air pollution control district
SANTA BARBARA COUNTY

PERMIT to OPERATE No. 13281 - R1

and

PART 70 OPERATING PERMIT No. 13281

SANTA MARIA REGIONAL LANDFILL

2065 EAST MAIN STREET
SANTA MARIA, CALIFORNIA

OWNERS/OPERATORS

J&A Santa Maria II, LLC

Santa Barbara County
Air Pollution Control District

February 2025

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ABBREVIATIONS/ACRONYMS

AP-42	USEPA's Compilation of Emission Factors
AQIA	Air Quality Impact Analysis
ASTM	American Society for Testing Materials
ATC	Authority to Construct
BACT	Best Available Control Technology
bhp	Brake Horsepower
BSFC	Brake Specific Fuel Consumption
Btu	British Thermal Unit
°C	Degree Celsius
CAAA	Clean Air Act Amendments
CAM	Compliance Assurance Monitoring
CAP	Clean Air Plan
CARB	California Air Resources Board
CATEF	California Air Toxics Emission Factor Database
CCR	California Code of Regulations
CEMS	Continuous Emissions Monitoring
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CPI	Consumer Price Index
CSML	City of Santa Maria Landfill
DAS	Data Acquisition System
District	Santa Barbara County Air Pollution Control District
°F	Degree Fahrenheit
ft^3	Cubic Feet
FID	Facility Identification
g	Gram
GLC	Ground Level Concentration
gr	Grain
HAP	Hazardous Air Pollutant (as defined by CAAA, Section 112(b))
HARP	Hotspots Analysis and Reporting Program
HHV	Higher Heating Value
HI	Hazard Index
hr	Hour
HRA	Health Risk Assessment
H_2S	Hydrogen Sulfide
IC	Internal Combustion
k	Kilo (thousand)
l	Liter
LAER	Lowest Achievable Emission Rate
lb	Pound
LFG	Landfill Gas
LPG	Liquid Propane Gas
M	Mega
MM	Million
MACT	Maximum Achievable Control Technology
MR	Molar Ratio
MSDS	Material Safety Data Sheets
MSW	Municipal Solid Waste
MV	Molecular Volume
MW	Molecular Weight
NMOC	Non-Methane Organic Compounds

NO_x	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
NOV	Notice of Violation
NSPS	New Source Performance Standards
NSR	New Source Review
NESHAP	National Emissions Standards for Hazardous Air Pollutants
O_2	Oxygen
PM	Particulate Matter
PM_{10}	Particulate Matter Less Than 10 Microns
$PM_{2.5}$	Particulate Matter Less Than 2.5 Microns
ppmv	Parts Per Million (Volume Dry or Weight)
PSD	prevention of significant deterioration
psia	Pounds Per Square Inch Absolute
PTE	Potential to Emit
PTO	Permit to Operate
PUC	Public Utility Commission
RACT	Reasonably Achievable Control Technology
ROC	Reactive Organic Compounds (same as VOC)
S	Sulfur
SCDP	Source Compliance Demonstration Period
scf	Standard Cubic Foot
scfm	Standard Cubic Feet Per Minute
SIP	State Implementation Plan
SO_x	Oxides of Sulfur
SSID	Stationary Source Identification
SSM	Startup, Shutdown, and Malfunction
STP	Standard Temperature (60 °F) and Pressure (29.92” of Mercury)
THC	Total Hydrocarbons
TPQ	Tons Per Quarter
TPY	Tons Per Year
USEPA	United States Environmental Protection Agency
VEE	Visible Emissions Evaluation
VOC	Volatile Organic Compound
W	Watt

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1.0 Introduction

1.1 Purpose

General: The Santa Barbara County Air Pollution Control District (District) is responsible for implementing all applicable federal, state and local air pollution requirements which affect any stationary source of air pollution in Santa Barbara County. The federal requirements include regulations listed in the Code of Federal Regulations (CFR): 40 CFR Parts 50, 51, 52, 60, 61, 63, 68, 70 and 82. The State regulations may be found in the California Health and Safety Code, Division 26, Section 39000 et seq as well as California Code of Regulations, Title 17, Subchapter 10, Article 4, Subarticle 6, §95460 to §95476. The applicable local regulations can be found in the District's Rules and Regulations.

Santa Barbara County is designated as a non-attainment area for the state PM_{10} ambient air quality standard. On July 1, 2020, the County achieved attainment status for the ozone state ambient air quality standards, however in February 2021, the California Air Resources Board took action at a public hearing to change Santa Barbara County's designation from attainment to nonattainment for the State ozone standard. This change was based on data measured at multiple locations in the County for the 3-year period from 2017 to 2019. The California Office of Administrative Law (OAL) finalized the designation change on September 27, 2021.

Part 70 Permitting: This is the first reevaluation of the Part 70 permit for J&A Santa Maria II, LLC and it satisfies the permit issuance requirements of the District's Part 70 operating permit program. A Part 70 permit is required under the Federal Title I New Source Performance Standards (NSPS) and the District's Part 70 Operating Permit program (Title V) because this facility is part of the Santa Maria Regional Landfill stationary source. This permitting action also supersedes ATC 14932, PTO 14932, ATC 15570, and PTO 15570 for J&A's facility. Conditions listed in this permit are based on federal, state, and local rules and requirements. Sections 9.A, 9.B and 9.C of this permit are enforceable by the District, United States Environmental Protection Agency (USEPA), and public because these sections are federally enforceable under Part 70. Where any reference contained in Sections 9.A, 9.B or 9.C refers to any other part of this permit, that part of the permit is federally enforceable. Conditions listed in Section 9.D are enforceable by the state and District.

Pursuant to the stated aims of Title V of the Clean Air Act Amendments (CAAA) of 1990 (i.e. the Part 70 operating permit program), this permit has been designed to meet two objectives: first, compliance with all conditions in this permit would ensure compliance with all federally enforceable requirements for the facility; second, the permit would be a comprehensive document to be used as a reference by J&A Santa Maria II, LLC, the regulatory agencies and the public to assess compliance.

Additionally, this permit directly incorporates Permit to Operate (PTO) No. 14932 and PTO 15570. This permitting action is for the operation of the landfill gas (LFG) treatment system.

1.2 Stationary Source/Facility Overview

1.2.1 Stationary Source/Facility Overview: The City of Santa Maria Landfill (CSML) is located at 2065 East Main Street, Santa Maria, California. It is located on the south bank of Santa Maria River. An approximately 20-foot high flood control levee, designed and constructed by the Army Corp of Engineers, separates the landfill from the river. The majority of the land adjacent to the south and west of the landfill is used for agricultural purposes. CSML was established in the early 1950s to serve the Santa Maria Valley area population. The landfill is owned and operated

by the City of Santa Maria. For District regulatory purposes, the facility location is in the Northern Zone of Santa Barbara County[a].

LFG is generated in the subsurface landfill by anaerobic biological decomposition is collected onsite using a vapor extraction system and handled using a collection and transport system. Under standard operations, the gas is treated and sent to the Marian Medical Center (SSID: 01793) located approximately two miles from the landfill. When the gas is not sent off site, it is combusted in one of two enclosed ground flares or the onsite LFG-fired, internal combustion (IC) engine powering an electrical generator. When the gas is flared, it is not treated. The LFG collection system and the enclosed ground flares are owned and operated by the City of Santa Maria. The gas treatment system, LFG-fired engine, and electrical generator are owned and operated by J&A Santa Maria, LLC.

A stationary source is defined as "any building, structure, facility, or installation which emits or may emit any affected pollutant directly or as a fugitive emission". A facility includes all pollutant-emitting activities which:

- Belong to the same industrial grouping: The landfill produces LFG and J&A Santa Maria, LLC's gas treatment system treats the LFG. The two facilities belong to the same industrial grouping because they are part of a process using a common material.

- Are located on one or more contiguous or adjacent properties: The gas treatment system, electrical generator, and LFG-fired engine are located at the landfill. The engines located at the Marian Medical Center, which is not contiguous or adjacent to the landfill, are not part of the same stationary source.

- Are under common ownership, operation, or control: The gas treatment system is not under common ownership or control with CSML. However, the gas treatment system is under common operation with the landfill because operation of the gas treatment system is dependent on the production of LFG.

As described above, the LFG treatment system and LFG-fired engine are part of the Santa Maria Regional Landfill stationary source. Since the landfill, LFG collection system, and enclosed ground flares are under separate ownership, these pieces of equipment are permitted separately under PT-70/Reeval 10318-R3.

Equipment and processes permitted under PT-70/Reeval 10318-R3 are as follows:

- Landfill: The generation of LFG resulting from anaerobic biological decomposition of organic matter deposited in a landfill.

- LFG Collection System: A system consisting of vertical and horizontal collectors to collect LFG generated by refuse deposited in the CSML and piping to transport the collected gas to one of the two enclosed ground flares for combustion, or to the gas treatment system for treatment and compression.

- Enclosed Ground Flares: Collected LFG can be destroyed in one of the two ground-level enclosed flares through continuous combustion. The flares are used as backups for when

[a] District Rule 102, Definition: "Northern Zone"

the engines at Marian Medical and the onsite electrical generator/engine are out of service, or if there is excess LFG production. The enclosed ground flares are owned and operated by the City of Santa Maria.

- Condensate and Leachate: LFG condensate and leachate may be applied to a lined cell of the landfill equipped with a containment system in order to control dust or incinerated in one of the enclosed ground flares.

This permit is for the following equipment and processes at the stationary source:

- Electrical Generator: Treated LFG is used to power an electrical generator, which provides electricity to the grid. This generator consists of a 1,966 bhp engine and 1,426 kW electrical generator.

- Treatment System: The treatment system takes LFG from gas collection system and filters, compresses, then sends it either to the engines located at the Marian Medical Center or the LFG-fired engine located at the landfill.

1.2.2 Facility New Source Review Overview: Since the issuance of the initial Part 70 operating permit for the LFG treatment system and LFG-fired engine, the following permitting actions have occurred:

PERMIT	FINAL ISSUED	PERMIT DESCRIPTION
ATC 15570	03/16/2022	Installation of two landfill gas blowers, landfill gas hydrogen sulfide and siloxane treatment system, and oxidation catalyst equipped on the landfill gas fired engine.
ATC 14932	05/31/2019	Replacement engine for the existing 1.426 MW electrical generator powered by a 1,966 bhp lean burn stationary IC engine fired on landfill gas.

1.3 Emission Sources

The emissions from J&A Santa Maria II, LLC come from the LFG-fired IC engine powering the electrical generator. Section 4 of this permit provides the District's engineering analyses of this emission source. Section 5 of this permit describes the allowable emissions from the permitted emissions unit and lists the potential emissions from non-permitted emission units.

1.4 Emission Control Overview

The LFG-fired IC engine utilizes a low-oxides of nitrogen (NO_x), lean-burn design with an air to fuel ratio controller to control air pollution emissions. There are no add-on controls installed with the engine.

1.5 Offsets/Emission Reduction Credit Overview

Offsets: Per the District's revised NSR rules adopted on August 25, 2016, the CSML stationary source is not required to offset emissions at this time because this permitting action is not subject to NSR. Additionally, offsets are not required since the equipment satisfies the requirements set forth in the California Health and Safety Code Section §42314. This regulation states that a District shall not require emissions offsets for a cogeneration technology project that fulfills the following requirements:

- The project produces 50 megawatts or less of electricity.

- The project will use the appropriate degree of pollution control technology (Best Available Control Technology [BACT] or Lowest Achievable Emission Rate [LAER]) as defined and to the extent required by the District permit system.

- Existing permits for any item of equipment to be replaced by the project, whether the equipment is owned by the applicant or a thermal beneficiary of the project, are surrendered to the District or modified to prohibit operation simultaneously with the project to the extent necessary to satisfy district offset requirements. The emissions reductions associated with the shutdown of existing equipment shall be credited to the project as emissions offsets in accordance with district rules.

