JEFFERSON COUNTY DEPARTMENT OF HEALTH

AIR POLLUTION PROGRAM

TITLE V OPERATING PERMIT

Permittee:	**Jefferson County Landfill No. 1**
Location:	**101 Barber Boulevard** **Gardendale, Alabama 35071**
Permit No:	**4-07-1052-04**
Issuance Date:	**February 28, 2025**
Expiration Date:	**December 30, 2025**
Nature of Business:	**Municipal Solid Waste Landfill**
Additional Information:	18.952,387 Short Tons Design Capacity; Subject to ADEM Solid Waste Permit 37-43, 40 CFR 62, Subpart OOO and 40 CFR 63, Subpart AAAA

Emission Unit No.	Emissions Unit Description
001	Municipal Solid Waste Landfill Operations
002	Landfill Gas Collection System
003	Non-Enclosed Landfill Gas Flare
004	Landfill Gas Treatment System (Recovered Natural Gas Plant)

This Permit is issued pursuant to and is conditioned upon the compliance with the provisions of the Jefferson County Board of Health Air Pollution Control Rules and Regulations, the applicable requirements of the Clean Air Act implementation plan for Alabama approved or promulgated by the United States Environmental Protection Agency (EPA) through rulemaking under title I of the Clean Air Act (identified in 40 CFR 52, Subpart B) and other applicable requirements as defined in section 18.1.1(e) of the Jefferson County Board of Health Rules and Regulations, Section 18 of the Alabama Air Pollution Control Act of 1971, Act No. 769 (Regular Session, 1971), Section 22-28-16 of the Alabama Air Pollution Control Act as amended, Orders of the Jefferson County Board of Health, Orders of the Director of the Alabama Department of Environmental Management (ADEM), and any applicable local, state or federal Court Order. This Permit is subject to the accuracy of all information submitted relating to the permit application and to the conditions appended hereto. It is valid from the date of issuance until the expiration date and shall be posted or kept under file at the source location described above and shall be made readily available for inspection at any reasonable time to any and all persons who may request to see it. This Permit is not transferable.

Pursuant to the Clean Air Act, conditions of this permit are federally enforceable by EPA, The Jefferson County Board of Health, ADEM and citizens in general. However, provisions that are not required by the Clean Air Act or under any of its applicable requirements, are considered to be Jefferson County provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate Sections of this Operating Permit and are specifically identified as not being federally enforceable.

Jonathan Stanton, Director
Environmental Health Services

Approved: David Hicks, DO, MPH, FAAFP
Health Officer

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In addition to compliance with Alabama Air Pollution Control Act Number 769 (Regular Session, 1971) and Act Number 612 (Regular Session, 1982) and with all applicable Air Pollution Control Rules and Regulations, the conditions which are listed below are hereby contained in and made a part of this permit. For each citation to a Jefferson County Board of Health regulation provided in connection with a permit condition (other than for those permit conditions that are specifically identified in the permit as not being federally enforceable), Appendix A to this permit identifies the corresponding ADEM regulation that has been approved by EPA as part of the Clean Air Act implementation plan for Alabama (identified in 40 CFR 52, Subpart B). The corresponding ADEM regulations, together with the cited Jefferson County Board of Health regulations, serve as the origin and authority for the associated permit term or condition.

GENERAL PERMIT CONDITIONS

No.	General Permit Conditions	Regulations
	Definitions	
1.	For the purposes of this Major Source Operating Permit, the following terms will have the meanings ascribed to in this permit: "40 CFR 51" shall be an acronym for Part 51 of Title 40 of the Code of Federal Regulations. "40 CFR 60" shall be an acronym for Part 60 of Title 40 of the Code of Federal Regulations. "40 CFR 61" shall be an acronym for Part 61 of Title 40 of the Code of Federal Regulations. "40 CFR 63" shall be an acronym for Part 63 of Title 40 of the Code of Federal Regulations. "40 CFR 82" is an acronym for Part 82 of Title 40 of the Code of Federal Regulations. "40 CFR 98" shall be an acronym for Part 98 of Title 40 of the Code of Federal Regulations. "Act" shall mean the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. "Active collection system" means a gas collection system that uses gas mover equipment. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Active landfill" means a landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "ADEM" shall mean the Alabama Department of Environmental Management. "Administrator" means: (1) For municipal solid waste landfills covered by the federal plan, the Administrator of the EPA or his/her authorized representative (*e.g.,* delegated authority); (2) For municipal solid waste landfills covered by an approved state plan, the director of the state air pollution control agency or his/her authorized representative. *40 CFR 62, Subpart OOO* "Asbestos" means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite. *40 CFR 61, Subpart M* "Asbestos containing waste material" (ACWM) shall mean mill tailing or any waste that contains commercial asbestos and is generated by those sources specified in §§ 61.142 through 61.151, 61.154, and 61.155. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing. The affected sources that generate ACWM include asbestos mills, construction and maintenance of roadways containing asbestos tailings or ACWM, manufacturing operations using commercial asbestos, demolition and renovation activities, spray application of asbestos-containing materials, fabricating operations using commercial asbestos, insulating materials containing commercial asbestos, operations that convert ACWM into nonasbestos material, and	1.3 61.141 62.16730 63.2 63.1990 98.2

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	waste disposal sites and operations serving any of the aforementioned operations or facilities. *40 CFR 61, Subpart M* "Asbestos tailings" means any solid waste that contains asbestos and is a product of asbestos mining or milling operations. *40 CFR 61, Subpart M* "Bioreactor" means an MSW landfill or portion of a MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (with or without leachate recirculation) to reach a minimum average moisture content of at least 40% by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of waste. *40 CFR 63, Subpart AAAA* "Carbon dioxide equivalent or CO_2e" means the number of metric tons of CO_2 emissions with the same global warming potential as one metric ton of another greenhouse gas, and is calculated using Equation A-1 of 40 CFR 98. "Closed area" means a separately lined area of an MSW landfill in which solid waste is no longer being placed. If additional solid waste is placed in that area of the landfill, that landfill area is no longer closed. The area must be separately lined to ensure that the landfill gas does not migrate between open and closed areas. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Closed landfill" means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under §60.7(a)(4) or 63.9(b). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Commercial asbestos" means any material containing asbestos that is extracted from ore and has value because of its asbestos content. *40 CFR 61, Subpart M* "Continuous monitoring system" (CMS) is a comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation. *40 CFR 63, Subpart A* "Controlled landfill" means any landfill at which collection and control systems are required under this subpart as a result of the NMOC emission rate. The landfill is considered controlled at the time a collection and control system design plan is prepared in compliance with §62.16714(e)(2) or 63.1959(b)(2)(i). *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Corrective action analysis" means a description of all reasonable interim and long-term measures, if any, that are available, and an explanation of why the selected corrective action(s) is/are the best alternative(s), including, but not limited to, considerations of cost effectiveness, technical feasibility, safety, and secondary impacts. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Cover penetration" means a wellhead, a part of a landfill gas collection or operations system, and/or any other object that completely passes through the landfill cover. The landfill cover includes that portion which covers the waste, as well as the portion which borders the waste extended to the point where it is sealed with the landfill liner or the surrounding land mass. Examples of what is not a penetration for purposes of this subpart include but are not limited to: Survey stakes, fencing including litter fences, flags, signs, utility posts, and trees so long as these items do not pass through the landfill cover. *40 CFR 63, Subpart AAAA* "Department" shall mean the Jefferson County Department of Health. "Deviation" means any instance in which the permittee fails to meet any requirement or obligation established by regulation, including but not limited to any emission limitation, operating limit, work practice standard, or any permit term or condition, or fails to meet any term or condition adopted to implement an applicable requirement, including but not limited to emission limitations	

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	during periods of startup, shutdown or malfunction. A deviation is not always a violation. The determination of whether a deviation is a violation is at the discretion of the enforcement authority. "Design capacity" means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the State, local, or Tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation must include a site specific density, which must be recalculated annually. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Deviation" means any instance in which an affected source subject to this subpart or an owner or operator of such a source: (1) Fails to meet any requirement or obligation established by this subpart including but not limited to any emission limit, or operating limit, or work practice requirement; or (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit. *40 CFR 63, Subpart AAAA* "Disposal facility" means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Emission rate cutoff" means the threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the regulation is required. *40 CFR 62, Subpart OOO* "Emissions limitation" means any emission limit, opacity limit, operating limit, or visible emissions limit. *40 CFR 63, Subpart AAAA* "Emissions unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under Section 112(b) of the Act. "Enclosed combustor" means an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "EPA" means the U.S. Environmental Protection Agency. "Final control plan (Collection and control system design plan)" means a plan that describes the collection and control system that will capture the gas generated within an MSW landfill. The collection and control system design plan must be prepared by a professional engineer and must describe a collection and control system that meets the requirements of § 62.1614(b) and (c). The final control plan must contain engineering specifications and drawings of the collection and control system. The final control plan must include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping, or reporting provisions of §§ 62.16716 through 62.16726 proposed by the owner or operator. The final control plan must either conform with the specifications for active collection systems in § 62.16728 or include a demonstration that shows that based on the size of the landfill and the amount of waste expected to be accepted, the system is sized properly to collect the gas, control emissions of NMOC to the required level and meet the operational standards for a landfill. *40 CFR 62, Subpart OOO* "Flare" means an open combustor without enclosure or shroud. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Fugitive emissions" means any pollutant released to the atmosphere that is not discharged through a system of equipment that is specifically designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. Fugitive emissions	

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	include pollutants released to the atmosphere through windows, doors, vents, or other building openings. Fugitive emissions also include pollutants released to the atmosphere through other general building ventilation or exhaust systems not specifically designed to capture pollutants at the source. "Gas mover equipment" means the equipment (*i.e.,* fan, blower, compressor) used to transport landfill gas through the header system. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "GHG" shall be an acronym for greenhouse gases as listed in table A-1 of 40 CFR 98. "Gust" means the highest instantaneous wind speed that occurs over a 3-second running average. *40 CFR 62, Subpart OOO* "HAP" shall be an acronym for Hazardous Air Pollutant as listed in Appendix D of the Rules and Regulations. "Interior well" *m*eans any well or similar collection component located inside the perimeter of the landfill waste. A perimeter well located outside the landfilled waste is not an interior well. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "JCDH" is an acronym for the Jefferson County Department of Health. "Landfill" means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under 40 CFR §257.2. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Lateral expansion" means a horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Leachate recirculation" means the practice of taking the leachate collected from the landfill and reapplying it to the landfill by any of one of a variety of methods, including pre-wetting of the waste, direct discharge into the working face, spraying, infiltration ponds, vertical injection wells, horizontal gravity distribution systems, and pressure distribution systems. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Modification" means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of July 17, 2014. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion. *40 CFR 62, Subpart OOO* "Municipal solid waste landfill" or "MSW landfill" means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (40 CFR §257.2) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Municipal solid waste landfill emissions" or "MSW landfill emissions" means gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "NESHAP" shall be an acronym for "National Emission Standards for Hazardous Air Pollutants." "NMOC" means nonmethane organic compounds, as measured according to the provisions of §62.16718 or §63,1959. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA*	

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	"Nondegradable waste" *m*eans any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "NSPS" shall be an acronym for "New Source Performance Standards." "Permittee" means the holder of an operating permit issued by the Department. "Passive collection system" means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Responsible official" means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and the delegation of authority to such representatives is approved in advance by the Department. "Root cause analysis" means an assessment conducted through a process of investigation to determine the primary cause, and any other contributing causes, of positive pressure at a wellhead. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Rules and Regulations" shall mean the Jefferson County Board of Health Air Pollution Control Rules and Regulations. "Source" shall mean any building, structure, facility, installation, article, machine, equipment, device, or other contrivance which emits or may emit any air contaminant. Any activity which utilizes abrasives or chemicals for cleaning or any other purpose (such as cleaning the exterior of buildings) which emits air contaminants shall be considered a source. "Stationary Source" means any building, structure, facility or installation that emits or may emit any regulated pollutant as defined in Part 18.1 of the Rules and Regulations or any pollutant listed in Appendix D of the Rules and Regulations. "Sufficient density" means any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors necessary to maintain emission and migration control as determined by measures of performance set forth in this part. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Sufficient extraction rate" means a rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Treated landfill gas" means landfill gas processed in a treatment system as defined in this subpart. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Treatment system" means a system that filters, de-waters, and compresses landfill gas for sale or beneficial use. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Untreated landfill gas" means any landfill gas that is not treated landfill gas. *40 CFR 62, Subpart OOO & 40 CFR 63, Subpart AAAA* "Volatile Organic Compound" means any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. This includes any such organic compound other than those listed under Part 1.3 of the Rules and Regulations and/or under 40 CFR §51.100(s)(1).	

