**This is the template for 40 CFR Part 62, Subpart OOO - Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014 which have actual non-methane organic compounds (NMOC) emissions equal to or greater than 34 megagrams per year.**

**This template is meant to be inserted into the ROP shell document along with the associated parts and appendices that are specific to this template.**

**Included is the emission unit name, description, and some instructions for Part C, the Emission Unit Summary Table and Part D, Flexible Group Special Conditions. Other emission units may be needed for the ROP.**

**Blue text is guidance or notes on the use of the template. Delete all blue text prior to issuing the final permit or submitting it with a permit application. Read through all conditions. If this template is being used for an ROP Reopening or Renewal, and the conditions were established in a PTI, the appropriate footnotes which reference enforceability must be added to each applicable condition in the template.**

**Red text identifies options. Select the option that applies to the source and change the text to black as appropriate. Delete red text that does not apply and renumber conditions if necessary.**

# 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.

**{REMOVE ANY EMISSION UNITS THAT ARE NOT AT THE SOURCE OR ADD EMISSION UNITS THAT ARE AT THE SOURCE}**

## 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 on or before July 17, 2014 **and has not been modified or reconstructed since July 17, 2014** and has accepted waste at any time since November 8, 1987. The MSW landfill has a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, and actual NMOC emissions equal to or greater than 34 Mg per year. | {Use mm-dd-yyyy} | FGLANDFILL-OOO |
| EUACTIVECOLL | 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. | {Use mm-dd-yyyy} | FGLANDFILL-OOO<br>FGACTIVECOLL-OOO |
| EUTREATMENTSYS | A treatment system that filters, de-waters, and compresses landfill gas for subsequent sale or beneficial use. The treatment system removes particulate to at least the 10-micron level, compresses the landfill gas, and removes enough moisture to ensure good combustion of gas for subsequent use. | {Use mm-dd-yyyy} | FGLANDFILL-OOO<br>FGTREATMENTSYS-OOO |
| EUOPENFLARE | Open flare is an open combustor without enclosure or shroud. | {Use mm-dd-yyyy} | FGLANDFILL-OOO<br>FGOPENFLARE-OOO |
| EUENCLOSEDFLARE | An enclosed flare is an enclosed combustor or firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. | {Use mm-dd-yyyy} | FGLANDFILL-OOO<br>FGENCLOSEDFLARE-OOO |

# 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.

**{REMOVE ANY FLEXIBLE GROUPS THAT ARE NOT AT THE SOURCE OR ADD FLEXIBLE GROUPS THAT ARE AT THE SOURCE}**

## 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-OOO | This flexible group represents the general MSW landfill with a required collection and control system. This flexible group contains 40 CFR Part 62, Subpart OOO requirements. | EULANDFILL<br>EUACTIVECOLL<br>EUTREATMENTSYS<br>EUOPENFLARE<br>EUENCLOSEDFLARE |
| FGACTIVECOLL-OOO | 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 62, Subpart OOO requirements. | EUACTIVECOLL |
| FGTREATMENTSYS-OOO | A treatment system that filters, de-waters, and compresses landfill gas for subsequent sale or beneficial use. This flexible group contains 40 CFR Part 62, Subpart OOO requirements. | EUTREATMENTSYS |
| FGOPENFLARE-OOO | Open (non-enclosed) flare is an open combustor without enclosure or shroud. This flexible group contains 40 CFR Part 62, Subpart OOO requirements. | EUOPENFLARE |
| FGENCLOSEDFLARE-OOO | An enclosed flare (enclosed combustor) is an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. This flexible group contains 40 CFR Part 62, Subpart OOO requirements. | EUENCLOSEDFLARE |

# FGLANDFILL-OOO
# 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 62, Subpart OOO requirements.

**Emission Units:** EULANDFILL, EUACTIVECOLL, EUTREATMENTSYS, EUOPENFLARE, EUENCLOSEDFLARE

## POLLUTION CONTROL EQUIPMENT

Describe control equipment utilized by the landfill. At most landfills, gas is routed to a treatment system and/or gas-to-energy plant. Any untreated landfill gas is generally routed to an on-site enclosed or open flare.

## I. EMISSION LIMIT(S)

**OPTIONAL:** Use this table if not subject to the operational standards in 40 CFR 63.1958. Delete table if not applicable and use NA option below.

| 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<br>SC VI.1 | **40 CFR 62.16716(d)** |

**{OR}**

NA

## II. MATERIAL LIMIT(S)

NA

## III. PROCESS/OPERATIONAL RESTRICTIONS

**OPTIONAL:** Use the following condition only if not subject to the operational standards in 40 CFR 63.1958 and the compliance provisions in 40 CFR 63.1960. Delete if not applicable and use the NA option below.

1. The provisions of 40 CFR Part 62, Subpart OOO apply at all times, including periods of startup, shutdown, or malfunction. During periods of startup, shutdown, and malfunction, the permittee shall comply with the work practices specified in 40 CFR 62.16716(e) in lieu of the compliance provisions in 40 CFR 62.16720. **(40 CFR 62.16720(e))**

**{OR}**

NA

## 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 62.16714(b) and 40 CFR 62.16714(c). **(40 CFR 62.16714(a)(3))**

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 62.16722(d). **(40 CFR 62.16714(c)(1))**

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 62.16714(c)(2))**

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 62.16714(c)(1) or (2). **(40 CFR 62.16714(c)(3))**

## V. TESTING/SAMPLING

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

**OPTIONAL:** Use the following conditions only if not subject to the operational standards in 40 CFR 63.1958, the compliance provisions in 40 CFR 63.1960, and the monitoring provisions in 40 CFR 63.1961. Delete if not applicable and use the NA option below.