- The applicant has provided offsets to the extent they are reasonably available from facilities it owns or operates in the air basin and that mitigate the remaining impacts of the project.

- For new projects that burn municipal waste, LFG, or digester gas, the applicant has, in the judgment of the District, made a good faith effort to secure all reasonably available emissions offsets to mitigate the remaining impact of the project, and has secured all reasonably available offsets.

Per the District's review, all the above requirements have been satisfied. Therefore, emission offsets were not required for this project under ATC 13281.

ERCs: J&A Santa Maria II, LLC does not generate emission reduction credits.

1.6 Part 70 Operating Permit Overview

1.6.1 Federally-Enforceable Requirements: All federally enforceable requirements are listed in 40 CFR Part 70.2 (*Definitions*) under "applicable requirements". These include all State Implementation Plan (SIP)-approved District Rules, all conditions in the District-issued ATC permits and all conditions applicable to major sources under federally promulgated rules and regulations. All these requirements are also enforceable by the public under CAAA. See Tables 3.2, 3.3, and 3.4 for a list of federally enforceable requirements.

1.6.2 Insignificant Emissions Units: Insignificant emission units are defined under District Rule 1301 as any regulated air pollutant emitted from the unit, excluding Hazardous Air Pollutants (HAP), that are less than 2 tons per year (TPY) based on the unit's potential to emit (PTE) and any HAP regulated under Section 112(g) of the Clean Air Act that does not exceed 0.5 TPY based on the unit's PTE. Insignificant activities must be listed in the Part 70 application with supporting calculations. Applicable requirements may apply to insignificant units. See Attachment 10.2 for a list of the insignificant emissions units.

1.6.3 Federal Potential to Emit: The federal PTE of a stationary source does not include fugitive emissions of any pollutant, unless the source is: (1) subject to a federal NSPS/National Emission Standards for Hazardous Air Pollutants (NESHAP) requirement which was in effect as of August 7, 1980, or (2) included in the 29-category source list specified in 40 CFR 70.2. The federal PTE does include all emissions from any insignificant emissions units. Note that the J&A Santa Maria II, LLC is subject to both NSPS (40 CFR Part 60, Subpart JJJJ) and NESHAP (40 CFR Part 63, Subpart AAAA, Subpart ZZZZ) for the LFG-fired engine but none of the Subparts were in effect as of August 7, 1980. See Table 5.3 for the federal PTE for this source.

1.6.4 Permit Shield: The operator of a major source may be granted a shield: (a) specifically stipulating any federally enforceable conditions that are no longer applicable to the source and (b) stating the reasons for such non-applicability. The permit shield must be based on a request from the source and its detailed review by the District. Permit shields cannot be granted indiscriminately with respect to all federal requirements. J&A Santa Maria II, LLC has not made a request for a permit shield.

1.6.5 Alternate Operating Scenarios: A major source may be permitted to operate under different operating scenarios, if appropriate descriptions of such scenarios are included in its Part 70 permit application and if such operations are allowed under federally-enforceable rules. J&A Santa Maria II, LLC has made no request for permitted alternative operating scenarios.

1.6.6 Compliance Certification: Part 70 permit holders must certify compliance with all applicable federally enforceable requirements including permit conditions. Such certification must accompany each Part 70 permit application; and, be re-submitted annually on or before March 1st or on a more frequent schedule, as specified in the permit. Each certification is signed by a responsible official of the owner/operator company whose name and address are listed prominently in the Part 70 permit. See Section 1.6.10 below.

1.6.7 Permit Reopening: Part 70 permits are re-opened and revised if the source becomes subject to a new rule or new permit conditions are necessary to ensure compliance with existing rules. The permits are also re-opened if they contain a material mistake, or the emission limitations or other conditions are based on inaccurate permit application data. See Part 70 Rule, 40 CFR 70.7.

1.6.8 Maximum Achievable Control Technology (MACT)/HAPs: Part 70 permits also regulate emission of HAPs from major sources through the imposition of MACT, where applicable. See the Subpart AAAA and Subpart ZZZZ requirements listed in Sections 3.2.4, 4.4.4, and 9 of this permit.

1.6.9 Compliance Assurance Monitoring (CAM): The CAM rule became effective on April 22, 1998. This rule affects emission units at the source subject to a federally enforceable emission limit or standard that uses a control device to comply with the emission standard, and either pre-control or post-control emissions exceed the Part 70 source emission thresholds. Sources subject to CAM Rule must submit a *CAM Rule Compliance Plan* along with their Part 70 operating permit renewal applications. The District has determined that no emissions units at this facility are subject to the CAM Rule. See Section 3.2.5.

1.6.10 Responsible Official: The designated responsible official's name and mailing address are:

Alan Janechek
President, J&A Santa Maria II, LLC
248 Hill Place
Costa Mesa, CA 92627

2.0 Source and Process Description

2.1 Source and Process Description

2.1.1 Facility Description: The CSML was established in the early 1950s. It covers an area of approximately 290 acres consisting of inactive, active, and borrow areas. Approximately 265 of the 290 acres are designated for landfill use. In general, the landfill has been developed from the northwest to the southeast with approximately 186 of the available 265 acres used for refuse disposal. The northwest portion of the landfill is active and includes an intermediate cover soil borrow area covering about 79 acres. Approximately 118 acres are currently used for landfill. The waste depth ranges from about 20 feet to 40 feet. The estimated waste acceptance design capacity of the site is 346 million cubic feet (ft^3), or about 9.8 million cubic meters. J&A Santa Maria II, LLC operates its equipment at the flare station.

2.1.2 Facility Operations: CSML currently receives an average of about 252 metric tons of municipal solid waste (MSW) per day (based on CVR data from second half 2013 to first half 2016), usually generated in the Santa Maria Valley. It operates under a Solid Waste Facility Permit (revised October 2013), which allows CSML to handle up to 778 metric tons per day (858 short tons per day) of waste. The facility includes a recycling and a household hazardous household waste collection program. Landfill operations consist of a 'fill-and-cover method' using onsite soils, tarps, and alternative daily cover (ADC) to provide daily cover. The refuse is spread and compacted using a compactor. LFG is generated as a result from anaerobic biological decomposition of organic matter deposited in a landfill. LFG consists primarily of methane (CH_4) and carbon dioxide (CO_2), with smaller amounts of non-methane organic compounds (NMOC). Some NMOCs are reactive organic compounds (ROC). The processes associated with the J&A Santa Maria II, LLC facility are as follows:

2.1.2.1 LFG Treatment System: The J&A Santa Maria II, LLC treatment system receives LFG from the CSML collection system permitted under PT-70/Reeval 10318-R3. The treatment system consists of an aftercooler to lower the LFG temperature to ambient temperature, and coalescing filter to remove entrained liquids, particles, and siloxanes. Collected liquids are drained to a condensate sump and automatically pumped to the condensate storage tank owned by the CSML. After exiting the treatment system, LFG is routed to the Marian Medical Center via pipeline or to the onsite electrical generator/engine.

2.1.2.2 IC Engine: The 1,426-kW electrical generator is powered by a GE Jenbacher Type 4 Model J420 GS-A82 reciprocating IC engine rated at 1,966 bhp. The LFG-fired, four-stroke, lean-burn, spark ignited engine is equipped with an air-to-fuel ratio controller. The unit provides electrical power to the grid. The system is equipped with a continuous emissions monitoring system (CEMS) for NO_X and carbon monoxide (CO), which telemeters the emissions data to the District's centralized Data Acquisition System (DAS).

2.2 Detailed Process Equipment Listing

Lists of permitted and permit-exempt equipment authorized under this permit are included in Attachments 10.1 and 10.2, respectively.

3.0 Regulatory Review

3.1 Rule Exemptions

- District Rule 333 (Control of Emissions from Reciprocating Internal Combustion Engines): Section B.1.a exempts spark ignition engines operating on gaseous fuel consisting of 75 percent or more of LFG on a volume basis determined by annual fuel use. This permit requires the IC engine to be operated exclusively on LFG; therefore, the engine is exempt from the emission limits, inspections, testing, and recordkeeping requirements of Rule 333.

3.2 Compliance with Applicable Federal Rules and Regulations

3.2.1 40 CFR Parts 51/52 (NSR [Nonattainment Area Review and Prevention of Significant Deterioration]): The 1,966-bhp IC engine permitted under ATC 14932 in May 2019 is subject to District Regulation VIII (New Source Review). Compliance with Part 70/PTO 13281-R1 requirements and Regulation VIII ensures the LFG-fired engine will comply with the federal NSR requirements.

3.2.2 40 CFR Part 60 (New Source Performance Standards): J&A Santa Maria II, LLC facility is subject to Subpart A and JJJJ. J&A is not subject to Subpart Cf, rather, the District is subject to this Subpart. J&A is not subject to Subpart XXX because the landfill capacity has not expanded since July 17, 2014. The Subpart Cf discussion below provides the reasoning of certain regulatory requirements.

Subpart A	General Provisions
Subpart JJJJ	Standards of Performance for Stationary Spark Ignited Internal Combustion Engines
Subpart Cf	Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills

On August 29, 2016, Subpart Cf established Emission Guidelines and compliance times for the control of designated pollutants from certain designated MSW landfills in accordance with Section 111(d) of the Clean Air Act and 40 CFR Part 60 Subpart B. States were required to submit a State Plan no later than August 29, 2019 to demonstrate how the requirements of this Subpart (and subsequently 40 CFR Part 62 Subpart OOO) would be implemented. If States did not submit a plan or failed to receive approval of a Plan, 40 CFR Part 62 Subpart OOO would go into effect in their jurisdiction.

California submitted a State Plan in the form of Title 17 CCR, Subchapter 10, Article 4, Subarticle 6, §95460 to §95476: California Methane Emissions from MSW Landfills to demonstrate implementation of this Subpart's requirements. California's State Plan received partial approval from the EPA. Therefore, applicable MSW landfills in California are required to comply with the California Methane Emissions from MSW Landfills regulation as well as 40 CFR Part 62 Subpart OOO §62.16716(c), §62.16720(a)(4), §62.16722(a)(2),§62.16722(a)(3), §62.16724(k), §62.16726(e)(2) and §62.16726(e)(5).

Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification on or After May 30, 1991, but Before July 18, 2014

The landfill and the landfill gas fired engine permitted herein was previously subject to the requirements of Subpart WWW. With the partial approval of the California's State Plan from the EPA per Subpart Cf, California landfills are now required to comply with the California Methane Emissions from MSW Landfills regulation (LMR) and 40 CFR Part 62 Subpart OOO §62.16716(c), §62.16720(a)(4), §62.16722(a)(2), §62.16722(a)(3), §62.16724(k), §62.16726(e)(2), and §62.16726(e)(5). The LFG fired engine and LFG treatment system operated under this permit, which are part of the overall landfill gas collection and control system at the CSML, is subject to the requirements of the LMR and missing elements of OOO (as applicable). Subpart WWW has been superseded by these regulations.

Subpart JJJJ Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Per §60.4233(e), stationary spark-ignited IC engines with a maximum engine power greater than or equal to 75 kW (100 bhp) (except gasoline and rich burn engines which use liquid gas propane [LPG]) must comply with the emission standards in Table 1 of the Subpart. Since the engine subject to this permit is 1,966 bhp, lean-burn, and fired on LFG, this section is applicable.

§60.4243 requires that the permittee operate and maintain the engine according to manufacturer specifications and maintenance records must be kept.

§60.4244 requires that performance tests be conducted within ten percent of peak load and according to the requirements of Table 2 of the Subpart. The equations in this section shall be used to convert measured parts per million by volume (ppmv) exhaust concentrations to g/bhp-hr emission rates.