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	"Work practice requirement" means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act. *40 CFR 63, Subpart AAAA* In addition, the individual definitions as specified in each applicable rule, regulation, or standard shall be utilized where applicable.	
	General Conditions	
2.	**Basis for Permit** This Operating Permit is issued based on provisions contained in all existing Jefferson County Board of Health Air Pollution Control Rules and Regulations (hereinafter called Rules and Regulations in this permit). In the event amendments, revisions or additions are made to these Rules and Regulations, it shall be the responsibility of the permit holder (hereinafter called the permittee in this permit) to comply with such new Rules and Regulations. Additions and revisions to the conditions in this Operating Permit will be made by the Jefferson County Department of Health (hereinafter called the Department), if necessary, to assure that the Rules and Regulations are not violated.	AL Act 769 AL Act 612
3.	**Authority** Nothing in this Operating Permit or conditions appended thereto shall negate any authority granted to this Department or the Health Officer pursuant to Alabama Air Pollution Control Act No. 769 (Regular Session, 1971) and Act No. 612 (Regular Session, 1982) or any regulations promulgated thereunder.	AL Act 769 AL Act 612
4.	**Acceptance of Permit** The permittee is required to bring the operation of a source within the standards of Paragraph 18.2.8(a) of the Rules and Regulations. Commencing construction or operation of the source shall be deemed acceptance of all conditions specified. A Title V Operating Permit with revised conditions may be issued upon receipt of a new application if the permittee demonstrates that the source can operate within the standard of Paragraph 18.2.8(a) of the Rules and Regulations under the revised conditions. This Title V permit supersedes all permits previously issued by the Department to this facility.	18.2.4
5.	**Compliance With Existing and Future Regulations** A. The permittee shall comply with all conditions of the Rules and Regulations. B. The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance. C. The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit, and shall follow any more detailed schedule of compliance set forth in the applicable requirement. D. The permittee shall be subject to MACT standards from the date of publication by EPA and shall comply with the rule by the compliance date.	18.5.6 18.4.8(h) 18.7.3 18.7.6
6.	**Noncompliance** The permittee shall comply with all terms and conditions of the permit. Noncompliance with any term or condition of a permit will constitute a violation of the Act and the Rules and Regulations and may result in enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.	70.6(a)(6)(i) 18.5.6
7.	**Compliance Defense** The permittee shall not use as a defense in an enforcement action, that maintaining compliance with permit conditions would have required halting or reducing the permitted activity.	18.5.7
8.	**Credible Evidence** Any credible evidence or information relevant to whether a source may have been in compliance with applicable requirements can be used to establish whether or a not an owner or operator has violated or is in violation of any rule or standard in these Regulations and/or any applicable provisions of 40 CFR 60.	1.18 61.12(e)
9.	**Circumvention** 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 contaminants which would otherwise violate these rules and regulations.	1.15 61.19 63.4(b)

No.	General Permit Conditions	Regulations
10.	**Bypass of Control Equipment Prohibited** The permittee shall not bypass, without prior approval from this Department, any air pollution control device. The permittee shall not shut down any air pollution control device unless such shutdown is accompanied by the corresponding shutdown of the respective source which the device is intended to control.	18.2.4
11.	**Shutdown of Control Equipment** In the case of shutdown of air pollution control equipment for scheduled maintenance, the intent shall be reported to this Department at least 24 hours prior to the planned shutdown unless the scheduled shutdown is accompanied with the shutdown of the source being controlled, including the information listed in Section 1.12.1.	1.12.1
12.	**Maintenance of Controls** If a control device is installed at the facility, the following requirements apply: A. The permittee shall equip each fabric filter particulate matter control device with a pressure differential measuring device to measure the pressure drop across the filter media in the control device. The device shall be installed in a location which is easily accessible for inspection by Department personnel. B. All air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in accordance with the manufacturer's specifications or alternative procedures approved by the Department 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 emissions of air contaminants shall be maintained near the source and provided to the Department upon request. C. The permittee shall conduct routine inspections on all required control equipment. All inspection results and repair work performed on the pollution control device shall be recorded. These records shall be kept in a permanent form suitable for inspection.	18.2.4 18.5.3(a)(2) 63.10(b)(2)(iii)
13.	**Nothing In This Operating Permit Shall Alter Or Affect The Following** A. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; B. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; C. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act; or D. The ability of EPA to obtain information from a source pursuant to Section 114 of the Act.	18.10.3
14.	**Additional Information and Corrected Information** The permittee shall submit any additional information to the Department to supplement or correct an application promptly after becoming aware of the need for additional or corrected information. Also, the permittee shall submit additional information concerning any new requirements which have become applicable after a complete application has been filed but before a draft permit is released. Any change in the information already provided pursuant to 40 CFR 63 shall be provided in writing within 15 calendar days after the change.	18.4.7 63.9(j)
15.	**Display and Availability of Permit** The permittee shall keep this Operating Permit under file or on display at all times at the site where the source is located and shall make the permit available for inspection by any and all persons who may request to see it.	18.2.2
16.	**Payment of Fees** The permittee must have paid all fees required by the Rules and Regulations or the Operating Permit is not valid. Payment of operating permit fees required under Chapter 16 of the Rules and Regulations shall be made on or before the date specified under Section 16.5.1 of the Rules and Regulations of each year. Failure to make payment of fees within 30 days of the specified date shall cause the assessment of a late fee of 3% (of the original fee) per month or fraction thereof.	18.5.11 16.1 16.4 16.5
17.	**Transfer** 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 Subparagraph 18.13.1(a)(5) of the Rules and Regulations.	18.2.6

No.	General Permit Conditions	Regulations
18.	**New Air Pollution Sources and Changes to Existing Units** A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants. For any new source or modification of an existing source subject to 40 CFR 63, the permittee shall submit an application as required by 63.5. For a landfill, events triggering a new application include, but are not limited to, the approval by ADEM of an increase in design capacity.	1.5.15 63.5
19.	**Construction Not In Accordance With Applications** If the source permitted herein has not been constructed in accordance with the Operating Permit application and if the changes noted are of a substantial nature in that the amount of air contaminants emitted by the source may be increased or in that the effect is unknown, then the Operating Permit shall be revoked. No further application for an Operating Permit shall be accepted until the source has been reconstructed in accordance with the Operating Permit or until the permittee has proven to the Department that the change will not cause an increase in the emission of air contaminants.	18.2.8(e)
20.	**Expiration** A source's right to operate shall terminate upon the expiration of this Operating Permit unless a timely complete renewal application has been submitted at least 6 months, but not more than 18 months before the date of expiration or the Department has taken final action approving the source's application for renewal by the expiration date. The expiration date of this Operating Permit is printed on the first page of this permit.	18.4.3 18.5.2 18.12.2(b)
21.	**Revocation** This Operating Permit may be revoked for any of the following reasons: A. Failure to comply with any conditions of the permit; B. Failure to establish and maintain such records, make such reports, install, use and maintain such monitoring equipment or methods; and sample such emissions in accordance with such methods at such locations, intervals and procedures as may be prescribed in accordance with Section 1.9.2 of the Rules and Regulations; C. Failure to comply with any provisions of any Department administrative order issued concerning the permitted facility; D. Failure to allow entry and inspections by properly identified Department personnel; E. Failure to comply with the Rules and Regulations; or F. For any other cause, after a hearing which establishes, in the judgment of the Department, that continuance of the permit is not consistent with the purpose of the Act or Rules and Regulations.	18.2.9
22.	**Severability** In case of legal challenge to any portion of this Title V Operating Permit, the remainder of the permit conditions shall continue in force.	18.5.5
23.	**Reopening For Cause** Under any of the following circumstances, this Operating Permit will be reopened and revised prior to the expiration of the permit: A. Additional applicable requirements under the Clean Air Act become applicable to the permittee with a remaining permit term of 3 or more years. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirements. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire. 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. C. The Department, ADEM 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. D. The Administrator, ADEM or the Department determines that this permit must be revised or revoked to assure compliance with the applicable requirements.	18.13.5

No.	General Permit Conditions	Regulations
24.	**Changes or Termination for Cause – No Stay of Permit Conditions** 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 a planned change or anticipated noncompliance will not stay any permit condition.	18.5.8
25.	**Submission of Information** The permittee shall furnish 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 copies of records required to be kept by the permit to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by the permit. For information claimed to be confidential, the permittee must identify the information claimed to be confidential at the time of submission, and provide a redacted version of the submittal that is suitable for public review.	18.5.10 70.6(a)(6)(v)
26.	**Entry and Inspections** The permittee shall allow the Department or authorized representative, upon presentation of credentials and other documents that may be required by law, to conduct the following: A. Enter upon the permittee's premises where a source is located or emissions related activity is conducted or where records are kept pursuant to the permit conditions; B. Review and/or copy at reasonable times any records kept pursuant to the permit conditions; C. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices or operations required by the permit; and D. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements. Denial of access upon proper identification is grounds for permit revocation.	1.8 18.7.2 18.2.9(d)
27.	**Flexibility Changes** Certain changes (per Section 502 (b)(10) of the Clean Air Act) can be made to this Operating Permit without a revision if no modification as defined in the Rules and Regulations would occur and the changes do not exceed the emissions allowed under this permit provided that written notification is sent to the Department and EPA at least 7 days before the change is made. The written notification shall describe the proposed change, the date of the change, any change in emissions, and any term or condition of the permit which is no longer valid due to the change.	18.13.2
28.	**Minor Permit Modifications** Minor permit modification procedures may be used only for those permit modifications that: A. Do not violate any applicable requirement; B. Do not involve significant changes to existing monitoring, reporting, or record keeping requirements in the permit; C. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis; D. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include: 1. A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the Act; and 2. An alternative emissions limit approved pursuant to regulations promulgated under §112(i)(5) of the Act; E. Are not modifications under any provision of title I of the Act; and F. Are not required by Part 18.12 of this Chapter to be processed as a significant modification. An application requesting the use of minor permit modification procedures shall meet the requirements of Section 18.4.8 relative to the modification and shall include the information listed at 18.3.3(b). If the Department notifies the source that the modification does not qualify as a minor modification within 10 days after receiving the application, then the source shall apply for the	18.13.3(a)(1) 18.13.3

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	change as a significant modification. Ten days after the application has been submitted to the Department, the source may make the change for which they applied unless the change does not qualify as a minor modification. After the source makes the change and until the Department takes final action on the permit application, the source must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time period, the source need not comply with the existing permit terms and conditions it seeks to modify. However, if the source fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against it. A permit shield granted under Part 18.10 shall not extend to minor permit modifications. The Department may not issue a final permit modification until after EPA's 45-day review period or until EPA has notified the Department that EPA will not object to issuance of the permit modification, whichever is first.	
29.	**Significant Modifications** Modifications that are significant modifications under the PSD (Part 2.4) or nonattainment (Part 2.5) regulations, are modifications under the NSPS or NESHAPS regulations, or otherwise do not meet the requirements for minor permit modifications from Section 18.13.3 of the Rules and Regulations must be incorporated in the Operating Permit using the requirements for sources initially applying for an Operating Permit, including those for applications, public participation, review by affected States, review by ADEM, and review by EPA, as described in Parts 18.4 and 18.15 of the Rules and Regulations.	18.13.4
30.	**Off-Permit Changes** Any change which is not addressed or prohibited in the federally enforceable terms and conditions of the permit may be designated by the owner or operator as an off-permit change, and may be made without revision to the federally enforceable terms and conditions of the operating permit, provided that the change: A. Meets all applicable requirements; B. Does not violate any federally enforceable permit term or condition; C. Is not subject to any requirement or standard under title IV of the Clean Air Act; and D. Is not a modification under title I. The permittee must comply with all applicable state permitting and preconstruction review requirements. Any application pertaining to a change designated by the applicant as an off-permit change shall be submitted by the applicant to EPA in fulfillment of the obligation to provide written notice, provided, that no change meeting the criteria for an insignificant activity or trivial activity is subject to the procedures set forth in this condition.	18.14
31.	**Property Rights and Privileges** No property rights of any sort or any exclusive privilege are conveyed through the issuance of this Operating Permit.	18.5.9
32.	**Economic Incentives** No permit revision shall be required under any approved economic incentives, marketable permit emissions trading and other similar programs or processes for changes that are provided for in the Operating Permit.	18.5.12
33.	**Emission Reduction Plan** Upon notification by this Department, the permittee shall submit an Air Pollution Emission Reduction Plan in a format approved by this Department concerning air contaminant emissions reductions to be taken during declared air pollution episodes.	18.2.8(b)
34.	**Obnoxious Odors** This Operating Permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Department inspectors, measures to abate the odorous emissions shall be taken upon determination by this Department that these measures are technically and economically feasible.	6.2.3 18.2.4
35.	**Title IV Requirements (Acid Rain Program)** Where an applicable requirement of Chapter 18 of the Rules and Regulations is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act (the acid rain program), both provisions shall be incorporated into the permit and shall be enforceable by the	18.5.1(b) 18.5.4

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	Department. Emissions exceeding any allowances that the permittee lawfully holds under title IV of the Act or the regulations promulgated thereunder are prohibited. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. No limit shall be placed on the number of allowances held by the permittee however, allowances may not be used as a defense to noncompliance with any other applicable requirement. Any such allowance shall be accounted for according to the procedures established in the regulations promulgated pursuant to Title IV of the Act.	
36.	**Title VI Requirements (Refrigerants)** Any facility having appliances or refrigeration equipment, including air conditioning equipment, which use Class I or Class II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR 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 82, Subpart F. A. 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 such device except as provided in 40 CFR 82, Subpart F. B. The responsible official shall comply with all reporting and recordkeeping requirements of 40 CFR §82.166. Reports shall be submitted to the U.S. EPA and the Department as required.	40 CFR 82 18.1.1(e)(10) 18.1.1(w)(4)
37.	**Asbestos Demolition and Renovation** Demolition and renovation activities at this facility are subject to the National Emission Standard for Asbestos, 40 CFR 61, Subpart M. To determine the applicable requirements of the Standard, the permittee must thoroughly inspect the affected part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos-containing materials, prior to the commencement of the demolition or renovation operation. The permittee shall comply with all applicable sections of the Standard, including notification requirements, emission control and waste disposal procedures. The permittee shall also ensure that anyone performing asbestos-related work at the facility is trained and certified according to the Alabama Department of Environmental Management's regulations for Asbestos Contractor Certification.	61.145 61.150 14.2.12 14.2.12(a)(1)
38.	**Prevention of Accidental Releases** The permittee shall comply with the requirements of §112(r) of the Act and 40 CFR 68 to prevent accidental releases of any substance listed pursuant to §112(r) or any other extremely hazardous substance. If the landfill has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR §68.115, the permittee shall comply with the requirements of this part no later than the latest of the following dates: A. June 21, 1999; B. Three years after the date on which a regulated substance is first listed under §68.130; or C. The date on which a regulated substance is first present above a threshold quantity.	CAA 112r 40 CFR 68 68.215(a)(1)
39.	**Testing** A source emissions test may be required by this Department at any time. The Administrator may require a performance test for a source subject to NESHAP at any time authorized by section 114 of the Clean Air Act. The permittee shall provide each point of emission with sampling ports, ladders, stationary platforms, and other safety equipment to facilitate testing. The permittee shall notify the Department in writing at least 30 days prior to conducting any required emissions test on any source. This notice shall state the source to be tested, the proposed time and date(s) of the test, the purpose of the test, and the methods to be used. The methods for such testing shall be in accordance with procedures established by 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63 and any emissions unit specific permit requirements. Performance testing to demonstrate compliance with an NSPS or NESHAP shall include a test method performance audit as required by §60.8(g) or §63.7(c)(2)(iii)(A), respectively if audit samples for a required method are commercially available. The permittee shall submit the results of all emissions tests on paper and in electronic	1.9.1 1.10.3 18.2.5 18.2.8(c) 60.8(d) 60.8(e) 60.8(g) 63.7(a)(3) 63.7(b)-(d) 63.10(d)

