SC DEPARTMENT of ENVIRONMENTAL SERVICES

Bureau of Air Quality
Synthetic Minor Construction Permit

Richland County Landfill Inc
1047 Highway Church Road
Elgin, South Carolina 29045
Richland County

In accordance with the provisions of the Pollution Control Act, Sections 48-1-50(5), 48-1-100(A), and 48-1-110(a), the 1976 Code of Laws of South Carolina, as amended, and South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards, the Bureau of Air Quality authorizes the construction of this facility and the equipment specified herein in accordance with the plans, specifications, and other information submitted in the construction permit application received on April 10, 2024, as amended. All official correspondence, plans, permit applications, and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction permit may be grounds for permit revocation.

The construction and subsequent operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

Permit Number: **CP-50000191 v1.0**
Agency Air Number: **1900-0148**

Issue Date: **September 10, 2024**

Steve McCaslin, P. E., Director
Air Permitting Division
Bureau of Air Quality

RECORD OF REVISIONS	
Date	**Description of Changes**

A. PROJECT DESCRIPTION, EQUIPMENT, AND CONTROL DEVICE(S)

Permission is hereby granted to construct a renewable natural gas process (RNG) utilizing landfill gas. The process will include a gas refining process (GRP), landfill gas treatment (LFGT), a thermal oxidizer (TOX) for tail gas control, and off-spec gas process flare (PF) for control. Additionally, the Leachate Evaporator System (LES-1), the 988 scfm Heartland Evaporator Concentrator System (CONC), and the 1,000 scfm Heartland Evaporator (CONC2) are now permitted to also combust natural gas.

A.1 EQUIPMENT

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
GRP	Gas refining Process including H_2S Removal, CO_2 Removal, N_2/O_2 Removal, and Supplemental Compression	LFGT, TOX, PF	LFGT, T1, PF

A.2 CONTROL DEVICES

Control Device ID	Control Device Description	Pollutant(s) Controlled	Emission Point ID
LFGT	Landfill Gas Treatment including Filtration, Dewatering, and Compression	H_2S, VOC, HAP, NMOC	LFGT
TOX	3,061 scfm Thermal Oxidizer	H_2S, VOC, HAP, NMOC	T1
PF	3,000 scfm Process Flare	H_2S, VOC, HAP, NMOC	PF

B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions
B.1	**Equipment ID:** GRP **Control Device ID:** TOX, PF The owner or operator shall inspect, calibrate, adjust, and maintain continuous monitoring systems, monitoring devices, and gauges in accordance with manufacturer's specifications or good engineering practices. The owner or operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel. (S.C. Regulation 61-62.1, Section II(J)(1)(d)) Sources required to have continuous emission monitors shall submit reports as specified in applicable parts of the permit, law, regulations, or standards.

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B.2	**Equipment ID:** GRP **Control Device ID:** TOX, PF All gauges shall be readily accessible and easily read by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Monitoring parameter readings (e.g., pressure drop readings, flow rates, etc.) and inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur. Each occurrence of operation outside the operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Exceedance of operational range shall not be considered a violation of an emission limit of this permit, unless the exceedance is also accompanied by other information demonstrating that a violation of an emission limit has taken place. Reports of these occurrences shall be submitted semiannually. If there were no occurrences during the reporting period, then documentation shall be submitted to indicate such. Any alternative method for monitoring control device performance must be preapproved by the Department and shall be incorporated into the permit as set forth in S.C. Regulation 61-62.70.7.
B.3	**Equipment/Control Device ID:** Facility Wide The owner or operator shall continue to operate under all applicable requirements, including emission limits and standards, testing, monitoring, record keeping, and reporting under the existing Title V Operating Permit (GTV-0900-0058) and any unincorporated construction permits that are not changed or contravened by this construction permit.
B.4	**Equipment ID:** GRP **Control Device ID:** TOX, PF (S.C. Regulation 61-62.1, Section II(E)) This project is a potential significant increase for CO and $PM_{2.5}$ emissions. The facility has requested federally enforceable operating limitations to limit the potential to emit from these sources to less than 100.0 tpy of CO and less than 10.0 tpy of $PM_{2.5}$ to avoid a PSD Significant Increase of 100.0 tpy for CO and 10.0 tpy for $PM_{2.5}$. The facility shall demonstrate compliance with these limits by limiting the operation of PF to a maximum of 500,000 million BTU per year.
B.5	**Equipment ID:** GRP **Control Device ID:** PF (S.C. Regulation 61-62.1, Section II(E)) The Process Flare (PF) is limited to operating a maximum of 500,000 million BTU per year. The methane content in the gas stream to the process flare will be measured using a continuous methane monitor. The methane monitor shall be operated and maintained in accordance with all the manufacturer's specifications. The owner or operator must record the methane content in the gas stream to the process flare daily when the process flare is in operation. The owner or operator must calculate and record the operating heat rate daily. The flare heat rate shall also be calculated on a monthly basis, and a twelve-month rolling sum shall be calculated for the heat rate. On the days the process flare did not operate, it shall be recorded as

