



MAJOR SOURCE OPERATING PERMIT

PERMITTEE: ARROWHEAD LANDFILL
FACILITY NAME: ARROWHEAD LANDFILL
FACILITY/PERMIT NO.: 107-0003
LOCATION: UNIONTOWN, ALABAMA

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

*Pursuant to the **Clean Air Act of 1990**, all conditions of this permit are federally enforceable by EPA, the Alabama Department of Environmental Management, and citizens in general. Those provisions which are not required under the **Clean Air Act of 1990** are considered to be state permit provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate sections of this permit.*

Issuance Date:

Effective Date:

Expiration Date:

Alabama Department of Environmental Management

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<p>1. <u>Transfer</u></p> <p>This permit is not transferable, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another, except as provided in Rule 335-3-16-.13(1)(a)5.</p>	<p>Rule 335-3-16-.02(6)</p>
<p>2. <u>Renewals</u></p> <p>An application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of this permit.</p> <p>The source for which this permit is issued shall lose its right to operate upon the expiration of this permit unless a timely and complete renewal application has been submitted within the time constraints listed in the previous paragraph.</p>	<p>Rule 335-3-16-.12(2)</p>
<p>3. <u>Severability Clause</u></p> <p>The provisions of this permit are declared to be severable and if any section, paragraph, subparagraph, subdivision, clause, or phrase of this permit shall be adjudged to be invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, impair, or invalidate the remainder of this permit, but shall be confined in its operation to the section, paragraph, subparagraph, subdivision, clause, or phrase of this permit that shall be directly involved in the controversy in which such judgment shall have been rendered.</p>	<p>Rule 335-3-16-.05(e)</p>
<p>4. <u>Compliance</u></p> <p>(a) The permittee shall comply with all conditions of ADEM Admin. Code 335-3. Noncompliance with this permit will constitute a violation of the Clean Air Act of 1990 and ADEM Admin. Code 335-3 and may result in an enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application by the permittee.</p> <p>(b) The permittee shall not use as a defense in an enforcement action that maintaining compliance with</p>	<p>Rule 335-3-16-.05(f)</p> <p>Rule 335-3-16-.05(g)</p>

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<p style="text-align: center;">conditions of this permit would have required halting or reducing the permitted activity.</p>	
<p>5. <u>Termination for Cause</u></p> <p>This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance will not stay any permit condition.</p>	Rule 335-3-16-.05(h)
<p>6. <u>Property Rights</u></p> <p>The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.</p>	Rule 335-3-16-.05(i)
<p>7. <u>Submission of Information</u></p> <p>The permittee must submit to the Department, within 30 days or for such other reasonable time as the Department may set, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by this permit.</p>	Rule 335-3-16-.05(j)
<p>8. <u>Economic Incentives, Marketable Permits, and Emissions Trading</u></p> <p>No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.</p>	Rule 335-3-16-.05(k)
<p>9. <u>Certification of Truth, Accuracy, and Completeness:</u></p> <p>Any application form, report, test data, monitoring data, or compliance certification submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the</p>	Rule 335-3-16-.07(a)

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document are true, accurate and complete.	
<p>10. <u>Inspection and Entry</u></p> <p>Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized representatives of the Alabama Department of Environmental Management and EPA to conduct the following:</p> <ul style="list-style-type: none"> (a) Enter upon the permittee’s premises where a source is located or emissions-related activity is conducted, or where records must be kept pursuant to the conditions of this permit; (b) Review and/or copy, at reasonable times, any records that must be kept pursuant to the conditions of this permit; (c) Inspect, at reasonable times, this facility’s equipment (including monitoring equipment and air pollution control equipment), practices, or operations regulated or required pursuant to this permit; (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements. 	Rule 335-3-16-.07(b)
<p>11. <u>Compliance Provisions</u></p> <ul style="list-style-type: none"> (a) The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance. (b) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit. 	Rule 335-3-16-.07(c)
<p>12. <u>Compliance Certification</u></p> <p>A compliance certification shall be submitted annually within 60 days of the anniversary date of issuance of this permit or within an alternate timeline approved by the Director.</p>	Rule 335-3-16-.07(e)