1. Quarterly, the permittee must conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover and all cover penetrations. The permittee must monitor any openings that are within an area of the landfill where waste has been placed and a gas collection system is required. A surface monitoring design plan must be developed that includes a topographical map with the monitoring route, any alternative traversing pattern that ensures equivalent coverage, and the rationale for any site-specific deviations from the 30-meter intervals. **(40 CFR 62.16716(d))**

2. The permittee must use the procedures in 40 CFR 62.16720(c) for compliance with the surface methane operational standard in 40 CFR 62.16716(d). **(40 CFR 62.16720(c))**

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 62.16716(d). **(40 CFR 62.16720(c)(4))**

   a. The location of each monitored exceedance must be marked, and the location and concentration recorded. For location, the permittee must determine the latitude and longitude coordinates 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 62.16720(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 shall be re-monitored within 10 calendar days of detecting the exceedance. **(40 CFR 62.16720(c)(4)(ii))**

   c. If the re-monitoring of the location shows a second exceedance, additional corrective action must be taken and the location shall 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 shall 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 62.16720(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 62.16720(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 shall be taken. **(40 CFR 62.16720(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 for approval. **(40 CFR 62.16720(c)(4)(v))**

4. The permittee must comply with instrumentation specifications and procedures in 40 CFR 62.16720(d) for surface emission monitoring devices: **(40 CFR 62.16720(d))**

   a. The portable analyzer must meet the instrument specifications provided in Section 6 of EPA Method 21 of Appendix A-7 of 40 CFR Part 60, except that "methane" shall replace all references to VOC. **(40 CFR 62.16720(d)(1))**

   b. The calibration gas must be methane, diluted to a nominal concentration of 500 ppm in air. **(40 CFR 62.16720(d)(2))**

   c. To meet the performance evaluation requirements in Section 8.1 of USEPA Method 21 of Appendix A-7 of 40 CFR Part 60, the instrument evaluation procedures of Section 8.1 of USEPA Method 21 of Appendix A-7 of 40 CFR Part 60 must be used. **(40 CFR 62.16720(d)(3))**

   d. The calibration procedures provided in Sections 8 and 10 of USEPA Method 21 of Appendix A-7 of 40 CFR Part 60, must be followed immediately before commencing a surface monitoring survey. **(40 CFR 62.16720(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 62.16722(f))**

**{OR}**

NA

## VI. MONITORING/RECORDKEEPING

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

**OPTIONAL:** Use conditions 1 & 2 only if not subject to the operational standards in 40 CFR 63.1958, the compliance provisions in 40 CFR 63.1960, and the monitoring provisions in 40 CFR 63.1961. Delete if not applicable and renumber conditions appropriately.

1. The permittee must keep monthly 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 62.16716(d))**

   b. The location(s) and concentrations of the methane readings and noting any reading above 500 ppm above background. **(40 CFR 62.16720(c)(4))**

   c. The meteorological conditions the day of the testing including wind speed, wind direction, and temperature. **(R 336.1213(3))**

   The permittee shall keep all records on file and make them available upon request. **(R 336.1213(3))**

2. The permittee must implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis. Records of the cover integrity and any cover repairs must be kept on file and made available upon request. **(R 336.1213(3), 40 CFR 62.16720(c)(5))**

**ALWAYS INCLUDE**

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 62.16714(e), 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 62.16726(a))**

4. 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 62.16726(f))**

5. If reporting leachate or other liquids addition under 40 CFR 62.16724(l), 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 62.16726(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 received 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 received by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

**{CHOOSE ONE}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. The permittee must submit reports by March 15 for reporting period January 1 to December 31. The report must include the location of each exceedance of the 500 ppm methane concentrations as provided in 40 CFR 62.16716(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. The report shall also include information on all deviations that occurred during the 6-month reporting period. **(40 CFR 62.16722(f), 40 CFR 62.16724(h)(5))**

**{OR}**
Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. If complying with the operational provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, as allowed in 40 CFR 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, the permittee must follow the semi-annual reporting requirements in 40 CFR 63.1981(h) in lieu of 40 CFR 62.16724(h). **(40 CFR 62.16724(h))**

**OPTIONAL:** Use if the owner or operator of the affected landfill has employed leachate recirculation or added liquids based on a Research, Development, and Demonstration permit (issued through Resource Conservation and Recovery Act, Subtitle D, Part 258) within the last 10 years for an annual liquids addition report.

5. Annually, the permittee must submit a liquids addition report within 365 days after the date the previous report was submitted with the following information: **(40 CFR 62.16724(l))**

   a. Volume of leachate recirculated (gallons per year) and the reported basis of those estimates (records or engineering estimates). **(40 CFR 62.16724(l)(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 62.16724(l)(2))**

   c. Surface area (acres) over which the leachate is recirculated (or otherwise applied). **(40 CFR 62.16724(l)(3))**

   d. Surface area (acres) over which any other liquids are applied. **(40 CFR 62.16724(l)(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 62.16724(l)(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 62.16724(l)(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 June 21, 2022. Subsequent annual reports must contain items (a) through (f) and be submitted no later than 365 days after the date the previous report was submitted and contain data for the most recent 365 days. **(40 CFR 62.16724(l)(7))**

**ALWAYS INCLUDE**

6. The permittee must submit an equipment removal report 30 days prior to removal or cessation of operation of the control equipment. **(40 CFR 62.16724(g))**

   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 62.16724(f). **(40 CFR 62.16724(g)(1)(i))**

      ii. Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 34 megagrams or greater of NMOC per year. **(40 CFR 62.16724(g)(1)(iii))**

      iii. A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired. **(40 CFR 62.16724(g)(1)(ii))**

   b. Additional information may be requested as necessary to verify that all of the conditions for removal in 40 CFR 62.16714(f) have been met. **(40 CFR 62.16724(g)(2))**

7. The permittee must submit a closure report within 30 days of waste acceptance cessation. Additional information may be requested as 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, 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 62.16724(f))**

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 62.16724(j)(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 t the appropriate address listed in 40 CFR 60.4. **(40 CFR 62.16724(j)(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 62.16724(j)(2))**

9. The permittee shall submit any performance test reports and all other reports required by 40 CFR Part 62, Subpart OOO to the AQD, 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 62.16724(d), the permittee must submit a revised design plan 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 62.16724(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 62.16724(d). **(40 CFR 62.16724(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 62.16730). A closure report must be submitted as provided in 40 CFR 62.16724(f). **(40 CFR 62.16714(f)(1))**
   b. The collection and control system must have been in operation a minimum of 15 years or the landfill owner or operator demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flow. **(40 CFR 62.16714(f)(2))**
   c. Following the procedures specified in 40 CFR 62.16718(b), the calculated NMOC emission rate at the landfill is less than 34 Mg 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 62.16714(f)(3))**