B. LIMITATIONS, MONITORING, AND REPORTING

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	such. Reports of the calculated heat rate values and the twelve-month rolling sum, calculated for each month in the reporting period, shall be submitted semiannually. The following algorithm shall be used to determine the process flare's monthly heat rate: $$Heat\ Rate\left(\frac{million\ BTU}{month}\right) = Methane\ Content\ (MC) \times Heat\ Rate\ (HR) \times Flow\ Rate\ (FR) \times \frac{1\ million\ BTU}{1{,}000{,}000\ BTU}$$ Where: MC = Methane content in the gas stream to the process flare (%) HR = Heat Rate Value for methane, 1,012 $\frac{BTU}{ft^3}$ FR = Gas flow to the process flare, $\frac{ft^3}{month}$
B.6	**Equipment ID:** LF **Control Device ID:** F1A, LES-1, CONC (S.C. Regulation 61-62.1, Section II(E)) This facility has established federally enforceable emissions limitations to limit the potential to emit from 6,000 scfm Open Flare (F1A), Leachate Evaporator System (LES-1), and 988 scfm Heartland Evaporator Concentrator System (CONC) to less than 250.0 tons per year of CO and the total landfill gas flow to F1A and the total landfill/natural gas flow to LES-1 and CONC is limited to a maximum rate of 2,628,000,000 standard cubic feet per year to avoid PSD.
B.7	**Equipment ID:** LF **Control Device ID:** F1A, LES-1, CONC (S.C. Regulation 61-62.1, Section II(E)) The owner or operator shall maintain flowrate records and any other records necessary to determine CO emissions from these sources. CO emissions and landfill gas flow shall be calculated on monthly basis, and a twelve-month rolling sum shall be calculated for total CO emissions. Emissions from malfunctions are required to be quantified and included in the calculations. The twelve-month rolling sum emissions from F1A, LES-1, and CONC shall be less than 250.0 tons CO and less than 2,628,000,000 standard cubic feet per year of total gas combusted. While using natural gas, LES-1 and CONC shall calculate emissions assuming 100% methane in determining compliance with CO limit. Reports of the calculated values and the twelve-month rolling sum, calculated for each month in the reporting period, shall be submitted semiannually.
B.8	**Equipment ID:** LF **Control Device ID:** F1A, LES-1, CONC (S.C. Regulation 61-62.1, Section II(E)) The following algorithm shall be used to determine monthly CO emissions for the F1A, LES-1, and CONC: $$CO\ Emissions\left(\frac{tons}{month}\right) = Flow\ Rate\ (FR) \times Heat\ Rate\ (HR) \times Emission\ Factor\ (EF) \times \frac{1\ million\ BTU}{1{,}000{,}000\ BTU} \times \frac{1\ ton}{2000\ lb}$$