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<p>(a) The compliance certification shall include the following:</p> <ul style="list-style-type: none"> (1) The identification of each term or condition of this permit that is the basis of the certification; (2) The compliance status; (3) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements); (4) Whether compliance has been continuous or intermittent; (5) Such other facts as the Department may require to determine the compliance status of the source; <p>(b) The compliance certification shall be submitted to the Air and EPCRA Enforcement Branch at EPA, Region IV through the Compliance and Emissions Data Reporting Interface (CEDRI) located on EPA's Central Data Exchange (CDX), and should also be mailed to the Alabama Department of Environmental Management's Air Division at P.O. Box 301463, Montgomery, AL 36130-1463.</p>	
<p>13. <u>Reopening for Cause</u></p> <p>Under any of the following circumstances, this permit will be reopened prior to the expiration of the permit:</p> <ul style="list-style-type: none"> (a) Additional applicable requirements under the Clean Air Act of 1990 become applicable to the permittee with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to 	<p>Rule 335-3-16-.13(5)</p>

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<p>expire.</p> <p>(b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.</p> <p>(c) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.</p> <p>(d) The Administrator or the Department determines that this permit must be revised or revoked to assure compliance with the applicable requirements.</p>	
<p>14. <u>Additional Rules and Regulations</u></p> <p>This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.</p>	<p>§22-28-16(d), <u>Code of Alabama 1975</u>, as amended</p>
<p>15. <u>Equipment Maintenance or Breakdown</u></p> <p>(a) In the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least twenty-four (24) hours prior to the planned shutdown, unless such shutdown is accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following:</p> <p style="padding-left: 40px;">(1) Identification of the specific facility to be taken out of service as well as its location and permit number;</p> <p style="padding-left: 40px;">(2) The expected length of time that the air pollution control equipment will be out of</p>	<p>Rule 335-3-1-.07(1), (2)</p>

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<p>service;</p> <p>(3) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period;</p> <p>(4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period;</p> <p>(5) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.</p> <p>(b) In the event that there is a breakdown of equipment or upset of process in such a manner as to cause, or is expected to cause, increased emissions of air contaminants which are above an applicable standard, the person responsible for such equipment shall notify the Director within 24 hours or the next working day and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Director shall be notified when the breakdown has been corrected.</p>	
<p>16. <u>Operation of Capture and Control Devices</u></p> <p>All air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.</p>	<p>§22-28-16(d), <u>Code of Alabama 1975</u>, as amended</p>
<p>17. <u>Obnoxious Odors</u></p> <p>This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically</p>	<p>Rule 335-3-1-.08</p>

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feasible.	
<p>18. <u>Fugitive Dust</u></p> <p>(a) Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hAnnistoners, ductwork, etc.</p> <p>(b) Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:</p> <p style="margin-left: 40px;">(1) By the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;</p> <p style="margin-left: 40px;">(2) By reducing the speed of vehicular traffic to a point below that at which dust emissions are created;</p> <p style="margin-left: 40px;">(3) By paving;</p> <p style="margin-left: 40px;">(4) By the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;</p> <p>Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.</p>	<p>Rule 335-3-4-.02</p>
<p>19. <u>Additions and Revisions</u></p> <p>Any modifications to this source shall comply with the modification procedures in Rules 335-3-16-.13 or 335-3-16-</p>	<p>Rule 335-3-16-.13 and .14</p>

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.14.	
<p>20. <u>Recordkeeping Requirements</u></p> <p>(a) Records of required monitoring information of the source shall include the following:</p> <ul style="list-style-type: none"> (1) The date, place, and time of all sampling or measurements; (2) The date analyses were performed; (3) The company or entity that performed the analyses; (4) The analytical techniques or methods used; (5) The results of all analyses; and (6) The operating conditions that existed at the time of sampling or measurement. <p>(b) Retention of records of all required monitoring data and support information of the source for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit</p>	Rule 335-3-16-.05(c)2.
<p>21. <u>Reporting Requirements</u></p> <p>(a) Reports to the Department of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with Rule 335-3-16-.04(9).</p>	Rule 335-3-16-.05(c)3.