**{CHOOSE ONE}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

3. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. **(40 CFR Part 62, Subpart OOO)**

**{OR}**
Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

3. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. Each permittee must comply with the provisions for the operational standards in 40 CFR 62.16716 (as well as the provisions in 40 CFR 62.16720 and 40 CFR 62.16722), or the operational standards in 40 CFR 63.1958 (as well as the provisions in 40 CFR 63.1960 and 40 CFR 63.1961), or both as alternative means of compliance, for an MSW landfill with a gas collection and control system used to comply with the provisions of 40 CFR 62.16714(b) and (c). 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 62.16716, 40 CFR 62.16720 and 40 CFR 62.16722. **(40 CFR 62.16716, 40 CFR 62.16720, 40 CFR 62.16722, 40 CFR Part 62, Subpart OOO)**

**OPTIONAL:** Use the following condition only if a major source of HAPs as defined in 40 CFR 63.2 and estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. 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)**

Remove these footnotes if no PTIs are associated with this source.
**Footnotes:**

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

# FGACTIVECOLL-OOO
# 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 62, Subpart OOO requirements.

**Emission Unit:** EUACTIVECOLL

## POLLUTION CONTROL EQUIPMENT

Describe control equipment utilized by the landfill. At most landfills, gas is routed to a treatment system and/or gas-to-energy plant. Any untreated landfill gas is generally routed to an on-site enclosed or open flare.

## I. EMISSION LIMIT(S)

NA

## II. MATERIAL LIMIT(S)

NA

## III. PROCESS/OPERATIONAL RESTRICTIONS

**OPTIONAL:** Use the following conditions only if not subject to the operational standards in 40 CFR 63.1958 and the compliance provisions in 40 CFR 63.1960. Delete if not applicable and use the NA option below.

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 62.16716(a)(1))**
   b. 2 years or more if closed or at final grade. **(40 CFR 62.16716(a)(1))**

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 62.16716(b)(1))**
   b. Use of a geo-membrane or synthetic cover. The permittee must develop acceptable pressure limits in the design plan. **(40 CFR 62.16716(b)(2))**
   c. A decommissioned well. A well may experience a static positive pressure after shut-down to accommodate for declining flows. **(40 CFR 62.16716(b)(3))**

3. The permittee shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C (131°F). The permittee may establish a higher operating temperature value at a particular well. A higher operating value demonstration must be submitted for approval and must include supporting data that the elevated parameter does not cause fires nor significantly inhibit anaerobic decomposition by killing methanogens. The demonstration must satisfy both criteria in order to be approved (*i.e.,* neither causing fires nor killing methanogens is acceptable). **(40 CFR 62.16716(c))**

4. Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 62.16714(c). 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 62.16716(e))**

5. The permittee must operate the control system at all times when the collected gas is routed to the system. **(40 CFR 62.16716(f))**

6. If monitoring demonstrates that the operational requirements in 40 CFR 62.16716(b), (c), or (d) are not met, corrective action must be taken as specified in 40 CFR 62.16720(a)(3) and (5) or 40 CFR 62.16720(c). If corrective actions are taken as specified in 40 CFR 62.16720, the monitored exceedance is not a violation of the operational requirements in 40 CFR 62.16716. **(40 CFR 62.16716(g))**

7. The provisions of 40 CFR Part 62, Subpart OOO apply at all times, including periods of startup, shutdown, and malfunction. During periods of startup, shutdown, and malfunction, the permittee must comply with the work practice specified in 40 CFR 62.16716(e) in lieu of the compliance provisions in 40 CFR 62.16720. **(40 CFR 62.16720(e))**

**{OR}**

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 system equipment. **(40 CFR 62.16714(b)(2)(i))**
   b. Collects gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active; or 2 years or more if closed or at final grade. **(40 CFR 62.16714(b)(2)(ii))**
   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 62.16720(b))**
   d. Collects gas at a sufficient extraction rate. **(40 CFR 62.16714(b)(2)(iii))**
   e. Designed to minimize off-site migration of subsurface gas. **(40 CFR 62.16714(b)(2)(iv))**

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 62.16714(c)(1) or (2). **(40 CFR 62.16714(c)(3))**

3. The permittee must site active gas collection devices as required in 40 CFR 62.16728 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 62.16726(d). **(40 CFR 62.16728(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 62.16728(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 62.16722(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))**

**OPTIONAL:** Use conditions 1-4 only if not subject to the operational standards in 40 CFR 63.1958, the compliance provisions in 40 CFR 63.1960, and the monitoring provisions in 40 CFR 63.1961. Delete if not applicable and use the option below.

1. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 62.16714(b)(2)(iii), 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 62.16720(a)(3) and 40 CFR 62.16722(a)(1). If a positive pressure exists, the following corrective actions must be taken:

   a. Action must be initiated to correct the exceedance within five calendar days. Any attempted corrective measure must not cause exceedances of other operational or performance standards. **(40 CFR 62.16720(a)(3))**

   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. The permittee must keep records according to 40 CFR 62.16726(e)(3). **(40 CFR 62.16720(a)(3)(i))**

   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. The permittee must keep records according to 40 CFR 62.16726(e)(4). **(40 CFR 62.16720(a)(3)(ii))**

   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, according to 40 CFR 62.16724(h)(7) and (k). The permittee must keep records according to 40 CFR 62.16726(e)(5). **(40 CFR 62.16720(a)(3)(iii))**

2. The permittee must monitor each well monthly for temperature as provided in 40 CFR 62.16716(c) and 40 CFR 62.16722(a)(3). 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 62.16720(a)(4))**

   b. If a landfill gas temperature less than 55°C (131°F) cannot be achieved within 15 calendar days of the first measurement of landfill gas temperature greater than 55°C (131°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 55°C (131°F) was first measured. The permittee must keep records according to 40 CFR 62.16726(e)(3). **(40 CFR 62.16720(a)(4)(i))**

