iii))**
 - ii. The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public. **(40 CFR 61.154(b)(2))**
 - iii. Upon request and supply of appropriate information, the appropriate AQD District Supervisor will determine whether a fence or a natural barrier adequately deters access by the general public. **(40 CFR 61.154(b)(3))**
 - c. Rather than meet the no visible emission requirement of 40 CFR 61.154(a), at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:

(40 CFR 61.154(c))

- i. Be covered with at least 15 centimeters (6 inches) of compacted non-asbestos-containing material. **(40 CFR 61.154(c)(1))** or
- ii. Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the appropriate AQD District Supervisor. For purposes of 40 CFR 61.154(c)(2), any used, spent, or other waste oil is not considered a dust suppression agent. **(40 CFR 61.154(c)(2))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The placement of gas collection devices determined in paragraph 40 CFR 60.769(a)(1) shall control all gas producing areas, except as provided by 40 CFR 60.769(a)(3)(i) and (a)(3)(ii) and (a)(3)(ii). **(40 CFR 60.769(a)(3))**
 - a. Any segregated area of asbestos or non-degradable material may be excluded from collection if documented as provided under 40 CFR 60.768(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or non-degradable material deposited in the area and shall be provided to the AQD upon request. **40 CFR 60.769(a)(3)(i)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For all asbestos-containing waste material received, the permittee of the active waste disposal site shall:
 - a. Maintain waste shipment records that include the following information: **(40 CFR 61.154(e)(1))**
 - i. The name, address, and telephone number of the waste generator. **(40 CFR 61.154(e)(1)(i))**
 - ii. The name, address, and telephone number of the transporter(s). **(40 CFR 61.154(e)(1)(ii))**
 - iii. The quantity of the asbestos-containing waste material in cubic meters (cubic yards). **(40 CFR 61.154(e)(1)(iii))**
 - iv. The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or USEPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or USEPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report. **(40 CFR 61.154(e)(1)(iv))**
 - v. The date of the receipt. **(40 CFR 61.154(e)(1)(v))**
 - b. As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator. **(40 CFR 61.154(e)(2))**
 - c. Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or USEPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record, and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.. **(40 CFR 61.154(e)(3))**

2. The permittee shall maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area storage. **(40 CFR 61.154(f))**
3. The permittee shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or non-degradable waste excluded from collection as provided in 40 CFR 60.769(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.769(a)(3)(ii). **(40 CFR 60.768(d)(2))**
4. The permittee shall keep records of one the following regarding any active disposal site where asbestos containing materials have been deposited:
 - a. USEPA Testing Method 22 readings demonstrating no visible emissions from any active disposal site where asbestos containing materials have been deposited. These readings are to be taken for 15 minutes each operating day. **(R 336.1213(3))**
 - b. Records of the date asbestos waste is received, the amount and type of material that has been used to cover the asbestos waste, and documentation that the cover material was applied in the frequency required in SC III.1.c of this table. **(40 CFR 61.154(c))**
 - c. Records pursuant to an alternative emissions control method that has prior written approval of the AQD District Supervisor as noted in SC III.1.d of this table. **(40 CFR 61.154(d))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit to the appropriate AQD District Supervisor, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities. **(40 CFR 61.154(h))**
5. The permittee shall furnish upon request and make available during normal business hours for inspection by the AQD, all records required by 40 CFR Part 61. **(40 CFR 61.154(i))**
6. Notify the AQD Technical Programs Unit and the appropriate AQD District Office in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the appropriate AQD District Office at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. **(40 CFR 61.154(j))**

Include the following information in the notice:

- a. Scheduled starting and completion dates. **(40 CFR 61.154(j)(1))**
- b. Reason for disturbing the waste. **(40 CFR 61.154(j)(2))**
- c. Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the AQD or may require changes in the emission control procedures to be used. **(40 CFR 61.154(j)(3))**
- d. Location of any temporary storage site and the final disposal site. **(40 CFR 61.154(j)(4))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D. FLEXIBLE GROUP SPECIAL CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGLANDFILL-XXX	This flexible group represents the general MSW landfill with a required collection and control system. This flexible group contains 40 CFR Part 60, Subpart XXX requirements.	EULANDFILL EUACTIVECOLL EUFLARE1 EUASBESTOS
FGLANDFILL-AAAA	This flexible group represents the general MSW landfill with a required collection and control system. This flexible group contains 40 CFR Part 63, Subpart AAAA requirements.	EULANDFILL EUACTIVECOLL EUFLARE1 EUASBESTOS
FGACTIVECOLL-XXX	This flexible group represents the active landfill gas collection system that uses gas mover equipment to draw landfill gas from the wells and moves the gas to the control equipment. This flexible group contains 40 CFR Part 60, Subpart XXX requirements.	EUACTIVECOLL
FGACTIVECOLL-AAAA	This flexible group represents the active landfill gas collection system that uses gas mover equipment to draw landfill gas from the wells and moves the gas to the control equipment. This flexible group contains 40 CFR Part 63, Subpart AAAA requirements.	EUACTIVECOLL
FGOPENFLARE-XXX	Open (non-enclosed) flare is an open combustor without enclosure or shroud. This flexible group contains 40 CFR Part 60, Subpart XXX requirements.	EUFLARE1
FGOPENFLARE-AAAA	Open (non-enclosed) flare is an open combustor without enclosure or shroud. This flexible group contains 40 CFR Part 63, Subpart AAAA requirements.	EUFLARE1
FGRULE290	Air stripper used for groundwater remediation.	EUGWTS
FGCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv).	EUCOLDCLEANERS

FGLANDFILL-XXX
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group represents the general MSW landfill with a required collection and control system. This flexible group contains 40 CFR Part 60, Subpart XXX requirements.

Emission Units: EULANDFILL, EUACTIVECOLL, EUFLARE1, EUASBESTOS

POLLUTION CONTROL EQUIPMENT

An open flare is used to combust the untreated landfill gas if the off-site gas to energy plant is down and/or is not able to process all the landfill gas being generated.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall implement the Odor Management Plan as outlined in Appendix 9. **(R 336.1213(3), R 336.1901)**

See Appendix 9

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee must install a collection and control system that captures the landfill gas generated within the landfill according to the requirements in 40 CFR 60.762(b)(2)(ii) and 40 CFR 60.762(b)(2)(iii). **(40 CFR 60.762(b)(2))**
2. The permittee must route all the collected landfill gas to at least one of the following:
 - a. A non-enclosed flare designed in accordance with 40 CFR 60.18 except as noted in 40 CFR 60.764(e). **(40 CFR 60.762(b)(2)(iii)(A))**
 - b. A control system designed and operated to reduce NMOC by 98 weight percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 ppmv on dry basis, as hexane at 3% oxygen. **(40 CFR 60.762(b)(2)(iii)(B))**
 - c. To a treatment system that processes the collected gas for subsequent sale or beneficial use. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to either 40 CFR 60.762(b)(2)(iii)(A) or (B). **(40 CFR 60.762(b)(2)(iii)(C))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee must keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered 40 CFR 60.762(b), the current amount of solid waste in place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. The permittee must keep all records on file in a format acceptable to the AQD District Supervisor and make them available upon request. **(R 336.1213(3), 40 CFR 60.768(a))**
2. Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of "design capacity", must keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. **(40 CFR 60.768(f))**
3. If reporting leachate or other liquids addition under 40 CFR 60.767(k), the permittee must keep records of any engineering calculations or company records used to estimate the quantities of leachate or liquids added, the surface areas for which the leachate or liquids were applied, and the estimates of annual waste acceptance or total waste in place in the areas where leachate or liquids were applied. **(40 CFR 60.768(j))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. If complying with the operational provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961 as allowed at 40 CFR 60.762(b)(2)(iv), the permittee must follow the semiannual reporting requirements in 40 CFR 63.1981(h) in lieu of 40 CFR 60.767(g). **(40 CFR 60.767(g))**
5. Annually, the permittee must submit a liquids addition report, to the appropriate AQD District Office, within 365 days after the date the previous report was submitted with the following information:
 - a. Volume of leachate recirculated (gallons per year) and the reported basis of those estimates (records or engineering estimates). **(40 CFR 60.767(k)(1))**
 - b. Total volume of all other liquids added (gallons per year) and the reported basis of those estimates (records or engineering estimates). **(40 CFR 60.767(k)(2))**
 - c. Surface area (acres) over which the leachate is recirculated (or otherwise applied). **(40 CFR 60.767(k)(3))**
 - d. Surface area (acres) over which any other liquids are applied. **(40 CFR 60.767(k)(4))**
 - e. The total waste disposed (megagrams) in the areas with recirculated leachate and/or added liquids based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates. **(40 CFR 60.767(k)(5))**
 - f. The annual waste acceptance rates (megagrams per year) in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates. **(40 CFR 60.767(k)(6))**
 - g. The initial report must contain items (a) through (f) for the initial annual reporting period as well as for each of the previous 10 years, to the extent historical data are available in on-site records, and the report must be submitted no later than thirteen (13) months after the date of commenced construction, modification, or

reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016 containing data for the first 12 months after August 29, 2016. **(40 CFR 60.767(k)(7)(ii))**