B. LIMITATIONS, MONITORING, AND REPORTING	
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	Where: FR = Total monthly flowrate from totalizer, $\frac{ft^3}{month}$ HR = Heat Rate Value, $500\ \frac{BTU}{ft^3}$ for landfill gas; $1000\ \frac{BTU}{ft^3}$ for natural gas EF = Manufacture Specified CO emissions factor for each source EF for F1A = $0.37\frac{lb}{million\ Btu}$ EF for LES-1= $0.30\ \frac{lb}{million\ BTU}$ and CONC = $0.20\ \frac{lb}{million\ BTU}$
B.9	**Equipment ID:** CDLF **Control Device ID:** F2, CONC2 (S.C. Regulation 61-62.1, Section II(E)) This facility has established federally enforceable operating limitations to limit the potential to emit from 6,000 scfm Utility Flare (F2) and 1,000 scfm Heartland Evaporator (CONC2) to less than 250.0 tons per year of CO to avoid PSD.
B.10	**Equipment ID:** CDLF **Control Device ID:** F2, CONC2 (S.C. Regulation 61-62.1, Section II(E)) When operating simultaneously, F2 shall be limited to a landfill gas flowrate of 5,000 and CONC2 is limited to a total natural/landfill gas flowrate of 1,000 scfm. The owner or operator shall record the actual gas flowrate to each unit daily. If no gas flowrate to either unit occurred for the day, the report shall indicate such. Reports of the flowrates shall be submitted semiannually. The owner or operator shall maintain any records necessary to determine CO emissions from these sources. CO emissions shall be calculated on a monthly basis and a twelve-month rolling sum shall be calculated for total CO emissions. Emissions from malfunctions are required to be quantified and included in the calculations. The twelve-month rolling sum emissions from F2 and CONC2 shall be less than 250.0 tons. While using natural gas, CONC2 shall calculate emissions assuming 100% methane in determining compliance with CO limit. Reports of the calculated values and the twelve-month rolling sum, calculated for each month in the reporting period, shall be submitted semiannually.
B.11	**Equipment ID:** CDLF **Control Device ID:** F2, CONC2 (S.C. Regulation 61-62.1, Section II(E)) The following algorithm shall be used to determine monthly CO emissions for the F2, and CONC2: $CO\ Emissions\left(\frac{tons}{month}\right) = Flow\ Rate\ (FR)\ \times Heat\ Rate\ (HR) \times Emission\ Factor\ (EF)\ \times \frac{1\ million\ BTU}{1{,}000{,}000\ BTU}\ \times \frac{1\ ton}{2000\ lb}$ Where:

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	FR = Total monthly flowrate from totalizer, $\frac{ft^3}{month}$ HR = Heat Rate Value, $500\,\frac{BTU}{ft^3}$; $1000\,\frac{Btu}{ft^3}$ for natural gas EF = Manufacture Specified CO emissions factor for each source EF for F2 = $0.31\frac{lb}{million\ BTU}$ EF for CONC2 = $0.20\,\frac{lb}{million\ BTU}$
B.12	**Equipment ID:** Facility Wide **Control Device ID:** Facility Wide (S.C. Regulation 61-62.1, Section II(E)) This facility has established federally enforceable operating limitations to limit its potential to emit 10.0 tons per year for any single HAP emission and 25.0 tons per year for any combination of HAP emissions to avoid becoming a major source of HAP.
B.13	**Equipment ID:** Facility Wide **Control Device ID:** Facility Wide (S.C. Regulation 61-62.1, Section II(E)) The owner or operator shall maintain records of all hazardous air pollutants (HAP). These records shall include data necessary to determine HAP emissions. HAP emissions shall be calculated on a monthly basis, and a twelve-month rolling sum shall be calculated for total individual HAP and total HAP emissions. Facility-wide emission totals must include emissions from insignificant activities. Emissions from malfunctions are required to be quantified and included in the calculations. The twelve-month rolling sum shall be less than 25.0 TPY combined HAP and less than 10.0 TPY individual HAP. Reports of the calculated values and the twelve-month rolling sum, calculated for each month in the reporting period, shall be submitted semiannually.
B.14	**Equipment ID:** Facility Wide **Control Device ID:** Facility Wide (S.C. Regulation 61-62.1, Section II(E)) (S.C. Regulation 61-62.1, Section II(E)) The following algorithm shall be used to determine monthly HAP emissions for the LFG fugitives, F1A, LES-1, CONC, F2, CONC2, PF, and TOX: $\text{HAP Emissions}\left(\frac{\text{tons}}{\text{month}}\right) = \sum \text{HAP}_{\text{LFG fugitives}} + \text{HAP}_{\text{control devices}}$ Where: HAP $LFG_{fugitive}$=HAP emissions from the fugitive landfill gases $\text{HAP}_{control\ devices} =$ Total HAP emissions from the control devices $(\text{HAP}_{\text{F1A}} + \text{HAP}_{\text{LES}-1} + \text{HAP}_{\text{CONC}} + \text{HAP}_{\text{F2}} + \text{HAP}_{\text{CONC2}} + \text{HAP}_{\text{PF}} + \text{HAP}_{\text{TOX}})$ HAP_{F1A}=HAP emissions from F1A $HAP_{LES\text{-}1}$=HAP emissions from LES-1 HAP_{CONC}=HAP emissions from CONC