   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 55°C (131°F). The permittee must keep records according to 40 CFR 62.16726(e)(4). **(40 CFR 62.16720(a)(4)(ii))**

   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, according to 40 CFR 62.16724(h)(7) and 40 CFR (k). The permittee must keep records according to 40 CFR 62.16726(e)(5). **(40 CFR 62.16720(a)(4)(iii))**

3. The permittee must monitor, on a monthly basis, the nitrogen or oxygen concentration in the landfill gas using the procedures in 40 CFR 62.16722(a)(2)(i) or (ii). **(40 CFR 62.16722(a)(2))**

4. The permittee must keep for at least 5 years up-to-date, readily accessible records of the following:

   a. All collection and control system exceedances of the operational standards in 40 CFR 62.16716, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. **(40 CFR 62.16726(e)(1))**

   b. Each wellhead temperature monitoring value of 55°C (131°F) or above, each wellhead nitrogen level at or above 20%, and each wellhead oxygen level at or above 5%. **(40 CFR 62.16726(e)(2))**

   c. For any root cause analysis for which corrective actions are required in 40 CFR 62.16720(a)(3) or 40 CFR 62.16720(a)(4), 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 62.16726(e)(3))**

   d. For any root cause analysis for which corrective actions are required in 40 CFR 62.16720(a)(3)(iii) or 40 CFR 62.16720(a)(4)(iii), 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 62.16726(e)(4))**

   e. For any root cause analysis for which corrective actions are required in 40 CFR 62.16720(a)(3)(iii) or 40 CFR 62.16720(a)(4)(iii), 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 AQD. **(40 CFR 62.16726(e)(5))**

**{OR}**

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 in 40 CFR 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, 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 62.16726(e))**

**ALWAYS INCLUDE {Renumber if necessary}**

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 62.16714(b) listed as follows:

   a. The maximum expected gas generation flow rate as calculated in 40 CFR 62.16720(a)(1). **(40 CFR 62.16726(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 62.16728(a)(1). **(40 CFR 62.16726(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 that matches the labeling on the plot map and the following up-to-date, readily accessible records. **(40 CFR 62.16726(d))**

   a. The installation date and location of all newly installed collectors as specified under 40 CFR 62.16720(b). **(40 CFR 62.16726(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 62.16728(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 40 CFR 62.16728(a)(3)(ii). **(40 CFR 62.16726(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 62.16724(i)(1))**

   b. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based. **(40 CFR 62.16724(i)(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 62.16724(i)(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 62.16724(i)(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 62.16724(i)(5))**

   f. The provisions for the control of off-site migration. **(40 CFR 62.16724(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 received 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 received by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

**{CHOOSE OPTION – conditions 4 & 5 OR condition 4 below}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. The permittee must submit reports by March 15 for reporting period January 1 to December 31. The report for the gas collection system shall include the following information:

   a. Value and length of time for exceedance of applicable parameters monitored under 40 CFR 62.16722(a)(1), (b), (c), (d), and (g). **(40 CFR 62.16724(h)(1))**

   b. Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under 40 CFR 62.16722. **(40 CFR 62.16724(h)(2))**

   c. All periods when the collection system was not operating and length of time not operating. **(40 CFR 62.16724(h)(4))**

   d. The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 62.16720(a)(3), 40 CFR 62.16720(a)(4), 40 CFR 62.16720(b), and 40 CFR 62.16720(c)(4). **(40 CFR 62.16724(h)(6))**

   e. The permittee must record instances when a positive pressure occurs in efforts to avoid fire. These records must be submitted with the annual reports as provided in 40 CFR 62.16724(h)(1). **(40 CFR 62.16716(b)(1))**

5. Annually, the permittee must submit reports for any corrective action analysis for which corrective actions are required in 40 CFR 62.16720(a)(3) or (4) and that take more than 60 days to correct the exceedance. The report must include the following information:

a. 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 elevated temperature reading. **(40 CFR 62.16724(h)(7))**

b. For action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates. **(40 CFR 62.16724(h)(7))**

**{OR}**

Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

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 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, the permittee must follow the semi-annual reporting requirements in 40 CFR 63.1981(h) in lieu of 40 CFR 62.16724(h). **(40 CFR 62.16724(h))**

**{CHOOSE OPTION and renumber as appropriate}**

Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

5. The permittee must submit reports for any corrective action and the corresponding timeline as follows:

a. For corrective action that is required according to 40 CFR 62.16720(a)(3)(iii) or 62.16720(a)(4)(iii) 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 as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value of 55°C (131°F). The USEPA Administrator must approve the plan for corrective action and the corresponding timeline. **(40 CFR 62.16724(k)(1))**

b. For corrective action that is required according to 40 CFR 62.16720(a)(3)(iii) or 62.16720(a)(4)(iii) and is not completed within 60 days after the initial exceedance, submit a notification as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance. **(40 CFR 62.16724(k)(2))**

**{OR}**

Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

5. If complying with the operational provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, as allowed in 40 CFR 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, the permittee must follow the corrective action and the corresponding timeline reporting requirements in 40 CFR 63.1981(j) in lieu of 40 CFR 62.16724(k). **(40 CFR 62.16724(k))**

**ALWAYS INCLUDE**

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 62.16724(j)(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 62.16724(j)(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 62.16724(j)(2))**

7. The permittee shall submit any performance test reports and all other reports required by 40 CFR Part 62, Subpart OOO to the AQD, 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

**{CHOOSE ONE}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

1. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. **(40 CFR Part 62, Subpart OOO)**

**{OR}**
Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

1. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. Each permittee must comply with the provisions for the operational standards in 40 CFR 62.16716 (as well as the provisions in 40 CFR 62.16720 and 40 CFR 62.16722), or the operational standards in 40 CFR 63.1958 (as well as the provisions in 40 CFR 63.1960 and 40 CFR 63.1961), or both as alternative means of compliance, for an MSW landfill with a gas collection and control system used to comply with the provisions of 40 CFR 62.16714(b) and (c). 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 62.16716, 40 CFR 62.16720 and 40 CFR 62.16722. **(40 CFR 62.16716, 40 CFR 62.16720, 40 CFR 62.16722, 40 CFR Part 62, Subpart OOO)**

Remove these footnotes if no PTIs are associated with this source.