6. The permittee must submit an equipment removal report to the appropriate AQD District Supervisor 30 days prior to removal or cessation of operation of the control equipment. **(40 CFR 60.767(f))**
 - a. The equipment removal report must contain all of the following items:
 - i. A copy of the closure report submitted in accordance with 40 CFR 60.767(e). **(40 CFR 60.767(f)(1)(i))**
 - ii. A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired, or information that demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the USEPA's Central Data Exchange (CDX). **(40 CFR 60.767(f)(1)(iii))**
 - iii. Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 Mg or greater of NMOC per year. If the NMOC emission rate reports have been previously submitted to the USEPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the USEPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports. **(40 CFR 60.767(f)(1)(ii))**
 - b. The Department may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.762(b)(2)(v) have been met. **(40 CFR 60.767(f)(2))**
7. The permittee must submit a closure report to the appropriate AQD District Office within 30 days of waste acceptance cessation. The Department may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Department, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4). **(40 CFR 60.767(e))**
8. The permittee must submit reports electronically according to the following:
 - a. Within 60 days after the date of completing each performance test (as defined in 40 CFR 60.8), the permittee must submit the results of each performance test. For data collected using test methods supported by the USEPA's Electronic Reporting Tool (ERT) as listed on the USEPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>), submit the results of the performance test to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The CEDRI can be accessed through the USEPA's CDX (<https://cdx.epa.gov/>). Performance test data must be submitted in a file format generated through the use of the USEPA's ERT or an alternative file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website, once the XML schema is available. **(40 CFR 60.767(i)(1)(i))**
 - b. For data collected using test methods that are not supported by the USEPA's ERT as listed on the USEPA's ERT website at the time of the test, submit the results of the performance test to the USEPA at the appropriate address listed in 40 CFR 60.4. **(40 CFR 60.767(i)(1)(ii))**
 - c. Each permittee must submit reports to the USEPA via CEDRI (CEDRI can be accessed through the USEPA's CDX). The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (<https://www.epa.gov/chief>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the permittee must submit the report to the USEPA at the appropriate address listed in 40 CFR 60.4. Once the form has been available in CEDRI for 90 calendar days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. **(40 CFR 60.767(i)(2))**
9. The permittee must submit any performance test reports and all other reports required by 40 CFR Part 60, Subpart XXX to the appropriate AQD District Office, in a format approved by the AQD District Supervisor. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

1. If the permittee has submitted a design plan under 40 CFR 60.767(c), the permittee must submit a revised design plan to the Department for approval as follows:
 - a. At least 90 days before expanding operations to an area not covered by the previously approved design plan. **(40 CFR 60.767(d)(1))**
 - b. Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted under 40 CFR 60.767(c). **(40 CFR 60.767(d)(2))**
2. The collection and control system may be capped or removed as provided in 40 CFR 60.762(b)(2)(v) if all the following conditions are met:
 - a. The landfill is a closed landfill (as defined in 40 CFR 60.761). A closure report must be submitted to the appropriate AQD District Office as provided in 40 CFR 60.767(e). **(40 CFR 60.762(b)(2)(v)(A))**
 - b. The collection and control system must have been in operation a minimum of 15 years or operator demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flow. **(40 CFR 60.762(b)(2)(v)(B))**
 - c. Following the procedures specified in 40 CFR 60.764(b), the calculated NMOC gas produced by the landfill must be less than 34 megagrams per year on three successive test dates. The test dates must be no less than 90 days apart, and no more than 180 days apart. **(40 CFR 60.762(b)(2)(v)(C))**
3. The permittee must comply with all applicable provisions of the federal Standards of Performance for Municipal Solid Waste Landfills that commenced construction, reconstruction, or modification after July 17, 2014 as specified in 40 CFR Part 60, Subpart XXX. Each permittee must comply with the provisions of 40 CFR 60.763, 40 CFR 60.765, and 40 CFR 60.766; or the provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961. Once the permittee begins to comply with the provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, the permittee must continue to operate the collection and control device according to those provisions and cannot return to the provisions of 40 CFR 60.763, 40 CFR 62.60.765 and 40 CFR 60.766. **(40 CFR 60.762(b)(2)(iv), 40 CFR Part 60, Subparts A and XXX)**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGLANDFILL-AAAA
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

This flexible group represents the general MSW landfill with a required collection and control system. This flexible group contains 40 CFR Part 63, Subpart AAAA requirements.

Emission Units: EULANDFILL, EUACTIVECOLL, EUFLARE1, EUASBESTOS

POLLUTION CONTROL EQUIPMENT

An open flare is used to combust the untreated landfill gas if the off-site gas to energy plant is down and/or is not able to process all the landfill gas being generated.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Methane	Less than 500 ppm above background level	Calendar Quarter	Surface of Landfill	SC V.1 SC VI.1	40 CFR 63.1958(d)(1)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. At all times, the permittee 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. **(40 CFR 63.1955(c))**
2. During periods of startup, shutdown, and malfunction (SSM), the permittee must comply with the work practices specified in 40 CFR 63.1958(e)(1). **(40 CFR 63.1960(e)(2))**
3. The permittee shall implement the Odor Management Plan as outlined in Appendix 9. **(R 336.1213(3), R 336.1901)**

See Appendix 9

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee must install a collection and control system that captures the landfill gas generated within the landfill according to the requirements in 40 CFR 63.1959(b)(2)(ii) and 40 CFR 63.1959(b)(2)(iii). **(40 CFR 63.1959(b)(2))**
2. The permittee must route all the collected landfill gas to at least one of the following:
 - a. An open (non-enclosed) flare designed in accordance with 40 CFR 63.11(b) except as noted in 40 CFR 63.1959(e). **(40 CFR 63.1959(b)(2)(iii)(A))**

- b. A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 ppmv on dry basis, as hexane at 3% oxygen. **(40 CFR 63.1959(b)(2)(iii)(B))**
- c. A treatment system that processes the collected gas for subsequent sale or beneficial use. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to either 40 CFR 63.1959(b)(2)(iii)(A) or (B). **(40 CFR 63.1959(b)(2)(iii)(C))**

V. TESTING/SAMPLING

Records must be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- 1. The permittee must monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30-meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis. **(40 CFR 63.1960(c)(1))**
- 2. The permittee 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. **(40 CFR 63.1958(d)(1))**
 - a. The permittee must conduct testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR 63.1960(d). **(40 CFR 63.1958(d)(2)(i), 40 CFR 63.1960(c)(1))**
 - b. The background concentration must be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells. **(40 CFR 63.1960(c)(2))**
 - c. Surface emission monitoring must be performed in accordance with 40 CFR Part 60, Appendix A-7, Method 21, Section 8.3.1, except that the probe inlet must be placed within 5 to 10 centimeters of the ground. Monitoring must be performed during typical meteorological conditions. **(40 CFR 63.1960(c)(3))**
 - d. The permittee must conduct surface testing at all cover penetrations and monitor any cover penetrations that are within an area of the landfill where waste has been placed and a gas collection system is required. **(40 CFR 63.1958(d)(2)(ii))**
 - e. The permittee must determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places. **(40 CFR 63.1958(d)(2)(iii))**
- 3. The permittee must document any reading of 500 ppm or more above background at any location as a monitored exceedance. As long as the following specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 63.1958(d). **(40 CFR 63.1960(c)(4))**
 - a. The location of each monitored exceedance must be marked, and the location recorded using an instrument with an accuracy of 4 meters with coordinates in decimal degrees and five decimal places. **(40 CFR 63.1960(c)(4)(i))**
 - b. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance must be made and the location must be re-monitored within 10 calendar days of detecting the exceedance. **(40 CFR 63.1960(c)(4)(ii))**
 - c. If the re-monitoring of the location shows a second exceedance, additional corrective action must be taken and the location must be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in SC V.3.e must be taken, and no

further monitoring of that location is required until the action specified in SC V.3.e has been taken. **(40 CFR 63.1960(c)(4)(iii))**

- d. Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in 40 CFR 63.1960(c)(4)(ii) or (iii) must be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 ppm above backgrounds, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in SC V.3.c or SC V.3.e must be taken. **(40 CFR 63.1960(c)(4)(iv))**
 - e. For any location where monitored methane concentration equals or exceeds 500 ppm above backgrounds three times within a quarterly period, a new well or other collection device must be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Department for approval. **(40 CFR 63.1960(c)(4)(v))**
4. The permittee must comply with instrumentation specifications and procedures in 40 CFR 63.1960(d) for surface emission monitoring devices: **(40 CFR 63.1960(d))**
 - a. The portable analyzer must meet the instrument specifications provided in 40 CFR Part 60, Appendix A-7, Method 21, except that "methane" must replace all references to VOC. **(40 CFR 63.1960(d)(1))**
 - b. The calibration gas must be methane, diluted to a nominal concentration of 500 ppm in air. **(40 CFR 63.1960(d)(2))**
 - c. To meet the performance evaluation requirements in 40 CFR Part 60, Appendix A-7, Method 21, the instrument evaluation procedures of 40 CFR Part 60, Appendix A-7, Method 21 must be used. **(40 CFR 63.1960(d)(3))**
 - d. The calibration procedures provided in 40 CFR Part 60, Appendix A-7, Method 21 must be followed immediately before commencing a surface monitoring survey. **(40 CFR 63.1960(d)(4))**
 5. Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring. **(40 CFR 63.1961(f))**