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	HAP_{F2}=HAP emissions from F2 HAP_{CONC2}=HAP emissions from CONC2 HAP_{PF}=HAP emissions from PF HAP_{TOX}=HAP emissions from TOX $\mathrm{LFG_{gemerated}} = \frac{\mathrm{LFG_{collected}}}{\mathrm{CE}}$ Where: $LFG_{generated}$=Landfill gas generated, $\frac{ft^3}{year}$ $LFG_{colleceted}$=Landfill gas collected from the control devices, $\frac{ft^3}{year}$ CE= Collection Efficiency of 75% from AP-42 Section 2.4.4.2 $\mathrm{LFG_{fugitive}} = \mathrm{LFG_{gemerated}} - \mathrm{LFG_{collected}}$ Where: $LFG_{fugitive}$=Landfill gas not collected by the control devices, $\frac{ft^3}{year}$ $LFG_{generated}$=Landfill gas generated, $\frac{ft^3}{year}$ $LFG_{colleceted}$=Landfill gas collected from the control devices, $\frac{ft^3}{year}$ $\mathrm{HAP_{LFG\ fugitives}}\left(\frac{\mathrm{tons}}{\mathrm{month}}\right) = LFG_{fugitives} \times \left(\frac{m^3}{35.314667 ft^3}\right) \times \frac{1\mathrm{year}}{12\ \mathrm{months}} \times \frac{\mathrm{HAP\ concentration}}{1{,}000{,}000} \times \mathrm{HAP\ MW} \times \mathrm{P} \times \mathrm{R} \times \mathrm{T} \times \frac{1000\ \mathrm{g}}{\mathrm{kg}} \times \frac{2.2\ \mathrm{lb}}{\mathrm{kg}} \times \frac{1\ \mathrm{ton}}{2000\ \mathrm{lb}}$ Where: $LFG_{fugitive}$=Landfill gas not collected by the control devices, $\frac{ft^3}{year}$ HAP Concentration=The concentration of the HAP in the gas stream from AP-42, Table 2.4-1 (ppmv) HAP MW=The molecular weight of the HAP in the gas stream from AP-42, Table 2.4-1 $\left(\frac{g}{mol}\right)$ P=Pressure of 1 atm R=Gas constant $\frac{8.205\ \mathrm{E{-}05\ m^3 atm}}{\mathrm{gmol\ K}}$ T=Temperature of 298K Conversion factors: 35.314667 ft^3 per m^3, 12 months per year, 1000 grams per kilogram, 2.2 pounds per kilogram, 2000 pounds per ton.

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$$\text{HAP}_{control\ device}\left(\frac{\text{tons}}{\text{month}}\right) = LFG_{control\ device} \times \left(\frac{m^3}{35.314667 ft^3}\right) \times \frac{1\text{year}}{12\text{ months}} \times \frac{\text{HAP concentration}}{1\text{E6}} \times \text{HAP MW} \times \text{P} \times \text{R} \times \text{T} \times \frac{1000\text{ g}}{\text{kg}} \times \frac{2.2\text{ lb}}{\text{kg}} \times \frac{1\text{ ton}}{2000\text{ lb}} \times (1 - DE)$$

Where:

$LFG_{control\ devices}$= Landfill gas collected by each control device F1A, LES-1, CONC, F2, CONC2, PF, and TOX, $\frac{ft^3}{year}$

HAP Concentration=The concentration of the HAP in the gas stream from AP-42, Table 2.4-1 (ppmv)

HAP MW=The molecular weight of the HAP in the gas stream from AP-42, Table 2.4-1 $\left(\frac{g}{mol}\right)$

P=Pressure of 1 atm

R=Gas constant $\frac{8.205\text{ E}{-}05\text{ m}^3\text{atm}}{\text{gmol K}}$

T=Temperature of 298K

DE=Destruction efficiency of 98% for halogenated compounds. 99.7% for non-halogenated compounds, and 0% for mercury compounds.