**Footnotes:**

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

# FGTREATMENTSYS-OOO
# FLEXIBLE GROUP CONDITIONS

## DESCRIPTION

A treatment system that filters, de-waters, and compresses landfill gas for subsequent sale or beneficial use. This flexible group contains 40 CFR Part 62, Subpart OOO requirements.

**Emission Unit:** EUTREATMENTSYS

## POLLUTION CONTROL EQUIPMENT

Any emissions from any atmospheric vents or stacks associated with the treatment system subject to 40 CFR 62.16714(c)(1) or (2).

## I. EMISSION LIMIT(S)

NA

## II. MATERIAL LIMIT(S)

NA

## III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must operate the treatment system so that any emissions from any atmospheric vents or stacks associated with the treatment system must comply with 40 CFR 62.16714(c)(1) or (2). **(40 CFR 62.16714(c)(3) and (4))**

**OPTIONAL:** Use conditions 2-4 only if not subject to the operational standards in 40 CFR 63.1958, the compliance provisions in 40 CFR 63.1960, and the monitoring provisions in 40 CFR 63.1961. Delete if not applicable.

2. The permittee must operate the treatment system at all times when the collected gas is routed to the treatment system. **(40 CFR 62.16716(f))**

3. The permittee must develop a site-specific treatment system monitoring plan as required in 40 CFR 62.16726(b)(5)(ii). The plan must at a minimum contain the following: **(40 CFR 62.16722(g))**

   a. Monitoring records of parameters that are identified in the treatment system monitoring plan and that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. At a minimum, records should include records of filtration, de-watering, and compression parameters that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. **(40 CFR 62.16726(b)(5)(ii)(A))**

   b. Monitoring methods, frequencies, and operating ranges for each monitored operating parameter based on manufacturer's recommendations or engineering analysis for each intended end use of the treated landfill gas. **(40 CFR 62.16726(b)(5)(ii)(B))**

   c. Documentation of the monitoring methods and ranges, along with justification for their use. **(40 CFR 62.16726(b)(5)(ii)(C))**

   d. Identify who is responsible (by job title) for data collection. **(40 CFR 62.16726(b)(5)(ii)(D))**

   e. Processes and methods used to collect the necessary data. **(40 CFR 62.16726(b)(5)(ii)(E))**

   f. Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems. **(40 CFR 62.16726(b)(5)(ii)(F))**

4. The monitoring requirements apply at all times the treatment system is operating except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. The permittee must complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. **(40 CFR 62.16722(h))**

## IV. DESIGN/EQUIPMENT PARAMETER(S)

**OPTIONAL:** Use the following only if not subject to the operational standards in 40 CFR 63.1958, the compliance provisions in 40 CFR 63.1960, and the monitoring provisions in 40 CFR 63.1961. Delete if not applicable and use the NA option below.

1. The permittee must install and properly operate a treatment system in accordance with 40 CFR 62.16714(c). **(40 CFR 62.16722(d))**

2. The permittee must calibrate, maintain, and operate according to the manufacturer's specifications, a device that records flow to the treatment system and bypass of the treatment system (if applicable) as follows: **(40 CFR 62.16722(g))**

   a. Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes. **(40 CFR 62.16722(g)(1))**

   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 62.16722(g)(2))**

**{OR}**

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))**

**{CHOOSE ONE}**

Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

1. The permittee must keep monthly records of all treatment system operating parameters specified to be monitored according to 40 CFR 62.16722(g). The records must include:

   a. Continuous records of the indication of flow and gas flow rate to the treatment system. **(40 CFR 62.16726(c)(2))**

   b. The indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines. **(40 CFR 62.16726(c)(2))**

   c. Maintenance and repair of the monitoring system. **(40 CFR 62.16722(h))**

**{OR}**

Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

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 in 40 CFR 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, 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 62.16726(e))**

## 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 received 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 received by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

**{CHOOSE ONE}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. The permittee must submit reports by March 15 for reporting period January 1 to December 31. The report for the landfill gas treatment system shall include the following:

   a. Value and length of time for exceedance of applicable parameters monitored under 40 CFR 62.16722(g). **(40 CFR 62.16724(h)(1))**

   b. Description and duration of all periods when the gas stream is diverted from the treatment system through a bypass line or the indication of bypass flow. **(40 CFR 62.16724(h)(2))**

   c. Description and duration of all periods when the treatment system was not operating and length of time the control device was not operating. **(40 CFR 62.16724(h)(3))**

**{OR}**
Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. If complying with the operational provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, as allowed in 40 CFR 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, the permittee must follow the semi-annual reporting requirements in 40 CFR 63.1981(h) in lieu of 40 CFR 62.16724(h). **(40 CFR 62.16724(h))**

**ALWAYS INCLUDE**

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 62.16724(j)(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 62.16724(j)(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 62.16724(j)(2))**

6. The permittee shall submit any performance test reports and all other reports required by 40 CFR Part 62, Subpart OOO to the AQD, 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)

**{CHOOSE ONE}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

1. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. **(40 CFR Part 62, Subpart OOO)**

**{OR}**
Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

1. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. Each permittee must comply with the provisions for the operational standards in 40 CFR 62.16716 (as well as the provisions in 40 CFR 62.16720 and 40 CFR 62.16722), or the operational standards in 40 CFR 63.1958 (as well as the provisions in 40 CFR 63.1960 and 40 CFR 63.1961), or both as alternative means of compliance, for an MSW landfill with a gas collection and control system used to comply with the provisions of 40 CFR 62.16714(b) and (c). 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 62.16716, 40 CFR 62.16720 and 40 CFR 62.16722. **(40 CFR 62.16716, 40 CFR 62.16720, 40 CFR 62.16722, 40 CFR Part 62, Subpart OOO)**

Remove these footnotes if no PTIs are associated with this source.

**Footnotes:**

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

# FGOPENFLARE-OOO
# FLEXIBLE GROUP CONDITIONS

## DESCRIPTION

Open (non-enclosed) flare is an open combustor without enclosure or shroud. This flexible group contains 40 CFR Part 62, Subpart OOO requirements.