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<p style="text-align: center;">upstream and downstream gas flow disturbances.</p> <p>A pretest meeting may be held at the request of the source owner or the Air Division. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.</p> <p>All test reports must be submitted to the Air Division within 30 days of the actual completion of the test unless an extension of time is specifically approved by the Air Division.</p>	<p>Rule 335-3-1-.04</p>
<p>23. <u>Payment of Emission Fees</u></p> <p>Annual emission fees shall be remitted each year according to the fee schedule in ADEM Admin. Code R. 335-1-7-.04.</p>	<p>Rule 335-1-7-.04</p>
<p>24. <u>Other Reporting and Testing Requirements</u></p> <p>Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require emission testing at any time.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>25. <u>Title VI Requirements (Refrigerants)</u></p> <p>Any facility having appliances or refrigeration equipment, including air conditioning equipment, which use Class I or Class II ozone-depleting substances as listed in 40 CFR Part 82, Subpart A, Appendices A and B, shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82, Subpart F.</p> <p>No person shall knowingly vent or otherwise release any Class I or Class II substance into the environment during the repair, servicing, maintenance, or disposal of any device except as provided in 40 CFR Part 82, Subpart F.</p> <p>The responsible official shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the US EPA and the Department as required.</p>	<p>335-3-16-.05(a)</p>

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<p>26. <u>Chemical Accidental Prevention Provisions</u></p> <p>If a chemical listed in Table 1 of 40 CFR Part 68.130 is present in a process in quantities greater than the threshold quantity listed in Table 1, then:</p> <p>(a) The owner or operator shall comply with the provisions in 40 CFR Part 68.</p> <p>(b) The owner or operator shall submit one of the following:</p> <p style="padding-left: 40px;">(1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR Part 68 § 68.10(a) or,</p> <p style="padding-left: 40px;">(2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan.</p>	<p>40 CFR Part 68</p>
<p>27. <u>Display of Permit</u></p> <p>This permit shall be kept under file or on display at all times at the site where the facility for which the permit is issued is located and will be made readily available for inspection by any or all persons who may request to see it.</p>	<p>Rule 335-3-14-.01(1)(d)</p>
<p>28. <u>Circumvention</u></p> <p>No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminant which would otherwise violate the Division 3 rules and regulations.</p>	<p>Rule 335-3-1-.10</p>
<p>29. <u>Visible Emissions</u></p> <p>Unless otherwise specified in the Unit Specific provisos of this permit, any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by</p>	<p>Rule 335-3-4-.01(1)</p>

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<p>40 CFR Part 60, Appendix A, Method 9, unless otherwise specified in the Unit Specific provisos of this permit.</p>	
<p>30. <u>Fuel-Burning Equipment</u></p> <p>Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge particulate emissions in excess of the emissions specified in Part 335-3-4-.03.</p> <p>Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge sulfur dioxide emissions in excess of the emissions specified in Part 335-3-5-.01.</p>	<p>Rule 335-3-4-.03</p> <p>Rule 335-3-5-.01</p>
<p>31. <u>Process Industries – General</u></p> <p>Unless otherwise specified in the Unit Specific provisos of this permit, no process may discharge particulate emissions in excess of the emissions specified in Part 335-3-4-.04.</p>	<p>Rule 335-3-4-.04</p>
<p>32. <u>Averaging Time for Emission Limits</u></p> <p>Unless otherwise specified in the permit, the averaging time for the emission limits listed in this permit shall be the nominal time required by the specific test method.</p>	<p>Rule 335-3-1-.05</p>

Summary Page for Arrowhead Landfill

Permitted Operating
Schedule: 24 Hrs/day x 7 Days/week x 52 Weeks/yr = 8760 Hrs/yr

Emission limitations:

Emission Point #	Description	Pollutant	Emission limit	Regulation
001	Municipal Solid Waste Landfill	NMOC	N/A	40 CFR 62.16710

Provisos for Arrowhead Landfill

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Section 1--Applicability

1. This source is subject to 40 CFR 62 Subpart OOO-Federal Plan Requirements for Municipal Solid Waste Landfills until ADEM Admin. Rule R. 335-3-19 becomes effective. 40 CFR 62.16710