3.2.3 40 CFR Part 61 (NESHAP*)*: This facility is not subject to the provisions of Part 61.

3.2.4 40 CFR Part 63 (MACT): Subparts AAAA and ZZZZ apply to the J&A Santa Maria II, LLC facility.

Subpart AAAA (NESHAP for Municipal Solid Waste Landfills)

On March 26, 2020, the USEPA promulgated an updated Subpart AAAA, a NESHAP for HAPs from MSW landfills, to address changes to the federal landfill regulations. Beginning September 27, 2021, landfills meeting the following criteria were subject to this regulation:

- A landfill without a bioreactor that:
  - Has accepted waste since November 8, 1987, or has additional capacity for waste deposition, and meets one of the following:
    - A major source
    - Collocated with a major source
    - An area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million cubic meters and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year of NMOC

- A landfill with a bioreactor that:
  - Has accepted waste since November 8, 1987, or has additional capacity for waste deposition, and meets one of the following:
    - A major source

- Collocated with a major source
- An area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3 and has not permanently closed as of January 16, 2003

CSML does not have a bioreactor, has accepted waste since November 8, 1987, is an area source, has a design capacity of 9.8 million m^3 and has estimated uncontrolled emissions equal to or greater than 50 Mg per year of NMOC (actual calculated value is 132.41 Mg/year). Therefore, 40 CFR Part 63 Subpart AAAA is applicable to CSML, including the LFG fired engine and LFG treatment system operated under this permit.

Subpart AAAA requires the following:

- Provisions in NESHAP Subpart AAAA are largely overlapping with provisions in the Federal Plan (40 CFR part 62 subpart OOO) and the Municipal Solid Waste Landfills regulation. NESHAP Subpart AAAA contains more requirements regarding enhanced monitoring associated with a higher wellhead operating temperature and its associated recordkeeping and reporting requirements.

- Comply with the standards and requirements of the Subpart. Some requirements in NESHAP Subpart AAAA are the same as those in the Federal Plan. For any requirements in NESHAP Subpart AAAA that are different than those in the Federal Plan, CSML must comply with both sets of requirements.

- Subpart AAAA removes the Startup, Shutdown, Malfunction (SSM) Plan requirements that were present in the previous rule.

Note that a Subpart AAAA monitoring deviation occurs when one or more hours during the three-hour block averaging period does not constitute a valid hour of data. A valid one-hour data consists of measured values for at least three 15-minute monitoring periods within that hour. The relevant provisions of Subpart AAAA applicable to the LFG fired engine and LFG treatment system have been incorporated into this permit.

Subpart ZZZZ (NESHAP for Stationary Reciprocating IC Engines):

The LFG-fired, reciprocating IC engine with a site rating of more than 500 bhp located at a major source of HAP emissions must meet the initial notification, monitoring, recordkeeping, and reporting requirements of this Subpart per §63.6590(c)(5). There are no emission or operational limitations for this type of engine found in this Subpart.

§63.6625(c) requires the operator to monitor fuel use daily with a fuel meter and to operate the engine in a manner which reasonably minimizes HAP emissions. In order to comply with these requirements, the engine is equipped with a fuel use meter. Meeting BACT requirements and using CEMS will ensure HAP emissions are reasonably minimized.

§63.6650(g) requires the operator to submit an annual report with (1) the fuel flow rate and heating values used in each calculation, (2) the operating limits provided in the permit and any deviations from the limits, and (3) any problems or errors suspected with the meters.

§63.6655(c) requires the operator to keep records of daily fuel use.

3.2.5 40 CFR Part 64 (CAM): This rule became effective on April 22, 1998. This rule affects emission units at sources subject to a federally enforceable emission limit or standard that use a control device to comply with the emission standard and either pre-control or post-control emissions exceed the Part 70 source emission thresholds. Compliance with this rule was evaluated and it was determined that this Subpart is not applicable to the IC engine. Though the IC engine qualifies as a control device, Part 64.2(b)(1)(i) exempts sources from CAM requirements when the sources are regulated by NSPS proposed after November 15, 1990.

3.2.6 40 CFR Part 70 (Operating Permits): Part 70 operating permits are required for sources subject to a NSPS. Since J&A Santa Maria II, LLC is subject to Subpart JJJJ, as well as the LMR and missing elements of 40 CFR Part 62 Subpart OOO, this regulation is applicable. Table 3.2 lists the federally enforceable District promulgated rules that are generic and apply to J&A Santa Maria II, LLC. Tables 3.3 lists the federally enforceable promulgated rules that are unit specific.

In its latest report, J&A Santa Maria II, LLC did not document any violations of District rules and permit conditions. Verification of ongoing compliance is required of J&A Santa Maria II, LLC semi-annually. Issuance of this permit and compliance with all its terms and conditions as well as with the compliance schedule will ensure that J&A Santa Maria II, LLC complies with the provisions of all applicable Subparts.

3.3 Compliance with Applicable State Rules and Regulations

3.3.1 Division 26. Air Resources (California Health and Safety Code): The administrative provisions of the California Health and Safety Code apply to this facility.

3.3.2 Title 17 California Code of Regulations, Subchapter 10, Article 4, Subarticle 6, §95460 to §95476: The California Methane Emissions from MSW Landfills regulation applies to active, inactive and closed MSW landfills which have 450,000 tons or greater of waste-in-place and received waste after January 1, 1977. The regulation contains performance standards for the LFG collection and control systems, and specifies monitoring requirements to ensure that the systems are being maintained and operated in a manner to minimize methane emissions. Compliance is determined through monitoring requirements, a methane destruction efficiency requirement for the IC engine, and reporting requirements. J&A Santa Maria II, LLC's requirements for this regulation are tabulated in Table 3.6 and the conditions found in Section 9.D.

3.4 Compliance with Applicable Local Rules and Regulations

3.4.1 Applicability Tables: Tables 3.2, 3.3, and 3.4 list the federally enforceable District promulgated rules that apply to the facility. Table 3.5 list the non-federally enforceable District Rules. Table 3.6 lists the non-federally enforceable state regulations for MSW landfills.

3.4.2 Rules Requiring Further Discussion: This section provides a more detailed discussion regarding the applicability and compliance of certain rules.

Rule 301 – Circumvention: This rule prohibits the concealment of any activity that would otherwise constitute a violation of Division 26 (Air Resources) of the California Health and Safety Code and the District rules and regulations.

Rule 302 – Visible Emissions: This rule prohibits the discharge from any single source any air contaminants for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade than a reading of 1 on the Ringelmann Chart or of such opacity to obscure an observer's view to a degree equal to or greater than a reading of 1 on the Ringelmann Chart. Sources subject to this rule include the LFG-fired engine. Improperly maintained engines

have the potential to violate this rule. Compliance will be assured by requiring visible emissions monitoring and by maintaining the units according to manufacturer's maintenance schedules.

Rule 303 – Nuisance: This rule prohibits J&A Santa Maria II, LLC from causing a public nuisance due to the discharge of air contaminants. There are no recent nuisance complaints in the District files that can be attributable to operation of the J&A Santa Maria II, LLC facility. All nuisance complaints are investigated by the District and follow the guidelines outlined in Policy & Procedure I.G.2 (Compliance Investigations).

Rule 304 – Particulate Matter, Northern Zone: The J&A Santa Maria II, LLC facility is considered a Northern Zone source. This rule prohibits the discharge into the atmosphere from any source particulate matter in excess of 0.3 grains (gr) per standard cubic feet (scf) at standard conditions.

Rule 306 – Fumes and Dust, Northern Zone: The J&A Santa Maria II, LLC facility is considered a Northern Zone source. The maximum allowable concentrations are determined as a function of volumetric discharge, measured in standard cubic feet per minute (scfm), and are listed in Table 305(a) of the rule. Emission units subject to this rule include the LFG-fired engine. Compliance will be assured by requiring the equipment to be maintained according to manufacturer maintenance schedules.

Rule 309 – Specific Contaminants: Under Section A, no source may discharge sulfur compounds and combustion contaminants in excess of 0.2 percent as SO_2 (by volume) and 0.1 gr/scf (at 12% CO_2) respectively. Due to the use of LFG as fuel, sulfur and particulate emissions are expected to comply with the SO_2 and particulate limits.

Rule 310 – Odorous Organic Compounds: This rule prohibits the discharge of hydrogen sulfide (H_2S) and organic sulfides that result in a ground level impact beyond the property boundary in excess of either 0.06 ppmv averaged over three minutes or 0.03 ppmv averaged over one hour. No measured data at the fence line exists to confirm compliance with this rule. There are no recent complaints of H_2S or organic sulfide odors related to this source in the District files.

Rule 311 – Sulfur Content of Fuels: This rule limits the sulfur content of fuels combusted at the J&A Santa Maria II, LLC facility to 50 gr/100 scf calculated as H_2S (or 796 ppmvd) for gaseous fuels. However, PT-70/PTO 13281-R1 restricts the sulfur content of LFG burned in the IC engine to 0.63 gr/100 scf (or 10 ppmvd). Compliance with this requirement is achieved through the use of LFG sampling and analysis.

Rule 317 – Organic Solvents: This rule sets specific prohibitions against the usage of both photochemically and non-photochemically reactive organic solvents (40 lb/day and 3000 lb/day, respectively). Solvents may be used at the J&A Santa Maria II, LLC facility during normal operations for degreasing by wipe cleaning and for use in paints and coatings in maintenance operations. There is the potential to exceed the limits during significant surface coating activities. Per Condition 9.C.3 of this permit, J&A Santa Maria II, LLC is required to maintain records to ensure compliance with this rule.

Rule 321 – Control of Degreasing Operations: This rule sets equipment and operational standards for degreasers using organic solvents. Unheated solvent cleaners that have less than one gallon of capacity or have an evaporative surface area smaller than one square foot (aggregate cap of ten square feet) are exempt from all rule provisions, except Section G.2. Compliance is determined via facility inspections.

Rule 322 – Metal Surface Coating Thinner and Reducer: This rule prohibits the use of photochemically reactive solvents for use as thinners or reducers in metal surface coatings. Per Condition 9.C.3 of this permit, J&A Santa Maria II, LLC is required to maintain records during maintenance operations to ensure compliance with this rule.

Rule 323 – Architectural Coatings: This rule sets standards for many types of architectural coatings. The primary coating standard that applies to the J&A Santa Maria II, LLC is the industrial maintenance coating limit of 250 gram (g) ROC per liter (l) of coating, as applied. J&A Santa Maria II, LLC is required to comply with the administrative requirements under Section F for each container at the facility.

Rule 323.1 – Architectural Coatings: This rule became effective on January 1, 2015. It does not lower the volatile organic compound (VOC) limit for industrial maintenance coatings, but it does lower the limits for certain other coating types.

Rule 324 – Disposal and Evaporation of Solvents: This rule prohibits any source from disposing more than one and a half gallons of any photochemically reactive solvent per day by means that allows the evaporation of the solvent into the atmosphere. Per Condition 9.C.3 of this permit, CSML is required to maintain records to ensure compliance with this rule.

Rule 328 – Continuous Emissions Monitoring: This rule details the applicability and standards for the use of CEMS. Process monitoring systems (e.g. fuel use meters) are used to track emissions. CEMS are required for the GE Jenbacher IC engine to measure the engine exhaust stack concentration for NO_X (as nitrogen dioxide [NO_2]), CO, and O_2 on a dry basis. In addition, the system shall convert the actual NO_X and CO concentrations to corrected NO_X and CO concentrations at 15% oxygen (O_2) and continuously record the stack NO_x and CO concentrations, stack O_2 concentration, and corrected NO_X and CO concentrations at 15% O_2. The permittee will operate the CEMS consistent with the District-approved *CEMS Plan*.