Conversion factors: 35.314667 ft^3 per m^3, 12 months per year, 1000 grams per kilogram, 2.2 pounds per kilogram, 2000 pounds per ton.

$$\text{HCl}_{control\ device}\left(\frac{\text{tons}}{\text{month}}\right) = LFG_{control\ device} \times \left(\frac{m^3}{35.314667 ft^3}\right) \times \frac{1\text{year}}{12\text{ months}} \times \frac{\text{HCl concentration}}{1\text{E6}} \times \text{HCl MW} \times \text{P} \times \text{R} \times \text{T} \times \frac{1000\text{ g}}{\text{kg}} \times \frac{2.2\text{ lb}}{\text{kg}} \times \frac{1\text{ ton}}{2000\text{ lb}} \times \left(\frac{N_{COL}}{100}\right) \times 1.03 \times \left(\frac{N_{CNT}}{100}\right)$$

Where:

$LFG_{control\ devices}$= Landfill gas collected by each control device F1A, LES-1, CONC, F2, CONC2, PF, and TOX, $\frac{ft^3}{year}$

HCl Concentration=The concentration of the HCl in the gas stream from AP-42, Table 2.4-1 (42 ppmv)

HCl MW=The molecular weight of the HAP in the gas stream from AP-42, Table 2.4-1 (35.453 g/mol)

P=Pressure of 1 atm

R=Gas constant $\frac{8.205\text{ E}{-}05\text{ m}^3\text{atm}}{\text{gmol K}}$

T=Temperature of 298K

N_{COL}= Efficiency of the landfill gas collection system (100% since based on actual flowrate to the control device)

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	N_{CNT}= Control efficiency of the landfill gas control or utilization device (100% based on 100% conversion of Cl to HCL) Conversion factors: 35.314667 ft^3 per m^3, 12 months per year, 1000 grams per kilogram, 2.2 pounds per kilogram, 2000 pounds per ton.
B.15	**Equipment ID:** GRP **Control Device ID:** TOX, PF (S.C. Regulation 61-62.5, Standard No. 3, Section III(I)(1)) Emissions from these sources shall not exhibit an opacity greater than 20%, each. This is a State Only requirement.
B.16	**Equipment ID:** GRP **Control Device ID:** TOX, PF (S.C. Regulation 61-62.5, Standard No. 3, Section III(I)(2)) Particulate matter emissions from these sources shall not exceed 0.5 $lb/10^6$ Btu total heat input. The total heat input value from waste and virgin fuel used for production shall not exceed the Btus used to affect the combustion of the waste. This is a State Only requirement.
B.17	**Equipment ID:** GRP **Control Device ID:** LFGT, TOX, PF (S.C. Regulation 61-62.5, Standard No. 4, Section IX) Where construction or modification began after December 31, 1985, emissions from these sources (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.
B.18	**Equipment ID:** GRP **Control Device ID:** LFGT, TOX, PF The owner or operator shall perform a visual inspection on a semiannual basis of sources subject to opacity limits. The inspection shall occur during normal source operation. Logs shall be kept to record all visual inspections, noting color, duration, density (heavy or light), cause, and corrective action taken for any abnormal emissions. If a source did not operate during the required visual inspection time frame, the log shall indicate such. The owner or operator shall submit semiannual reports. The report shall include records of abnormal emissions, if any, and corrective actions taken. If the unit did not operate during the semiannual period, the report shall state so. Visual inspection means a qualitative observation of opacity during daylight hours. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water.
B.19	**Equipment ID:** GRP **Control Device ID:** TOX The owner or operator shall install, operate and maintain a combustion zone temperature indicator

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	on the thermal oxidizer. Temperature readings shall be recorded at least every fifteen (15) minutes during source operation for the thermal oxidizer. Facilities with automated data collection may collect monitoring data on a more frequent basis and calculate the daily average. Readings collected when the source is shutdown or not operating may not be used in the calculation. The owner or operator must get approval from the Department for an increased frequency/averaging plan prior to using averaging for parametric monitoring. The owner or operator shall continue to record daily, the calculated monitoring averages using the approved increased frequency/averaging plan unless prior approval is obtained from the Department for changing the plan. Maintenance checks for proper temperature indicator operation shall be made on at least a weekly basis. The checks and any corrective actions shall be documented and kept on-site. The thermal oxidizer shall be in place and operational whenever processes controlled by it are running, except during periods of flame thermal oxidizer malfunction or mechanical failure. The minimum operating temperature for the combustion zone temperature shall be established to ensure proper operation of the pollution control equipment. The minimum operating temperature shall be derived from the manufacturer's recommendation. The minimum operating temperature and supporting documentation shall be submitted to the Department within 180 days of the permit effective date. The minimum operating temperature may be updated following submittal to the Department.
B.20	**Equipment ID:** GRP **Control Device ID:** PF The owner or operator shall install, operate and maintain a presence of flame indicator on the flare. Maintenance checks for proper flare operation shall be made on at least a monthly basis. The flare shall be in place and operational whenever processes controlled by it are running, except during periods of flare malfunction or mechanical failure.
B.21	**Equipment ID:** GRP **Control Device ID:** LFGT These sources are subject to 40 CFR 60 Subparts A and Cf Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills. These sources shall comply with all applicable requirements of Subparts A and Cf.
B.22	**Equipment ID:** GRP **Control Device ID:** LFGT 40 CFR 60.33f Emission Guidelines for municipal solid waste landfill emissions. (c)(3) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-Btu gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to either