**Emission Unit:** EUOPENFLARE

## POLLUTION CONTROL EQUIPMENT

Open (non-enclosed) flare

## I. EMISSION LIMIT(S)

1. There must be no visible emissions from EUOPENFLARE 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 62.16714(c)(1))**

2. The flare must be operated with a flame present at all times. **(40 CFR 60.18(c)(2))**

**OPTIONAL:** Use conditions 3 & 4 only if not subject to the operational standards in 40 CFR 63.1958, the compliance provisions in 40 CFR 63.1960, and the monitoring provisions in 40 CFR 63.1961. Delete if not applicable.

3. The permittee must operate the control system at all times when the collected gas is routed to it. **(40 CFR 62.16716(f))**

4. In the event the 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 one hour of the collection and control system not operating. **(40 CFR 62.16716(e))**

## IV. DESIGN/EQUIPMENT PARAMETER(S)

**OPTIONAL:** Use condition 1 only if not subject to the operational standards in 40 CFR 63.1958, the compliance provisions in 40 CFR 63.1960, and the monitoring provisions in 40 CFR 63.1961. Delete if not applicable and use the NA option below.

1. The permittee using a non-enclosed flare must install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

   a. 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 62.16722(c)(1))**

   b. A device that records flow to the flare and bypass of the flare (if applicable). **(40 CFR 62.16722(c)(2))**

**{OR}**

NA

## V. TESTING/SAMPLING

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

1. Within 180 days after commencement of initial startup, the permittee must verify visible emissions from EUOPENFLARE, 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. The AQD must approve the final plan prior to testing. The permittee must submit a complete report of the test results to the AQD 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. Within 180 days after commencement of initial startup, 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 EUOPENFLARE 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 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 62.16726(b))**

2. Where the permittee seeks to demonstrate compliance with 40 CFR 62.16714(c)(1) 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 62.16726(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))**

**{CHOOSE ONE}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. The permittee must keep monthly records of the operating parameters specified to be monitored in 40 CFR 62.16722(c). The records must include:

   a. Continuous records of the indication of flow and gas flow rate to the control device. **(40 CFR 62.16726(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 62.16722(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 62.16726(b)(4))**

**{OR}**

Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

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 in 40 CFR 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, 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 62.16726(e))**

**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 received 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 received by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

**{CHOOSE ONE}**

Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. The permittee must submit reports by March 15 for reporting period January 1 to December 31. For flares, reportable exceedances are defined under 40 CFR 62.16726(c). The report shall include the following:

   a. Value and length of time for exceedance of applicable parameters monitored under 40 CFR 62.16722(a)(1), (b), (c), (d), and (g). **(40 CFR 62.16724(h)(1))**

   b. Description and duration of all periods when the gas stream was diverted from the control device from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR 62.16722. **(40 CFR 62.16724(h)(2))**

   c. 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 62.16724(h)(3))**

**{OR}**

Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

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 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, the permittee must follow the semi-annual reporting requirements in 40 CFR 63.1981(h) in lieu of 40 CFR 62.16724(h). **(40 CFR 62.16724(h))**

**ALWAYS INCLUDE**

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 62.16724(j)(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 62.16724(j)(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 62.16724(j)(2))**

6. The permittee shall submit any performance test reports and all other reports required by 40 CFR Part 62, Subpart OOO to the AQD, 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)

**{CHOOSE ONE}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

1. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. **(40 CFR Part 62, Subpart OOO)**

**{OR}**
Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

1. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. Each permittee must comply with the provisions for the operational standards in 40 CFR 62.16716 (as well as the provisions in 40 CFR 62.16720 and 40 CFR 62.16722), or the operational standards in 40 CFR 63.1958 (as well as the provisions in 40 CFR 63.1960 and 40 CFR 63.1961), or both as alternative means of compliance, for an MSW landfill with a gas collection and control system used to comply with the provisions of 40 CFR 62.16714(b) and (c). 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 62.16716, 40 CFR 62.16720 and 40 CFR 62.16722. **(40 CFR 62.16716, 40 CFR 62.16720, 40 CFR 62.16722, 40 CFR Part 62, Subpart OOO)**

Remove these footnotes if no PTIs are associated with this source.

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

# FGENCLOSEDFLARE-OOO
# FLEXIBLE GROUP CONDITIONS

## DESCRIPTION

An enclosed flare (enclosed combustor) is an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. This flexible group contains 40 CFR Part 62, Subpart OOO requirements.

**Emission Unit:** EUENCLOSEDFLARE

## POLLUTION CONTROL EQUIPMENT

Enclosed flare

## I. EMISSION LIMITS

| Pollutant | Limit | Time Period/Operating Scenario | Equipment | Monitoring/ Testing Method | Underlying Applicable Requirements |
|---|---|---|---|---|---|
| 1. NMOC | 20 ppmv dry as hexane at 3% oxygen<br><br>-OR-<br><br>98% reduction or more | Hourly | Enclosed Combustion Device | SC V.1<br>SC V.2 | **40 CFR 62.16714(c)(2)** |

## II. MATERIAL LIMIT(S)

NA

## III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee must operate control system such that all collected gases are vented to a control system designed and operated in accordance 40 CFR 62.16714(c). **(40 CFR 62.16714(c)(2))**

2. The enclosed flare must be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in 40 CFR 62.16722. **(40 CFR 62.16714(c)(2)(ii))**

**OPTIONAL:** Use conditions 3 & 4 only if not subject to the operational standards in 40 CFR 63.1958, the compliance provisions in 40 CFR 63.1960, and the monitoring provisions in 40 CFR 63.1961. Delete if not applicable.

3. The permittee must operate the control system at all times when the collected gas is routed to it. **(40 CFR 62.16716(f))**

4. In the event the 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 one hour. **(40 CFR 62.16716(e))**

## IV. DESIGN/EQUIPMENT PARAMETER(S)

**OPTIONAL:** Use condition 1 only if not subject to the operational standards in 40 CFR 63.1958, the compliance provisions in 40 CFR 63.1960, and the monitoring provisions in 40 CFR 63.1961. Delete if not applicable and use the NA option below.