Rule 330 – Surface Coating of Metal Parts and Products: This rule sets standards for many types of coatings applied to metal parts and products. In addition to the ROC standards, this rule sets operating standards for application of the coatings, labeling and recordkeeping. This rule does not apply to architectural coatings. It is not anticipated that J&A Santa Maria II, LLC will trigger the requirements of this rule. Compliance shall be based on site inspections.

Rule 333 – Control of Emissions from Reciprocating Internal Combustion Engines: Section B.1.a exempts spark ignition engines operating on gaseous fuel consisting of 75 percent or more of LFG on a volume basis determined by annual fuel use. This permit requires the IC engine to be operated exclusively on LFG; therefore, the engine is exempt from the emission limits, inspections, testing, and recordkeeping requirements of this rule.

Rule 353 – Adhesives and Sealants: This rule applies to the use of adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primers. Compliance shall be based on site inspections, recordkeeping, and reporting.

Rule 505 – Breakdown Conditions: This rule describes the procedures that J&A Santa Maria II, LLC must follow when a breakdown condition occurs to any emissions unit associated with the J&A Santa Maria II, LLC facility. A breakdown condition is defined as an unforeseeable failure or malfunction of (1) any air pollution control equipment or related operating equipment which causes a violation of an emission limitation or restriction prescribed in the District Rules and

Regulations, or by State law, or (2) any in-stack continuous monitoring equipment, provided such failure or malfunction:

a. Is not the result of neglect or disregard of any air pollution control law or rule or regulation;

b. Is not the result of an intentional or negligent act or omission on the part of the owner or operator;

c. Is not the result of improper maintenance;

d. Does not constitute a nuisance as defined in Section 41700 of the California Health and Safety Code;

e. Is not a recurrent breakdown of the same equipment.

Rule 603 – Emergency Episode Plans: Section A of this rule requires the submittal of a *Stationary Source Curtailment Plan* from any business, commercial, industrial or governmental facility or activity for all stationary sources which can be expected to exceed 100 TPY of hydrocarbons, NO_x, CO, or PM. J&A Santa Maria II, LLC is not required to submit a *Stationary Source Curtailment Plan*.

Rule 810 – Federal Prevention of Significant Deterioration: This rule was adopted January 20, 2011 and amended June 20, 2013 to incorporate the federal PSD rule requirements into the District's rules and regulations. The permit does not trigger federal PSD permit requirements.

3.5 Compliance History

This section contains a summary of the compliance history for this facility and was obtained from documentation contained in the District's Administrative file.

3.5.1 Source Tests: Since the issuance of Part 70/PTO 13281, the District has received four reports for source tests conducted at the facility. These source tests were conducted on December 12, 2018, July 30, 2020, November 30, 2021, and December 13, 2022. The most recent source test for the LFG-fired engine showed compliance with permit limits.

3.5.2 Violations: Table 3.1 lists the violations issued for this facility issued in the last three years.

Table 3.1 - Violations Issued for J&A Santa Maria, LLC

Violation Type	Number	Issue Date	Description of Violation
NOV	13167	08/22/2022	Operating beyond SCDP without a valid District permit.
NOV	13169	08/22/2022	Operation beyond SCDP without a valid PTO
NOV	13203	10/18/2022	District Rule 206 and §95464(b)(4) of Article 4, Sub article 6, Title 17, California Code of Regulations (Methane Emissions from Municipal Solid Waste Landfills) were violated by failing to source test the engine for calendar year 2022 within 45 days of the anniversary date of 08/17/2022.

Violation Type	Number	Issue Date	Description of Violation
NOV	13263	02/23/2023	District Rule 206 was violated by not adhering to condition 6.b of Authority to Construct 14932. Condition 6.b requires that source test results be submitted to the District no later than 45 calendar days after source test completion. The source test was conducted on 12/13/2022, the results were due on 01/27/2023 and the results were received by the District on 02/15/2023.
NOV	13869	12/06/2024	District Rule 206 and and §95464(b)(4) of Article 4, Subarticle 6, Title 17, California Code of Regulations were violated by failing to conduct annual source testing of the LFG-fired engine as required by Condition 9.C.6.a. of Pt-70 13281.

3.5.3 Variances: Since the issuance of the last permit reevaluation, J&A Santa Maria II, LLC has not sought any variances from the District.

3.5.4 Significant Historical Hearing Board Actions: Since the issuance of the last permit reevaluation, there have been no significant historical Hearing Board actions in regards to this facility.

Table 3.2: Generic Federally Enforceable District Rules

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
RULE 101: Compliance by Existing Installations	All emission units	Emission of pollutants	June 1981
RULE 102: Definitions	All emission units	Emission of pollutants	August 25, 2016
RULE 103: Severability	All emission units	Emission of pollutants	October 23, 1978
RULE 201: Permits Required	All emission units	Emission of pollutants	June 19, 2008
RULE 202: Exemptions to Rule 201	Applicable emission units	Insignificant activities/emissions, per size/rating/function	August 25, 2016
RULE 203: Transfer	All emission units	Change of ownership	May 16, 2024
RULE 204: Applications	All emission units	Addition of new equipment or modification to existing equipment.	August 25, 2016
RULE 205: Standards for Granting Permits	All emission units	Emission of pollutants	April 17, 1997
RULE 206: Conditional Approval of Authority to Construct or Permit to Operate	All emission units	Applicability of relevant Rules	October 15, 1991
RULE 207: Denial of Applications	All emission units	Applicability of relevant Rules	October 23, 1978
RULE 208: Action on Applications – Time Limits	All emission units. Not applicable to Part 70 permit applications.	Addition of new equipment of modification to existing equipment.	April 17, 1997
RULE 212: Emission Statements	All emission units	Administrative	October 20, 1992

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
RULE 301: Circumvention	All emission units	Any pollutant emission	October 23, 1978
RULE 302: Visible Emissions	All emission units	PM emissions	June 1981
RULE 303: Nuisance	All emission units	Emissions that can injure, damage or offend.	October 23, 1978
RULE 304: Particulate Matter (PM) Concentration – Northern Zone	Each PM source	Emission of PM in effluent gas	October 23, 1978
RULE 306: Dust and Fumes – Northern Zone	Each PM source	Emission of PM in effluent gas	October 23, 1978
RULE 309: Specific Contaminants	All emission units	Combustion contaminants	October 23, 1978
RULE 311: Sulfur Content of Fuel	All combustion units	Use of fuel containing sulfur	October 23, 1978
RULE 317: Organic Solvents	Emission units using solvents	Solvent used in process operations	October 23, 1978
RULE 321: Solvent Cleaning Operations	Emission units using solvents	Solvent used in process operations	June 21, 2012
RULE 322: Metal Surface Coating Thinner and Reducer	Emission units using solvents	Solvent used in process operations	October 23, 1978
RULE 323: Architectural Coatings	Paints used in maintenance and surface coating activities	Application of architectural coatings	November 15, 2001
RULE 323.1: Architectural Coatings	Paints used in maintenance and surface coating activities.	Application of architectural coatings	January 1, 2015
RULE 324: Disposal and Evaporation of Solvents	Emission units using solvents	Solvent used in process operations	October 23, 1978
RULE 353: Adhesives and Sealants	Emission units using adhesives and sealants	Adhesives and sealants use	June 21, 2012
RULE 505: Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded or rule requirements are not complied with	October 23, 1978
REGULATION VIII (RULES 801-809): New Source Review	All emission units	Addition of new equipment or modification to existing equipment	August 25, 2016
REGULATION VIII (RULE 810): Federal Prevention of Significant Deterioration	All emission units	Addition of new equipment or modification to existing equipment	June 20, 2013
REGULATION IX (RULE 901): New Source Performance Standards	Landfill Surface	Landfill to comply with emission standards found in the regulation	September 20, 2010
REGULATION X (RULE 1001): National Emission Standards for Hazardous Air Pollutants	Emergency Standby Generator, Firewater Engine	Engines to comply with emission standards found in the regulation	October 26, 1993

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
REGULATION XIII (RULES 1301-1305): Part 70 Operating Permits	All emission units	CSML is a major source	August 15, 2024

Table 3.3: Unit-Specific Federally Enforceable District Rules

Unit-Specific Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
RULE 328: Continuous Emission Monitoring	GE Jenbacher Type 4 Model J420 GS-A82 IC engine	BACT and minimizing HAP emissions from IC engine	October 23, 1978

Table 3.4 – Federally Enforceable State Rules

Methane Emissions from MSW Landfills Regulation	Section Description or Requirements
§95461	Regulation applies to all MSW landfills that received waste after January 1, 1977
§95464(a)	Gas collection and control system design plan and installation requirements
§95464(b)	General, flare, and other control devices requirements for the collection and control of gas and source test requirements
§95467	Requirements to be met prior to permanent shutdown and removal of the gas collection and control systems
§95468	Alternative compliance options may be requested in place of the requirements of §95464, §95469, and §95471
§95469(b)	Permittee must monitor the gas control system using the procedure specified in this section
§95470(a)	Records listed in this section must be kept for a minimum of five years
§95470(b)	Reporting requirements include closure notification, equipment removal report, annual reports, waste-in-place report, and LFG heat input capacity report
§95471	Monitoring as specified in this regulation must be conducted according to the test methods and procedure specified in this section
§95472	Basis of penalties and the frequency that penalties can occur
§95473	Implementation, enforcement, and related fees
§95474	Other rules and regulations applying to MSW landfills
§95475	Definitions for this regulation
§95476	Severability condition of regulation

Table 3.5: Non-Federally Enforceable District Rules

Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
RULE 210: Fees	All emission units	Administrative	March 17, 2005
RULE 310: Odorous Organic Sulfides	All emission units	Emission of organic sulfides	October 23, 1978
RULES 501-504: Variance Rules	All emission units	Administrative	October 23, 1978
RULES 506-519: Variance Rules	All emission units	Administrative	October 23, 1978

4.0 Engineering Analysis

4.1 General

The engineering analyses performed for this permit were limited to the review of:

- Emission factors and calculation methods for each emissions unit
- Emission control equipment (including Reasonably Achievable Control Technology [RACT], BACT, NSPS, NESHAP)
- Emission source testing, sampling, CEMS
- Process monitors required to ensure compliance

The equipment located at the J&A Santa Maria II, LLC facility generate air emissions from the following sources:

- LFG-Fired Engine: NO_X, ROC, CO, oxides of sulfur (SO_X), PM, PM_{10} and particulate matter less than 2.5 microns ($PM_{2.5}$) emissions are generated from the combustion of LFG.
- Gas Treatment System: Due to the LFG composition and small number of fugitive components in the gas treatment system, ROC emissions from the collection system are negligible.

4.2 Electrical Generator / LFG-Fired Engine

4.2.1 General: The GE Jenbacher J420 GS-A82 IC engine is connected to an electrical generator, which is used to produce up to 1,426 kW of power. This engine combusts the gas generated by the landfill. When this onsite engine or the engines located at the Marian Medical Center are not operational, LFG is sent to the enclosed flares, which are owned and operated by the CSML.

4.2.2 Emission Factors: The emission factors for NO_X (0.50 g/bhp-hr, 0.1632 lb/million British thermal unit [MMBtu]), ROC (0.40 g/bhp-hr, 0.1306 lb/MMBtu) and CO (2.50 g/bhp-hr, 0.8160 lb/MMBtu) are based on the engine manufacturer's specifications. These emission factors are BACT for this equipment. The SO_X emission factor (0.0034 lb/MMBtu) was determined using mass balance based on the LFG's higher heating value (HHV) of 497 Btu/scf and maximum sulfur content of 10 ppmv (as H_2S). The emission factor for PM of 0.0165 lb/MMBtu are based on source test data submitted with the application for ATC 13281. The PM_{10} and $PM_{2.5}$

emission factors are assumed to be equal to the PM factor based on guidance from USEPA AP-42 for gaseous fueled internal combustion engines.