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	paragraph (c)(1) or (2) of this section. (c)(4) All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of paragraph (b) or (c) of this section. For purposes of this subpart, atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of paragraph (b) or (c) of this section.
B.23	**Equipment ID:** GRP **Control Device ID:** LFGT 40 CFR 60.37f Monitoring of operations. (g)Each owner or operator seeking to demonstrate compliance with the control system requirements in § 60.33f(c) using a landfill gas treatment system must maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in § 60.39f(b)(5)(ii) and must calibrate, maintain, and operate according to the manufacturer's specifications a device that records flow to the treatment system and bypass of the treatment system (if applicable). The owner or operator must: (1) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes; and (2) 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. (h) The monitoring requirements of paragraphs (b), (c) (d) and (g) of this section 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. You are required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.
B.24	**Equipment ID:** GRP **Control Device ID:** LFGT 40 CFR 60.38f Reporting guidelines. (d)(7) If the owner or operator chooses to demonstrate compliance with the emission control requirements of this subpart using a treatment system as defined in this subpart, then the owner or operator must prepare a site-specific treatment system monitoring plan as specified in § 60.39f(b)(5).

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B.25	**Equipment ID:** GRP **Control Device ID:** LFGT 40 CFR 60.38f Reporting guidelines. (h) Annual report. If complying with the operational provisions of §§ 63.1958, 63.1960, and 63.1961 of this chapter, as allowed at §§ 60.34f, 60.36f, and 60.37f, the owner or operator must follow the semi-annual reporting requirements in § 63.1981(h) of this chapter in lieu of this paragraph. (h)(2) Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under § 60.37f. (h)(3) Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating. The facility will demonstrate compliance with 40 CFR 60.38f(h)(2) and (3) by complying with 40 CFR 63.1981(h)(2) and (3).
B.26	**Equipment ID:** GRP **Control Device ID:** LFGT 40 CFR 60.39f Recordkeeping guidelines. (b)(5) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.33f(c)(3) through use of a landfill gas treatment system: (i) Bypass records. Records of the flow of landfill gas to, and bypass of, the treatment system. (ii) Site-specific treatment monitoring plan, to 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.

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	(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.