Section 2--Emission Standards

1. The owner or operator must calculate a Tier 1 NMOC mass according to 40 CFR 62.16718(a)(1). 40 CFR 62.16710
 - a. If the NMOC emission rate is less than 34 Mg/yr, the owner or operator must submit an NMOC emission rate report and must recalculate the NMOC mass emission rate annually as required by 40 CFR 62.16714(e).
 - b. If the NMOC emission rate is equal to or greater than 34 Mg/yr, the owner or operator must do one of the following:
 - i. Submit a gas collection system design plan within 1 year as specified in 40 CFR 62.16724(d) and install and operate a gas collection and control system within 30 months according to 40 CFR 62.16714(b) and (c);
 - ii. Determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the Tier 2 procedures provided in 40 CFR 62.16718(a)(3);
 - iii. Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using Tier 3 procedures provided in 40 CFR 62.16718(a)(4).
2. If the owner or operator determines a site-specific NMOC concentration using Tier 2 procedures, the following applies: 40 CFR 62.16710
 - a. If the NMOC emission rate is less than 34 Mg/yr, the owner or operator must submit a periodic emission report in accordance with 40 CFR 40 CFR 62.16724(c)(1) and retest the site specific NMOC concentration every five years using methods specified in 40 CFR 60 Appendix A.
 - b. If the NMOC emission rate is equal to or greater than 34 Mg/yr, the owner or operator must do one of the following:
 - i. Submit a gas collection system design plan within 1 year as specified in 40 CFR 62.16724(d) and install and operate a gas collection and control system within 30 months according to 40 CFR 62.16714(b) and (c);
 - ii. Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using the Tier 3 procedures provided in paragraph 40 CFR

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- 62.16718(a)(4);
- iii. Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in paragraph 40 CFR 62.16718(a)(6).
3. If the owner or operator determines a site-specific NMOC using Tier 3, the site-specific methane generation rate constant must be determined using the procedures in Method 2E of 40 CFR 60 Appendix A. The site-specific methane generation determined is used in all subsequent calculations. 40 CFR 62.16710
- a. If the NMOC emission rate is less than 34 Mg/yr, the owner or operator must submit a periodic emission report in accordance with 40 CFR 40 CFR 62.16724(c). and retest the site specific NMOC concentration every five years using methods specified in 40 CFR 60 Appendix A.
- b. If the NMOC mass emission rate as calculated using the Tier 2 site-specific NMOC concentration and Tier 3 site-specific methane generation rate is equal to or greater than 34 Mg/yr, the owner or operator must do one of the following:
- i. Submit a gas collection system design plan within 1 year as specified in 40 CFR 62.16724(d) and install and operate a gas collection and control system within 30 months according to 40 CFR 62.16714(b) and (c);
- ii. Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in 40 CFR 62.16718(a)(6);
4. The owner or operator may use other methods to determine the NMOC concentration or a site-specific methane generation rate constant as an alternative to the Tier 2 and Tier 3 methods if the method has been approved by the Administrator. 40 CFR 62.16710
5. Under Tier 4 procedures, if Tier 2 NMOC emissions are greater than 34 Mg/yr but less than 50 Mg/yr, the owner or operator may demonstrate that surface methane emissions are below 500 parts per million and the owner or operator is not required to install and operate a gas collection and control system. 40 CFR 62.16710
6. The collection and control system shall be installed within 30 months after: 40 CFR 62.16710
- a. The first annual report in which the emission rate equals or exceeds 34 Mg/yr, unless Tier 2 or Tier 3 sampling demonstrates the emission rate is less than 34 Mg/yr as specified in 40 CFR 62.16724(d)(4).
- b. The most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 Mg/yr based on Tier 2, if the Tier 4 surface emissions monitoring shows a

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surface methane concentration of 500 parts per million methane or greater as specified in 40 CFR 62.16724(d)(4)(iii).

- c. The first annual report in which the NMOC emission rate equals or exceeds 50 Mg/yr unless Tier 2 or Tier 3 sampling demonstrates the emission rate is less than 50 Mg/yr as specified in 40 CFR 63.1959(b).