VI. MONITORING/RECORDKEEPING

Records must be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee must keep records of the surface methane monitoring including, at a minimum, the following information:
 - a. The route traversed including any areas not monitored because of unsafe conditions (i.e., truck traffic, construction, active face, dangerous areas, etc.) and areas included where visual observations indicate elevated levels of landfill gas. **(40 CFR 63.1960(c)(1))**
 - b. The location(s) and concentrations of the methane readings and noting any reading of 500 ppm or more above background. **(40 CFR 63.1960(c)(4))**
 - c. The meteorological conditions the day of the testing including wind speed, wind direction, and temperature. **(R 336.1213(3))**

The permittee must keep all records on file in a format acceptable to the appropriate AQD District Supervisor and make them available upon request. **(R 336.1213(3), 40 CFR 63.1960(c))**

2. The permittee must implement a program to monitor, on a monthly basis, for cover integrity and implement cover repairs as necessary. Records of the cover integrity and any cover repairs must be kept on file in a format acceptable to the appropriate AQD District Supervisor and made available upon request. **(R 336.1213(3), 40 CFR 63.1960(c)(5))**

3. The permittee must keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered 40 CFR 63.1959(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. The permittee must keep all records on file in a format acceptable to the appropriate AQD District Supervisor and make them available upon request. **(R 336.1213(3), 40 CFR 63.1983(a))**
4. If adding liquids other than leachate in a controlled fashion to the waste mass and do not comply with the bioreactor requirements in 40 CFR 63.1947, 40 CFR 63.1955(b), and 40 CFR 63.1982(a) and (b), the permittee must keep records of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. The permittee must document the calculations and the basis of any assumptions. Keep the record of the calculations until the permittee ceases liquids addition. **(40 CFR 63.1982(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee must submit reports which must be postmarked or received by the appropriate AQD District Office by March 15 for reporting period January 1 to December 31. The reports must include the location of each exceedance of the 500 ppm methane concentrations as provided in 40 CFR 63.1958(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. The reports must also include information on all deviations that occurred during the 6-month reporting period. **(40 CFR 63.1961(f), 40 CFR 63.1981(h)(5))**
5. The permittee of a controlled landfill must submit an equipment removal report to the Department 30 days prior to removal or cessation of operation of the control equipment. **(40 CFR 63.1981(g))**
 - a. The equipment removal report must contain all the following items:
 - i. A copy of the closure report submitted in accordance with 40 CFR 63.1981(f). **(40 CFR 63.1981(g)(1)(i))**
 - ii. A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired, or information that demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the USEPA's Central Data Exchange (CDX). **(40 CFR 63.1981(g)(1)(ii))**
 - iii. Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 Mg or greater of NMOC per year. If the NMOC emission rate reports have been previously submitted to the USEPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the USEPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports. **(40 CFR 63.1981(g)(1)(iii))**
 - b. The Department may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 63.1957(b) have been met. **(40 CFR 63.1981(g)(2))**

6. The permittee of a controlled landfill must submit a closure report to the Department within 30 days of waste acceptance cessation. The Department may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Department, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 63.9(b). **(40 CFR 63.1981(f))**
7. The permittee must submit reports electronically according to the following:
 - a. Within 60 days after the date of completing each performance test required, submit the results of the performance test with data collected using test methods supported by the USEPA's Electronic Reporting Tool (ERT) as listed on the USEPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>). Submit the results of the performance test to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the USEPA's CDX (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the USEPA's ERT. Alternatively, submit an electronic file consistent with the extensible markup language (XML) schema listed on the USEPA's ERT website. **(40 CFR 63.1981(I)(1)(i))**
 - b. For data collected using test methods that are not supported by the USEPA's ERT as listed on the USEPA's ERT website, the results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the USEPA's ERT website. Submit the ERT generated package or alternative file to the USEPA via CEDRI. **(40 CFR 63.1981(I)(1)(ii))**
 - c. Each permittee must submit reports to the USEPA via CEDRI. CEDRI can be accessed through the USEPA's CDX. The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (<https://www.epa.gov/chief>). Once the spreadsheet template upload/forms for the reports have been available in CEDRI for 90 days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. The NMOC emission rate reports, semiannual reports, and bioreactor 40-percent moisture reports should be electronically reported as a spreadsheet template upload/form to CEDRI. If the reporting forms specific to this subpart are not available in CEDRI at the time that the reports are due, the permittee must submit the reports to the USEPA at the appropriate address listed in 40 CFR 63.13. **(40 CFR 63.1981(I)(2))**
8. The permittee shall submit any performance test reports and all other reports required by 40 CFR Part 63, Subpart AAAA to the appropriate AQD District Office, in a format approved by the appropriate AQD District Supervisor. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

1. If the permittee has submitted a design plan under 40 CFR 63.1981(d), the permittee must submit a revised design plan to the Department for approval as follows:
 - a. At least 90 days before expanding operations to an area not covered by the previously approved design plan. **(40 CFR 63.1981(e)(1))**
 - b. Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted under 40 CFR 63.1981(d). **(40 CFR 63.1981(e)(2))**

2. The collection and control system may be capped, removed, or decommissioned if the following criteria are met:
 - a. The landfill is a closed landfill (as defined in 40 CFR 63.1990). A closure report must be submitted to the Department as provided in 40 CFR 63.1981(f). **(40 CFR 63.1957(b)(1))**
 - b. The gas collection and control system has been in operation a minimum of 15 years or the permittee demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flow. **(40 CFR 63.1957(b)(2))**
 - c. Following the procedures specified in 40 CFR 63.1959(c), the calculated NMOC gas produced by the landfill must be less than 50 Mg/yr on three successive test dates. The test dates must be no less than 90 days apart, and no more than 180 days apart. **(40 CFR 63.1957(b)(3))**
3. The permittee must comply with all applicable provisions of the National Emissions Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills as specified in 40 CFR Part 63, Subparts A and AAAAA. **(40 CFR Part 63, Subparts A and AAAAA)**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGACTIVECOLL-XXX
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This emission unit represents the active landfill gas collection system that uses gas mover equipment to draw landfill gas from the wells and moves the gas to the control equipment. This flexible group contains 40 CFR Part 60, Subpart XXX requirements.

Emission Unit: EUACTIVECOLL

POLLUTION CONTROL EQUIPMENT

An open flare is used to combust the untreated landfill gas if the off-site gas to energy plant is down and/or is not able to process all the landfill gas being generated.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee must install an active collection system that meets the following requirements:
 - a. 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 or treatment system equipment. **(40 CFR 60.762(b)(2)(ii)(C)(1))**
 - b. Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been in place for a period of 5 years or more if active; or 2 years or more if closed at final grade. **(40 CFR 60.762(b)(2)(ii)(C)(2))**
 - c. Each well must be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of 5 years or more if active; or 2 years or more if closed at final grade. **(40 CFR 60.765(b))**
 - d. Collects gas at a sufficient extraction rate. **(40 CFR 60.762(b)(2)(ii)(C)(3))**
 - e. Designed to minimize off-site migration of subsurface gas. **(40 CFR 60.762(b)(2)(ii)(C)(4))**
2. The permittee must route the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-BTU gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to either 40 CFR 60.762(b)(2)(iii)(A) or (B). **(40 CFR 60.762(b)(2)(iii)(C))**

3. The permittee must site active gas collection devices as required in 40 CFR 60.769 and must control all gas producing areas, except as provided below.
 - a. Any segregated area of asbestos or non-degradable material may be excluded from collection if documented as provided under 40 CFR 60.768(d). **(40 CFR 60.769(a)(3)(i))**
 - b. 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. 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. Emissions from each section must be computed using the equation in Appendix 7. **(40 CFR 60.769(a)(3)(ii))**
4. The permittee must install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead. **(40 CFR 60.766(a))**

See Appendix 7

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Each permittee that chooses to comply with the provisions in 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, as allowed at 40 CFR 60.762(b)(2)(iv), must keep records of the date upon which the permittee started complying with the provisions in 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961 and must keep records according to 40 CFR 63.1983(e)(1) through (5). **(40 CFR 60.768(e))**
2. The permittee must keep up-to-date, readily accessible records for the life of the control equipment of the data where the permittee seeks to demonstrate compliance with 40 CFR 60.762(b)(2)(ii) listed as follows:
 - a. The maximum expected gas generation flow rate as calculated in 40 CFR 60.765(a)(1). **(40 CFR 60.768(b)(1)(i))**
 - b. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.769(a)(1). **(40 CFR 60.768(b)(1)(ii))**
3. The permittee must keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector and the following up-to-date, readily accessible records. **(40 CFR 60.768(d))**
 - a. The installation date and location of all newly installed collectors as specified under 40 CFR 60.765(b). **(40 CFR 60.768(d)(1))**
 - b. Documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in 40 CFR 60.769(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.769(a)(3)(ii). **(40 CFR 60.768(d)(2))**
4. The permittee must maintain the following information:
 - a. A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion. **(40 CFR 60.767(h)(1))**
 - b. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and gas mover equipment sizing are based. **(40 CFR 60.767(h)(2))**

- c. The documentation of the presence of asbestos or non-degradable material for each area from which collection wells have been excluded based on the presence of asbestos or non-degradable material. **(40 CFR 60.767(h)(3))**
- d. The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area. **(40 CFR 60.767(h)(4))**
- e. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill. **(40 CFR 60.767(h)(5))**
- f. The provisions for the control of off-site migration. **(40 CFR 60.767(h)(6))**