The emission factor for SO_X was calculating using the following equation:

$$EF_{SO_2} = \frac{ppmv_s}{10^6} * \frac{1}{MV} * MR * MW_{SO_2} * CF * \frac{1}{HHV} * BSFC$$

Where:

EF_{SO2} = Oxides of sulfur emission factor (g/bhp-hr)
$ppmv_s$ = Parts per million sulfur by volume (ft^3 sulfur [S]/10^6 ft^3 fuel)
MV = Molar volume (379 standard ft^3 S/lb-mol S; assumes standard temperature of 60 °F)
MR = Molar ratio (S + O_2 => SO_2; MR = 1)
MW_{SO2} = Molecular weight of sulfur dioxide (64 lb/lb-mol)
CF = Grams to pounds conversion factor (453.6 g/lb)
HHV = Higher heating value of fuel (Btu/standard ft^3)
BSFC = Engine brake-specific fuel consumption - HHV based (Btu/bhp-hr)

Dimensional Analysis:

$$\frac{g}{bhp-hr} = \frac{ft^3\ S}{10^6\ ft^3\ fuel} * \frac{lb-mol\ S}{std\ ft^3\ S} * \frac{lb-mol\ SO_2}{lb-mol\ S} * \frac{lb\ SO_2}{lb-mol\ SO_2} * \frac{g\ SO_2}{lb\ SO_2} * \frac{std\ ft^3\ fuel}{Btu} * \frac{Btu}{bhp-hr}$$

To convert the BACT limits in g/bhp-hr to lb/MMBtu the following equation was used:

$$\frac{lb}{MMBtu} = \frac{g}{bhp-hr} * \frac{1}{CF} * \frac{1}{BSFC} * \frac{10^6\ Btu}{MMBtu}$$

$EF_{lb/MMBtu} = EF_{g/bhp-hr} \times 1/CF1 \times 1/BSFC \times 10^6$ Btu/MMBtu

Where:

CF = Grams to pounds conversion factor (453.6 g/lb)
BSFC = Engine brake specific fuel consumption (Btu/bhp-hr)

4.2.3 Emission Controls: There are no add-on emission controls associated with the engine. The engine has a low-NO_X lean-burn design and an air-fuel-ratio controller. The engine must operate at a minimum temperature based on a three-hour block average. This minimum temperature requirement is established by the LMR, Subpart AAAA and the most recent compliant source test.

4.3 LFG Treatment System

4.3.1 General: LFG is received from the CSML-owned and -operated LFG collection system. Before being sent to the onsite LFG-fired engine or the Marian Medical Center, the LFG is routed through the LFG treatment system. This system compresses the LFG, reduces the LFG temperature to ambient temperature using an aftercooler, and removes entrained liquids, particles and siloxanes via a coalescing filter. Since the LFG is mostly CH_4 and CO_2, fugitive ROC emissions from the LFG treatment system are assumed to be negligible.

4.4 BACT/NSPS/NESHAP/MACT

4.4.1 BACT: Best Available Control Technology is required for the LFG-fired engine for NO_X and ROC because the uncontrolled emissions exceed the BACT threshold of 25 lb/day. The IC engine must meet the following performance standards: 0.50 g/bhp-hr (38 ppmvd at 15% O_2) for NO_x, 0.40 g/bhp-hr (86 ppmvd at 15% O_2 as methane) for ROC, and 2.50 g/bhp-hr (308 ppmvd at 15% O_2) for CO. BACT emission factors are documented in Section 4.2.2 and Table 4.1.

4.4.2 NSPS: Discussion of applicability and compliance status regarding with NSPS (LMR, missing elements of Subpart OOO and Subpart JJJJ) is presented in Section 3.2. An engineering analysis for the affected equipment is found in the sections above.

4.4.4 NESHAP: This facility is not subject to the provisions of 40 CFR Part 61.

4.4.4 MACT: J&A Santa Maria II, LLC is subject to the USEPA-promulgated MACT standards of Subpart AAAA and Subpart ZZZZ. Note that Subpart AAAA monitoring deviation occurs when one or more hours during the three-hour block averaging period does not constitute a valid hour of data. Each valid one-hour data consists of measured values for at least three 15-minute monitoring periods within that hour.

Discussion of applicability regarding with Subpart ZZZZ is presented in Section 3.2. These requirements have been included in this permit under Section 9.C to ensure J&A Santa Maria II, LLC's compliance with these federal standards.

4.5 CEMS/Process Monitoring/Meter Calibration

4.5.1 CEMS: A CEMS is required to monitor emissions and process parameters in order to confirm continuous compliance with the permit conditions. Table 4.2 provides details on the CEMS requirements for the LFG-fired engine. In order for the District to assess facility operation status and to ensure major emission sources are operating properly, selected monitor data is telemetered to the District offices on a real-time basis. Both calculated and raw data is telemetered in accordance with District specifications for the life of the project, as required by the applicable permit conditions.

The CEMS shall measure the engine exhaust stack raw concentration for NO_X (as NO_2), CO, and O_2 on a dry basis. In addition, the system shall convert the raw NO_X and CO concentrations to corrected NO_X and CO concentrations at 15% O_2. The District may require additional continuous emission monitors and redundant monitor system components in the future, if problems with the facility or monitoring operations that warrant additional monitoring develop.

The monitors must meet the requirements set forth in District Rule 328 as well as 40 CFR Parts 51, 52, and 60. Monitors must be operated in accordance with manufacturer's specifications and USEPA requirements as specified in the CFR.

The permittee is required to follow the District's *Continuous Emission Monitoring Protocol Manual* (October 2, 1992 and any updates thereof). The permittee shall operate the CEMS consistent with the District-approved *CEMS Plan*. Any modifications or updates to the *CEMS Plan* must also be approved by the District.

All continuously-monitored parameters must be recorded on a computer or data logger. The required data will be consolidated and submitted to the District as required by Conditions 9.C.7 and 9.C.8 of this permit. More frequent reporting may be required if the District deems this

necessary. Minimum data reporting requirements must be consistent with District Rule 328 and must include the following:

- Hourly data summaries for each parameter
- Summary of monitor downtime, including explanation and corrective action
- Report on compliance with permit requirements, including any corrective action being taken
- Operator log entries and/or discs must be provided upon request by the District

4.5.2 Process Monitoring: In many instances, ongoing compliance beyond a single snap shot source test is assessed through process monitoring systems. Once these process monitors are in place, it is important that they be well maintained and calibrated to ensure that the required accuracy and precision of the devices are within specifications. At a minimum, the following process monitors are required to be operated, calibrated (as applicable), and maintained in good working order:

Gas Treatment System

- Flow meter for LFG

Electrical Generator

- NO_X, CO, and O_2 analyzers for exhaust stack
- Thermocouple for combustion temperature
- Flow meter for exhaust stack
- Flow meter for LFG
- Non-resettable hour meter

To ensure that appropriate calibration and maintenance procedures are applied to the process monitors, the permittee shall adhere to the District-approved *Engine Inspection and Maintenance Plan*. This plan shall take into consideration manufacturer-recommended maintenance and calibration schedules. Where manufacturer guidance is not available, the recommendations of comparable equipment manufacturers and good engineering judgment shall be utilized.

As necessary to ensure compliance with this permit and applicable rule and regulations, the District may require J&A Santa Maria II, LLC, by written notice, to install additional process monitors. Table 4.3 contains the minimum process monitoring requirements for the J&A Santa Maria II, LLC.

4.6 Source Testing/Sampling

4.6.1 Source Testing: J&A Santa Maria II, LLC is required to follow the District *Source Test Procedures Manual* (May 24, 1990 and any updates thereof). Source testing and sampling are required in order to ensure compliance with BACT, permitted emission limits, prohibitory rules, control measures, and the assumptions that form the basis of this operating permit. In addition to compliance source testing a Relative Accuracy Test Audit (RATA) is required annually to verify performance of the CEMS.

The parameters to be source tested annually are listed below, and include more specific requirements as identified in Table 4.4. Source testing requirements can be found in

Condition 9.C.6. The District may require additional source testing if problems develop or if unique circumstances occur that warrant special testing. The following emissions points and control/monitoring systems are required to be source tested:

- LFG-Fired Engine: NO_X, ROC, CO, and CH_4 (as hexane)

4.6.2 Sampling: At a minimum, the process stream below is required to be sampled and analyzed:

Weekly Basis

- LFG heat content (Btu/scf)

Quarterly Basis

- LFG sulfur content (ppmv as H_2S)
- LFG methane (percent by volume)
- LFG carbon dioxide (percent by volume)

As necessary to ensure compliance with this permit and applicable rule and regulations, the District may require the permittee, by written notice, to sample additional process streams in a manner and frequency specified by the District. All sampling and analyses are required to be performed according to District-approved procedures and methodologies. Typically, the appropriate American Society for Testing Materials (ASTM) methods are acceptable. It is important that all sampling and analysis be traceable by chain of custody procedures.

4.7 Part 70 Engineering Review: Hazardous Air Pollutant Emissions

HAP emissions and emission factors for the LFG-fired engine were determined based on a J&A Santa Maria Medical Center LFG-fired engine source test and supplemented with factors from California Air Resources Board's (CARB) California Air Toxics Emission Factor Database (CATEF) for IC engines operating on LFG. The HAP factors and emission estimates are documented in Table 5.5.

Table 4.1: Best Available Control Technology Requirements

Emission Source	Pollutant	BACT Technology	BACT Performance Standard
LFG-Fired Engine	NO_X	Low-NO_X, lean burn design, air to fuel controller	0.50 g/bhp-hr, 38 ppmvd at 15% O_2
LFG-Fired Engine	ROC	Low-NO_X, lean burn design, air to fuel controller	0.40 g/bhp-hr, 86 ppmvd at 15% O_2 (as methane)

Table 4.2: LFG-Fired CEMS Requirements

Location	Parameter Monitored	Monitoring Method	Units
LFG-Fired Engine Exhaust Stack	NO_X	NO_X Analyzer [2, 3, 4, 5]	lb/hr; raw ppmvd; ppmvd at 15% O_2
	O_2	O_2 Analyzer [2, 3, 4, 5]	lb/hr; raw ppmvd; ppmvd at 15% O_2
	CO	CO Analyzer [2, 3, 4, 5]	lb/hr; raw ppmvd; ppmvd at 15% O_2
	Temperature	Thermocouple [2, 3]	°F
	Flow Rate	Annubar [2, 3, 5] (or equivalent)	scf/minute
LFG Fuel Feed	Flow Rate	Process Flow Meter [2, 3, 5]	scf/minute
N/A	Mode	Process Monitors [2, 3]	Mode

Notes:

1. Parameters in addition to those listed must be monitored continuously if deemed necessary by the District.
2. All table parameter raw data must be permanently recorded using a computer or data/logger.
3. All table parameters must be monitored continuously and reported to the District on a semi-annual basis. Electronic data files must be provided in a format approved by the District.
4. Parameter monitoring must be telemetered to the District. NO_X as NO_2.
5. Emissions monitoring instrument must be performance certified annually (or more often if this is deemed necessary by the District) in accordance with 40 CFR 60 Appendix B and 40 CFR 50 Appendix E, or equivalent method approved by the District. Flow meter shall be calibrated per the *CEMS Plan*.
6. Monitoring and reporting frequency per District CEMS Protocol and the permittee's District-approved *CEMS Plan*.