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	form to this Department within a time period specified by this Department; however, not to exceed 30 days from the test completion date unless a longer period is specified in the applicable subpart.	
40.	**Fugitive Dust** A. The permittee shall take reasonable precautions to prevent dust from any operation, process, materials handling and storage, transportation activity (including dust from paved and unpaved roads), or construction activity (including but not limited to the use, repair, alteration, and demolition of buildings) at the facility from becoming airborne. B. The permittee shall not cause or allow the discharge of visible emissions which travel beyond the property line of the facility. C. When dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any rule or regulation, the Health Officer may order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air. Airborne fugitive dust emissions shall be prevented and addressed as needed and as appropriate to weather conditions using any or all of the following pre-approved control measures specific to the following sources of fugitive dust: A. Wet suppression and compaction shall be used to prevent fugitive dust emanating from active and completed waste cells; B. Unpaved plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne: 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 action of wind or vehicular traffic; 2. By reducing the speed of vehicular traffic to a point below that at which dust emissions are created; 3. By paving; 4. By the application of binders (chemical dust suppressants) to the road surface at any time the road surface is found to allow the creation of dust emissions; or 5. By any combination of the above methods which results in the prevention of dust becoming airborne from the ground or road surface. Wet suppression may be accomplished by the application of water with or without the addition of surfactants, wetting agents or other additives to increase the effectiveness of wet suppression. Manufacturer's documentation of the contents of any chemical, surfactant, wetting agent, or other additive used for dust suppression shall be maintained and readily made available upon request by the Department. Other dust control methods not listed above may be used subject to Department approval.	
	Alternative Operating Scenario	
41.	**Alternative Operating Scenario** Two distinct control device systems are approved under this permit, including: A. EU 003: Non-enclosed flare meeting the requirements of 40 CFR 60.18 and 63.11. B. EU 004: Treatment system meeting the requirements of 40 CFR 62.16714(c)(3) and 63.1959(b)(2)(iii)(C) that recovers methane from the landfill gas, including a thermal oxidizer as the primary control device for non-methane components of landfill gas and a non-enclosed flare for control of landfill gas during startup, shutdown, and other periods when methane recovery results in off-specification gases. Keep a contemporaneous log at the permitted facility of all changes from one operating scenario (control system) to the other, including the date and time of each change and the operating status of each control system. The following specific records of the distribution of the collected gases to EU 003 and/or EU 004 shall be maintained: A. Monthly inspections of equipment that distributes landfill gas to one or both EUs, including but not limited to the inspection of components that allow or prevent flow to each EU and identifying where flow is present and any corrective actions taken; and	18.5.13

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	B. Each time the collection system components that control landfill gas flow to the control device systems are adjusted to change the distribution of landfill gas between EU 003 and/or EU 004, including the date, time, and the resulting change in flow.	
	Recordkeeping and Reporting	
42.	**General Recordkeeping Requirements** The permittee shall keep records of facility-wide operations, activities and materials which have the potential to release pollutants into the atmosphere in sufficient detail to show compliance with permit conditions and to allow the annual calculation of emissions of regulated pollutants and HAP from each point and fugitive source and activity at the facility. **In addition to the records specific to and included in each emission unit section, the permittee shall maintain records of the following**: A. The quantity of waste disposed for each day the landfill accepts waste; B. The quantity of landfill gas collected and controlled; C. The hours of operation of the blower; D. The hours of operation of each control device, including the amount of landfill gas combusted or treated and the amount of natural gas combusted by pilot lights; E. The identify and quantity of fuels combusted by heavy equipment and/or stored on-site; F. The number of dump trucks admitted to the facility; G. The hours of operation for heavy equipment (compactors, excavators, graders, etc.); H. The quantity of cover soil crushed; I. The records required under the Alternative Operating Scenario (General Condition 41 above); J. All reports and notifications submitted to comply with this permit; K. Results of all required performance testing, monitoring and sampling; L. The occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment; M. All required maintenance performed on the air pollution control and monitoring equipment; N. Records of required monitoring must include (as a minimum): 1. The date, time and place identified by specific component or latitude/longitude coordinates of sampling or measurements; 2. The date(s) analyses were performed; 3. The company or entity that performed the analyses; 4. The analytical techniques or test methods used; 5. The results of such analyses; and 6. The operating conditions as existing at the time of sampling or measurement. and O. Available SDS and/or other manufacturer supplied contents information relating to the VOC and HAP contents of materials used at the facility; and P. All spills or other mishaps of VOC/HAP materials. The record shall include the date, time, and quantity (gallons or pounds) of VOC/HAP materials involved in the spill or mishap. The permittee shall document the amount of VOC/HAP materials recovered and the amount that evaporated to the atmosphere.	1.9.1 18.7.1 70.6(a)(3)(C) 63.10(b)(2)
43.	**Retention of Records** Keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered FIP and NESHAP, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Records of all required monitoring data, fuel consumption, analyses, reports, MSDS, and other support information shall be retained for a minimum of 5 years from the date when the record was generated. Records of the control device vendor specifications must be maintained until removal. Records must be readily accessible (on-site or retrievable within 4 hours) and suitable for inspection. Records may be kept in hard copy or electronically. Any records that are submitted electronically via the EPA's CDX may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.	18.5.3(b) 62.16726(a) 62.16726(b) 63.1983(a) 63.1983(h)(2) 63.10(b)(1)

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44.	**Submission of Reports, Notifications and Permit Applications** The permittee shall submit all reports, notifications and applications required by any permit condition and by any applicable NESHAP and/or NSPS to the Department and to the EPA. A. Documents submitted to the Department may be sent by US mail or by electronic mail, however a paper copy with a "wet ink" signature is required to be submitted to the Department within 1 week of any electronic submission. B. A renewal application for a Title V permit must be submitted at least 6 months before the date of permit expiration except as allowed by 18.12.2(b). C. Reports and applications shall be timely if received on or before the due date, except that reports submitted by US mail postmarked on or before the due date are timely submitted even if USPS delivery occurs after the due date. D. Documents submitted to the EPA may be (or may be required to be) submitted electronically in compliance with the Cross-Media Electronic Reporting Rule (CROMERR, 40 CFR 3). E. Mailing addresses for the agencies: Jefferson County Department of Health Air Pollution Control Program P.O. Box 2648 Birmingham, Alabama 35202-2648 and to EPA Region IV Atlanta Federal Center 61 Forsyth Street Atlanta, GA 30303 Submissions to EPA may be (or may be required to be) submitted using CEDRI. **Any application form, report or compliance certification required to be submitted pursuant to the Title V program regulations shall contain a certification by a responsible official that meets the requirements of Section 18.4.9 of the Rules and Regulations ("CTAC").** The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete. Each report shall identify the company name and address, the beginning and ending dates of the reporting period, and the date of report completion. The records required for each emissions unit shall be used in preparing these reports and notifications. The information to be included in each report is listed in General Conditions 45 – 53 below. The following reports and notifications are required to be submitted on the following schedule: A. **Annual Production and Emissions Report**, due February 10 of each year covering the previous calendar year. B. **Title V Renewal Application** no later than 6 months before the date of permit expiration. C. **Annual Title V Compliance Certification**, covering the period from May 16 to May 15 of the following year, shall be submitted by June 15 each calendar year. D. **Title V 6-Month Monitoring Report**, Semiannual reporting for the FIP and NESHAP shall be included with the report for submission to the Department in addition to electronic reporting to EPA as required by the FIP and NESHAP. E. **Semiannual reports for NESHAP and FIP,** covering the periods of January 1 – June 30 (due July 30) and July 1 – December 30 (due January 30), shall be submitted electronically to EPA. F. **Episodic prompt reporting:** (independent of inclusion in periodic Title V reports) 1. **Malfunctions** must be reported within 24 hours, and the department shall also be notified when the condition causing the failure or breakdown has been corrected; 2. **Deviations and violations** from the permit within 2 working days of the deviation or discovery of a violation. 3. **NESHAP Corrective Actions** that cannot be completed in 60 days after the initial exceedance must be reported within 75 days after the initial exceedance. 4. **24-hour high temperature report** by email within 24 hours of the measurement. 5. **Revised Design Plan** prepared according to 40 CFR 62.16724(d) and 40 CFR 63.1981(d) must be submitted at least 90 days before expanding operations to an area not covered by the previously approved design plan and prior to installing or expanding the gas collection system in a way that is not consistent with the design plan as previously submitted.	18.4.9 18.4.3 40 CFR 3 18.5.3(c) 1.12.2 18.7.1 18.7.4 18.7.5 18.11.2(b)(4) 18.7.6 61.154(j) 62.16724(e) 63.1981(e) 63.1981(j) 63.1981(k) 61.154(e)

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	6. **Asbestos Reports** shall be made to the authority administering the asbestos NESHAP program for each waste generator (and for the facility, if different) whenever asbestos waste received is not properly enclosed, covered or sealed and whenever a discrepancy between the quantity of waste designated on the waste shipment records and the quantity of waste received at the landfill cannot be resolved within 15 days of receipt of the waste. 7. This episodic reporting requirement is in addition to and does not replace periodic reporting requirements (i.e. these events must also be included in the 6-Month Monitoring Reports and Annual Title V Compliance Certifications). G. **Notifications** as follows: 1. Notify the EPA Administrator at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited and covered as required by 61.154(j); 2. Notify the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record) and for the disposal site (if different) immediately if a discrepancy between the quantity of asbestos-containing waste material designated on the waste shipment records and the quantity actually received is not resolved within 15 days as required by 61.154(e)(3). 3. Performance testing at least 30 days prior to scheduled testing; 4. Notification of any increase in design capacity within 30 days of ADEM approval, including a Form 103 Permit Application for Facility Identification; 5. Notify the Department in writing within 2 working days of becoming subject to a federal Maximum Achievable Control Technology (MACT) standard pursuant to Section 112 of the Act (local requirement). **H. Results of any required testing or visible emissions observations** within 60 days of completion. These are to be submitted electronically to EPA but on paper with a "wet-ink" signature on the accompanying CTAC to the Department. The initial performance test report for EU 003 must include the information listed in 40 CFR 62.16724(i) and 63.1981(i). I. **Annual Leachate Recirculation Report** if applicable, including for leachate applied for dust suppression. J. **Compliance schedule progress reports** if a compliance schedule is required.	
45.	**<u>Annual Production and Emissions Report</u>** The permittee shall submit **by February 10th of each year** to this Department an annual summary report for the previous calendar year in a format approved by this Department of the following production information for each emissions unit permitted herein: A. LandGEM report using the best available information concerning annual landfill waste additions, the results of any site-specific testing, and the default values recommended by AP-42 Section 2.4 for the purpose of calculating emissions for HAP and VOC emissions from the landfill; B. The volume of landfill gas collected, measured by the flow meter(s), and the volume of landfill gas directed to each control device in operation at the landfill; C. The volume of any LFG that is collected but is not directed to a control device, including the basis for the volume calculation or estimate; D. The results of landfill gas sampling, including determination of components and net heating value, and control device testing, if performed during the calendar year; E. The quantity of cover soil crushed; F. The total equipment hours of operation of compactors, excavators and graders; G. The quantity of all fuels (including diesel, gasoline, natural gas and propane) which are combusted at the landfill; H. The number of vehicle miles traveled within the landfill by road type (paved or unpaved); I. The annual throughput in gallons, the chemical or trade name, average storage temperature in degrees Fahrenheit, and average true vapor pressure in psia of the contents of each storage tank with a capacity greater than 1,000 gallons; J. The quantity of VOC and/or HAP material emitted to the atmosphere as a result of spills and other mishaps; and	1.5.15 1.9.2 18.7.1

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	K. The actual calendar year emissions (point and fugitive) of all regulated air pollutants as defined in Section 16.2.7 of the Rules and Regulations, including but not necessarily limited to TSP, PM_{10}, $PM_{2.5}$, NO_X, CO, VOC, and SO_X, and all HAP based upon the above calendar year records, and including the products of combustion of internal combustion engines. The submission shall include a certification by a responsible official of the truth, accuracy and completeness of the report. Concurrence with the calculations by the Department shall be the basis for annual emission fees in accordance with Chapter 16 of the Rules and Regulations.	
46.	**Annual Title V Compliance Certification** The Title V Annual Compliance Certification, covering the period from May 16 to May 15 of the following year, shall be submitted by June 15 each calendar year and shall certify compliance with terms and conditions contained in the permit, including emissions limitations, standards and work practices. The permittee shall provide a means for monitoring the compliance of its air pollution sources with the emissions limitation, standards and work practices listed or referenced within this permit. The compliance certification shall include the following: A. The identification of each term or condition of this permit that is being certified; B. The emission unit or units to which the term or condition applies; C. The compliance status; D. Whether compliance has been continuous or intermittent; E. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with the Rules and Regulations; F. Such additional requirements as may be specified pursuant to §§114(a)(2) and 504(b) of the Act; and G. Such other facts as the Department may require to determine the compliance status of the source, including but not limited to identifying each deviation that occurred.	18.7.5
47.	**Contents of Title V 6-Month Compliance and Monitoring Reports** A. Monitoring of Waste Acceptance Rate, as demonstrated by the submission of quarterly volume reports as submitted to ADEM. B. The dates and brief descriptions of each time a work practice for landfilling operations was not performed and any corrective actions taken as a result, or a statement that no such events occurred during the reporting period. C. Deviations from any permit term, condition or regulation, including but not limited to the deviation(s) reportable under the FIP and NESHAP as detailed below. D. Attach or incorporate the Semiannual Monitoring Report for the Gas Collection and Control System (GCCS) as detailed below.	18.5.3(c)(1)
48.	**Semiannual Monitoring Report for the Gas Collection and Control System** A. Date, time, duration and value of each measured exceedance of the following operating parameters and each other indicator of improper operation: 1. Positive pressure in the gas collection header 2. Wellhead temperature (identifying the threshold temperature for each instance and any associated fire concerns) and oxygen or nitrogen exceedances measured in landfill gas 3. Instances when positive pressure occurs at a wellhead in efforts to avoid a fire. 4. All periods when the gas stream was diverted from the control device or treatment system through a bypass line and any other indication of bypass flow (describe) 5. All periods when the collection system was not operating 6. All periods when no control device or treatment system was operating 7. All periods when the flow rate to the control device or treatment system was not measured and recorded at least every 15 minutes 8. All periods during which there were measurements of flow through a bypass line (if present) or other indications of bypass flow 9. Each instance in which the gas mover system was not shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere were not closed within 1 hour of the collection or control system not operating 10. All periods when the continuous presence of a flame and flow to an open flare that is intended to be in operation is not indicated by monitoring and measurement	62.16724(h) 63.1981(h) 63.1961(f) 63.1965 62.16726(c)(1)(i) 63.1983(c)(1)(i)