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- 4. If complying with the operational provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, as allowed at 40 CFR 60.762(b)(2)(iv), the permittee must follow the semiannual reporting requirements in 40 CFR 63.1981(h) in lieu of 40 CFR 60.767(g). **(40 CFR 60.767(g))**
- 5. If complying with the operational provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, as allowed at 40 CFR 60.762(b)(2)(iv), the permittee must follow the corrective action and the corresponding timeline reporting requirements in 40 CFR 63.1981(j) in lieu of 40 CFR 60.767(j). **(40 CFR 60.767(j))**
- 6. The permittee must submit reports electronically according to the following:
 - a. Within 60 days after the date of completing each performance test (as defined in 40 CFR 60.8), the permittee must submit the results of each performance test. For data collected using test methods supported by the USEPA's Electronic Reporting Tool (ERT) as listed on the USEPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>), submit the results of the performance test to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The CEDRI can be accessed through the USEPA's CDX (<https://cdx.epa.gov/>). Performance test data must be submitted in a file format generated through the use of the USEPA's ERT or an alternative file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website, once the XML schema is available. **(40 CFR 60.767(i)(1)(i))**
 - b. For data collected using test methods that are not supported by the USEPA's ERT as listed on the USEPA's ERT website at the time of the test, submit the results of the performance test to the USEPA at the appropriate address listed in 40 CFR 60.4. **(40 CFR 60.767(i)(1)(ii))**
 - c. Each permittee must submit reports to the USEPA via CEDRI (CEDRI can be accessed through the USEPA's CDX). The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (<https://www.epa.gov/chief>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the permittee must submit the report to the USEPA at the appropriate address listed in 40 CFR 60.4. Once the form has been available in CEDRI for 90 calendar days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. **(40 CFR 60.767(i)(2))**

7. The permittee shall submit any performance test reports and all other reports required by 40 CFR Part 60, Subpart XXX to the appropriate AQD District Office, in a format approved by the AQD District Supervisor.
(R 336.1213(3)(c), R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

1. The permittee must comply with all applicable provisions of the federal Standards of Performance for Municipal Solid Waste Landfills that commenced construction, reconstruction, or modification after July 17, 2014 as specified in 40 CFR Part 60, Subpart XXX. Each permittee must comply with the provisions of 40 CFR 60.763, 40 CFR 60.765, and 40 CFR 60.766; or the provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961. Once the permittee begins to comply with the provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, the permittee must continue to operate the collection and control device according to those provisions and cannot return to the provisions of 40 CFR 60.763, 40 CFR 62.60.765 and 40 CFR 60.766.
(40 CFR 60.762(b)(2)(iv), 40 CFR Part 60, Subparts A and XXX)

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGACTIVECOLL-AAAA FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group represents the active landfill gas collection system that uses gas mover equipment to draw landfill gas from the wells and moves the gas to the control equipment. This flexible group contains 40 CFR Part 63, Subpart AAAA requirements.

Emission Unit: EUACTIVECOLL

POLLUTION CONTROL EQUIPMENT

An open flare is used to combust the untreated landfill gas if the off-site gas to energy plant is down and/or is not able to process all the landfill gas being generated.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee must operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:
 - a. 5 years or more if active; or **(40 CFR 63.1958(a)(1))**
 - b. 2 years or more if closed or at final grade. **(40 CFR 63.1958(a)(2))**
2. The permittee must operate the collection system with negative pressure at each wellhead except under the following conditions:
 - a. A fire or increased well temperature. **(40 CFR 63.1958(b)(1))**
 - b. Use of a geo-membrane or synthetic cover. The permittee must develop acceptable pressure limits in the design plan. **(40 CFR 63.1958(b)(2))**
 - c. A decommissioned well. A well may experience a static positive pressure after shut-down to accommodate for declining flows. **(40 CFR 63.1958(b)(3))**
3. The permittee must operate each interior wellhead in the collection system under the following conditions:
 - a. Operate each interior wellhead in the collection system with a landfill gas temperature less than 62.8°C (145°F). **(40 CFR 63.1958(c)(1))**
 - b. A higher operating temperature value may be established at a particular well. A higher operating value demonstration must be submitted to the Department for approval and must include supporting data that the elevated parameter does not cause fires nor significantly inhibit anaerobic decomposition by killing methanogens. **(40 CFR 63.1958(c)(2))**
4. At all times, the permittee 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. **(40 CFR 63.1955(c))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee must operate the system in accordance with 40 CFR 63.1955(c) such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 63.1959(b)(2)(iii). **(40 CFR 63.1958(e)(1))**
 - a. In the event the collection or control system is not operating, 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. **(40 CFR 63.1958(e)(1)(i))**
 - b. Efforts by the permittee 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. **(40 CFR 63.1958(e)(1)(ii))**
2. The permittee must install an active collection system that meets the following requirements:
 - a. 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 or treatment system equipment. **(40 CFR 63.1959(b)(2)(ii)(B)(1))**
 - b. Each well must be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of 5 years or more if active; or 2 years or more if closed or at final grade. **(40 CFR 63.1960(b), 40 CFR 63.1959(b)(2)(ii)(B)(2))**
 - c. Collects gas at a sufficient extraction rate. **(40 CFR 63.1959(b)(2)(ii)(B)(3))**
 - d. Designed to minimize off-site migration of subsurface gas. **(40 CFR 63.1959(b)(2)(ii)(B)(4))**
3. The permittee must install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead. **(40 CFR 63.1961(a))**
4. The permittee must demonstrate compliance with the operational standard for temperature in 40 CFR 63.1958(c)(1) by monitoring the temperature of the landfill gas on a monthly basis as provided in 40 CFR 63.1960(a)(4). The temperature measuring device must be calibrated annually using the procedure in Section 10.3 of USEPA Method 2 of Appendix A-1 to Part 60 of this chapter. **(40 CFR 63.1961(a)(4))**
5. The permittee must site active gas collection devices as required in 40 CFR 63.1962 and must control all gas producing areas, except as provided below.
 - a. Any segregated area of asbestos or non-degradable material may be excluded from collection if documented as provided under 40 CFR 63.1983(d). **(40 CFR 63.1962(a)(3)(i))**
 - b. 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. 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. Emissions from each section must be computed using the equation in Appendix 7. **(40 CFR 63.1962(a)(3)(ii))**

See Appendix 7

V. TESTING/SAMPLING

Records must be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records must be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 63.1959(b)(2)(ii)(B)(3), the permittee must measure, on a monthly basis, the gauge pressure in the gas collection header at each individual well as provided in 40 CFR 63.1960(a)(3) and 40 CFR 63.1961(a)(1). Any attempted corrective measure must not cause exceedances of other operational or performance standards.
 - a. If positive pressure exists, action must be initiated to correct the exceedance within five calendar days. **(40 CFR 63.1960(a)(3)(i))**
 - b. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement of positive pressure, the permittee must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after positive pressure was first measured. **(40 CFR 63.1960(a)(3)(i)(A))**
 - c. If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the permittee must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the positive pressure measurement. **(40 CFR 63.1960(a)(3)(i)(B))**
 - d. If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the permittee must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Department as soon as practicable but no later than 75 days after the first measurement of positive pressure or above, according to 40 CFR 63.1981(j). **(40 CFR 63.1960(a)(3)(i)(C))**
2. The permittee must monitor each well monthly for temperature for the purpose of identifying whether excess air infiltration exists as provided in 40 CFR 63.1958(c)(1) and 40 CFR 63.1961(a)(4). If a well exceeds the operating parameter for temperature, the following corrective actions must be taken:
 - a. Action must be initiated to correct the exceedance within 5 calendar days. Any attempted corrective measure must not cause exceedances of other operational or performance standards. **(40 CFR 63.1960(a)(4)(i))**
 - b. If a landfill gas temperature less than 62.8°C (145°F) cannot be achieved within 15 calendar days of the first measurement of landfill gas temperature greater than 62.8°C (145°F), the permittee must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after a landfill gas temperature greater than 62.8°C (145°F) was first measured. **(40 CFR 63.1960(a)(4)(i)(A))**
 - c. If corrective actions cannot be fully implemented within 60 days following the temperature measurement for which the root cause analysis was required, the permittee must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 62.8°C (145°F). **(40 CFR 63.1960(a)(4)(i)(B))**
 - d. If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the permittee must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Department as soon as practicable but no later than 75 days after the first measurement of temperature monitoring value of 62.8°C (145°F) or above, according to 40 CFR 63.1981(h)(7) and 40 CFR 63.1981(j). **(40 CFR 63.1960(a)(4)(i)(C))**
 - e. If a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7°C (170°F) and the carbon monoxide concentration measured according to the procedures in 40 CFR 63.1961(a)(5)(vi) is greater than or equal to 1,000 ppmv, the corrective action(s) for the wellhead temperature standard 62.8°C (145°F) must be completed within 15 days. **(40 CFR 63.1960(a)(4)(i)(D))**
3. The permittee must monitor, on a monthly basis, the nitrogen or oxygen concentration in the landfill gas using the procedures in 40 CFR 63.1961(a)(2)(i) or (ii). **(40 CFR 63.1961(a)(2))**