Table 4.3: Process Monitoring Requirements

Parameter Number	Monitoring Location	Parameter Monitored	Monitoring Method
1	Gas Treatment System Inlet	LFG Flow Rate	Process Flow Meter
2	LFG-Fired Engine Inlet	LFG Flow Rate	Process Flow Meter
3	LFG-Fired Engine Outlet	NO_X	NO_X Analyzer
		O_2	O_2 Analyzer
		CO	CO Analyzer
		Temperature	Thermocouple
		Flow Rate	Annubar (or Equivalent)
4	LFG-Fired Engine	Hours of Operation	Non-Resettable Hour Meter

Table 4.4: LFG-Fired Engine Source Test Requirements

Emission and Limit Test Points	Pollutants	Parameters [(a)]	Test Methods [(b)(c)]	Destruction Efficiency [(d)]	Concentration (ppmvd at 15% O_2)	Mass Emissions (lb/hr)
LFG- Fired Engine Exhaust Stack	NO_x	ppmv, lb/hr	EPA Method 7E, CARB Method 100		38	2.17
	ROC [(e)]	Inlet and outlet ppmv, lb/hr	EPA Method 25, EPA Method 25A[(f)], EPA Method 25C [(g)]	98% (mass basis)	86 (as methane)	1.73
					20 ppmvd at 3% O_2 (as hexane)	1.73
	Methane	outlet ppmv	EPA Method 18, EPA Method 25, EPA Method 25A [(f)]		3,000	
	CO	ppmv, lb/hr	EPA Method 10, CARB Method 100		308	10.84
	Sampling Point Determination		EPA Method 1			
	Stack Gas Flow Rate	scfm	EPA Method 2			
	O_2	Dry, Mol. Wt	EPA Method 3			
	Moisture Content	percent	EPA Method 4			
	Temperature [(h)]	°C or °F	Thermocouple			
	Generator Output	kW	Plant Meter			
	Fuel Gas Flow Rate	scfm	Fuel Gas Meter [(i)]			
Fuel Gas	Higher Heating Value	Btu/scf	ASTM D 1826-88			
	Total Sulfur Content [(j)]	ppm	ASTM D 1072			
IC Engine Setup		Ignition Timing	Setting used during test to be documented			

Table Notes:

(a) The emission rates shall be based on EPA Methods 2 and 4, or Method 19 along with the heat input rate. Measured NO_x, ROC, CH_4, and CO ppmvd shall not exceed the limits specified in Condition 9.C.2.a.i.

(b) Alternative methods may be acceptable on a case-by-case basis.

(c) A minimum of three 40-minute runs shall be obtained during each test.

(d) Destruction rate efficiency = [100 × (inlet mass – outlet mass)] ÷ (inlet mass)

(e) The permittee shall either comply with the ROC requirements of 98% destruction efficiency and 86 ppmv at 15% O_2 (as methane), or 20 ppmv at 3% O_2 (as hexane).

(f) EPA Method 25A should be used in place of EPA Method 25 in cases where the outlet concentration of NMOC is less than 8 ppmv as hexane (or 50 ppmv as carbon).

(g) EPA Method 25C may only be used on the LFG-fired engine inlet.

(h) Temperature to be measured every 15 minutes at a minimum and averaged over the course of the source test.

(i) Fuel meter shall be calibrated in accordance with Condition 9.C.6.a. Results shall be corrected for temperature and pressure at standard temperature and pressure (STP) [60 °F and 14.7 pound per square inch absolute {psia}].
(j) Total sulfur content fuel samples shall be obtained using EPA Method 18 with Tedlar Bags (or equivalent) equipped with Teflon tubing and fittings. Turnaround time for laboratory analysis of these samples shall be no more than 24 hours from sampling in the field. Results shall be reported as H_2S.
(k) Source testing shall be performed for the IC engine in an "as found" condition operating at a representative, District-approved, IC engine load (scf/hr and kW).
(l) Equations found in Subpart JJJJ §60.4244 shall be used to convert ppmv exhaust concentrations to g/bhp-hr emission rates.

5.0 Emissions

5.1 General

Emissions calculations are divided into permitted and permit-exempt categories. District Rule 202 lists which equipment is exempt from permit. The permitted emissions for each emissions unit are based on the equipment's PTE as defined by Rule 102. Section 5.2 details the permitted emission limits for each emission unit. Section 5.3 details the overall permitted emissions for the facility based on reasonable worst case scenarios using the PTE for each emissions unit. Section 5.4 provides the estimated HAP emissions from J&A Santa Maria II, LLC facility. Section 5.5 discusses permit exempt equipment. In order to accurately track the emissions from a facility, the District uses a computer database. Attachment 10.3 contains the District's documentation for the information entered into that database.

5.2 Permitted Emission Limits - Emission Units

Table 5.1-1 specifies the horsepower rating, heat input rating (MMBtu/day and MMBtu/year), operating schedule, and fuel properties of the LFG-fired engine. Table 5.1-2 lists emission factors used to calculate the engine's PTE. The daily and annual LFG-fired engine PTE are listed in Table 5.1-3 using the input parameters provided in Tables 5.1-1 and 5.1-2.

5.3 Permitted Emission Limits - Facility Totals

Total permitted facility emissions, based on permitted emissions from each emissions unit, are reported in Table 5.2. The federal PTE based on the definition of PTE found in District Rule 1301 is reported in Table 5.3. Additionally, the PTE for the CSML stationary source is shown in Table 5.4.

5.4 Part 70: Hazardous Air Pollutant Emissions for the Facility

Table 5.5 lists HAP emission factors for the equipment permitted herein and the estimated HAP emissions attributed to J&A Santa Maria II, LLC.

5.5 Permit-Exempt Emission Sources/Part 70 Insignificant Emissions

The following facility equipment and activities are exempt from permit: routine surface coating maintenance (Rule 202.D.8). Insignificant activities are defined under District Rule 1301 as any activities with a PTE less than two TPY, or any HAP PTE less than 0.5 TPY. No emission units at J&A Santa Maria II, LLC are considered insignificant emission units.

Table 5.1-1: Combustion Equipment Information

Engine Description	Device ID	Specifications			Operating Schedule				Fuel Properties	
		Fuel Type	Unit Rating (bhp)	Brake Specific Fuel Consumption (Btu/bhp-hr)	On-Line		Heat Input Limit		HHV[1] (Btu/scf)	Total Sulfur (ppmv)
					hr/day	hr/year	MMBtu/day	MMBtu/year		
GE Jenbacher J420 GS-A82	393304	LFG	1,966	6,754	24	8,760	318.681	116,318.469	497	10

Notes:

1. 497 Btu/scf is a representative heating value, the actual heat value of the gas varies throughout the year.

Table 5.1-2: Combustion Equipment Emission Factors

Engine Description	Device ID	NO_X	ROC	CO	SO_X	PM	PM_{10}	$PM_{2.5}$	GHG	Units
GE Jenbacher J420 GS-A82	393304	0.1632	0.1306	0.8160	0.0034	0.0165	0.0165	0.0165	115.373	lb/MMBtu

Notes:

1. NO_X emission factor based on 0.50 g/bhp-hr value from manufacturer's specifications.
2. ROC emission factor based on 0.40 g/bhp-hr value from manufacturer's specifications and assumption that the ROC/THC ratio is 1:1.
3. CO emission factor based on 2.50 g/bhp-hr value from manufacturer's specifications.
4. SO_X emission factor based on fuel properties found in Table 5.1-1 and mass balance.
5. PM emission factor based on source test data from the application for ATC 13281.
6. PM_{10} and $PM_{2.5}$ emission factors are assumed to be equal to the PM emission factors based on guidance from USEPA.
7. GHG emission factor based on Table C-2 of Part 98 Subpart C.

Table 5.1-3: Combustion Equipment Potential to Emit

Engine Description	Device ID	NO_x		ROC		CO		SO_x		PM		PM_{10}		$PM_{2.5}$		GHG	
		lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY
GE Jenbacher J420 GS-A82	393304	52.01	9.49	41.61	7.59	260.05	47.46	1.08	0.20	5.26	0.96	5.26	0.96	5.26	0.96	36,767.15	6,710.01
Emission Totals		**52.01**	**9.49**	**41.61**	**7.59**	**260.05**	**47.46**	**1.08**	**0.20**	**5.26**	**0.96**	**5.26**	**0.96**	**5.26**	**0.96**	**36,767.15**	**6,710.01**

Table 5.2
J&A Santa Maria II, LLC - PT-70/Reeval 13281-R1
Facility Potential to Emit (FID: 10854)

Equipment Category	NO_x		ROC		CO		SO_x		PM		PM_{10}		$PM_{2.5}$		GHG	
	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY
Combustion Equipment - IC Engine	52.01	9.49	41.61	7.59	260.05	47.46	1.08	0.20	5.26	0.96	5.26	0.96	5.26	0.96	36,767.15	6,710.01
Total Emissions	**52.01**	**9.49**	**41.61**	**7.59**	**260.05**	**47.46**	**1.08**	**0.20**	**5.26**	**0.96**	**5.26**	**0.96**	**5.26**	**0.96**	**36,767.15**	**6,710.01**

Table 5.3
J&A Santa Maria II, LLC - PT-70/Reeval 13281-R1
Federal Potential to Emit (FID: 10854)

Equipment Category	NO_x		ROC		CO		SO_x		PM		PM_{10}		$PM_{2.5}$		GHG	
	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY
Combustion Equipment - IC Engine	52.01	9.49	41.61	7.59	260.05	47.46	1.08	0.20	5.26	0.96	5.26	0.96	5.26	0.96	36,767.15	6,710.01
Total Emissions	**52.01**	**9.49**	**41.61**	**7.59**	**260.05**	**47.46**	**1.08**	**0.20**	**5.26**	**0.96**	**5.26**	**0.96**	**5.26**	**0.96**	**36,767.15**	**6,710.01**

Table 5.4
J&A Santa Maria II, LLC - PT-70/Reeval 13281-R1
Stationary Source Potential to Emit (SSID: 08713)

Facility	NO_x		ROC		CO		SO_x		PM		PM_{10}		$PM_{2.5}$	
	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY	lb/day	TPY
City of Santa Maria Landfill (FID: 08704)	39.74	4.46	144.26	25.92	211.38	35.14	24.60	4.49	10.51	1.76	10.51	1.76	10.51	1.76
J&A Santa Maria - Main St (FID: 10854)	52.01	9.49	41.61	7.59	260.05	47.46	1.08	0.20	5.26	0.96	5.26	0.96	5.26	0.96
Total Emissions	**91.75**	**13.95**	**185.87**	**33.52**	**471.43**	**82.60**	**25.68**	**4.68**	**15.77**	**2.72**	**15.77**	**2.72**	**15.77**	**2.72**

Table 5.5 - Annual HAP Emissions

Hazardous Air Pollutant	Emission Factor (lb/MMscf)	Emissions (TPY)
Benzene	9.48E-03	0.00
Carbon Tetrachloride	1.14E-04	0.00
Chloroform	1.13E-04	0.00
Ethylene Dibromide	1.12E-04	0.00
Ethylene Dichloride	5.08E-03	0.00
Formaldehyde	1.49E+00	0.17
Hydrogen Chloride	2.07E+00	0.24
Methyl Chloroform	1.11E-04	0.00
Methylene Chloride	1.30E-04	0.00
Polycyclic Organic Matter	7.42E-04	0.00
Perchloroethylene	5.84E-04	0.00
Trichloroethylene	1.49E-03	0.00
Vinyl Chloride	1.63E-04	0.00
Facility Total HAP Emissions		**0.42**

Notes:

1. Emission factors are based on the J&A Santa Maria Marian Medical LFG-fired IC engine source test performed on April 12, 2013. Maximum emission factors for landfill gas fired engines from CARB's CATEF database were used to supplement the source test data for those pollutants that were not included in the source testing.
2. These are estimates only, and are not intended to represent emission limits.