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	11. All periods when the operating temperature of the thermal oxidizer was more than 28 degrees Celsius (82 degrees Fahrenheit) below the average combustion temperature during the most recent performance test that demonstrated compliance 12. Each instance in which the treatment system was not operated and maintained in accordance with the site-specific treatment system monitoring plan 13. Each monitored exceedance of the 500 parts-per-million methane concentration, including each measured value and the corresponding location (latitude and longitude measured with an accuracy of at least 4 meters and reported in decimal degrees with at least 5 decimal places) and each reading for the month after an exceedance 14. If enhanced monitoring under Subpart AAAA (40 CFR 63.1961(a)(5) and (6)) is required, report the results of all monitoring activities as follows: a. For each monitoring point, report the date, time, and well identifier along with the value and units of measure for oxygen, temperature (wellhead and downwell), methane, and carbon monoxide. b. Include a summary trend analysis for each well subject to the enhanced monitoring requirements to chart the weekly readings over time for oxygen, wellhead temperature, methane, and weekly or monthly readings over time, as applicable for carbon monoxide. c. Include the date, time, staff person name, and description of findings for each visual observation for subsurface oxidation event. B. For any corrective action analysis for which corrective actions are required for instances of positive pressure or elevated temperature and that take more than 60 days to correct the exceedance, the root cause analysis conducted, including a description of the recommended corrective action(s), the date for corrective action(s) already completed following the positive pressure or elevated temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates C. The date of installation and the location of each well or collection system expansion added pursuant to the ongoing program of system expansion as waste is continued to be added to the landfill and for wells or components added or upgraded as a corrective action for positive pressure, elevated temperature (including components added as a result of other enhanced monitoring parameters) or surface methane exceedances. D. Identify Specific Deviations: For the thermal oxidizer (part of the treatment system), all 3-hour periods of operation during which the average temperature was more than 28 degrees Celsius (82 degrees Fahrenheit) below the average combustion temperature during the most recent performance test at which compliance was demonstrated. For continuous flow rate and temperature monitors, any hour which has fewer than three measured values (recorded at 15-minute intervals).	
49.	**Prompt Reporting of Malfunctions** In the event that any emission source, air pollution control equipment, or related facility fails or breaks down in such a manner as to cause the emission of air contaminants in violation of these rules and regulations, the person responsible for such source, equipment, or facility shall notify the Department within 24 hours of such failure or breakdown and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Department shall be notified when the condition causing the failure or breakdown has been corrected and such source, equipment, or facility is again in operation.	1.12.2
50.	**Corrective Action and Corresponding Timeline Notifications** For corrective action that is required for monitoring exceedances of temperature and pressure operating parameters and is not completed within 60 days after the initial exceedance, submit a notification to the Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance. If the corrective action is expected to take longer than 120 days after the initial exceedance to complete, submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value equaling or exceeding 55 degrees Celsius (131 degrees Fahrenheit) for Subpart OOO or 62.8 degrees Celsius (145 degrees Fahrenheit) for	62.16724(k) 63.1981(j)

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	NESHAP unless a higher operating temperature value has been approved by the Administrator for the well. The Administrator must approve the plan for corrective action and the corresponding timeline.	
51.	**24-hour High Temperature Report** If a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7 degrees Celsius (170 degrees Fahrenheit) and the carbon monoxide concentration measured is greater than or equal to 1,000 ppmv, report the date, time, well identifier, temperature and carbon monoxide reading via email to the Administrator within 24 hours of the measurement unless a higher operating temperature value has been approved by the Administrator for the well.	63.1981(k) 62.16724(q)
52.	**Submission of Performance Test Reports** Within 60 days after the date of completing each performance test, submit the results of the performance tests, including any associated fuel analyses, electronically to EPA according to General Condition 54 below. A paper copy of the test report must be submitted to the Department. The initial performance test report shall include the additional information listed at 40 CFR 62.16724(i) and 40 CFR 63.1981(i).	62.16718(d)(1) 62.16718(e)(1) 63.1959(e)(1) 63.10(d)(2)
53.	**Compliance Schedule Progress Reports (if required)** If any air pollution source owned or operated by the permittee is not in compliance with the emissions limitations, standards and work practices listed or referenced within this permit, the permittee shall submit progress reports including a statement of truth, accuracy and completeness of these reports shall be certified by a responsible official for that air pollution source. The first progress report shall be submitted within 3 months after the Operating Permit issuance date or within 3 months of the permittee or Department determining that the air pollution source is not in compliance. Subsequent reports shall be submitted every 6 months following the initial report. The progress reports shall contain the following: A. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and/or dates when such activities, milestones or compliance were achieved; and B. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.	18.4.8(h) 18.7.3 18.7.4
54.	**Requirements for Electronic Reporting to EPA** The permittee must submit performance test reports and semi-annual compliance reports electronically to EPA by the deadline specified as follows: A. Within 60 days after the date of completing each performance test (as defined in 40 CFR 60.8), the owner or operator must submit the results of each performance test according to the following procedures: 1. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www3.epa.gov/ttn/chief/ert/ert_info.html*) at the time of the test, submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The CEDRI can be accessed through the EPA's CDX (*https://cdx.epa.gov/*). Performance test data must be submitted in a file format generated through the use of the EPA'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. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.	18.4.9 63.9(k) 62.16724(j) 63.1981(l)

No.	General Permit Conditions	Regulations
	2. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 60.4 for reports required by 40 CFR 62, Subpart OOO. For reports required by 40 CFR 63, Subpart AAAA, the results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI. B. Semiannual reports shall be submitted to the EPA via the CEDRI (CEDRI can be accessed through the EPA's CDX). 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://www3.epa.gov/ttn/chief/cedri/index.html*). 1. Once the spreadsheet template upload/forms for the reports have been available in CEDRI for 90 days, the owner or operator must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. The NMOC emission rate reports, semi-annual reports, and bioreactor 40-percent moisture reports should be electronically reported as a spreadsheet template upload/form to CEDRI. If the reporting forms specific to this subpart are not available in CEDRI at the time that the reports are due, the owner or operator must submit the reports to the Administrator at the appropriate address listed in § 63.13 of subpart A. 2. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the owner or operator must submit the report to the Administrator at the appropriate address listed in 40 CFR 60.4. Once the form has been available in CEDRI for 90 calendar days, the owner or operator 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. C. The EPA will make all the information submitted through CEDRI available to the public without further notice to you. D. In the event that reporting via CDX cannot be completed during the required time frame, the following provisions may be applicable: 40 CFR 63.1981(m) Claims of EPA system outage; 40 CFR 63.1981(n) Claims of force majeure; and 40 CFR 63.9(k) Electronic submission of notifications or reports. E. Submissions to the Department must be printed paper with a “wet-ink” signature and CTAC.	
55.	**<u>Mandatory Greenhouse Gas Reporting (for informational purposes only)</u>** The permittee shall be aware that the facility may be required to report emissions of greenhouse gases directly to EPA under the Mandatory Greenhouse Gas Reporting rules. The reporting threshold is annual greenhouse gas emissions equal to 25,000 metric tons CO_2e, calculated using the methods presented in 40 CFR 98. Mandatory greenhouse gas reporting is made directly to EPA and is not an enforceable requirement of this Title V Operating Permit. It is the permittee’s responsibility to determine whether reporting is required each calendar year.	40 CFR 98

MUNICIPAL SOLID WASTE LANDFILL OPERATIONS

Emissions Unit No.	Emissions Unit Description
001	Municipal Solid Waste Landfill Operations

No.	Emissions Unit 001 MSW Landfill Operations	Regulations
1.	**Emission Unit Description and Applicability** The emission unit "Municipal Solid Waste Landfill Operations" includes the entire disposal facility where household and other permitted waste is placed in or on land for permanent disposal and all of the equipment and operations of the MSW landfill, including but not limited to waste disposal cells, roads, vehicle traffic, rock crushing operations and solid waste transfer and disposal. **Requirements for the collection and control systems are presented as separate "emission units" for administrative convenience but are also part of this unit.**	
	A. The landfill is subject to Part 6.2 of the Rules and Regulations. The landfill initially became subject to Title V permitting (Chapter 18) in 2011 under then-applicable regulations upon approval and construction of an increase in landfill capacity.	6.2 60.750 60.752(b)
	B. The landfill became subject to 40 CFR 62, Subpart OOO ("FIP") when it was published on June 21, 2021. The landfill became subject to the gas collection and control system (GCCS) requirements of Subpart OOO when the design capacity report required to be submitted by September 20, 2021 per 62.16724(a) indicated calculated NMOC emissions in excess of the emissions rate cutoff. The collection and control system design plan required by 62.16724(d) was submitted to JCDH on September 16, 2022. The requirements of §62.16712, Compliance Schedule and Increments of Progress were met prior to issuance of this permit. If EPA approves a state plan for Alabama implementing 40 CFR 60, subpart Cf, the landfill will become subject to that plan instead.	62.16711 62.16714 62.16711(b) 62.16724(c)
	C. The landfill became subject to 40 CFR 63, Subpart AAAA ("NESHAP") when the estimated uncontrolled emissions of NMOC calculated (in early 2022) according to the regulatory defaults at §63.1959 exceeded the Subpart AAAA emission rate cutoff for the 2021 full calendar year. The collection and control system design plan required by 62.16724(d) also satisfied the requirements of 63.1981(d). The requirements of §63.1959(b)(2)(ii) to design, install and start up a collection and control system within 30 months were met prior to issuance of this permit simultaneously with the earlier timeframe resulting from Subpart OOO.	63.1935(a)(3) 63.1959(b)(2)
	D. The permittee is subject to the general conditions of 40 CFR 63, Subpart A as set forth in Table 1 to Subpart AAAA.	16.1981 16.1983
	E. Acceptance and landfilling of asbestos-containing waste materials is subject to 40 CFR 61, Subpart M.	61.140
	F. Information on regulations not expected to apply during this permit term:	18.2.4
	1. Stone crushing operations with a capacity exceeding 150 tons/hr for a portable operation or 25 tons/hr for a fixed operation are subject to 40 CFR 60, Subpart OOO, unless all materials processed are saturated with water. The permittee must submit an application before adding an affected source.	60.670
	2. The permittee must submit an application to modify this permit prior to the installation of a bioreactor or other controlled liquids addition, which would be subject to requirements from 40 CFR 63, Subpart AAAA that are not included in this permit at this time.	63.1947 63.1982(c)
	3. The permittee must submit an application to modify this permit prior to initiating leachate recirculation, which would be subject to requirements from 40 CFR 62, Subpart OOO that are not included in this permit at this time.	62.16724(l)

<table>
<tr><th>No.</th><th>Emissions Unit 001 MSW Landfill Operations</th><th>Regulations</th></tr>
<tr><td></td><td>4. After the installation and startup of a collection and control system in compliance with the applicable regulations, the permittee must calculate the NMOC emission rate for purposes of determining when the system can be capped, removed, or decommissioned as required by 62.16718(b) and 63.1959(c). Criteria for removal of the collection and control system is located at 62.16714(f) and 63.1957(b). Requirements for a closure and removal reports are located at 62.16724(f) and (g) and 63.1981(f) and (g).</td><td>62.16718(b)
63.1959(c)</td></tr>
<tr><td>2.</td><td><u>Compliance with Subpart OOO</u>
The provisions of Subpart OOO apply at all times, including periods of startup, shutdown, or malfunction. Operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with § 62.16714(c). During periods of startup, shutdown, and malfunction, you must comply with the work practice specified in § 62.16716(e) in lieu of the compliance provisions in § 62.16720. 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.</td><td>62.16720(e)
62.16716(e)</td></tr>
<tr><td>3.</td><td><u>General Duty and Compliance with Subpart AAAA</u>
At all times, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if the requirements of 40 CFR 63, Subpart AAAA have been achieved.
A. Operate the system in accordance to this general duty such that all collected gases are vented to a control system designed and operated in compliance with this subpart. 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. Efforts to repair the collection or control system must be initiated and completed in a manner such that downtime is kept to a minimum, and the collection and control system must be returned to operation.
B. The monitoring requirements apply at all times the affected source 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. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. Complete monitoring system repairs in response to monitoring system malfunctions and return the monitoring system to operation as expeditiously as practicable.</td><td>63.1955(c)
63.1958(e)
63.1960(e)(2)
63.1961(h)
63.1964(b)</td></tr>
<tr><td>4.</td><td><u>Compliance with Overlapping Applicable Regulations</u>
The permittee must comply with the provisions of 40 CFR 62, Subpart OOO listed in the table below, or the provisions of 40 CFR 63, Subpart AAAA listed in the table below, or both as alternative means of compliance. Once the owner or operator begins to comply with the listed provisions of Subpart AAAA, the owner or operator must continue to operate the collection and control device according to those provisions and cannot return to the provisions of Subpart OOO. The permittee must identify which rule(s) it is complying with in each periodic compliance report.
<table>
<tr><td>Provision</td><td>Subpart OOO</td><td>Subpart AAAA</td></tr>
<tr><td>Operational Standards</td><td>§ 62.16716</td><td>§ 63.1958</td></tr>
<tr><td>Compliance Provisions</td><td>§ 62.16720</td><td>§ 63.1960</td></tr>
<tr><td>Monitoring Provisions</td><td>§ 62.16722</td><td>§ 63.1961</td></tr>
</table></td><td>62.16716
62.16720
62.16722</td></tr>
</table>