4. Unless a higher operating temperature value has been approved by the Department under this subpart or under 40 CFR Part 60, Subpart WWW; 40 CFR Part 60, Subpart XXX; or a federal plan or USEPA-approved and effective state plan that implements either 40 CFR Part 60, Subpart Cc or 40 CFR Part 60, Subpart Cf, the permittee must initiate enhanced monitoring at each well with a landfill gas temperature greater than 62.8°C (145°F) as follows:
- a. Visual observations for subsurface oxidation events (smoke, smoldering ash, damage to well) within the radius of influence of the well. **(40 CFR 63.1961(a)(5)(i))**
 - b. Monitor the oxygen concentration as provided in SC VI.3. **(40 CFR 63.1961(a)(5)(ii))**
 - c. Monitor the temperature of the landfill gas at the wellhead as provided in SC VI.2. **(40 CFR 63.1961(a)(5)(iii))**
 - d. Monitor the landfill gas every 10 vertical feet of the well as provided in SC VI.5. **(40 CFR 63.1961(a)(5)(iv))**
 - e. Monitor the methane concentration with a methane meter using USEPA Method 3C of Appendix A-6 to 40 CFR Part 60, USEPA Method 18 of Appendix A-6 to 40 CFR Part 60, or a portable gas composition analyzer to monitor the methane levels provided that the analyzer is calibrated and the analyzer meets all quality assurance and quality control requirements for USEPA Method 3C or USEPA Method 18. **(40 CFR 63.1961(a)(5)(v))**
 - f. Monitor the carbon monoxide concentrations as follows:
 - i. Collect the sample from the wellhead sampling port in a passivated canister or multi-layer foil gas sampling bag (such as the Cali-5-Bond Bag) and analyze that sample using an approved USEPA Method listed in 40 CFR 60, Appendix A, or an equivalent method with a detection limit of at least 100 ppmv of carbon monoxide in high concentrations of methane; or. **(40 CFR 63.1961(a)(5)(vi)(A))**
 - ii. Collect and analyze the sample from the wellhead using an approved USEPA Method listed in 40 CFR 60, Appendix A to measure carbon monoxide concentrations. **(40 CFR 63.1961(a)(5)(vi)(B))**
 - iii. When sampling directly from the wellhead, sample for 5 minutes plus twice the response time of the analyzer. These values must be recorded. The five 1-minute averages are then averaged to give you the carbon monoxide reading at the wellhead. **(40 CFR 63.1961(a)(5)(vi)(C))**
 - iv. When collecting samples in a passivated canister or multi-layer foil sampling bag, sample for the period of time needed to assure that enough sample is collected to provide five (5) consecutive, 1-minute samples during the analysis of the canister or bag contents, but no less than 5 minutes plus twice the response time of the analyzer. The five (5) consecutive, 1-minute averages are then averaged together to give a carbon monoxide value from the wellhead. **(40 CFR 63.1961(a)(5)(vi)(D))**
 - g. The enhanced monitoring specified in SC VI.4 must begin seven calendar days after the first measurement of landfill gas temperature greater than 62.8°C (145°F). **(40 CFR 63.1961(a)(5)(vii))**
 - h. The enhanced monitoring must be conducted on a weekly basis. If four consecutive weekly carbon monoxide readings are under 100 ppmv, then enhanced monitoring may be decreased to monthly. However, if carbon monoxide readings exceed 100 ppmv again, the landfill must return to weekly monitoring. **(40 CFR 63.1961(a)(5)(viii))**
 - i. The enhanced monitoring specified in SC VI.4 can be stopped once a higher operating value is approved, at which time the monitoring provisions issued with the higher operating value should be followed, or once the measurement of landfill gas temperature at the wellhead is less than or equal to 62.8°C (145°F). **(40 CFR 63.1961(a)(5)(ix))**
5. For each wellhead with a measurement of landfill gas temperature greater than or equal to 73.9°C (165°F), the permittee shall annually monitor temperature of the landfill gas every 10 vertical feet of the well. This temperature can be monitored either with a removable thermometer or using temporary or permanent thermocouples installed in the well. **(40 CFR 63.1961(a)(6))**

6. The permittee must keep, on a monthly basis, readily accessible records of the following:
 - a. All collection and control system exceedances of the operational standards in 40 CFR 63.1958, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. **(40 CFR 63.1983(e)(1))**
 - b. The records of each wellhead temperature monitoring value of 62.8°C (145°F) or above. **(40 CFR 63.1983(e)(2)(i))**
 - c. Each permittee required to conduct the enhanced monitoring provisions in 40 CFR 63.1961(a)(5), must also keep records of all enhanced monitoring activities. **(40 CFR 63.1983(e)(2)(ii))**
 - d. The permittee must also keep a record of the email transmission when required to submit the 24-hour high temperature report in 40 CFR 63.1981(k). **(40 CFR 63.1983(e)(2)(iii))**
 - e. For any root cause analysis for which corrective actions are required in 40 CFR 63.1960(a)(3)(i)(A) or (a)(4)(i)(A), keep a record of the root cause analysis conducted, including a description of the recommended corrective action(s) taken, and the date(s) the corrective action(s) were completed. **(40 CFR 63.1983(e)(3))**
 - f. For any root cause analysis for which corrective actions are required in 40 CFR 63.1960(a)(3)(i)(B) or (a)(4)(i)(B), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates. **(40 CFR 63.1983(e)(4))**
 - g. For any root cause analysis for which corrective actions are required in 40 CFR 63.1960(a)(3)(i)(C) or (a)(4)(i)(C), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates, and a copy of any comments or final approval on the corrective action analysis or schedule from the Department. **(40 CFR 63.1983(e)(5))**
7. The permittee must keep up-to-date, readily accessible records for the life of the control equipment of the data listed as follows:
 - a. The maximum expected gas generation flow rate as calculated in 40 CFR 63.1960(a)(1). **(40 CFR 63.1983(b)(1)(i))**
 - b. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 63.1962(a)(1) and (2). **(40 CFR 63.1983(b)(1)(ii))**
8. The permittee must record the date, time, and duration of each startup and/or shutdown periods when the affected source was subject to the standard applicable to startup and shutdown. **(40 CFR 63.1983(c)(6))**
9. Where the permittee seeks to demonstrate compliance with the operational standard in 40 CFR 63.1958(e)(1), in the event that an affected unit fails to meet an applicable standard, the permittee shall record the following information:
 - a. The date, time, and duration of each failure and the cause of the events (including unknown cause, if applicable). **(40 CFR 63.1983(c)(7)(i))**
 - b. For each failure to meet an applicable standard; record and retain a list of the affected sources or equipment. **(40 CFR 63.1983(c)(7)(ii))**
 - c. Record actions taken to minimize emissions in accordance with the general duty of 40 CFR 63.1955(c) and any corrective actions taken to return the affected unit to its normal or usual manner of operation. **(40 CFR 63.1983(c)(7)(iii))**

10. The permittee must keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector; and the installation date and location of all newly installed collectors as specified under 40 CFR 63.1960(b). **(40 CFR 63.1983(d), 40 CFR 63.1983(d)(1))**
11. The permittee must maintain the following information:
 - a. A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion. **(40 CFR 63.1981(i)(1))**
 - b. The documentation of the presence of asbestos or non-degradable material for each area from which collection wells have been excluded based on the presence of asbestos or non-degradable material. **(40 CFR 63.1981(i)(3))**
 - c. The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area. **(40 CFR 63.1981(i)(4))**
 - d. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill. **(40 CFR 63.1981(i)(5))**
 - e. The provisions for the control of off-site migration. **(40 CFR 63.1981(i)(6))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee using an active collection system designed in accordance with 40 CFR 63.1959(b)(2)(ii) must submit to the Department semiannual reports. The semiannual reports must include the following information:
 - a. Number of times the applicable parameters monitored under 40 CFR 63.1958(b), (c) and (d) were exceeded and when the gas collection and control system was not operating under 40 CFR 63.1958(e), including periods of SSM. For each instance, report the date, time, and duration of each exceedance. **(40 CFR 63.1981(h)(1))**
 - b. Where the permittee seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph 40 CFR 63.1958(c), provide a statement of the wellhead operational standard for temperature and oxygen for the period covered by the report. Indicate the number of times each of those parameters monitored under 40 CFR 63.1961(a)(3) were exceeded. For each instance, report the date, time, and duration of each exceedance. **(40 CFR 63.1981(h)(1)(i))**
 - c. Where the permittee seeks to demonstrate compliance with the operational standard for temperature in 40 CFR 63.1958(c)(1), provide a statement of the wellhead operational standard for temperature and oxygen for the period covered by the report. Indicate the number of times each of those parameters monitored under 40 CFR 63.1961(a)(4) were exceeded. For each instance, report the date, time, and duration of each exceedance. **(40 CFR 63.1981(h)(1)(ii))**
 - d. The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 63.1960(a)(3) and (a)(4), (b), and (c)(4). **(40 CFR 63.1981(h)(6))**