6.0 Air Quality Impact Analyses

6.1 Modeling

An ambient air quality standard (AAQS) analysis has not been required for this facility.

6.2 Increments

In April 2011, an increment analysis was conducted by West Coast Environmental and Engineering on behalf of J&A Santa Maria II, LLC, prior to the installation of the IC engine at CSML. The increment analysis was conducted using the USEPA Industrial Source Complex – Short Term Model (ISC-ST3) as required by the District. The District reviewed the increment analysis submittal and the associated files, made appropriate changes to the model, and re-ran the analysis using Lakes AERMOD View software running the ISC-ST3 model. Ground level concentration (GLC) values for ROC were calculated and compared to maximum allowable increase increments specified in District Rule 803. The calculated concentrations are as follows:

3-Hour Max GLC	**Maximum Allowable Increase**
24.17 µg ROC/m^3	**40-160 µg ROC/m^3**

Based on these results, the IC engine at the facility did not cause an increment to be exceeded. See ATC 13281 for complete details regarding the increment analysis.

6.3 Monitoring

Air quality monitoring is not required for this facility.

6.4 Health Risk Assessment

In April 2011, an air toxics Health Risk Assessment (HRA) was conducted by West Coast Environmental and Engineering on behalf of J&A Santa Maria II, LLC, prior to the installation of the IC engine at CSML. This HRA included the emissions from the IC engine, as well as the emissions from CSML's enclosed ground flare and the fugitive emissions from the landfill itself. Marian Medical also operates an IC engine using LFG from the Santa Maria Landfill, but those emissions were not included in this modeling, as that equipment is not considered a part of this stationary source.

The HRA was conducted using the Hotspots Analysis and Reporting Program (HARP) software, Version 1.4c (Build 23.09.06). Cancer risk and chronic and acute non-cancer Hazard Index (HI) risk values were calculated and compared to significance thresholds adopted by the District's Board of Directors. The calculated risk values and applicable thresholds are as follows:

	CSML Max Risks	Significance Thresholds
Cancer risk:	3.7/million	≥10/million
Chronic non-cancer risk:	0.02	>1
Acute non-cancer risk:	0.37	>1

Based on the results, the equipment at the CSML stationary source does not present a significant risk to the surrounding community. See ATC 13281 for complete details regarding this HRA.

A new flare and emergency standby diesel generator were installed at CSML under ATC 15730. In March 2023, an HRA was conducted for just this project using AERMOD Build 21112 in Lakes' AERMOD View, Version 10.2.1 and the Hotspots Analysis and Reporting Program software Version 2 (HARP 2), Build 22118. SCS Engineers submitted the HRA for the project on behalf of the City of Santa Maria, and the District revised the modeling and completed the final HRA and report. Cancer risk and non-cancer HI risk values were calculated and compared to significance thresholds adopted by the District's Board of Directors. The calculated risk values and applicable thresholds are as follows:

	ATC 15730 Max Risks	Significance Thresholds
Cancer risk:	0.5/million	≥10/million
Chronic non-cancer risk:	<0.01	>1
8-hour chronic non-cancer risk:	<0.01	>1
Acute non-cancer risk:	0.08	>1

The risk assessment results show that the new flare and engine at CSML do not present a significant risk to the surrounding community. Furthermore, the risk results are less than ten percent of the District's significant risk thresholds. In addition, the health risk from the entire stationary source will be reevaluated under the AB 2588 Air Toxics "Hot Spots" Program.

7.0 CAP Consistency, Offset Requirements and ERCs

7.1 General

Santa Barbara County is in nonattainment for the State of California's PM_{10} ambient air quality standard. Further, the County is currently in nonattainment-transitional status for the State ozone standards. Emissions from all emission units at the stationary source and its constituent facilities must be consistent with the provisions of the USEPA and State-approved Clean Air Plans (CAP) and must not interfere with progress towards attainment of federal and state ambient air quality standards. Under District regulations, any modifications at the source that result in an emissions increase of any nonattainment pollutant exceeding 25 lb/day must apply BACT. Additional increases may trigger offsets at the source or elsewhere so that there is a net air quality benefit for Santa Barbara County. These offset threshold levels are 240 lb/day for all attainment pollutants and precursors (except CO and $PM_{2.5}$) and 25 tons/year for all non-attainment pollutants and precursors (except CO and $PM_{2.5}$).

7.2 Clean Air Plan

The 2007 Clean Air Plan, adopted by the District Board on August 16, 2007, addressed both federal and state requirements, serving as the maintenance plan for the federal eight-hour ozone standard and as the state triennial update required by the Health and Safety Code to demonstrate how the District will expedite attainment of the state eight-hour ozone standard. The plan was developed for Santa Barbara County as required by both the 1998 California Clean Air Act and the 1990 Federal Clean Air Act Amendments. In December 2022, the District Board adopted the 2022 Ozone Plan, which satisfies all state triennial planning requirements.

7.3 Offset Requirements

Per the District's revised NSR rules adopted on August 25, 2016, the CSML stationary source is not required to offset emissions at this time because this permitting action is not subject to NSR. Furthermore, this project is exempt from emission offsets under California Health and Safety Code Section §42314. See Section 1.5 for more details.

7.4 Emission Reduction Credits

The CSML stationary source does not generate or provide emission reduction credits.

8.0 Lead Agency Permit Consistency

The District is the lead agency for this permitting process. Pursuant to California Environmental Quality Act (CEQA) Guidelines §15300.4 and Section 1 of Appendix A (District List of Exempt Projects) of the District's Environmental Review Guidelines document (dated 11/2000), the issuance of this reevaluation/PTO is exempt from CEQA.

9.0 Permit Conditions

This section lists the applicable permit conditions for the J&A Santa Maria II, LLC facility. Section 9.A lists the standard administrative conditions. Section 9.B lists generic permit conditions, including emission standards, for all equipment in this permit. Section 9.C lists conditions affecting specific equipment. Section 9.D lists District and State enforceable permit conditions. Conditions listed in Sections 9.A, 9.B, and 9.C are enforceable by the USEPA, the District, the State of California and the public. Conditions listed in Section D are enforceable only by the District and the State of California. Where any reference contained in Sections 9.A, 9.B, or 9.C refers to any other part of this permit, that part of the permit referred to is federally enforceable. In case of a discrepancy between the wording of a condition and the applicable federal or District rule(s), the wording of the rule shall control.

For the purposes of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this permit, nothing in the permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed.

Permit Conditions Table of Contents

9.A Standard Administrative Conditions

A.1 **Consistency with Analysis.** Operation under this permit shall be conducted by the permittee consistent with all written data, specifications and assumptions included with the application and supplements thereof (as documented in the District's project file) and with the District's analyses under which this permit is issued as documented in the permit analyses prepared for and issued with this permit. [*Ref: District Rule 206*]

A.2 **Grounds for Revocation.** Failure to abide by and faithfully comply with this permit shall constitute grounds for the APCO to petition for permit revocation pursuant to California Health and Safety Code Section 42307 et seq. [*Ref: District Rule 1303*]

A.3 **Equipment Maintenance.** The equipment listed in this permit shall be properly maintained and kept in good condition at all times. The equipment manufacturer's maintenance manual, maintenance procedures and/or maintenance checklists (if any) shall be kept on site. [*Ref: District Rule 206*]

A.4 **Reimbursement of Costs.** All reasonable expenses, as defined in District Rule 210, incurred by the District, District contractors, and legal counsel for all activities that follow the issuance of this permit, including but not limited to permit condition implementation, compliance verification and emergency response, directly and necessarily related to enforcement of the permit shall be reimbursed by the permittee as required by Rule 210. Reimbursable activities include work involving: CEMS, modeling/AQIA, DAS and data telemetry. Notwithstanding the above, DAS system operation and maintenance shall be assessed fees based on a fee schedule as provided by the District. [*Ref: District Rule 210*]

A.5 **Access to Records and Facilities.** As to any condition that requires for its effective enforcement the inspection of records or facilities by the District or its agents, the permittee shall make such records available or provide access to such facilities upon notice from the District. Access shall mean access consistent with California Health and Safety Code §41510 and Clean Air Act Section 114A. [*Ref: District Rule 1303*]

A.6 **Compliance.** Nothing contained within this permit shall be construed by the permittee to allow the violation of any local, State or Federal rule, regulation, ambient air quality standard or air quality increment. [*Ref: District Rule 1303*]

A.7 **Conflict Between Permits.** The requirements or limits that are more protective of air quality shall apply if any conflict arises between the requirements and limits of this permit and any other permitting actions associated with the equipment permitted herein. [*Ref: District Rule 1303*]

A.8 **Complaint Response.** The permittees shall provide the District with the current name and position, address and 24 hour phone number of a contact person who shall be available to respond to complaints from the public concerning nuisance or odors. This contact person shall aid the District staff, as requested by the District, in the investigation of any complaints received; the permittees shall take corrective action, to correct the facility activity which is reasonably believed to have caused the complaint. [*Ref: District Rule 206*]

A.9 **Consistency with State and Local Permits.** Nothing in this permit shall relax any air pollution control requirements imposed on the project by the permits required by federal, state, or other local agencies and any subsequent modifications of those permits. [*Ref: District Rule 206*]

A.10 **Compliance with Permit Conditions.**

a. The permittee shall comply with all permit conditions.

b. This permit does not convey property rights or exclusive privilege of any sort.

c. Any permit noncompliance constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.

d. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

e. A pending permit action or notification of anticipated noncompliance does not stay any permit condition.

f. Within a reasonable time period, the permittee shall furnish any information requested by the Control Officer, in writing, for the purpose of determining:

i. Compliance with the permit, or

ii. Whether or not cause exists to modify, revoke and reissue, or terminate a permit or for an enforcement action.

g. In the event that any condition herein is determined to be in conflict with any other condition contained herein, then, if principles of law do not provide to the contrary, the condition most protective of air quality and public health and safety shall prevail to the extent feasible. [*Ref: 40 CFR §70.5(a)(6)(iii*); *District Rules 1303.D.1.j, 1303.D.1.n, 1303.D.1.l, 1303.D.1.k, and 1303.D.1.o*]

A.11 **Emergency Provisions.** Revoked.

A.12 **Compliance Plan.**

a. The permittee shall comply with all requirements that become applicable during the permit term, in a timely manner.

b. For all applicable equipment, the permittee shall implement and comply with any specific compliance plan required under any rules or standards. [*Ref: District Rule 1302.D.2*]

A.13 **Right of Entry.** The Control Officer or their authorized representatives, upon the presentation of credentials, shall be permitted to enter upon the premises where a source is located or where records must be kept:

a. To inspect at reasonable times the stationary source, including monitoring and control equipment, work practices, operations, and emission-related activity;
b. To inspect and duplicate, at reasonable times, records required by this ATC;

c. To sample substances or monitor emissions from the source or assess other parameters to assure compliance with the permit or applicable requirements, at reasonable times. [*Ref: District Rule 1303.D.2.a*]

A.14 **Severability.** The provisions of this permit are severable and if any provision of this permit is held invalid, the remainder of this permit shall not be affected thereby. [*Ref: District Rule 103; District Rule 1303.D.1.i*]

A.15 **Permit Life.** The Part 70 permit shall become invalid three years from the date of issuance unless a timely and complete renewal application is submitted to the District. Any operation of the source to which this Part 70 permit is issued beyond the expiration date of this Part 70 permit and without a valid Part 70 operating permit (or a complete Part 70 permit renewal application) shall be a violation of the CAAA, §502(a) and 503(d) and of District rules.