No.	Emissions Unit 001 MSW Landfill Operations	Regulations
	Keep records of the date upon which compliance with the provisions in §§ 63.1958, 63.1960, and 63.1961 in place of §§ 62.16716, 62.16729, and 62.16722 commenced. Thereafter, the permittee must keep records according to § 63.1983(e)(1) through (5) in lieu of 62.16726(e)(1) through (5).	62.16726(e)(6)
5.	**Fugitive Dust** The permittee shall take reasonable precautions to prevent dust from any operation, process, handling, storage, or transportation activity, including from dust from paved and unpaved roads and grounds in the source permitted herein from becoming airborne. The permittee shall not cause or allow the discharge of visible emissions which travel beyond the property line of the landfill. Specific dust control measures for this emission unit include, but are not limited to: A. Wet suppression shall be used to prevent fugitive dust emanating from plant roads, active and completed waste cells, rock crushing operations and grounds. B. Tarps may be used to prevent fugitive dust emanating from active deposition areas as allowed by Solid Waste Disposal Facility Permit 37-43. C. Unpaved plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne: 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; 2. By reducing the speed of vehicular traffic to a point below that at which dust emissions are created; 3. By paving; 4. By the application of binders (chemical dust suppressants) to the road surface at any time the road surface at any time the road surface is found to allow the creation of dust emissions; or 5. By any combination of the above methods which results in the prevention of dust becoming airborne from the road surface. Other dust control methods not listed above may be used if approved by the Department.	6.2.1 6.2.2 18.2.4
6.	**Obnoxious Odors** This Operating Permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Department inspectors, measures to abate the odorous emissions shall be taken upon determination by this Department that these measures are technically and economically feasible.	6.2.3 18.2.4
7.	**Landfilling of Asbestos-Containing Waste Material** The permittee shall ensure that there are no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited or shall meet the requirements of §61.154(c). The permittee shall meet the fencing and signage requirements of §61.154(b).	61.154 61.143
8.	**Collection System Requirements, Generally** Landfill gas shall be collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for 5 years or more if active; or 2 years or more if closed or at final grade. After the initial installation, 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 consistent with this timing requirement. Gas collection and monitoring equipment shall at all times be operated in a manner consistent with safety and good air pollution control practices for minimizing emissions. **Complete conditions for the collection system are presented as Emission Unit 002.**	62.16714(b)(2) 63.1958(a) 62.16716(a) 63.1955(b)(2) 63.1955(c) 62.16720(b) 63.1960(b) 63.1964(b)
9.	**Control System Requirements, Generally** The air pollution control equipment and monitoring equipment shall at all times be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. Two distinct control device systems are approved under this permit. **Complete conditions for each of the control system(s) are presented at the sections for these listed emissions units:**	62.16714(c) 63.1955(c) 18.5.13

No.	Emissions Unit 001 MSW Landfill Operations	Regulations
	A. **EU 003**: Non-enclosed flare meeting the requirements of 40 CFR 60.18 and 63.11. B. **EU 004**: Treatment system meeting the requirements of 40 CFR 62.16714(c)(3)&(4) and 63.1959(b)(2)(iii)(C)&(D) that recovers methane from the landfill gas, including a thermal oxidizer as the primary control device for non-methane components of landfill gas and a non-enclosed flare for control of landfill gas during startup, shutdown, and other periods when methane recovery results in off-specification gases. **These 2 systems are alternative operating scenarios for the purposes of permitting.** Beginning no later than when EU 004 is connected to the LFG collection system, keep a contemporaneous log at the permitted facility of each time the collection system components that control landfill gas flow to the control device systems are adjusted to change the distribution of landfill gas between EU 003 and/or EU 004, including the date, time, and the resulting change in flow. Records for the equipment which directs landfill gas to each system or prevents landfill gas from entering each system shall be maintained. Perform and record monthly inspections of equipment that distributes landfill gas to one or both EUs, including but not limited to the inspection of components that allow or prevent flow to each EU, identification where flow is present, and performance of prompt corrective actions if defects or unintended flow are found.	
	Required Records	
10.	**<u>Recordkeeping</u>** The permittee shall maintain the following records for landfill operations: A. The amount of waste accepted each calendar day; B. The amount of cover soil crushed, transported and placed each calendar day; C. The days on which the water truck was operated to reduce fugitive dust; D. The days when the water truck was inoperable and no precipitation occurred; E. The design capacity, the current amount of solid waste in-place and the year-by-year solid waste acceptance rate; F. Records documenting the nature, date of deposition, amount and location of non-degradable or non-productive waste excluded from collection as allowed by 62.16728(a)(3) and 63.1962(a)(3); G. For all asbestos-containing waste material received: 1. Maintain waste shipment records, using a form similar to that shown in 61.154, Figure 4 and include the following information: a. The date of the receipt; b. The name, address, and telephone number of the waste generator.; c. The name, address, and telephone number of the waste generator; d. The name, address, and telephone number of the transporter(s); e. The quantity of the asbestos-containing waste material in cubic meters (cubic yards); and f. The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report. 2. As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator. 3. Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in	1.9.1 18.5.3 62.16726(d)(2) 63.1982(d)(2) 63.1983(a) 61.154(e) 61.154(f) 61.154(h)

No.	Emissions Unit 001 MSW Landfill Operations	Regulations
	writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report. 4. Retain a copy of all records and reports required by this paragraph for at least 2 years. H. Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area. Upon closure of the facility, these records must be submitted to the Administrator. I. Records of the flow of landfill gas to each installed control device, consistent with the requirements for the alternative operating scenario as set forth in Condition 9 above and General Condition 41. J. Each owner or operator that chooses to comply with the provisions in §§ 63.1958, 63.1960, and 63.1961, as allowed in §§ 62.16716, 62.16720, and 62.16722, must keep records of the date upon which the owner or operator started complying with the provisions in §§ 63.1958, 63.1960, and 63.1961. Thereafter, the permittee must keep records according to § 63.1983(e)(1) through (5) in lieu of 62.16726(e)(1) through (5). K. Keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered the requirement to install and operate a collection and control system, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. **Records specific to the collection and control devices are required in the respective Emission Unit sections.**	

LANDFILL GAS COLLECTION SYSTEM

Emissions Unit No.	Emissions Unit Description
002	Landfill Gas Collection System

No.	Emissions Unit 002 Landfill Gas Collection System	Regulations
1.	**Operation of Collection System – Work Practice for SSM** At all times, operate the collection system such that all collected gases are vented to the control system of Emission Unit 003 or the control system of Emission Unit 004. 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.	63.1958(f) 62.16720(e) 63.1960(e)(2) 62.16716(e) 63.1958(e) 63.1955(c) 63.1964(b)
2.	**Design Specifications for Active Collection Systems** The collection system must collect 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. Areas of the landfill that are or become non-productive may be excluded from the collection system if the requirements of 62.16728(a)(3) and 63.1962(a)(3) are met. The permittee must design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards. The collection devices within the interior must be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The design plan shall meet the requirements of 62.16724(d) and 63.1962. Construct the gas collection devices using the equipment and procedures of 62.16728(b) and 63.1962(b). Install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead as required by 62.16722(a) and 63.1961(a) to facilitate monitoring of operating parameters. The system must be designed to meet the following requirements for: A. **Maximum Expected Gas Flow Rate:** Calculated per 40 CFR 62.16720(a)(1) & 40 CFR 63.1960(a)(1) and sized per 40 CFR 62.16728(c) & 40 CFR 63.1962(c) B. **Sufficient Density of Gas Collectors:** According to 40 CFR 62.16720(a)(2), 40 CFR 62.16728(a), 40 CFR 63.1960(a)(2) & 40 CFR 63.1962(a)(2) C. **Sufficient Gas Extraction Rate:** Indicated as follows: 1. Maintaining negative pressure at each wellhead except as allowed by 40 CFR 62.16716(b) & 40 CFR 63.1958(b) 2. Preventing excess air infiltration, as evidenced by landfill gas temperature and nitrogen or oxygen content D. **Minimize Off-Site Migration of Subsurface Gas:** Indicated by maintaining surface methane concentration less than 500 parts per million above background at the surface of the landfill, per 40 CFR 63.1958(d) Monitored instances of failure to meet operational and performance standards may require the installation of additional wells. Such additional wells must be added to the design plan and approved by the Administrator as specified in § 62.16724(d) & 63.1981(d).	62.16714(b)(2) 63.1959(b)(2)(ii) 62.16720(a) 63.1960(a) 62.16728 63.1962
3.	**On-Going Collection System Expansion** After initial system installation, each additional well must be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of 5 years or more if active; or 2 years or more if closed or at final grade. Place each well or design component as specified in the approved design plan. All additional equipment installed shall meet the requirements below and shall be reported in the	62.16716(a) 62.16720(b) 62.16724(e) 63.1960(b) 63.1981(e)

No.	Emissions Unit 002 Landfill Gas Collection System	Regulations
	semiannual compliance reports. The permittee shall maintain records of when waste is first placed in each section of the landfill in which the collection system has not yet been installed in a form suitable to demonstrate, upon inspection, that collection system expansion is occurring in the required timeframe. Submit a revised design plan to the Administrator for approval at least 90 days before expanding operations to an area not covered by the previously approved design plan and prior to installing or expanding the gas collection system in a way that is not consistent with the previously approved design plan.	
4.	**Active Collection System Operating Standards** At all times, operate the system such that all collected gases are vented to a control system designed and operated in compliance with the following requirements: A. 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 5 years or more if active, or 2 years or more if closed or at final grade. B. Operate the collection system with negative pressure at each wellhead except under the following conditions: 1. A fire or increased well temperature. The owner or operator must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the semi-annual reports; 2. Use of a geomembrane or synthetic cover. The owner or operator must develop acceptable pressure limits in the design plan; 3. A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes must be approved by the Administrator. C. Operate each interior wellhead in the collection system with a landfill gas temperature less than the temperature(s) specified below, except that a higher operating value demonstration must be submitted to the Administrator for approval and must include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibits 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). 1. 55 degrees Celsius (131 degrees Fahrenheit) for Subpart OOO. 2. 62.8 degrees Celsius (145 degrees Fahrenheit) for Subpart AAAA. D. Operate the collection system so that the methane concentration is less than 500 parts per million (ppm) above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator must conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in § 62.16720(d) and § 63.1960(d) at all areas of the landfill where waste has been placed and a gas collection system is required. The owner or operator must conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover and all cover penetrations that are within an area of the landfill where waste has been placed and a gas collection system is required. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan must be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing. Determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.	62.16716(f) 63.1958(f) 63.1964(b) 62.16716(a) 63.1958(a) 62.16716(b) 63.1958(b) 62.16716(c) 63.1958(c) 62.16716(d) 63.1958(d)

No.	Emissions Unit 002 Landfill Gas Collection System	Regulations
	E. If monitoring demonstrates that the operational requirements to maintain, at each wellhead, negative pressure and LFG temperature below the applicable limits, and/or to maintain surface methane below 500 ppm are not met, corrective action must be taken as specified in § 62.16720(a)(3) or § 62.16720(c)(4) or as specified in § 63.1960(a)(3) and or 63.1960(c)(4). If corrective actions are taken as specified in § 62.16720 or as specified in § 63.1960, the monitored exceedance is not a violation of the operational requirements in this section.	62.16716(g) 63.1958(g)
	F. Operate the system such that all collected gases are vented to a control system designed and operated in compliance with this permit. In the event the collection or control system is not operating (including periods of startup, shutdown and malfunction): 1. The gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within 1 hour of the collection or control system not operating; and 2. Efforts to repair the collection or control system must be initiated and completed in a manner such that downtime is kept to a minimum, and the collection and control system must be returned to operation.	62.16716(e) 62.16720(e) 63.1958(e) 63.1960(e)(2)
5.	**Monitoring Requirements – General & Work Practice for SSM** The monitoring requirements apply at all times the affected source 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. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. Complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. The operational standards for temperature, nitrogen or oxygen, and surface methane concentration apply at all times.	63.1961(h)
6.	**Monthly Monitoring of Cover Integrity and Repairs** The owner or operator must implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis for compliance with the surface methane operational standard.	62.16720(c)(5) 63.1960(c)(5)
7.	**Monthly Inspection of Equipment Directing Landfill Gas to Control System(s)** Conduct monthly inspections of equipment that distributes landfill gas to EU 003 and/or EU 004, including but not limited to the inspection of components that allow or prevent flow to each EU and identifying where flow is present and any corrective actions taken. Inspection of the components placed into service shall also be made when the distribution of the collected landfill gas to the control systems is changed.	18.5.13
8.	**Monthly Wellhead Guage Pressure Monitoring & Corrective Actions Timeframes** For the purpose of demonstrating whether the gas collection system flow rate is sufficient, the owner or operator must measure gauge pressure in the gas collection header at each wellhead applied to each individual well monthly. If a positive pressure exists, action must be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under § 62.16716(b) and § 63.1958(b). Any attempted corrective measure must not cause exceedances of other operational or performance standards. A. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement of positive pressure, the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but not later than 60 days after positive pressure was first measured. The owner or operator must keep records according to § 62.16726(e)(3) and § 63.1983(e)(3). B. If corrective actions cannot be fully implemented within 60 days following the positive pressure or elevated temperature measurement for which the root cause	62.16720(a)(3) 62.16722(a)(1) 63.1960(a)(3) 63.1961(a)(1)

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	analysis was required, the owner or operator 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 owner or operator must submit the items listed in § 62.16724(h)(7) and § 63.1981(h)(7) as part of the next semi-annual report. The owner or operator must keep records according to § 62.16726(e)(4) and § 63.1983(e)(4). C. If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 62.16724(h)(7) and (k) and § 63.1981(j). Keep records according to § 62.16726(e)(5) and § 63.1983(e)(5).	
9.	**Monthly Temperature Monitoring & Corrective Actions Timeframes** For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator must monitor each well monthly for temperature as provided in § 62.16720(a)(4) and 63.1960(a)(4)(i). The temperature measuring device must be calibrated annually using the procedure in 40 CFR part 60, Appendix A, EPA Method 2, section 10.3. If a well exceeds the operating parameter for temperature, 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. A. If a landfill gas temperature less than the applicable operating parameter cannot be achieved within 15 calendar days of the first measurement of landfill gas temperature greater than the operating parameter, the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after the excessive landfill gas temperature was first measured. The owner or operator must keep records according to § 62.16726(e)(3) and § 63.1983(e)(3). B. If corrective actions cannot be fully implemented within 60 days following the measurement of landfill gas temperature measurement for which the root cause analysis was required, the owner or operator 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 exceedance. The owner or operator must submit the items listed in § 62.16724(h)(7) and § 63.1981(h)(7) as part of the next semi-annual report. The owner or operator must keep records according to § 62.16726(e)(4) and § 63.1983(e)(4). C. If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 62.16724(h)(7) and § 62.16724(k) and § 63.1981(h)(7) and (j). The owner or operator must keep records according to § 62.16726(e)(5) and § 63.1983(e)(5). D. If a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7 degrees Celsius (170 degrees Fahrenheit) and the carbon monoxide concentration measured, according to the procedures in § 63.1961(a)(5)(vi) is greater than or equal to 1,000 ppmv the corrective action(s) for the wellhead temperature standard (62.8 degrees Celsius or 145 degrees Fahrenheit) must be completed within 15 days.	62.16720(a)(4) 62.16722(a)(3) 63.1960(a)(4)(i) 63.1961(a)(4)
10.	**Enhanced Monitoring (Weekly for Temperature) for Subpart AAAA** Initiate enhanced monitoring at each well with a measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) beginning 7 calendar days after the first measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) and continue to conduct enhanced monitoring	63.1961(a)(5)