- e. The permittee must record instances when a positive pressure occurs in efforts to avoid fire. **(40 CFR 63.1958(b)(1))**
 - f. Include any corrective action analysis for which corrective actions are required in 40 CFR 63.1960(a)(3)(i) or (a)(5) and that take more than 60 days to correct the exceedance, the root cause analysis conducted, including a description of the recommended corrective action(s), the date for corrective action(s) already completed following the positive pressure or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates. **(40 CFR 63.1981(h)(7))**
 - g. Each permittee required to conduct enhanced monitoring in 40 CFR 63.1961(a)(5) and (6) must include the results of all monitoring activities conducted during the period; **(40 CFR 63.1981(h)(8))**
 - i. For each monitoring point, report the date, time, and well identifier along with the value and units of measure for oxygen, temperature (wellhead and downwell), methane, and carbon monoxide. **(40 CFR 63.1981(h)(8)(i))**
 - ii. Include a summary trend analysis for each well subject to the enhanced monitoring requirements to chart the weekly readings over time for oxygen, wellhead temperature, methane, and weekly or monthly readings over time, as applicable for carbon monoxide. **(40 CFR 63.1981(h)(8)(ii))**
 - iii. Include the date, time, staff person name, and description of findings for each visual observation for subsurface oxidation event. **(40 CFR 63.1981(h)(8)(iii))**
5. The permittee must submit information regarding corrective actions as follows:
- a. For corrective action that is required according to 40 CFR 63.1960(a)(3) or (a)(4) and is not completed within 60 days after the initial exceedance, submit a notification to the Department as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance. **(40 CFR 63.1981(j)(1))**
 - b. For corrective action that is required according to 40 CFR 63.1960(a)(3) or (4) and is expected to take longer than 120 days after the initial exceedance to complete, submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Department as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value of 62.8°C (145°F) or above. The Department must approve the plan for corrective action and the corresponding timeline. **(40 CFR 63.1981(j)(2))**
6. Where the permittee seeks to demonstrate compliance with the operational standard for temperature in 40 CFR 63.1958(c)(1) and a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7°C (170°F) and the carbon monoxide concentration measured is greater than or equal to 1,000 ppmv, report the date, time, well identifier, temperature and carbon monoxide reading via email to the Department within 24 hours of the measurement unless a higher operating temperature value has been approved by the Department for the well under this subpart or under 40 CFR Part 60, Subpart WWW; 40 CFR Part 60, Subpart XXX; or a Federal plan or USEPA approved and effective state plan that implements either 40 CFR Part 60, Subpart Cc or 40 CFR Part 60, Subpart Cf. **(40 CFR 63.1981(k))**
7. Beginning no later than September 27, 2021, the permittee must submit reports electronically according to the following:
- a. Within 60 days after the date of completing each performance test required, submit the results of the performance test with data collected using test methods supported by the USEPA's Electronic Reporting Tool (ERT) as listed on the USEPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>). Submit the results of the performance test to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the USEPA's CDX (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the USEPA's ERT. Alternatively, submit an electronic file consistent with the extensible markup language (XML) schema listed on the USEPA's ERT website. **(40 CFR 63.1981(l)(1)(i))**

- b. For data collected using test methods that are not supported by the USEPA's ERT as listed on the USEPA's ERT website, the results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the USEPA's ERT website. Submit the ERT generated package or alternative file to the USEPA via CEDRI. **(40 CFR 63.1981(I)(1)(ii))**
 - c. Each permittee must submit reports to the USEPA via CEDRI. CEDRI can be accessed through the USEPA's CDX. The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (<https://www.epa.gov/chief>). Once the spreadsheet template upload/forms for the reports have been available in CEDRI for 90 days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. The semiannual reports and bioreactor 40-percent moisture reports should be electronically reported as a spreadsheet template upload/form to CEDRI. If the reporting forms specific to this subpart are not available in CEDRI at the time that the reports are due, the permittee must submit the reports to the USEPA at the appropriate address listed in 40 CFR 63.13. **(40 CFR 63.1981(I)(2))**
8. The permittee shall submit all monitoring activities and all other reports required by 40 CFR Part 63, Subpart AAAA to the appropriate AQD District Office, in a format approved by the appropriate AQD District Supervisor. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENTS

1. The permittee must comply with all applicable provisions of the National Emissions Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills as specified in 40 CFR Part 63, Subparts A and AAAA. **(40 CFR Part 63, Subparts A and AAAA)**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGOPENFLARE-XXX
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Open (non-enclosed) flare is an open combustor without enclosure or shroud. This flexible group contains 40 CFR Part 60, Subpart XXX requirements.

Emission Unit: EUFLARE1

POLLUTION CONTROL EQUIPMENT

Open (non-enclosed) flare

I. EMISSION LIMIT(S)

1. There must be no visible emissions from EUFLARE1 except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. **(40 CFR 60.18(c)(1))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must operate the flare in accordance with 40 CFR 60.18. **(40 CFR 60.762(b)(2)(iii)(A))**
2. The flare must be operated with a flame present at all times. **(40 CFR 60.18(c)(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee must verify visible emissions from EU-FLARE1, by testing at owner's expense, in accordance with Department requirements. Testing must be performed using an approved USEPA Method 22 listed in 40 CFR Part 60, Appendix A. No less than 30 days prior to testing, the permittee must submit a complete test plan to the AQD Technical Programs Unit and the appropriate District Office. The AQD must approve the final plan prior to testing including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and the appropriate District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.18(f))**
2. The permittee must verify the following:
 - a. The net heating value of the gas being combusted in the flare must be calculated and recorded using the equation provided in Appendix 7. **(40 CFR 60.18(f)(3))**
 - b. The exit velocity for steam-assisted, air-assisted, or non-assisted flares as determined by the methods provided in Appendix 7. **(40 CFR 60.18(f)(5) and (6))**

3. Within 180 days of permit issuance, the permittee must verify visible emissions, the net heating value, and exit velocity from EU-FLARE1 and at a minimum, every five years from the date of the last test, thereafter. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.18(f))**
4. The permittee must notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.1213(3))**

See Appendix 7

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee must keep up-to-date, readily accessible records for the life of the control equipment of the data as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring must be maintained for a minimum of 5 years. Records of the control device vendor specifications must be maintained until removal. **(40 CFR 60.768(b))**
2. Where the permittee seeks to demonstrate compliance with 40 CFR 60.762(b)(2)(iii)(A) through use of a non-enclosed flare, the flare type (*i.e.*, steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; and continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame or the flare flame is absent. **(40 CFR 60.768(b)(4))**
3. The following records for the flare must be maintained onsite:
 - a. The net heating value of the gas being combusted in the flare must be calculated and recorded using the equation provided in Appendix 7. **(40 CFR 60.18(f)(3))**
 - b. The exit velocity for steam-assisted, air-assisted, or non-assisted flares as determined by the methods specified in 40 CFR 60.18(f)(4) provided in Appendix 7. **(40 CFR 60.18(f)(4))**
4. Each permittee that chooses to comply with the provisions in 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, as allowed at 40 CFR 60.762(b)(2)(iv), must keep records of the date upon which the permittee started complying with the provisions in 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961. **(40 CFR 60.768(e)(6))**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. If complying with the operational provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, as allowed at 40 CFR 60.762(b)(2)(iv), the permittee must follow the semiannual reporting requirements in 40 CFR 63.1981(h) in lieu of 40 CFR 60.767(g). **(40 CFR 60.767(g))**

5. The permittee must submit reports electronically according to the following:
 - a. Within 60 days after the date of completing each performance test (as defined in 40 CFR 60.8), the permittee must submit the results of each performance test. For data collected using test methods supported by the USEPA's Electronic Reporting Tool (ERT) as listed on the USEPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>), submit the results of the performance test to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The CEDRI can be accessed through the USEPA's CDX (<https://cdx.epa.gov/>). Performance test data must be submitted in a file format generated through the use of the USEPA's ERT or an alternative file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website, once the XML schema is available. **(40 CFR 60.767(i)(1)(i))**
 - b. For data collected using test methods that are not supported by the USEPA's ERT as listed on the USEPA's ERT website at the time of the test, submit the results of the performance test to the USEPA at the appropriate address listed in 40 CFR 60.4. **(40 CFR 60.767(i)(1)(ii))**
 - c. Each permittee must submit reports to the USEPA via CEDRI (CEDRI can be accessed through the USEPA's CDX). The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (<https://www.epa.gov/chief>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the permittee must submit the report to the USEPA at the appropriate address listed in 40 CFR 60.4. Once the form has been available in CEDRI for 90 calendar days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. **(40 CFR 60.767(i)(2))**
6. The permittee must submit any performance test reports and all other reports required by 40 CFR Part 60, Subpart XXX to the appropriate AQD District Office, in a format approved by the AQD District Supervisor. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee must comply with all applicable provisions of the federal Standards of Performance for Municipal Solid Waste Landfills that commenced construction, reconstruction, or modification after July 17, 2014 as specified in 40 CFR Part 60, Subpart XXX. Each permittee must comply with the provisions of 40 CFR 60.763, 40 CFR 60.765, and 40 CFR 60.766; or the provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961. Once the permittee begins to comply with the provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, the permittee must continue to operate the collection and control device according to those provisions and cannot return to the provisions of 40 CFR 60.763, 40 CFR 62.60.765 and 40 CFR 60.766. **(40 CFR 60.762(b)(2)(iv), 40 CFR Part 60, Subparts A and XXX)**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGOPENFLARE-AAAA FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Open (non-enclosed) flare is an open combustor without enclosure or shroud. This flexible group contains 40 CFR Part 63, Subpart AAAAA requirements.