Section 3--Compliance and Performance Test Methods and Procedures

- 1. The source with a required collection system shall demonstrate compliance use the procedures specified in 40 CFR 62.16720. Once the owner or operator begins to comply with 63.1960, the owner or operator must continue to operate the collection and control device according to those provisions and cannot return to 40 CFR 62.16720. 40 CFR 62.16710
- 2. An initial performance test of the collection and control system shall be completed no later than 180 days after initial startup of the system in accordance with the test methods specified in 40 CFR 62.16718(d). 40 CFR 62.16710
- 3. The owner or operator shall conduct an initial performance test of the collection system and flare in accordance with the requirements of 40 CFR 60.8.
- 4. The visible emissions shall be determined using reference Method 22 of 40 CFR 60 Appendix A.

Section 4--Emission Monitoring

- 1. The owner or operator shall submit an emission report initially and annually thereafter in accordance with 40 CFR 62.16724(c)(1) and shall recalculate the NMOC rate using the formula and procedures provided in 62.16718(a) or (b) as applicable. 40 CFR 62.16710
- 2. If the owner or operator submits a 5-year NMOC emission report in accordance with 40 CFR 62.16724(c)(1), the annual MSW acceptance rate shall be documented to determine if it exceeds the rate used in the 5-year NMOC calculations. If the acceptance rate exceeds the rate used in the report, a revised NMOC report shall be submitted based on the known acceptance rates. 40 CFR 62.16710
- 3. Monitoring of a required collection and control system shall comply with the provisions of 40 CFR 62.16722. 40 CFR 62.16710

Section 5--Recordkeeping and Reporting Requirements

- 1. The owner or shall maintain on-site records of the design capacity report in which design capacity was first shown to 40 CFR 62.16710

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- meet or exceed 2.5 million m³ by volume and 2.5 million Mg by mass, current waste in place and year by year acceptance rate.
2. The owner or operator shall submit an NMOC emission rate report as provided for below. The administrator may request additional information as may be necessary to verify the reported NMOC emission rate.
 - a. The NMOC emission rate report must contain an annual or 5-year estimate on the NMOC emission rate calculated using the formula and procedures provided in 40 CFR 62.16718 as applicable.
 - i. The NMOC emission rate reports must be submitted annually except if the NMOC emission rate is less than 34 Mg/yr in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate must include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based must be provided to the Administrator. This estimate must be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate must be submitted to the Administrator. The revised estimate must cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.
 - b. The NMOC emission rate report must include all the data, calculations, sample reports, and measurements used to estimate the annual or 5-year emissions.
 - c. Each owner or operator subject to the requirements of 40 CFR Subpart OOO is exempted from the requirements to submit an NMOC emission rate report, after installing a collection and control system that complies with 40 CFR 62.16714(b) and (c), during such time as the collection and control system is in operation and in compliance 62.16716 and 62.16720.
 - d. A copy of the NMOC emission rate report shall be kept on site.
 3. Each owner or operator required to install and operate a gas collection and control system must submit a collection and control system design plan to the Administrator for approval. The collection and control system design plan must be prepared and approved by a professional engineer and meet the requirements in 40 CFR 62.16724(d)(1)-(7).

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| <p>4. An owner or operator intending to demonstrate site-specific surface methane emissions are below 500 parts per million(ppm) based on Tier 4 provisions must meet the following requirements:</p> <ul style="list-style-type: none">a. A notification of the date(s) upon which site-specific surface methane emissions are to be demonstrated to be below 500 ppm. The landfill must also include a description of the wind barrier to be used during the SEM in the notification. Notification must be postmarked no less than 30 days prior to such date.b. If there is a delay to the scheduled Tier 4 SEM date due to weather conditions, including not meeting the wind requirements in 40 CFR 62.16718(a)(6)(iii)(A), the owner or operator shall notify the Administrator by e-mail or telephone no later than 48 hours before any delay or cancellation in the original test date, and arrange an updated date with the Administrator by mutual agreement. | <p>40 CFR 62.16710</p> |
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Summary Page for Arrowhead Landfill

Permitted Operating
Schedule: 24 Hrs/day x 7 Days/week x 52 Weeks/yr = 8760 Hrs/yr

Emission limitations:

Emission Point #	Description	Pollutant	Emission limit	Regulation
001	Municipal Solid Waste Landfill	NMOC	N/A	ADEM Admin. Rule R. 335-3-19

Provisos for Arrowhead Landfill

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Regulations

Section 1--Applicability

1. This source shall be subject to ADEM Admin. Rule R. 335-3-19 Control of Municipal Solid Waste Landfill Gas Emissions upon EPA's final approval of that Chapter. ADEM Admin. Rule R. 335-3-19