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	on a weekly basis. If four consecutive weekly carbon monoxide readings are under 100 ppmv, then enhanced monitoring may be decreased to monthly. However, if carbon monoxide readings exceed 100 ppmv again, the landfill must return to weekly monitoring. The following procedures must be used: A. Visual observations for subsurface oxidation events (smoke, smoldering ash, damage to well) within the radius of influence of the well. B. Monitor oxygen concentration as provided in 63.1961(a)(2); C. Monitor temperature of the landfill gas at the wellhead as provided in 63.1961(a)(4). D. Monitor temperature of the landfill gas every 10 vertical feet of the well as provided in 63.1961(a)(6). E. Monitor the methane concentration with a methane meter using EPA Method 3C or EPA Method 18 of 40 CFR 60, Appendix A, or using a portable gas composition analyzer to monitor the methane levels provided that the analyzer is calibrated and the analyzer meets all quality assurance and quality control requirements for EPA Method 3C or EPA Method 18. F. Monitor and determine carbon monoxide concentrations, as follows: 1. Collect the sample from the wellhead sampling port in a passivated canister or multi-layer foil gas sampling bag (such as the Cali-5-Bond Bag) and analyze that sample using EPA Method 10 of 40 CFR 60, Appendix A, or an equivalent method with a detection limit of at least 100 ppmv of carbon monoxide in high concentrations of methane; or 2. Collect and analyze the sample from the wellhead using EPA Method 10 of 40 CFR 60, Appendix A to measure carbon monoxide concentrations. 3. When sampling directly from the wellhead, you must sample for 5 minutes plus twice the response time of the analyzer. These values must be recorded. The five 1-minute averages are then averaged to give you the carbon monoxide reading at the wellhead. 4. When collecting samples in a passivated canister or multi-layer foil sampling bag, you must sample for the period of time needed to assure that enough sample is collected to provide five (5) consecutive, 1-minute samples during the analysis of the canister or bag contents, but no less than 5 minutes plus twice the response time of the analyzer. The five (5) consecutive, 1-minute averages are then averaged together to give you a carbon monoxide value from the wellhead. The enhanced monitoring can be stopped once a higher operating value is approved, at which time the monitoring provisions issued with the higher operating value should be followed, or once the measurement of landfill gas temperature at the wellhead is less than or equal to 62.8 degrees Celsius (145 degrees Fahrenheit).	
11.	**Annual Vertical Temperature Monitoring for Certain Wells** For each wellhead with a measurement of landfill gas temperature greater than or equal to 73.9 degrees Celsius (165 degrees Fahrenheit), annually monitor temperature of the landfill gas every 10 vertical feet of the well. This temperature can be monitored either with a removable thermometer, or using temporary or permanent thermocouples installed in the well.	63.1961(a)(6)
12.	**Monthly Nitrogen or Oxygen Concentration Monitoring** Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as follows: A. The nitrogen level must be determined using EPA Method 3C of 40 CFR 60, Appendix A B. The oxygen level must be determined by an oxygen meter using EPA Method 3A or EPA Method 3C of 40 CFR 60, Appendix A, or ASTM D6522-11. Determine the oxygen level by an oxygen meter using EPA Method 3A, 3C, or ASTM D6522-11 (if sample location is prior to combustion) except that	62.16722(a)(2) 63.1961(a)(2)

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	1. The span must be set between 10- and 12-percent oxygen; 2. A data recorder is not required; 3. Only two calibration gases are required, a zero and span; 4. A calibration error check is not required; 5. The allowable sample bias, zero drift, and calibration drift are ±10 percent. C. A portable gas composition analyzer may be used to monitor the oxygen levels provided: 1. The analyzer is calibrated; and 2. The analyzer meets all quality assurance and quality control requirements for EPA Method 3A or ASTM D6522-11.	
13.	**Monthly Surface Methane Monitoring & Corrective Actions Timeframes** The following procedures must be used for compliance with the surface methane operational standard as provided in § 62.16716(d) and § 63.1958(d): A. After installation and startup of the gas collection system, the owner or operator must monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at no more than 30-meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the following specifications: 1. The portable analyzer must meet the instrument specifications provided in section 6 of EPA Method 21 of 40 CFR 60, Appendix A, except that "methane" replaces all references to "VOC." 2. The calibration gas must be methane, diluted to a nominal concentration of 500 parts-per-million in air. 3. To meet the performance evaluation requirements in section 8.1 of EPA Method 21 of 40 CFR 60, Appendix A, the instrument evaluation procedures of section 8.1 of EPA Method 21 must be used. 4. The calibration procedures provided in sections 8 and 10 of EPA Method 21 of 40 CFR 60, Appendix A must be followed immediately before commencing a surface monitoring survey. B. The background concentration must be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells. C. Surface emission monitoring must be performed in accordance with section 8.3.1 of EPA Method 21 40 CFR 60, Appendix A, except that the probe inlet must be placed within 5 to 10 centimeters of the ground. Monitoring must be performed during typical meteorological conditions. D. Any reading of 500 parts per million or more above background at any location must be recorded as a monitored exceedance and the actions specified below must be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of § 62.16716(d) and § 63.1958(d). 1. The location of each monitored exceedance must be marked, and the location and concentration recorded. For location, you 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. 2. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance must be made and the location must be re-monitored within 10 calendar days of detecting the exceedance. 3. If the re-monitoring of the location shows a second exceedance, additional corrective action must be taken, and the location must be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in Item 5 below must be	62.16720(c) 63.1960(c) 62.16722(f) 63.1961(f) 62.16720(d) 63.1960(d)

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	taken, and no further monitoring of that location is required until the action specified in Item 5 below has been taken. 4. Any location that initially showed an exceedance but has a methane concentration less than 500 parts-per-million methane above background at the 10-day re-monitoring specified in Item 2 or 3 above must be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts-per-million above background, 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 Item 3 above or Item 5 below must be taken. 5. For any location where monitored methane concentration equals or exceeds 500 parts-per-million above background three times within a quarterly period, a new well or other collection device must be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval. In the semiannual report, report the location of each exceedance of the 500-ppm methane concentration and the concentration recorded at each location for which an exceedance was recorded in the previous month. Determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters and the coordinates must be in decimal degrees with at least five decimal places.	
14.	**Continuous Monitoring of Flow to Control Devices** Calibrate, maintain, and operate according to the manufacturer's specifications a device that records flow to each control device and to any bypass (if installed), as follows: A. Install, calibrate, and maintain a gas flow rate measuring device at the common header pipe that records the flow to the control device at least every 15 minutes; B. Where more than one control device or a treatment system is present, the gas flow to each control device shall be measured; C. If present, 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. These monitoring requirements apply at all times the designated facility 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. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. Complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.	62.16722(b)(2) 62.16722(g) 62.16722(h) 63.1959(c)(1) 63.1961(b)(2) 63.1961(c)(2) 63.1961(g)
	Required Records	
15.	**Recordkeeping** Maintain the following records: A. 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 on each collector that matches the labeling on the plot map. B. Keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors. C. Keep a contemporaneous log at the permitted facility of all changes from one operating scenario (control system EU 003 or EU 004) to the other, including the date and time of each change and the operating status of each control system.	62.16726(d) 63.1983(d) 62.16726(d)(1) 63.1983(d)(1) 18.5.3

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	D. Keep records of inspections and maintenance performed on the equipment that directs landfill gas to EU 003 and EU 004.	18.5.3
	E. Keep up-to-date, readily accessible records for the life of the collection system of: 1. The maximum expected gas generation flow rate determined using the procedures specified in § 62.16720(a)(1) and § 63.1960(a)(1). 2. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in § 62.16728(a)(1) and § 63.1962(a).	62.16726(b)(1) 63.1983(b)(1)
	F. Keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in § 62.16728(a)(3)(i) and § 63.1962(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in § 62.16728(a)(3)(ii) and § 63.1962(a)(3)(ii).	62.16726(d)(2) 63.1983(d)(2)
	G. Keep for at least 5 years up-to-date, readily accessible continuous records of all collection system monitoring data.	62.16726(c)&(h) 63.1983(c)&(g)
	H. Records of the landfill gas temperature on a monthly basis as monitored.	63.1983(h)(1)
	I. Records of enhanced monitoring data at each well with a measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) as gathered in § 63.1961(a)(5) and (6).	63.1983(h)(2)
	J. Continuous records of the indication of flow to the control system(s) and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines (if present).	62.16726(c)(2) 63.1983(c)(2)
	K. Keep records of periods when the collection system or control device is not operating indicative of compliance with 62.16716(e) and 63.1958(e) for minimizing the venting of landfill gas during periods when the collection and control system is not functioning properly.	62.16726(c)(5) 63.1983(c)(5)
	L. All collection system exceedances of the operational standards in § 62.16716 and § 63.1958, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.	62.16726(e)(1) 63.1983(e)(1)
	M. Keep records of each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above 5 percent, and each wellhead temperature monitoring value of: 1. 55 degrees Celsius (131 degrees Fahrenheit) or above for Subpart OOO; and 2. 62.8 degrees Celsius (145 degrees Fahrenheit) or above for Subpart AAAA.	62.16726(e)(2) 63.1983(e)(2)
	N. For any root cause analysis for which corrective actions are required in § 62.16720(a)(3) or § 62.16720(a)(4) and § 63.1960(a)(3)(i)(A) or (a)(4)(i)(A), keep a record of the root cause analysis conducted, including a description of the recommended corrective action(s) taken, and the date(s) the corrective action(s) were completed.	62.16726(e)(3) 63.1983(e)(3)
	O. For any root cause analysis for which corrective actions are required in § 62.16720(a)(3)(ii) or § 62.16720(a)(4)(ii) and § 63.1960(a)(3)(i)(B) or (a)(4)(i)(B), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion date.	62.16726(e)(4) 63.1983(e)(4)
	P. For any root cause analysis for which corrective actions are required in § 62.16720(a)(3)(iii) or § 62.16720(a)(4)(iii) and in § 63.1960(a)(3)(i)(C) or (a)(4)(i)(C), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates, and a copy of any comments or final approval on the corrective action analysis or schedule from the regulatory agency.	62.16726(e)(5) 63.1983(e)(5) 63.1983(h)

NON-ENCLOSED LANDFILL GAS FLARE

Emissions Unit No.	Emissions Unit Description
003	Non-Enclosed Landfill Gas Flare

No.	Emissions Unit 003 Non-Enclosed Landfill Gas Flares	Regulations
1.	**Control System Requirements: Non-Enclosed Flare** This emission unit consists of the Non-Enclosed Landfill Gas Flare that began operation in 2024 and its required monitoring equipment, as well as all piping and valves that connect it to the collection system and any equipment installed to isolate this flare from the collection system (EU 002) and the treatment system (EU 004). At all times: A. Control the gas collected from within the landfill through the use of a non-enclosed flare designed and operated in accordance with the parameters established in 40 CFR 60.18 & 63.11(b). The flare shall be operated at all times when emissions may be vented to it. 1. The net heat value of the of the landfill gas being combusted, calculated according to 60.18(f)(3) and 63.11(b)(6)(ii), shall be 7.45 MJ/scm (200 Btu/scf) or greater. 2. The exit velocity shall be less than 18.3 m/sec (60 ft/sec) as determined by 60.18(f)(4) and 63.11(b)(7)(i). B. The flare shall be designed for and operated with no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Compliance is determined using EPA Method 22 of 40 CFR 60, Appendix A for a required observation period of 2 hours. C. The flare shall be operated with a flame present at all times, and monitored according to Condition 3, Item A below.	62.16714(c)(1) 63.1959(b)(2)(iii)(A) 60.18(b)-(f) 63.11(b) 63.1955(c)
2.	**Initial Compliance Demonstration** To demonstrate that the non-enclosed flare meets the specification and requirements of 40 CFR 60.18 & 63.11(b), determine the net heating value of the combusted landfill gas, the flare gas exit velocity and visible emissions as follows: A. Collect a minimum of three 30-minute samples and measure the concentration of methane in the landfill gas using EPA Method 3C of 40 CFR 60, Appendix A. The measurement of other organic components, hydrogen, and carbon monoxide is not required. B. EPA Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 60.18(f)(4) and 63.11(b)(7). C. EPA Method 22 shall be used to determine compliance with the requirement for no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. D. Within 60 days after the date of completing each performance test, submit the results of the performance tests, including any associated fuel analyses, to the Department (a paper copy is required) and to the EPA (via CDX). The performance test must be conducted under representative performance conditions and not during periods of malfunction.	62.16718(d) 63.1959(b)(2)(iii)(A) 63.1959(e) 63.1959(f)
3.	**Monitoring and Inspections** A. Install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment: 1. 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. Keep continuous records of the flare pilot flame or flare flame	62.16722(c) 62.16726(b)(4) 62.16722(h) 63.1961(c) 63.1961(h) 63.1983(b)(4) 63.1983(c)

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	monitoring and records of all periods of operations during which the pilot flame or the flare flame is absent. 2. A gas flow rate measuring device that records the flow to the control device at least every 15 minutes. B. Inspect equipment that directs landfill gas flow to the non-enclosed flare (and treatment system, if present) each month. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. Make a record of the conditions found and any actions performed to correct leaks, damage or defects. The inspection record must include, as a minimum: 1. The position of each valve directing or preventing flow to the flare. 2. For the heat sensing device and gas flow rate measuring device: confirm operation, identify the need for corrective actions, identify if manufacturer recommended calibration and/or maintenance are due, and cause these activities to be performed when required. 3. Observe the flare for visible emissions once a month using EPA Method 22 for a period of 10 minutes. Identify and correct any visible emissions. C. The monitoring requirements apply at all times the designated facility 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. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. Complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.	63.8(c)(3) 18.5.3(a)
	Required Records	
4.	**<u>Recordkeeping</u>** A. 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 Condition 2 above. B. Keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under § 62.16722(c) and § 63.1961(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent. C. Keep up-to-date, readily accessible continuous records of the indication of flow to this control system EU 003 and the indication of bypass flow or flow to EU 004 (when installed), and records of monthly inspections of equipment used to direct LFG to each control system, as applicable. D. Keep records of periods when the collection system, control device or monitoring equipment is not operating indicative of compliance with 62.16716(e) and 63.1958(e) for minimizing the venting of landfill gas during periods when the collection and control system is not functioning properly, including the date, time, and duration of each startup and/or shutdown period. E. Keep records of each failure to meet an applicable standard, including the date, time and duration of each failure and the cause of such events (including unknown cause, if applicable), record and retain a list of the affected sources or equipment, and actions taken to minimize emissions in accordance with the general duty of 63.1955(c) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.	62.16726(c)(4) 62.16726(b)(4) 62.16726(c)(2) 63.1983(c)(4) 63.1983(b)(4) 63.1983(c)(2) 63.1965 62.16726(c) 62.16726(h) 63.1983(c) 63.1983(g) 63.1965

No.	Emissions Unit 003 Non-Enclosed Landfill Gas Flares	Regulations
	F. Records of the control device vendor specifications must be maintained until removal. G. Keep up-to-date, readily accessible records for the life of the control system equipment of the data measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring must be maintained for a minimum of 5 years. H. Keep for at least 5 years up-to-date, readily accessible continuous records of all collection and control system monitoring data for parameters measured per 62.16722 or monitored per § 63.1961as 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.	