Emission Unit: EUFLARE1

POLLUTION CONTROL EQUIPMENT

Open (non-enclosed) flare

I. EMISSION LIMIT(S)

1. There must be no visible emissions from EU-FLARE1 except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. **(40 CFR 63.11(b)(4))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must operate EUFLARE1 at all times when the collected gas is routed to it. **(40 CFR 63.11(b)(3), 40 CFR 63.1958(f))**
2. The flare must be operated with a flame present at all times. **(40 CFR 63.11(b)(5))**
3. In the event the control system is inoperable, 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 one hour. **(40 CFR 63.1958(e)(1)(i))**
4. In the event the control system is inoperable, efforts to repair the collection 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. **(40 CFR 63.1958(e)(1)(ii))**
5. At all times, the permittee 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. **(40 CFR 63.1955(c))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee must design and operate EUFLARE1 in accordance with the parameters established in 40 CFR 63.11(b). **(40 CFR 63.1959(b)(2)(iii)(A))**
2. The permittee must install, calibrate, maintain, and operate according to the manufacturer's specifications, a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame. **(40 CFR 63.11(b)(5), 40 CFR 63.1961(c)(1))**
3. The permittee must install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that records flow to or bypass of the flare (if applicable) at least every 15 minutes. **(40 CFR 63.1961(c)(2))**

V. TESTING/SAMPLING

Records must be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee must verify visible emissions from EUFLARE1, by testing at owner's expense, in accordance with Department requirements. Testing must be performed using approved USEPA Method 22 listed in 40 CFR 60, Appendix A. No less than 30 days prior to testing, the permittee must submit a complete test plan to the AQD District Office. The AQD must approve the final plan prior to testing. The permittee must submit a complete report of the test results to the AQD District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.11(b)(4))**
2. The permittee must verify the following:
 - a. The net heating value of the gas being combusted in the flare must be calculated and recorded using the equation provided in Appendix 7. **(40 CFR 63.11(b)(6))**
 - b. The exit velocity for steam-assisted, air-assisted, or non-assisted flares as determined by the methods provided in Appendix 7. **(40 CFR 63.11(b)(7) and (8))**
3. Within 180 days of permit issuance, the permittee must verify visible emissions, the net heating value, and exit velocity from EUFLARE1 and at a minimum, every five years from the date of the last test, thereafter. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**
4. The permittee must notify the AQD District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

See Appendix 7

VI. MONITORING/RECORDKEEPING

Records must be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee must maintain records regarding the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 63.11. **(40 CFR 63.1983(b)(4))**
2. The permittee must keep monthly records of the operating parameters specified to be monitored in 40 CFR 63.1961(c). The records must include:
 - a. Continuous records of the indication of flow and gas flow rate to the control device. **(40 CFR 63.1983(b)(4))**
 - b. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line. **(40 CFR 63.1961(c)(2)(ii))**
 - c. Continuous records of the open flare pilot flame or open flare flame monitoring, and records of all periods of operations during which the pilot flame of the flare flame is absent. **(40 CFR 63.1983(b)(4))**

See Appendix 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee must submit to the appropriate AQD District Office semiannual reports for the control system. Reports must be received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. For flares, reportable exceedances are defined under 40 CFR 63.1961(c). The reports must include the following:
 - a. Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow. **(40 CFR 63.1981(h)(2))**
 - b. Description and duration of all periods when the control device was not operating and length of time the control device was not operating. **(40 CFR 63.1981(h)(3))**
5. The permittee must submit reports electronically according to the following:
 - a. Within 60 days after the date of completing each performance test required, submit the results of the performance test with data collected using test methods supported by the USEPA's Electronic Reporting Tool (ERT) as listed on the USEPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>). Submit the results of the performance test to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the USEPA's CDX (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the USEPA's ERT. Alternatively, submit an electronic file consistent with the extensible markup language (XML) schema listed on the USEPA's ERT website. **(40 CFR 63.1981(I)(1)(i))**
 - b. For data collected using test methods that are not supported by the USEPA's ERT as listed on the USEPA's ERT website, the results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the USEPA's ERT website. Submit the ERT generated package or alternative file to the USEPA via CEDRI. **(40 CFR 63.1981(I)(1)(ii))**
 - c. Each permittee must submit reports to the USEPA via CEDRI. CEDRI can be accessed through the USEPA's CDX. The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (<https://www.epa.gov/chief>). Once the spreadsheet template upload/forms for the reports have been available in CEDRI for 90 days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. The semiannual reports should be electronically reported as a spreadsheet template upload/form to CEDRI. If the reporting forms specific to this subpart are not available in CEDRI at the time that the reports are due, the permittee must submit the reports to the USEPA at the appropriate address listed in 40 CFR 63.13. **(40 CFR 63.1981(I)(2))**
6. The permittee shall submit any performance test reports and all other reports required by 40 CFR Part 63, Subpart AAAA to the appropriate AQD District Office, in a format approved by the AQD District Supervisor. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee must comply with all applicable provisions of the National Emissions Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills as specified in 40 CFR Part 63, Subparts A and AAAA. **(40 CFR Part 63, Subparts A and AAAA)**

FGRULE290 FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.

Emission Units installed on or after December 20, 2016: NA

Emission Units installed prior to December 20, 2016: EUGWTS

POLLUTION CONTROL EQUIPMENT

Air Stripper

I. EMISSION LIMIT(S)

1. Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(2)(a)(i))**
2. Any emission unit for which CO₂ equivalent emissions are not more than 6,250 tons per month and for which the total uncontrolled or controlled emissions of all other air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(2)(a)(ii))**
 - a. For toxic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(A))**
 - b. For toxic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(B))**
 - c. The emission unit shall not emit any toxic air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. **(R 336.1290(2)(a)(ii)(C))**
 - d. For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(D))**
 - e. For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(E))**
3. Any emission unit that emits only particulate air contaminants without initial risk screening levels and other air contaminants that are exempted under Rule 290(2)(a)(i) or Rule 290(2)(a)(ii), if all the following provisions are met: **(R 336.1290(2)(a)(iii))**
 - a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than

or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have exhaust gas flow rate more than 30,000 actual cubic feet per minute. **(R 336.1290(2)(a)(iii)(A))**

- b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in Rule 303. **(R 336.1290(2)(a)(iii)(B))**
- c. The initial threshold screening level for each particulate toxic air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(2)(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- 1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**
- 2. The following requirements apply to emission units installed on or after December 20, 2016, utilizing control equipment:
 - a. An air cleaning device for volatile organic compounds shall be installed, maintained, and operated in accordance with the manufacturer's specifications. Examples include the following: **(R 336.1290(2)(b)(i), R 336.1910)**
 - i. Oxidizers and condensers equipped with a continuously displayed temperature indication device.
 - ii. Wet scrubbers equipped with a liquid flow rate monitor.
 - iii. Dual stage carbon absorption where the first canister is monitored for breakthrough and replaced if breakthrough is detected.
 - b. An air cleaning device for particulate matter shall be installed, maintained, and operated in accordance with the manufacturer's specifications or the permittee shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. It shall also be equipped to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate. **(R 336.1290(2)(b)(ii), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- 1. The permittee shall maintain records of the following information for each emission unit for each calendar month using the methods outlined in the EGLE, AQD Rule 290; Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor. **(R 336.1213(3))**
 - a. Records identifying each air contaminant that is emitted. **(R 336.1213(3))**
 - b. Records identifying if each air contaminant is controlled or uncontrolled. **(R 336.1213(3))**
 - c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. **(R 336.1213(3))**

- d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(2)(a)(ii) and (iii). **(R 336.1213(3))**
 - e. Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in enough detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. Volatile organic compound emissions from units installed on or after December 20, 2016, shall be calculated using mass balance, generally accepted engineering calculations, or another method acceptable to the AQD District Supervisor. **(R 336.1213(3), R 336.1290(2)(d))**
 - f. Records are maintained on file for the most recent 2-year period and are made available to the department upon request. **(R 336.1213(3), R 336.1290(2)(e))**
2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information. **(R 336.1213(3))**
- a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. **(R 336.1290(2)(c), R 336.1213(3))**
 - b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. **(R 336.1213(3))**
3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. **(R 336.1213(3))**

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

FGCOLDCLEANERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EUCOLDCLEANERS

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(2)(h))**
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(2)(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**

5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:
 - a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**
 - b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**
 - c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**
2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
 - a. A serial number, model number, or other unique identifier for each cold cleaner.
 - b. The date the unit was installed, manufactured or that it commenced operation.
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(2)(h).
 - d. The applicable Rule 201 exemption.
 - e. The Reid vapor pressure of each solvent used.
 - f. If applicable, the option chosen to comply with Rule 707(2).
3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**
4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ e	Carbon Dioxide Equivalent
CEMS	Continuous Emission Monitoring System	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	gr	Grains
EGLE	Michigan Department of Environment, Great Lakes, and Energy	HAP	Hazardous Air Pollutant
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallons of Applied Coating Solids	HP	Horsepower
GC	General Condition	H ₂ S	Hydrogen Sulfide
GHGs	Greenhouse Gases	kW	Kilowatt
HVLP	High Volume Low Pressure*	lb	Pound
ID	Identification	m	Meter
IRSL	Initial Risk Screening Level	mg	Milligram
ITSL	Initial Threshold Screening Level	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	NMOC	Non-methane Organic Compounds
MAP	Malfunction Abatement Plan	NO _x	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	ng	Nanogram
NA	Not Applicable	PM	Particulate Matter
NAAQS	National Ambient Air Quality Standards	PM10	Particulate Matter equal to or less than 10 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	%	Percent
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SDS	Safety Data Sheet	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
VE	Visible Emissions	µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

Appendix 3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5. Testing Procedures

There are no specific testing requirement plans or procedures for this ROP. Therefore, this appendix is not applicable.