1. The permittee using an enclosed combustor must install, calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

   a. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. **(40 CFR 62.16722(b)(1))**

   b. A device that records flow to the control device and bypass of the control device (if applicable). **(40 CFR 62.16722(b)(2))**

   c. Install, calibrate, and maintain a gas flow rate measuring device that must record the flow to the control device at least every 15 minutes. **(40 CFR 62.16722(b)(2)(i))**

   d. 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 62.16722(b)(2)(ii))**

**{OR}**

NA

## V. TESTING/SAMPLING

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

1. Within 180 days after commencement of initial startup, the permittee must verify the NMOC reduction efficiency or ppmv from EUENCLOSEDFLARE, by testing at owner's expense, in accordance with Department requirements. Testing must be performed using an approved USEPA method listed in 40 CFR Part 62.16718(d). 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 62.16714(c)(2), 40 CFR 62.16718(e))**

2. Within 180 days of permit issuance, the permittee must verify the NMOC reduction efficiency or ppmv from EUENCLOSEDFLARE 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)**

3. 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))**

## 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 62.16726(b))**

2. Where the permittee seeks to demonstrate compliance with 40 CFR 62.16714(c) through use of an enclosed combustion: **(40 CFR 62.16726(b)(2))**

   a. The average temperature measured at least every 15 minutes and averaged over the same time period of the performance test. **(40 CFR 62.16726(b)(2)(i))**

b. The percent reduction of NMOC determined as specified in 40 CFR 62.16714(c)(2) achieved by the control device. **(40 CFR 62.16726(b)(2)(ii))**

**{CHOOSE ONE}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

3. The permittee must keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR 62.16722 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. **(40 CFR 62.16726(c))**

   a. The average temperature measured at least every 15 minutes and averaged over the same time period of the performance test. **(40 CFR 62.16726(b)(2)(i))**

   b. All 3-hour periods of operation during which the average temperature was more than 28°C (82°F) below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 62.16714(c) was determined. **(40 CFR 62.16726(c)(1)(i))**

   c. Continuous records of the indication of flow to the control system and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 62.16722. **(40 CFR 62.16726(c)(2))**

**{OR}**
Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

3. 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 in 40 CFR 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, 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 62.16726(e))**

## 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 received 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 received March 15 for the previous calendar year. **(R 336.1213(4)(c))**

**{CHOOSE ONE}**
Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. The permittee must submit reports by March 15 for reporting period January 1 to December 31. For enclosed combustion devices, reportable exceedances are defined under 40 CFR 62.16726(c). The report shall include the following:

   a. Value and length of time for exceedance of applicable parameters monitored under 40 CFR 62.16722(c). **(40 CFR 62.16724(h)(1))**

   b. 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 62.16724(h)(2))**

   c. 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 62.16724(h)(3))**

**{OR}**
Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

4. If complying with the operational provisions of 40 CFR 63.1958, 40 CFR 63.1960, and 40 CFR 63.1961, as allowed in 40 CFR 62.16716, 40 CFR 62.16720, and 40 CFR 62.16722, the permittee must follow the semi-annual reporting requirements in 40 CFR 63.1981(h) in lieu of 40 CFR 62.16724(h). **(40 CFR 62.16724(h))**

**ALWAYS INCLUDE**

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 62.16724(j)(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 appropriate address listed in 40 CFR 60.4. **(40 CFR 62.16724(j)(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 62.16724(j)(2))**

6. The permittee shall submit any performance test reports and all other reports required by 40 CFR Part 62, Subpart OOO to the AQD, 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

**{CHOOSE ONE}**

Use if estimated uncontrolled emissions are less than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

1. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. **(40 CFR Part 62, Subpart OOO)**

**{OR}**

Use if estimated uncontrolled emissions are equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 63.1959.

1. The permittee must comply with all applicable provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014 and have not been modified or reconstructed since July 17, 2014, as specified in 40 CFR Part 62, Subpart OOO. Each permittee must comply with the provisions for the operational standards in 40 CFR 62.16716 (as well as the provisions in 40 CFR 62.16720 and 40 CFR 62.16722), or the operational standards in 40 CFR 63.1958 (as well as the provisions in 40 CFR 63.1960 and 40 CFR 63.1961), or both as alternative means of compliance, for an MSW landfill with a

gas collection and control system used to comply with the provisions of 40 CFR 62.16714(b) and (c). 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 62.16716, 40 CFR 62.16720 and 40 CFR 62.16722. **(40 CFR 62.16716, 40 CFR 62.16720, 40 CFR 62.16722, 40 CFR Part 62, Subpart OOO)**

Remove these footnotes if no PTIs are associated with this source.

**Footnotes:**

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

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

# E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to the specified emission unit(s) and/or flexible group(s). This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii). If the permittee makes a change that affects the basis of the non-applicability determination, the permit shield established as a result of that non-applicability decision is no longer valid for that emission unit or flexible group.

| Emission Unit/ Flexible Group ID | Non-Applicable Requirement | Justification |
|---|---|---|
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**{OR}**