LANDFILL GAS TREATMENT SYSTEM (RNG PLANT)

Emissions Unit No.	Emissions Unit Description
004	Landfill Gas Treatment System (Recovered Natural Gas Plant)

No.	Emissions Unit 004 Landfill Gas Treatment System (RNG Plant)	Regulations
1.	**Treatment System (Recovered Methane Gas Plant)** The LFG treatment system includes all equipment that processes the collected gas for subsequent sale or beneficial use and its required monitoring equipment, as well as all piping and valves that connect it to the collection system and any equipment installed to isolate this flare from the collection system (EU 002) and the alternative control device (EU 003). Two control devices are included: (1) a thermal oxidizer to control emissions from the waste gas after methane is recovered, and (2) a non-enclosed flare for the combustion of landfill gas or waste gas whenever the process equipment or thermal oxidizer is not operating properly. All emissions from any atmospheric vent from the gas treatment system are subject to the requirements for collection and control of landfill gas. Venting of treated landfill gas to the ambient air is not allowed from any point within the treatment system, including but not limited to any atmospheric vents. Emissions from the gas treatment system are required to be controlled by the thermal oxidizer or the non-enclosed flare at all times.	62.16714(c)(3) 62.16714(c)(4) 63.1959(b)(2)(iii)(C) 63.1959(b)(2)(iii)(D) 63.1955(c)
	Site-Specific Treatment Monitoring Plan	
2.	**Site-Specific Treatment Monitoring Plan** The site-specific treatment monitoring plan shall be maintained as a record and include: 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. 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. C. Documentation of the monitoring methods and ranges, along with justification for their use. D. Identify who is responsible (by job title) for data collection. E. Processes and methods used to collect the necessary data. F. Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems, including spare parts inventory.	62.16726(b)(5)(ii) 63.1983(b)(5)(ii) 63.8(d)(2)
3.	**Compliance with Site-Specific Treatment System Monitoring Plan** Maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan. Each CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. Verification of monitoring device operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. These monitoring requirements apply at all times the affected source 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. A monitoring system	62.16722(g) 16.16722(h) 62.16724(d)(7) 63.1961(g) 63.1961(h) 63.8(c)(1)

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	malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. Complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.	
	Control System Operating Requirements: Thermal Oxidizer	
4.	**Thermal Oxidizer Requirements** The thermal oxidizer must be designed and operated to reduce NMOC by 98 weight-percent, or reduce the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3-percent oxygen. The reduction efficiency or ppmv must be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in 63.1959(d). The control device 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 §§ 63.1961(b) through (e).	63.1959(b)(2)(iii)(C) 63.1959(b)(2)(iii)(B) 63.1959(b)(2)(iii)(D)
5.	**Initial Compliance Demonstration for Thermal Oxidizer** For the performance test required in § 63.1959(b)(2)(iii)(B) and § 62.16714(c)(2), EPA Method 25 or 25C (EPA Method 25C may be used at the inlet only) of 40 CFR 60, Appendix A must be used to determine compliance with the 98 weight-percent efficiency or the 20- ppmv outlet concentration level. EPA Method 3, 3A, or 3C of 40 CFR 60, Appendix A must be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), EPA Method 25A should be used in place of EPA Method 25. EPA Method 18 may be used in conjunction with EPA Method 25A on a limited basis (compound specific, *e.g.,* methane) or EPA Method 3C may be used to determine methane. The methane as carbon should be subtracted from the EPA Method 25A total hydrocarbon value as carbon to give NMOC concentration as carbon. Divide the NMOC concentration as carbon by 6 to convert from the C_{NMOC} as carbon to C_{NMOC} as hexane. The following equation must be used to calculate efficiency: $$Control\ Efficiency = (NMOC_{in} - NMOC_{out})/(NMOC_{in})$$ Where: $NMOC_{in}$ = Mass of NMOC entering control device. $NMOC_{out}$ = Mass of NMOC exiting control device. The performance test must be conducted under representative performance conditions and not during periods of malfunction. The permittee must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation and make the information available to the Department upon request. Each performance test shall consist of three separate runs using the applicable test method. The arithmetic mean of the results of the three runs will determine compliance.	63.1959(d) 63.1959(f) 62.16718(e) 63.7(e)(3)
	Control System Operating Requirements: Non-Enclosed Flare	
6.	**Control System Requirements: Non-Enclosed Flare** A. Control the gas collected from within the landfill through the use of a non-enclosed flare designed and operated in accordance with the parameters established in 40 CFR 60.18 & 63.11(b). The flare shall be operated at all times when emissions may be vented to it. 1. The net heat value of the of the landfill gas being combusted, calculated according to 60.18(f)(3) and 63.11(b)(6)(ii), shall be: a. 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or b. MJ/scm (200 Btu/scf) or greater if the flare is nonassisted.	62.16714(c)(1) 63.1959(b)(2)(iii)(A) 60.18 63.11(b)(3) 63.1959(b)(2)(iii)(D)

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	2. The exit velocity shall be: a. Less than 18.3 m/sec (60 ft/sec) as determined by 60.18(f)(4) and 63.11(b)(7)(i) if the flare is steam-assisted or nonassisted; or b. Less than V_{max} as determined by 60.18(f)(6) and 63.11(b)(8). The exit velocity must not exceed 122 m/sec (400 ft/sec) for a steam-assisted or nonassisted flare even if the calculated V_{max} is higher. B. The flare shall be designed for and operated with no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Compliance is determined using EPA Method 22 of 40 CFR 60, Appendix A for a required observation period of 2 hours. C. The flare shall be operated with a flame present at all times, and monitored according to Condition 8, Item B and Condition 10 below.	
7.	**Initial Compliance Demonstration for Non-Enclosed Flare** To demonstrate that the non-enclosed flare meets the specification and requirements of 40 CFR 60.18 & 63.11(b), determine the net heating value of the combusted landfill gas and the flare gas exit velocity as follows: A. Collect a minimum of three 30-minute samples and measure the concentration of methane in the landfill gas using EPA Method 3C of 40 CFR 60, Appendix A. The measurement of other organic components, hydrogen, and carbon monoxide is not required. B. EPA Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 60.18(f)(4) and 63.11(b)(7). The performance test must be conducted under representative performance conditions and not during periods of malfunction. The permittee must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation and make the information available to the Department upon request. Within 60 days after the date of completing each performance test, submit the results of the performance tests, including any associated fuel analyses, to the Department (a paper copy is required) and to the EPA (electronically).	62.16718(d) 63.1959(e) 63.1959(f)
	Monitoring and Inspections	
8.	**Flow to Treatment System Control Devices (Thermal Oxidizer and Flare)** 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 equipped), as follows: A. Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the thermal oxidizer at least every 15 minutes; B. Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the open flare at least every 15 minutes; and C. If present, 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. These monitoring requirements apply at all times the designated facility 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. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. Complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.	62.16722(b)(2) 62.16722(g) 62.16722(h) 63.1961(b)(2) 63.1961(c)(2) 63.1961(g)

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9.	**Operational Status of Thermal Oxidizer** Calibrate, maintain, and operate according to the manufacturer's specifications, 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. A CMS quality control program per 63.8(d)(2) and a site-specific performance evaluation test plan per 63.8(e)(3) are required. Verification of monitoring device operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. The average combustion temperature must be measured at least every 15 minutes and averaged over the same time period of the performance test. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour. Data collected during monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments is not to be included in compliance averages. Complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. A monitoring deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. All 3-hour periods of operation during which the average temperature was more than 28 degrees Celsius (82 degrees Fahrenheit) below the average combustion temperature during the most recent performance test at which compliance was determined are reportable exceedances.	63.1961(b)(1) 62.16722(b) 63.1983(b)(2)(i) 63.1983(c)(1)(i) 63.1975 62.16722(h) 63.1983(c)(8) 63.8(c)(3)
10.	**Operational Status of the Non-Enclosed Flare** Install, calibrate, maintain, and operate according to the manufacturer's specifications, a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame. Keep 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. Verification of monitoring device operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. Complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.	62.16722(c) 62.16722(h) 62.16726(b)(4) 63.1961(c) 63.1983(b)(4) 63.8(c)(3) 18.5.3(a)
11.	**Monthly Inspections** Equipment that directs landfill gas flow to the treatment system shall be inspected monthly. Inspect equipment that directs landfill gas flow to the and treatment system and each control device each month. Make a record of the conditions found and any actions performed to correct leaks, damage or defects. The inspection record must include, as a minimum, the following information and actions: A. The position of each valve directing or preventing flow to the thermal oxidizer and the flare. B. For the heat sensing device and gas flow rate measuring device: confirm operation, identify the need for corrective actions, identify if manufacturer recommended calibration and/or maintenance are due, and cause these activities to be performed when required. C. If the thermal oxidizer is operating, record the combustion temperature. D. If the flare is operating during the period of inspection, observe the flare for visible emissions once a month using EPA Method 22 for a period of 10 minutes. Identify and correct any visible emissions.	
	Required Records	
12.	**Recordkeeping** A. For the thermal oxidizer: 1. The average temperature measured at least every 15 minutes and averaged over the same time period of the performance test;	62.16726(b) 62.16726(b) 63.1983(b) 63.1983(c)

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	2. The percent reduction of NMOC determined as specified in § 62.16714(c)(2) and § 63.1959(b)(2)(iii)(B) achieved by the control device; and 3. All 3-hour periods of operation during which the average temperature was more than 28 degrees Celsius (82 degrees Fahrenheit) below the average combustion temperature during the most recent performance test that demonstrated compliance. These exceedances are reportable under § 63.1981(h). B. For the flare: 1. The flare type (*i.e.,* steam-assisted, air-assisted, or non-assisted); 2. 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 Condition 7 above; and 3. Keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under § 62.16722(c) and § 63.1961(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent. C. Keep up-to-date, readily accessible continuous records of the indication of flow to the treatment system EU 004 and the indication of bypass flow or flow to EU 003, and records of monthly inspections of equipment used to direct LFG to each control system, as applicable. D. Keep records of periods when the collection system, control device or monitoring equipment is not operating indicative of compliance with 62.16716(e) and 63.1958(e) for minimizing the venting of landfill gas during periods when the collection and control system is not functioning properly, including the date, time, and duration of each startup and/or shutdown period. E. Keep records of each failure to meet an applicable standard, including the date, time and duration of each failure and the cause of such events (including unknown cause, if applicable), record and retain a list of the affected sources or equipment, and actions taken to minimize emissions in accordance with the general duty of § 63.1955(c) and any corrective actions taken to return the affected unit to its normal or usual manner of operation. F. Records of the control device vendor specifications must be maintained until removal. G. Keep the site-specific treatment monitoring plan on record for the life of the affected source. If revised, keep previous (*i.e.,* superseded) versions on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. H. Keep up-to-date, readily accessible records for the life of the control system equipment of the data listed in 62.16726(b)(1) through (5) and 63.1983(b)(1) through (5) 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. I. Keep for at least 5 years up-to-date, readily accessible continuous records of all collection and control system monitoring data for parameters measured per § 62.16722 or monitored per § 63.1961 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. J. For the flow meter, a deviation occurs when 1 hour (or more) does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour. K. For the thermal oxidizer, the data collected during monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments, and startups, shutdowns and malfunctions are not to be included	63.1965 62.16726(h) 63.1983(g) 63.8(d)(2) 63.1975 18.5.13

No.	Emissions Unit 004 Landfill Gas Treatment System (RNG Plant)	Regulations
	in any average computed for Subpart AAAA. A reportable deviation occurs when: 1. The control device operating parameter boundaries are exceeded for all 3-hour periods of operation during which the average temperature was more than 28 degrees Celsius (82 degrees Fahrenheit) below the average combustion temperature during the most recent performance test at which compliance with§ 62.16714(c) and § 63.1959(b)(2)(iii) and § 63.1959(b)(2)(iii) was determined. 2. 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.	

APPENDIX A: CROSS-REFERENCES TABLE: JCBH AIR POLLUTION CONTROL RULES AND REGULATIONS TO STATE IMPLEMENTATION PLAN

The citations to Alabama regulations provided below refer to the version of the regulation that has been approved by the U.S. EPA as part of Alabama's Clean Air Act state implementation plan (SIP), as identified in 40 CFR 52, Subpart B. In the event that there is a discrepancy between the information provided in the table below and the federal regulatory table identifying the Alabama SIP at 40 CFR 52, Subpart B, the federal regulatory table governs.