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N2896-2017. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N2896-2017 is being reissued as Source-Wide PTI No. MI-PTI-N2896-2023.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA	202100193*	The facility submitted a Notification of Change (NOC) stating they wanted to "Opt-In" too only having to comply with 40 CFR Part 63, Subpart AAAA and not with requirements of 40 CFR Part 62, Subpart OOO nor 40 CFR Part 60, Subpart WWW that it replaces. The facility has since become subject to the requirements of 40 CFR Part 60, Subpart XXX so Subpart OOO is now non-applicable and no references to it are included in the ROP.	FGLANDFILL-XXX FGLANDFILL-AAAA FGACTIVECOLL-XXX FGACTIVECOLL-AAAA FGOPENFLARE-XXX FGOPENFLARE-AAAA

Appendix 7. Emission Calculations

1. The permittee must use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in EUFLARE1, FGACTIVECOLL-XXX and FGOPENFLARE-XXX.

Calculation used to determine NMOC emissions from any nonproductive area

The following shall be used to determine if 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 one percent of the total amount of

NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the AQD District Supervisor upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation: **(40 CFR 60.769(a)(3)(ii))**

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

Where:

Q_i = NMOC emission rate from the i^{th} section, megagrams per year

k = methane generation rate constant, year⁻¹

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of the degradable solid waste in the i^{th} section, megagram

t_i = age of the solid waste in the i^{th} section, years

C_{NMOC} = concentration of non-methane organic compounds, ppm by volume

3.6×10^{-9} = conversion factor

The values for k and C_{NMOC} determined in field testing shall be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (this 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 40 CFR 60.764(a)(1) or the alternative values from 40 CFR 60.764(a)(5) must be used. The mass of non-degradable 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 non-degradable material is documented as provided in 40 CFR 60.769(a)(3)(i).

(40 CFR 60.769(a)(3)(iii))

Net Heating Value of the gas being combusted in the flare:

The net heating value of the gas being combusted in the flare shall be calculated and recorded using the equation provided in 40 CFR 60.18(f)(3). **(40 CFR 60.18(f)(3))**

$$H_T = K \sum_{i=1}^n C_i H_i$$

Where:

H_T = Net heating value of the sample,

MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mmHg, but the standard temperature for determining the volume corresponding to one mole is 20°C;

$$K = \text{Constant} \cdot 10^{-7} \left(\frac{1}{\text{ppm}} \right) \left(\frac{\text{g mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for $\left(\frac{\text{g mole}}{\text{scm}} \right)$ is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946–77 or 90 (Reapproved 1994) (Incorporated by reference as specified in 40 CFR 60.17); and

H_i = Net heat of combustion of sample component i , kcal/g mole at 25°C and 760 mmHg. The heats of combustion may be determined using ASTM D2382–76 or 88 or D4809–95 (incorporated by reference as specified in 40 CFR 60.17) if published values are not available or cannot be calculated.

n = Number of sample components.

Calculation for Vmax steam-assisted and non-assisted flares

The maximum permitted velocity, Vmax, for flares complying with 40 CFR 60.18(c)(4)(iii) shall be calculated and recorded using the equation provided in 40 CFR 60.18(f)(5). **(40 CFR 60.18(f)(5))**

$$\text{Log}_{10} (V_{\text{max}}) = (H_{\text{T}} + 28.8) / 31.7$$

Where:

Vmax = Maximum permitted velocity, M/sec
28.8 = Constant
31.7 = Constant
H_T = The net heating value as determined in 60.18(f)(3).

Calculation for Vmax for air-assisted flares

The maximum permitted velocity, Vmax, for air-assisted flares shall be calculated and recorded using the equation provided in 40 CFR 60.18(f)(6). **(40 CFR 60.18(f)(6))**

$$V_{\text{max}} = 8.706 + 0.7084 (H_{\text{T}})$$

Where:

Vmax = Maximum permitted velocity, m/sec
8.706 = Constant
0.7084 = Constant
H_T = The net heating value as determined in 60.18(f)(3).

2. The permittee must use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in EUFLARE1, FGACTIONCOLL-AAAA and FGOPENFLARE-AAAA for 40 CFR Part 63, Subpart AAAA.

Calculation used to determine NMOC emissions from any nonproductive area

The following must be used to determine if 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 one 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 Department 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. **(40 CFR 63.1962(a)(3)(ii))**

The NMOC emissions from each section proposed for exclusion must be computed using Equation 7 (40 CFR 63.1962(a)(3)(ii)(A)):

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

Where:

Q_i = NMOC emission rate from the ith section, Mg/yr
k = methane generation rate constant, year⁻¹
L_o = methane generation potential, m³/Mg solid waste
M_i = mass of the degradable solid waste in the ith section, Mg
t_i = age of the solid waste in the ith section, years
C_{NMOC} = concentration of non-methane organic compounds, ppmv
3.6 × 10⁻⁹ = conversion factor

If the permittee 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 40 CFR 63.1959(c) or Equation 7 in 40 CFR 63.1962(a)(3)(ii)(A). **(40 CFR 63.1962(a)(3)(ii)(B))**

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 (this 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 40 CFR 63.1959(a)(1) or the alternative values from 40 CFR 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 40 CFR 63.1962(a)(3)(i). **(40 CFR 63.1962(a)(3)(iii))**

Net Heating Value of the gas being combusted in the flare:

The permittee has the choice of adhering to the heat content specifications in 40 CFR 63.11(b)(6)(ii) (equations below), and the maximum tip velocity specifications in 40 CFR 63.11(b)(7) or (b)(8), or adhering to the requirements in 40 CFR 63.11(b)(6)(i). **(40 CFR 63.11(b)(6))**

$$H_T = K \sum_{i=1}^n C_i H_i$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25°C and 760 mmHg, but the standard temperature for determining the volume corresponding to one mole is 20°C;

$$K = Constant = (1.740 \times 10^{-7}) \left(\frac{1}{ppm} \right) \left(\frac{g \text{ mole}}{scm} \right) \left(\frac{MJ}{kcal} \right)$$

Where the standard temperature for $\left(\frac{g \text{ mole}}{scm} \right)$ is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946–77 or 90 (Reapproved 1994) (Incorporated by reference as specified in 40 CFR 63.14); and

H_i = Net heat of combustion of sample component i , kcal/g mole at 25°C and 760 mmHg. The heats of combustion may be determined using ASTM D2382–76 or 88 or D4809–95 (incorporated by reference as specified in 40 CFR 63.14) if published values are not available or cannot be calculated.

n = Number of sample components.

Calculation for Vmax steam-assisted and non-assisted flares

The maximum permitted velocity, V_{max} , for flares complying with 40 CFR 63.11(b)(7)(i) must be calculated and recorded using the equation provided in 40 CFR 63.11(b)(7)(iii). **(40 CFR 63.11(b)(7)(iii))**

$$\text{Log}_{10}(V_{max}) = (H_T + 28.8)/31.7$$

Where:

V_{max} = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

H_T = The net heating value as determined in 63.11(b)(6).

Calculation for Vmax for air-assisted flares

The maximum permitted velocity, V_{max} , for air-assisted flares must be calculated and recorded using the equation provided in 40 CFR 63.11(b)(8). **(40 CFR 63.11(b)(8))**

$$V_{max} = 8.71 + 0.708 (H_T)$$

Where:

V_{max} = Maximum permitted velocity, m/sec

8.71 = Constant

0.708 = Constant

H_T = The net heating value as determined in 63.11(b)(6)(ii).

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

Appendix 9. Odor Management Plan

- A. The permittee shall implement the following procedures to minimize odors from the landfill. The primary method employed to control odors from typical solid waste material shall be the application of 6-inches of daily cover soil or an approved alternative material over the active face at the end of each day's operation. If operations include the disposal of wastewater sludge or other odorous waste material, then alternative odor control methods are necessary to control odor nuisances. Therefore, in addition to the primary waste placement procedures, the following methods shall be utilized to control odors associated with odorous waste material:
1. The permittee shall spread the odorous waste material over the compacted working face.
 2. The permittee shall place typical solid waste over the odorous waste material as soon as practical, or within three hours of placement.
 3. The permittee shall maintain appropriate quantities of stockpiled soil cover at or near the active face for foul weather operations, difficulties encountered with alternative cover materials, or if anticipated incoming waste loads do not arrive within the 3 hours of odorous waste material placement.
 4. The permittee shall not use a tarp as an alternate daily cover to cover the odorous waste material.
 5. Whenever practical, trucks shall be scheduled during morning operations to allow sufficient time to cover the sludge with typical solid waste.
 6. During periods of sustained strong winds, the permittee shall increase the frequency of soil cover or waste placement over the odorous waste material.

Should the permittee judge that the methods noted above are not feasible, the disposal of odorous waste material will be temporarily suspended.

- B. Unforeseen Conditions Abatement - Since operations are dependent on the landfill's heavy machinery, manpower, and operations, the following abatement issues will be undertaken as appropriate:
1. **Machinery Breakdowns:** Typical waste placement procedures are completed by a dozer and a compactor. Should this equipment become inoperable whereby the waste placement procedures described above cannot be completed within three hours, the disposal of odorous waste material will be suspended. The disposal of odorous waste material shall commence as soon as the equipment becomes operational.
 2. **Manpower Constraints:** The permittee shall provide additional employees and equipment, as needed, to cover odorous waste material within three hours of the time of placement.
 3. **Operation Constraints:** When all other options have been exhausted, the odorous waste material may require transfer to an alternate disposal facility. If this happens, an attempt shall be made to transfer the material to Ottawa County Farms Landfill, Coopersville, Michigan.