**{Delete Table}**

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 | $CO_2e$ | 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 |
| | | HAP | Hazardous Air Pollutant |
| EGLE | Michigan Department of Environment, Great Lakes, and Energy | Hg | Mercury |
| | | hr | Hour |
| EU | Emission Unit | HP | Horsepower |
| FG | Flexible Group | $H_2S$ | Hydrogen Sulfide |
| GACS | Gallons of Applied Coating Solids | kW | Kilowatt |
| GC | General Condition | lb | Pound |
| GHGs | Greenhouse Gases | m | Meter |
| HVLP | High Volume Low Pressure* | mg | Milligram |
| ID | Identification | mm | Millimeter |
| IRSL | Initial Risk Screening Level | MM | Million |
| ITSL | Initial Threshold Screening Level | MW | Megawatts |
| LAER | Lowest Achievable Emission Rate | NMOC | Non-methane Organic Compounds |
| MACT | Maximum Achievable Control Technology | $NO_x$ | Oxides of Nitrogen |
| MAERS | Michigan Air Emissions Reporting System | ng | Nanogram |
| MAP | Malfunction Abatement Plan | PM | Particulate Matter |
| MSDS | Material Safety Data Sheet | PM10 | Particulate Matter equal to or less than 10 microns in diameter |
| NA | Not Applicable | | |
| NAAQS | National Ambient Air Quality Standards | PM2.5 | Particulate Matter equal to or less than 2.5 microns in diameter |
| NESHAP | National Emission Standard for Hazardous Air Pollutants | pph | Pounds per hour |
| | | ppm | Parts per million |
| NSPS | New Source Performance Standards | ppmv | Parts per million by volume |
| NSR | New Source Review | ppmw | Parts per million by weight |
| PS | Performance Specification | % | Percent |
| PSD | Prevention of Significant Deterioration | psia | Pounds per square inch absolute |
| PTE | Permanent Total Enclosure | psig | Pounds per square inch gauge |
| PTI | Permit to Install | scf | Standard cubic feet |
| RACT | Reasonable Available Control Technology | sec | Seconds |
| ROP | Renewable Operating Permit | $SO_2$ | Sulfur Dioxide |
| SC | Special Condition | TAC | Toxic Air Contaminant |
| SCR | Selective Catalytic Reduction | Temp | Temperature |
| SDS | Safety Data Sheet | THC | Total Hydrocarbons |
| SNCR | Selective Non-Catalytic Reduction | tpy | Tons per year |
| SRN | State Registration Number | µg | Microgram |
| TEQ | Toxicity Equivalence Quotient | µm | Micrometer or Micron |
| USEPA/EPA | United States Environmental Protection Agency | VOC | Volatile Organic Compounds |
| | | yr | Year |
| VE | Visible Emissions | | |

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

## Appendix 2. Schedule of Compliance

**{CHOOSE ONE}**

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements of this ROP except for the following: {Enter condition number(s)}. As a result, the permittee was required to submit a Schedule of Compliance as defined in Rule 119(a), pursuant to Rule 210(2) and Rule 213(4).

A Schedule of Compliance for any applicable requirements that the permittee is not in compliance with at the time of ROP issuance is supplemental to, and shall not sanction non-compliance with, the underlying applicable requirements on which it is based.

The permittee shall adhere to this schedule of compliance and submit the required certified progress reports accordingly.

**Compliance Plan**

The permittee outlined the details of achieving compliance in a narrative compliance plan. The details of the compliance plan are outlined below.

Insert the narrative details from the Compliance Plan that was submitted.

**Schedule of Compliance**

The following schedule of compliance conforms to the provisions of Rule 119(a) and Rule 213(4).

| Emission Unit/ Flexible Group ID and Condition No. | Applicable Requirement | Remedial Measure | Required Action | Milestone Date | Progress Reports |
|---|---|---|---|---|---|
| | | | | | |
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**Progress Reports**

The permittee shall submit Certified Progress Reports using the MiEnviro form ROP General Compliance Report. **(R 336.1213(4)(b))**

Progress reports shall contain the following information:

The projected dates for achieving scheduled activities, milestones or compliance as required in the schedule of compliance. **(R 336.1213(4)(b)(i))**

The actual dates that the activities, milestones, or compliance are achieved. **(R 336.1213(4)(b)(i))**

An explanation of why any dates in the schedule of compliance were not or will not be met. **(R 336.1213(4)(b)(ii))**

A description of any preventative or corrective measures adopted in order to ensure that the schedule of compliance is met. **(R 336.1213(4)(b)(ii))**

**{OR}**

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

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

## Appendix 6. Permits to Install

**{CHOOSE ONE}**

{For Initial ROP Issuance}
The following table lists any Permit to Install and/or Operate, that relates to the identified emission units or flexible groups as of the effective date of this ROP. This includes all Permits to Install and/or Operate that are hereby incorporated into Source-Wide PTI No. SWPTI####### v#.#. PTIs issued after the effective date of this ROP, including amendments or modifications, will be identified in Appendix 6 upon renewal.

| Permit to Install Number | Description of Equipment | Corresponding Emission Unit(s) or Flexible Group(s) |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

**{OR}**

{For ROP Renewals}
The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-{SRN}-{YEAR}. {Note: this should be the most recently issued ROP, not a revision. If any revisions have been done since ROP issuance, do not include the "a, b, c" sequential number here.} 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-{SRN}-{YEAR} {Note: this should be the most recent version of the Source-Wide PTI. Include the latest sequential letter after the number if there was a revision.} is being reissued as Source-Wide PTI No. SWPTI####### v#.#.

{For a PTI that does not have an associated ROP revision application or an ROP revision application that does not have an associated PTI, enter NA in the appropriate column in the table below.}

| Permit to Install Number | ROP Revision Application Number | Description of Equipment or Change | Corresponding Emission Unit(s) or Flexible Group(s) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
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| | | | |

## Appendix 7. Emission Calculations

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

**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 must be documented and provided 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. Emissions from each section must be computed using the following equation: **(40 CFR 62.16728(a)(3)(ii)(A))**

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

Where:

$Q_i$ = NMOC emission rate from the ith section, Mg per year

k = methane generation rate constant, $year^{-1}$

$L_o$ = methane generation potential, cubic meters per 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, ppm by volume

$3.6 \times 10^{-9}$ = conversion factor

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 62.16718 or the alternative values from 40 CFR 62.16718 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 62.16728(a)(3)(i). **(40 CFR 62.16278(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 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C;

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

where the standard temperature for $\left(\frac{g\ mole}{scm}\right)$ 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 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))**

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

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 63.11(b)(8))**

$$Vmax = 8.706 + 0.7084\ (H_T)$$

Where:

Vmax = Maximum permitted velocity, m/sec
8.706 = Constant
0.7084 = 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 the MiEnviro forms ROP Annual Compliance Certification and ROP Semi-Annual Compliance Certification 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. .

### B. Other Reporting

**{CHOOSE ONE}**

The permittee shall use the following approved formats and procedures for the reporting requirements referenced in {Enter emission unit/flexible group}. Alternative formats must be approved by the AQD District Supervisor.

**{OR}**

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.