Section 2--Emission Standards

1. The owner or operator must calculate a Tier 1 NMOC mass according to 335-3-19-.03(3)(a). ADEM ADMIN. RULE R. 335-3-19
 - a. If the NMOC emission rate is less than 34 Mg/yr, the owner or operator must submit an NMOC emission rate report and must recalculate the NMOC mass emission rate annually as required by 335-3-19-.03(1)(d).
 - b. If the NMOC emission rate is equal to or greater than 34 Mg/yr, the owner or operator must do one of the following:
 - i. Submit a gas collection system design plan within 1 year as specified in 335-3-19.03(6)(c) and install and operate a gas collection and control system within 30 months according to 335-3-19-.03(1)(a) and (b);
 - ii. Determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the Tier 2 procedures provided in 335-3-19-.03(3)(a)3.;
 - iii. Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using Tier 3 procedures provided in 335-3-19-.03(3)(a)4.
2. If the owner or operator determines a site-specific NMOC concentration using Tier 2 procedures, the following applies: ADEM Admin. Rule R. 335-3-19
 - a. If the NMOC emission rate is less than 34 Mg/yr, the owner or operator must submit a periodic emission report in accordance with 40 CFR 335-3-19-.03(6)(c)1. and retest the site specific NMOC concentration every five years using methods specified in 40 CFR 60 Appendix A.
 - b. If the NMOC emission rate is equal to or greater than 34 Mg/yr, the owner or operator must do one of the following:
 - i. Submit a gas collection system design plan within 1 year as specified in 40 CFR 62.16724(d) and install and operate a gas collection and control system within 30 months according to 335-3-19-.03(1)(a) and (b);
 - ii. Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using the Tier 3 procedures provided in paragraph 335-3-19-

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- .03(3)(a)4.;
- iii. Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in paragraph 335-3-19-.03(3)(a)6.
3. If the owner or operator determines a site-specific NMOC using Tier 3, the site-specific methane generation rate constant must be determined using the procedures in Method 2E of 40 CFR 60 Appendix A. The site-specific methane generation determined is used in all subsequent calculations.
- a. If the NMOC emission rate is less than 34 Mg/yr, the owner or operator must submit a periodic emission report in accordance with 40 CFR 335-3-19-.03(6)(c)1. and retest the site specific NMOC concentration every five years using methods specified in 40 CFR 60 Appendix A.
 - b. If the NMOC mass emission rate as calculated using the Tier 2 site-specific NMOC concentration and Tier 3 site-specific methane generation rate is equal to or greater than 34 Mg/yr, the owner or operator must do one of the following:
 - i. Submit a gas collection system design plan within 1 year as specified in 40 CFR 62.16724(d) and install and operate a gas collection and control system within 30 months according to 335-3-19-.03(1)(a) and (b);
 - ii. Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in 335-3-19-.03(3)(a)6.;
4. The owner or operator may use other methods to determine the NMOC concentration or a site-specific methane generation rate constant as an alternative to the Tier 2 and Tier 3 methods if the method has been approved by the Administrator.
5. Under Tier 4 procedures, if Tier 2 NMOC emissions are greater than 34 Mg/yr but less than 50 Mg/yr, the owner or operator may demonstrate that surface methane emissions are below 500 parts per million and the owner or operator is not required to install and operate a gas collection and control system.
6. The collection and control system shall be installed within 30 months after:
- a. The first annual report in which the emission rate equals or exceeds 34 Mg/yr, unless Tier 2 or Tier 3 sampling demonstrates the emission rate is less than 34 Mg/yr as specified in 335-3-19-.03(6)(c)4.
 - b. The most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 Mg/yr based on Tier 2, if the Tier 4 surface emissions monitoring shows a

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surface methane concentration of 500 parts per million methane or greater as specified in 335-3-19-.03(6)(c)4(iii).

- c. The first annual report in which the NMOC emission rate equals or exceeds 50 Mg/yr unless Tier 2 or Tier 3 sampling demonstrates the emission rate is less than 50 Mg/yr as specified in 40 CFR 63.1959(b).