JCDH Citation	State Citation	Title/Subject
	Chapter No. 335-1-1	**Organization**
No equivalent provision	Section 335-1-1-.03[1]	Organization and Duties of the Commission
No equivalent provision	Section 335-1-1-.04	Organization of the Department
Chapter 1	**Chapter No. 335-3-1**	**General Provisions**
Part 1.1	Section 335-3-1-.01	Purpose
Part 1.3	Section 335-3-1-.02	Definitions
Part 1.7	Section 335-3-1-.03	Ambient Air Quality Standards
Part 1.9	Section 335-3-1-.04	Monitoring, Records, and Reporting
Part 1.10	Section 335-3-1-.05	Sampling and Test Methods
Part 1.11	Section 335-3-1-.06	Compliance Schedule
Part 1.12	Section 335-3-1-.07	Maintenance and Malfunctioning of Equipment; Reporting
Part 1.13	Section 335-3-1-.08	Prohibition of Air Pollution
Sections 3.2.1 – 3.2.4 & Part 3.4	Section 335-3-1-.09	Variances
Part 1.15	Section 335-3-1-.10	Circumvention
Part 1.16	Section 335-3-1-.11	Severability
Part 1.17	Section 335-3-1-.12	Bubble Provision
Part 1.18	Section 335-3-1-.13	Credible Evidence
Part 1.20	Section 335-3-1-.15	Emissions Inventory Reporting Requirements
Chapter 2	**Chapter No. 335-3-14**	**Air Permits**
Part 2.1	Section 335-3-14-.01	General Provisions
Part 2.2, except 2.2.4(h)	Section 335-3-14-.02[2]	Permit Procedures
Part 2.3	Section 335-3-14-.03	Standards for Granting Permits
Part 2.4	Section 335-3-14-.04[3],[4],[5]	Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration (PSD)]
Part 2.5	Section 335-3-14-.05[6]	Air Permits Authorizing Construction in or Near Nonattainment Areas
Chapter 4	**Chapter No. 335-3-2**	**Air Pollution Emergency**
Part 4.1	Section 335-3-2-.01	Air Pollution Emergency
Part 4.3	Section 335-3-2-.02	Episode Criteria
Part 4.4	Section 335-3-2-.03	Special Episode Criteria
Part 4.5	Section 335-3-2-.04	Emission Reduction Plans
Part 4.6	Section 335-3-2-.05	Two Contaminant Episode

[1] ADEM amendments effective on December 7, 2018 have not been approved in the SIP by EPA.
[2] ADEM amendments effective on September 7, 2000 and July 11, 2006 have not been approved in the SIP by EPA.
[3] Exceptions to approval as of July 3, 2019: Except for changes to 335-3-14-.04(2)(w)1., state effective July 11, 2006, which lists a 100 ton per year significant net emissions increase for regulated NSR pollutants not otherwise specified at 335-3-14-.04(2)(w).
[4] Exceptions to approval as of July 3, 2019: Except for the significant impact levels at 335-3-14-.04(10)(b) which were withdrawn from EPA consideration on October 9, 2014.
[5] Exceptions to approval as of July 3, 2019: Except for the second sentence of paragraph 335-3-14-.04(2)(bbb)2., as well as the second and fourth sentences of paragraph 335-3-14-.04(2)(bbb)3., which include changes from the vacated federal ERP rule and were withdrawn from EPA consideration by the State on May 5, 2017.
[6] Exceptions to approval as of December 14, 2018: With the exception of: The portion of 335-3-14-.05(1)(k) stating "excluding ethanol production facilities that produce ethanol by natural fermentation"; and 335-3-14-.05(2)(c)3 (addressing fugitive emission increases and decreases). Also with the exception of the state-withdrawn elements: 335-3-14-.05(1)(h) (the actual-to-potential test for projects that only involve existing emissions units); the last sentence at 335-3-14-.05(3)(g), stating "Interpollutant offsets shall be determined based upon the following ratios"; and the NNSR interpollutant ratios at 335-3-14-.05(3)(g)1-4.

JCDH Citation	State Citation	Title/Subject
Part 4.7	Section 335-3-2-.06	General Episodes
Part 4.8	Section 335-3-2-.07	Local Episodes
Part 4.9	Section 335-3-2-.08	Other Sources
Section 4.2.3	Section 335-3-2-.09	Other Authority Not Affected
Chapter 5	**Chapter No. 335-3-3**	**Control of Open Burning and Incineration**
Sections 5.1.1 – 5.1.5[7]	Section 335-3-3-.01	Open Burning
Part 5.2	Section 335-3-3-.02[8]	Incinerators
Part 5.3[9], except 5.3.4	Section 335-3-3-.03	Incineration of Wood, Peanut, and Cotton Ginning Waste
Chapter 6	**Chapter No. 335-3-4**	**Control of Particulate Emissions**
Part 6.1[10]	Section 335-3-4-.01	Visible Emissions
Part 6.2	Section 335-3-4-.02[11]	Fugitive Dust and Fugitive Emissions
Part 6.3	Section 335-3-4-.03	Fuel Burning Equipment
Part 6.4	Section 335-3-4-.04	Process Industries—General
Part 6.5[12]	Section 335-3-4-.05	Small Foundry Cupola
Part 6.6[13]	Section 335-3-4-.06	Cotton Gins
Part 6.7	Section 335-3-4-.07	Kraft Pulp Mills
Part 6.8	Section 335-3-4-.08	Wood Waste Boilers
Part 6.9	Section 335-3-4-.09	Coke Ovens
No equivalent provision	Section 335-3-4-.10	Primary Aluminum Plants
Part 6.10	Section 335-3-4-.11	Cement Plants
Part 6.12	Section 335-3-4-.12	Xylene Oxidation Process
No equivalent provision	Section 335-3-4-.13[14]	Sintering Plants
No equivalent provision	Section 335-3-4-.14	Grain Elevators
No equivalent provision	Section 335-3-4-.15	Secondary Lead Smelters
No equivalent provision	Section 335-3-4-.17	Steel Mills Located in Etowah County
Chapter 7	**Chapter No. 335-3-5**	**Control of Sulfur Compound Emissions**
Part 7.1	Section 335-3-5-.01	Fuel Combustions
Part 7.2 is not equivalent	Section 335-3-5-.02	Sulfuric Acid Plants
No equivalent provision	Section 335-3-5-.03	Petroleum Production
No equivalent provision	Section 335-3-5-.04	Kraft Pulp Mills
No equivalent provision	Section 335-3-5-.05	Process Industries—General
Parts 7.6 through 7.36	Sections 335-3-5-.06 through 335-3-5-.36	TR SO_2 Trading Program
Chapter 8	**Chapter No. 335-3-6**	**Control of Organic Emissions**
Part 8.1[15]	Section 335-3-6-.24	Applicability
Part 8.2	Section 335-3-6-.25	VOC Water Separation
Part 8.3	Section 335-3-6-.26[16],	Loading and Storage of VOC
Part 8.4	Section 335-3-6-.27	Fixed-Roof Petroleum Liquid Storage Vessels
Part 8.5	Section 335-3-6-.28	Bulk Gasoline Plants
Part 8.6	Section 335-3-6-.29	Gasoline Terminals

[7] See also Guidelines & Standard Operating Procedures for Issuance of Open Burning Authorizations at the end of Chapter 5. ADEM 335-3-3-.01(2)(b)(6) also prohibits open burning during declared air stagnation advisories and drought emergencies.
[8] Amendments to 335-3-3-.02 effective September 19, 1991 have not been approved into the SIP by EPA.
[9] JCDH has no equivalent for ADEM 335-3-3-.03(5), which states "Each incinerator subject to this Rule shall be properly designed, equipped, and maintained for its maximum rated burning capacity and shall be equipped with an underfire forced air system, an over-fire air recirculation secondary construction system, and variable control damper, all of which shall be electronically controlled to insure the optimum temperature range for the complete combustion of the amount and type of material waste being charged into the incinerator. Each such incinerator shall be equipped with a temperature recorder which shall be operated continuously with the incinerator, and the temperature records shall be made available for inspection at the request of the Director."
[10] ADEM has no equivalent to Section 6.1.8.
[11] ADEM 335-3-4-.02(4) was removed effective July 15, 1999, however, the provision is still included in the EPA-approved SIP.
[12] All allowable emissions rates in Table 6-3 should be construed to have 2 significant figures, consistent with ADEM 335-3-4-.05, Table 4-3.
[13] All allowable emissions rates in Table 6-4 should be construed to have 1 significant figure, consistent with ADEM 335-3-4-.06, Table 4-4.
[14] ADEM has removed and reserved this section, however it remains listed in the EPA approved SIP. See 40 CFR 52.50(c).
[15] The definition of "low-use coating"at ADEM 335-3-6-.24(2)(d) is located at JCDH Part 1.3.
[16] Amendments to 335-3-6-.26 effective September 21, 1989 and July 31, 1991 have not been approved into the SIP by EPA. The EPA-approved SIP requires a disposal system in conjunction with equipment required by ADEM 335-3-6-.26(2)(c)1.(i) (JCDH 8.3.2(c)(1)(i)).

JCDH Citation	State Citation	Title/Subject
Part 8.7, except 8.7.4(b) & 8.7.5(e)	Section 335-3-6-.30	Gasoline Dispensing Facilities Stage 1
No equivalent provision	Section 335-3-6-.31[17]	Petroleum Refinery Sources
Part 8.11	Section 335-3-6-.32	Surface Coating
Part 8.12	Section 335-3-6-.33	Solvent Metal Cleaning
Part 8.13	Section 335-3-6-.34	Cutback and Emulsified Asphalt
No equivalent provision	Section 335-3-6-.35[18]	Petition for Alternative Controls
Part 8.15	Section 335-3-6-.36	Compliances Schedules
Part 8.16[19]	Section 335-3-6-.37	Test Methods and Procedures
No equivalent provision	Section 335-3-6-.38	Reserved
Part 8.18	Section 335-3-6-.39	Manufacture of Synthesized Pharmaceutical Products
Part 8.20, except 8.20.8	Section 335-3-6-.41	Leaks from Gasoline Tank Trucks and Vapor Collection Systems
No equivalent provision	Section 335.3.6-.42	Reserved
Part 8.22	Section 335-3-6-.43	Graphic Arts
Part 8.23	Section 335-3-6-.44	Petroleum Liquid Storage in External Floating Roof Tanks
Part 8.24	Section 335-3-6-.45	Large Petroleum Dry Cleaners
No equivalent provision	Section 335-3-6-.46	Reserved
Part 8.26	Section 335-3-6-.47	Leaks from Coke by-Product Recovery Plant Equipment
Part 8.27	Section 335-3-6-.48	Emissions from Coke by-Product Recovery Plant Coke Oven Gas Bleeder
Part 8.28	Section 335-3-6-.49	Manufacture of Laminated Countertops
Part 8.29	Section 335-3-6-.50	Paint Manufacture
Part 8.23[20]	Section 335-3-6-.53	List of EPA Approved and Equivalent Test Methods and Procedures for the Purpose of Determining VOC Emissions
Chapter 9	**Chapter No. 335-3-7**	**Control of Carbon Monoxide Emissions**
Part 9.1	Section 335-3-7-.01	Metals Productions
Part 9.2	Section 335-3-7-.02	Petroleum Processes
Chapter 10	**Chapter No. 335-3-8**	**Control of Nitrogen Oxides Emissions**
Part 10.1	Section 335-3-8-.01	Standards for Portland Cement Kilns
Part 10.2	Section 335-3-8-.02	Nitric Acid Manufacturing
Part 10.3	Section 335-3-8-.03	NO_X Emissions from Electric Utility Generating Units
Part 10.4	Section 335-3-8-.04	Standards for Stationary Reciprocating Internal Combustion Engines
Part 10.5	Section 335-3-8-.05	New Combustion Sources
Part 10.7	Sections 335-3-8-.07 through 335-3-8-.38	TR NO_X Annual Trading Program
Part 10.8	Sections 335-3-8-.39 through 335-3-8-.70	TR NO_X Ozone Season Trading Program
Part 10.9	Sections 335-3-8-.71 & 335-3-8-.72	NO_X Budget Program
Chapter 11	**Chapter No. 335-3-9**	**Control of Emissions from Motor Vehicles**
Part 11.1	Section 335-3-9-.01	Visible Emission Restriction for Motor Vehicles
Part 11.2	Section 335-3-9-.02	Ignition System and Engine Speed
Part 11.3	Section 335-3-9-.03	Crankcase Ventilation Systems
Part 11.4	Section 335-3-9-.04	Exhaust Emission Control Systems
Part 11.5	Section 335-3-9-.05	Evaporative Loss Control Systems
Part 11.6	Section 335-3-9-.06	Other Prohibited Acts
Part 11.7	Section 335-3-9-.07	Effective Date

[17] ADEM has removed and reserved this section, however it remains listed in the EPA approved SIP. See 40 CFR 52.50(c).
[18] Amendments to 335-3-6-.35 effective July 31, 1991 have not been approved into the SIP by EPA.
[19] Federally enforceable testing provisions for perchloroethylene dry cleaning systems are located at ADEM 335-3-6-.37(5) and federally enforceable testing provisions for capture efficiency for VOC capture and control systems are located at ADEM 335-3-6-.37(13). JCDH 8.16.5 is reserved, and JCDH 8.16.13 is very brief.
[20] Test Methods 204, 204A-204F are not included in the EPA-approved SIP.

JCDH Citation	State Citation	Title/Subject
No equivalent provision	**Chapter No. 335-3-12**[21]	Continuous Monitoring Requirements for Existing Sources
No equivalent provision	**Chapter No. 335-3-13**	Control of Fluoride Emissions
Chapter 17	**Chapter No. 335-3-15**	**Synthetic Minor Operating Permits**
Part 17.1	Section 335-3-15-.01[22]	Definitions
Part 17.2, except 17.2.8(h)(7)	Section 335-3-15-.02	General Provisions
Part 17.3	Section 335-3-15-.03	Applicability
Part 17.4[23]	Section 335-3-15-.04	Synthetic Minor Operating Permit Requirements
Part 17.5, except 17.5.2	Section 335-3-15-.05	Public Participation
Chapter 19	**Chapter No. 335-3-17**	**Conformity of Federal Actions to State Implementation Plans**
Part 19.1	Section 335-3-17-.01	Transportation Conformity
Part 19.2	Section 335-3-17-.02	General Conformity

[21] Amendments to 335-3-12-.02 effective September 7, 2000 have not been approved into the SIP by EPA.
[22] Amendments to 335-3-15-.01 effective January 16, 1997 have not been approved into the SIP by EPA. Only the first sentence of ADEM 335-3-15-.01(g) is approved into the SIP. JCDH does not include the unapproved language.
[23] The federally enforceable provisions of ADEM 335-3-15-.04(3)(c) are located at JCDH 2.1.7(a).