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
C.1	(40 CFR §61.04(b); 40 CFR §63.9(a)(4)(ii) and §63.10(a)(4)(ii)) All NESHAP notifications and reports shall be sent to the Department. Electronic submission of notifications or reports to the United States Environmental Protection Agency (US EPA) via CEDRI (Compliance and Emissions Data Reporting Interface) shall serve as the submission to the Department. CEDRI can be accessed through the EPA's Central Data Exchange (CDX).
C.2	(40 CFR §61.04(b); 40 CFR §63.9(a)(4)(ii) and §63.10(a)(4)(ii)) All NESHAP notifications and reports requiring electronic submission to US EPA shall be submitted to EPA via CEDRI. Notifications and reports for specific NESHAP subparts not yet requiring electronic submission may also be submitted via CEDRI. Notifications and the accompanying cover letter for periodic reports not submitted via CEDRI shall be sent to the US EPA Region 4 Air and Radiation Division as required by the applicable subpart.
C.3	This facility has processes subject to the provisions of S.C. Regulation 61-62.61 and 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Subparts A and M, National Emission Standard for Asbestos. Existing affected sources shall be in compliance with the requirements of these Subparts by the compliance date, unless otherwise noted. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.
C.4	This facility has processes subject to the provisions of S.C. Regulation 61-62.63 and 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, Subparts A and AAAA National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills. Existing affected sources shall be in compliance with the requirements of these Subparts by the compliance date, unless otherwise noted. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.
C.5	**Equipment ID:** GRP **Control Device ID:** LFGT 40 CFR 63.1959 NMOC calculation procedures. (b)(2)(iii)(C) A treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-British thermal unit (Btu) gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to either paragraph (b)(2)(iii)(A) or (B) of this section. (b)(2)(iii)(D) All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of paragraph (b)(2)(iii)(A) or (B) of this section. For purposes of this subpart, atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of paragraph (b)(2)(iii)(A) or (B) of this section.
C.6	**Equipment ID:** GRP **Control Device ID:** LFGT 40 CFR 63.1961 Monitoring of operations. (g) Each owner or operator seeking to demonstrate compliance with § 63.1959(b)(2)(iii)(C) using a landfill gas treatment system must calibrate, maintain, and operate according to the manufacturer's specifications a device that records flow to the treatment system and bypass of the treatment system (if applicable). Beginning no later than September 27, 2021, each owner or operator must maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in § 63.1983(b)(5)(ii). The owner or operator must: (1) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes; and (2) 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. (h) The monitoring requirements of paragraphs (a), (b), (c), (d), and (g) of this section 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. You are required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c)(1), (d)(2), and (e)(1), the standards apply at all times.
C.7	**Equipment ID:** GRP **Control Device ID:** LFGT

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	40 CFR 63.1981 What reports must I submit? (h) The semi-annual reports must contain the information in (h)(2) and (h)(3) of this section. (h)(2) Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under § 63.1961. (h)(3) Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating.
C.8	**Equipment ID:** GRP **Control Device ID:** LFGT 40 CFR 63.1983 What records must I keep? (b)(5) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(iii)(C) through use of a landfill gas treatment system: (i) Bypass records. Records of the flow of landfill gas to, and bypass of, the treatment system. (ii) Site-specific treatment monitoring plan. Beginning no later than September 27, 2021, the owner or operator must prepare a site-specific treatment monitoring plan to 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) List of responsible staff (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 (CMS).

D. GENERAL FACILITY WIDE	
Condition Number	**Conditions**
D.1	The owner or operator shall comply with S.C. Regulation 61-62.6, Control of Fugitive Particulate Matter, Section III Control of Fugitive Particulate Matter Statewide.
D.2	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.
D.3	In the event of an emergency, as defined in S.C. Regulation 61-62.1, Section II(L), the owner or operator may document an emergency situation through properly signed, contemporaneous operating logs, and other relevant evidence that verify: 1. An emergency occurred, and the owner or operator can identify the cause(s) of the emergency; 2. The permitted source was at the time the emergency occurred being properly operated; 3. During the period of the emergency, the owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and 4. The owner or operator gave a verbal notification of the emergency to the Department within twenty-four (24) hours of the time when emission limitations were exceeded, followed by a written report within thirty (30) days. The written report shall include, at a minimum, the information required by S.C. Regulation 61-62.1, Section II(J)(1)(c)(i) through (J)(1)(c)(viii). The written report shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
D.4	(S.C. Regulation 61-62.1, Section II(O)) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following: 1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit. 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. 3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit. 4. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
D.5	(S.C. Regulation 61-62.1, Section II(J)(1)(a)) No applicable law, regulation, or standard will be contravened.

D. GENERAL FACILITY WIDE	
Condition Number	**Conditions**
D.6	(S.C. Regulation 61-62.1, Section II(J)(1)(e)) Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this regulation or with the terms of any approval to construct, or who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to enforcement action.

E. EMISSIONS INVENTORY REPORTS - RESERVED

F. GENERAL RECORD KEEPING AND REPORTING	
Condition Number	**Conditions**
F.1	(S.C. Regulation 61-62.1, Section II(J)(1)(g)) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least five (5) years from the date the record was generated and shall be made available to a Department representative upon request.
F.2	The owner or operator shall submit reports required in this permit in a timely manner and according to the reporting schedule established through the Department's approved electronic permitting system.
F.3	All reports and notifications required under this permit shall be submitted to the Department.
F.4	(S.C. Regulation 61-62.1, Section II(A)(3)) The owner or operator shall submit written notification to the Department of the date construction is commenced, postmarked within thirty (30) days after such date.
F.5	(S.C. Regulation 61-62.1, Section II(J)(1)(c)) For sources not required to have continuous emission monitors, any malfunction of air pollution control equipment or system, process upset, or other equipment failure which results in discharges of air contaminants lasting for one (1) hour or more and which are greater than those discharges described for normal operation in the permit application, shall be reported to the Department within twenty-four (24) hours after the beginning of the occurrence and a written report shall be submitted to the Department within thirty (30) days. The written report shall include, at a minimum, the following: 1. The identity of the stack and/or emission point where the excess emissions occurred; 2. The magnitude of excess emissions expressed in the units of the applicable emission