Section 3--Compliance and Performance Test Methods and Procedures

- 1. The source with a required collection system shall demonstrate compliance using the procedures specified in 335-3-19-.03(4). Once the owner or operator begins to comply with 63.1960, the owner or operator must continue to operate the collection and control device according to those provisions and cannot return to 335-3-19-.03(4). ADEM Admin. Rule R. 335-3-19
- 2. An initial performance test of the collection and control system shall be completed no later than 180 days after initial startup of the system in accordance with the test methods specified in 335-3-19-.03(3)(d). ADEM Admin. Rule R. 335-3-19
- 3. The owner or operator shall conduct an initial performance test of the collection system and flare in accordance with the requirements of 40 CFR 60.8. ADEM Admin. Rule R. 335-3-19
- 4. The visible emissions shall be determined using reference Method 22 of 40 CFR 60 Appendix A. ADEM Admin. Rule R. 335-3-19

Section 4--Emission Monitoring

- 1. The owner or operator shall submit an emission report initially and annually thereafter in accordance with 40 CFR 335-3-19-.03(6)(c)1. and shall recalculate the NMOC rate using the formula and procedures provided in 335-3-19-.03(3)(a) or (b) as applicable. ADEM Admin. Rule R. 335-3-19
- 2. If the owner or operator submits a 5-year NMOC emission report in accordance with 335-3-19-.03(6)(c)1., the annual MSW acceptance rate shall be documented to determine if it exceeds the rate used in the 5-year NMOC calculations. If the acceptance rate exceeds the rate used in the report, a revised NMOC report shall be submitted based on the known acceptance rates. ADEM Admin. Rule R. 335-3-19
- 3. Monitoring of a required collection and control system shall comply with the provisions of 335-3-19-.03(5). ADEM Admin. Rule R. 335-3-19

Section 5--Recordkeeping and Reporting Requirements

- 1. The owner or shall maintain on-site records of the design capacity report in which design capacity was first shown to meet or exceed 2.5 million m³ by volume and 2.5 million Mg by ADEM Admin. Rule R. 335-3-19

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mass, current waste in place and year-by-year acceptance rate.

2. The owner or operator shall submit an NMOC emission rate report as provided for below. The administrator may request additional information as may be necessary to verify the reported NMOC emission rate.

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 - a. The NMOC emission rate report must contain an annual or 5-year estimate on the NMOC emission rate calculated using the formula and procedures provided in 335-3-19-.03(3)(a) as applicable.
 - i. The NMOC emission rate reports must be submitted annually except if the NMOC emission rate is less than 34 Mg/yr in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate must include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based must be provided to the Administrator. This estimate must be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate must be submitted to the Administrator. The revised estimate must cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.
 - b. The NMOC emission rate report must include all the data, calculations, sample reports, and measurements used to estimate the annual or 5-year emissions.
 - c. Each owner or operator subject to the requirements of ADEM Admin. Rule R. 335-3-19 is exempted from the requirements to submit an NMOC emission rate report, after installing a collection and control system that complies with 335-3-19-.03(1)(a), during such time as the collection and control system is in operation and in compliance with 335-3-19-.03(2) and 335-3-19-.03(4).
 - d. A copy of the NMOC emission rate report shall be kept on site.
3. Each owner or operator required to install and operate a gas collection and control system must submit a collection and control system design plan to the Administrator for approval. The collection and control system design plan must be prepared and approved by a professional engineer and meet the requirements in 335-3-19-.03(6)(d)1.-7.

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4. An owner or operator intending to demonstrate site-specific surface methane emissions are below 500 parts per million(ppm) based on Tier 4 provisions must meet the following requirements:
- a. A notification of the date(s) upon which site-specific surface methane emissions are to be demonstrated to be below 500 ppm. The landfill must also include a description of the wind barrier to be used during the SEM in the notification. Notification must be postmarked no less than 30 days prior to such date.
 - b. If there is a delay to the scheduled Tier 4 SEM date due to weather conditions, including not meeting the wind requirements in 335-3-19-.03(3)(a)6.(iii)(I), the owner or operator shall notify the Administrator by e-mail or telephone no later than 48 hours before any delay or cancellation in the original test date, and arrange an updated date with the Administrator by mutual agreement.
- ADEM Admin. Rule R.
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