F. GENERAL RECORD KEEPING AND REPORTING	
Condition Number	**Conditions**
	limitation and the operating data and calculations used in determining the excess emissions; 3. The time and duration of excess emissions; 4. The identity of the equipment causing the excess emissions; 5. The nature and cause of such excess emissions; 6. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; 7. The steps taken to limit the excess emissions; and, 8. Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions. The initial twenty-four (24) hour notification should be made to the Department's local Regional Office. The written report should be sent to the Department.

G. PERMIT EXPIRATION AND EXTENSION	
Condition Number	**Conditions**
G.1	(S.C. Regulation 61-62.1, Section II(A)(4) and (5) and S.C. Regulation 61-62.1, Section II(J)(1)(f)) Approval to construct shall become invalid if construction: a. Is not commenced within eighteen (18) months after receipt of such approval; b. Is discontinued for a period of eighteen (18) months or more; or c. Is not completed within a reasonable time as deemed by the Department. The Department may extend the construction permit for an additional eighteen (18) month period upon a satisfactory showing that an extension is justified. This request must be made prior to the permit expiration. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within eighteen (18) months of the projected and approved commencement date.

H. PERMIT TO OPERATE

Condition Number	Conditions
H.1	(S.C. Regulation 61-62.1, Section II(F)(3)) When a Department issued construction permit includes engineering and/or construction specifications, the owner or operator or professional engineer in charge of the project shall certify that, to the best of his/her knowledge and belief and as a result of periodic observation during construction, the construction under application has been completed in accordance with the specifications agreed upon in the construction permit issued by the Department. If construction is certified as provided above, the owner or operator may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department. If construction is not built as specified in the permit application and associated construction permit(s), the owner or operator must submit to the Department a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation. Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered construction without a permit.
H.2	(S.C. Regulation 61-62.1, Section II(F)(1)) The owner or operator shall submit written notification to the Department of the actual date of initial startup of each new or altered source, postmarked within fifteen (15) days after such date. Any source that is required to obtain an air quality construction permit issued by the Department must obtain an operating permit when the new or altered source is placed into operation and shall comply with the requirements of this section.
H.3	(S.C. Regulation 61-62.1, Section II(F)(4)(b)) The owner or operator shall submit a written request to the Department for a new or revised operating permit to cover any new or altered source postmarked within fifteen (15) days after the actual date of initial startup of each new or altered source. (S.C. Regulation 61-62.1, Section II(F)(4)(c)) The written request for a new or revised operating permit must include, at a minimum, the following information: i. A list of sources that were placed into operation; and ii. The actual date of initial startup of each new or altered source. (S.C. Regulation 61-62.1, Section II(F)(4)(a)) For sources covered by an effective Title V Operating Permit, the modification request required by S.C. Regulation 61-62.70 shall serve as the request to operate for the purposes of S.C. Regulation 61-62.1, Section II(F). The request should be made using the appropriate Title V modification form.

I. AMBIENT AIR STANDARDS

Condition Number	Conditions
I.1	Air dispersion modeling (or other method) has previously demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in this demonstration may require a review by the facility to

I. AMBIENT AIR STANDARDS	
Condition Number	**Conditions**
	determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. The owner or operator shall maintain this facility at or below the emission rates used in the most recent air dispersion modeling (or other method) demonstration submitted to and approved by the Department, not to exceed the pollutant limitations of this permit. Should the facility wish to increase the emission rates used in the demonstration, not to exceed the pollutant limitations in the body of this permit, it may do so by submitting a new demonstration for approval. This condition along with the referenced modeling demonstration will also serve to meet the intent of S.C. Regulation 61-62.5, Standard No. 8, Section II(D). This is a State Only enforceable requirement.