The permittees shall apply for renewal of the Part 70 permit no earlier than 18 months and not later than six months before the date of the permit expiration. Upon submittal of a timely and complete renewal application, the Part 70 permit shall remain in effect until the Control Officer issues or denies the renewal application. [*Re: District Rule 1304.D.1*]

A.16 **Payment of Fees.** The permittees shall reimburse the District for all its Part 70 permit processing and compliance expenses for the stationary source on a timely basis. Failure to reimburse on a timely basis shall be a violation of this permit and of applicable requirements and can result in forfeiture of the Part 70 permit. Operation without a Part 70 permit subjects the source to potential enforcement action by the District and the USEPA pursuant to Section 502(a) of the Clean Air Act. [*Re: District Rules 1303.D.1; District Rule 1304.D.11; 40 CFR 70.6(a)(7*)]

A.17 **Prompt Reporting of Deviations.** The permittee shall submit a written report to the District documenting each and every deviation from the requirements of this permit or any applicable federal requirements within 7 days after discovery of the violation, but not later than 180 days after the date of occurrence. The report shall clearly document 1) the probable cause and extent of the deviation, 2) equipment involved, 3) the quantity of excess pollutant emissions, if any, and 4) actions taken to correct the deviation. The requirements of this condition shall not apply to deviations reported to District in accordance with Rule 505: Breakdown Conditions. [*Ref: 40 CFR §70.6(a)(3); 40 CFR Subpart ZZZZ §63.6650(g)(2)*]

A.18 **Reporting Requirements/Compliance Certification.** The permittee shall submit compliance certification reports to both the USEPA and Control Officer every six months. These reports shall be submitted on District forms and shall identify each applicable requirement/condition of the permit, the compliance status with each requirement/condition, the monitoring methods used to determine compliance, whether the compliance was continuous or intermittent, and include detailed information on the

occurrence and correction of any deviations (excluding emergency upsets) from permit requirement. The reporting periods shall be each half of the calendar year (e.g., January through June for the first half of the year). These reports shall be submitted by September 1st and March 1st, respectively, each year. Supporting monitoring data shall be submitted in accordance with Condition 9.C.8. The permittee shall include a written statement from the responsible official, which certifies the truth, accuracy, and completeness of the reports. [*Ref: District Rule 1303.D.1; District Rule 1302.D.3; District Rule 1303.2.c*]

A.19 **Recordkeeping Requirements**. A record of required monitoring information includes the following:

a. The date, place as defined in the permit, and time of sampling, measurements, or maintenance activity;

b. The date(s) analyses or measurements were performed;

c. The company or entity that performed the analyses, measurements, or maintenance activities;

d. The analytical techniques or methods used;

e. The results of such analyses or measurements;

f. The operating conditions as existing at the time of sampling, measurements, or maintenance activity.

The records (electronic and hard copy), as well as all supporting information including calibration and maintenance records, shall be maintained for a minimum of five (5) years from date of initial entry by the permittee and shall be made available to the District upon request. [*Ref: District Rule 1303.D.1.f; 40 CFR §70.6(a)(3)(ii)(A)*]

A.20 **Conditions for Permit Reopening.** The permit shall be reopened and revised for cause under any of the following circumstances:

a. Additional Requirements: If additional applicable requirements (e.g. NSPS or MACT) become applicable to the source which has an unexpired permit term of three (3) or more years, the permit shall be reopened. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. However, no such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended. All such re-openings shall be initiated only after a 30 day notice of intent to reopen the permit has been provided to the permittee, except that a shorter notice may be given in case of an emergency.

b. Inaccurate Permit Provisions: If the District determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit, the permit shall be reopened. Such re-openings shall be made as soon as practicable.

c. Applicable Requirement: If the District determines that the permit must be revised or revoked to assure compliance with any applicable requirement, the permit shall be reopened. Such re-openings shall be made as soon as practicable.

d. Administrative Procedures: To reopen a permit shall follow the same procedures as apply to initial permit issuance. Re-openings shall affect only those parts of the permit for which cause to reopen exists. If the permit is reopened, and revised, it will be reissued with the expiration date that was listed in the permit before the re-opening.

Administrative procedures to reopen and revise/revoke/reissue a permit shall follow the same procedures as apply to initial permit issuance. Re-openings shall affect only those parts of the permit for which cause to reopen exists. If the permit is reopened, and revised, it will be reissued with the expiration date that was listed in the permit before the re-opening. [*Ref: 40 CFR §70.6(a)*; *40 CFR §70.7(f)*]

A.21 **Emission Factor Revisions.** The District may update the emission factors for any calculation based on USEPA AP-42 or District emission factors at the next permit modification or permit reevaluation to account for USEPA and/or District revisions to the underlying emission factors.

A.22 **Federally-Enforceable Conditions.** Each federally-enforceable condition in this permit shall be enforceable by the USEPA and members of the public. None of the conditions in the District-only enforceable section of this permit are federally-enforceable or subject to the public/USEPA review. [*Ref: CAAA §502(b)(6); 40 CFR §70.6(b*)]

9.B Generic Conditions

The generic conditions listed below apply to all emission units, regardless of their category or emission rates. These rules apply to the equipment and operations at the J&A Santa Maria II, LLC facility, as they currently exist. Compliance with these requirements is discussed in Section 3.4.2. In the case of a discrepancy between the wording of a condition and the applicable District rule, the wording of the rule shall control.

B.1 **Circumvention (Rule 301).** A person shall not build, erect, install, or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Division 26 (Air Resources) of the Health and Safety Code of the State of California or of these Rules and Regulations. This Rule shall not apply to cases in which the only violation involved is of Section 41700 of the Health and Safety Code of the State of California, or of District Rule 303. [*Ref: District Rule 301*]

B.2 **Visible Emissions (Rule 302).** The permittee shall not discharge into the atmosphere from any single source of emission any air contaminants for a period or periods aggregating more than three minutes in any one hour that is:

a. As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

b. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection B.2.a above. [*Ref: District Rule 302*]

B.3 **Nuisance (Rule 303).** No pollutant emissions from any source at the permittee shall create nuisance conditions. No operations shall endanger health, safety or comfort, nor shall they damage any property or business. [*Ref: District Rule 303*]

B.4 **Particulate Matter – Northern Zone (Rule 304).** The permittee shall not discharge into the atmosphere, from any source, particulate matter in excess of 0.3 gr/scf of gas at standard conditions. [*Ref: District Rule 304*]

B.5 **Dust and Fumes – Northern Zone (Rule 306).** The permittee shall not discharge into the atmosphere, from any source, dust or fumes in excess of the concentrations listed in Table 306(a) of Rule 306. [*Ref: District Rule 306*]

B.6 **Specific Contaminants (Rule 309).** The permittee shall not discharge into the atmosphere, from any single source, sulfur compounds, combustion contaminants, nitrogen oxides and carbon monoxide in excess of the standards listed in Sections A, E, and G of Rule 309. [*Ref: District Rule 309*]

B.7 **Sulfur Content of Fuels (Rule 311).** The permittee shall not burn fuels with a sulfur content in excess of 0.5% (by weight) for liquid fuels and 796 ppmvd or 50 gr/100 scf (calculated as H_2S) for gaseous fuel. Compliance with this condition shall be based on quarterly hydrogen sulfide and total sulfur content measurements of the fuel gas using ASTM methods or other District-approved methods. [*Ref: District Rule 311*]

B.8 **Organic Solvents (Rule 317).** The permittee shall comply with the emission standards listed in Section B of Rule 317. Compliance with this condition shall be based on J&A

Santa Maria, LLC's compliance with Condition 9.C.3 in this permit. [*Ref: District Rule 317*]

B.9 **Solvent Cleaning Operations (Rule 321).** The permittee shall comply with the operating requirement, equipment requirements and emission control requirements for all solvent cleaning subject to this Rule. Compliance shall be based on District inspection of operations and with Condition 9.C.3 condition in this permit. [*Ref: District Rule 321*]

B.10 **Metal Surface Coating Thinner and Reducer (Rule 322).** The use of photochemically reactive solvents as thinners or reducers in metal surface coatings is prohibited. Compliance with this condition shall be based on Condition 9.C.3 in this permit and facility inspections. [*Ref: District Rule 322*]

B.11 **Architectural Coatings (Rule 323).** The permittee shall comply with the emission standards listed in Section D of Rule 323 as well as the Administrative requirements listed in Section F of Rule 323. Compliance with this condition shall be based on Condition 9.C.3 in this permit and facility inspections. [*Ref: District Rule 323*]

B.12 **Disposal and Evaporation of Solvents (Rule 324).** The permittee shall not dispose through atmospheric evaporation more than one and a half gallons of any photochemically reactive solvent per day. Compliance with this condition shall be based on Condition 9.C.3 in this permit and facility inspections. [*Ref: District Rule 324*]

B.13 **Adhesives and Sealants (Rule 353).** The permittees shall not use adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primers, unless the permittees comply with the following:

a. Such materials used are purchased or supplied by the manufacturer or suppliers in containers of 16 fluid ounces or less; or alternately

b. When the permittees use such materials from containers larger than 16 fluid ounces and the materials are not exempt by Rule 353, Section B.1, the total ROC emissions from the use of such material shall not exceed 200 pounds per year unless the substances used and the operational methods comply with Sections D, E, F, G, and H of Rule 353. Compliance shall be demonstrated by recordkeeping in accordance with Section B.2 and/or Section O of Rule 353. [*Ref: District Rule 353*]

B.14 **Breakdowns (Rule 505).** The permittees shall promptly report: (a) breakdowns that result in violations of emission limitations or restrictions prescribed by District Rules or by this permit, or (b) any in-stack, continuous monitoring equipment breakdowns; such reporting shall be made in conformance with the requirements of Rule 505, Sections A, B.1 and D. [*Ref: District Rule 505*]

9.C Requirements and Equipment Specific Conditions

C.1 **Landfill Gas Treatment System.** The following equipment is included in this emissions unit category:

District Device No.	Name
395536	Compressor 1
395537	Compressor 2
395538	Landfill Gas Treatment System

a. Operational Limits: The LFG treatment system equipment permitted herein is subject to the following operational restrictions listed below:

i. *Condensate Disposal:* Condensate shall be pumped to the City of Santa Maria condensate management system. [*Ref: ATC/PTO 12223*]

ii. *Venting:* The LFG treatment system shall not vent LFG. [*Ref: ATC/PTO 12223*]

iii. *Positive Pressure Components:* The permittee shall operate the LFG treatment system so that there are no LFG leaks that exceeds 500 ppmv, measured as methane, at any component under positive pressure. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95464(b)(1)(B)*]

iv. *LFG Treatment System Operations and Downtime:* The LFG treatment system shall be operated at all times when LFG is routed through the system. In the event the collection and/or control system is not operating:

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 controls 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.

[*Ref: 40 CFR 63 Subpart AAAA §63.1958(e)(1)]*

v. *LFG Routing – CA Landfill Methane Regulation*: Treated LFG shall be routed to a control device which reduces methane by 99 percent by weight. Alternatively, if the treated LFG is routed to a lean burn internal combustion engine, the outlet methane concentration shall be less than 3000 ppmv, dry basis, corrected to 15 percent oxygen.

1. The control device shall be operated within the parameter ranges established during the initial or most recent performance test.

[Ref: *CCR Subchapter 10, Article 4, Subarticle 6 §95464(b)(3)(A)*]

vi. *LFG Routing – MACT Subpart AAAA:* Treated LFG shall be routed to a control device which reduces NMOC/ROC by 98 percent (mass basis) or reduces the outlet NMOC/ROC concentration to less than 20 ppmvd at 3% O_2 (as hexane).

1. The control device shall be operated within the parameter ranges established during the initial or most recent performance test.

[*Ref: 40 CFR 63 Subpart AAAA §63.1959(b)(2)(iii)(B)*]

b. Monitoring: The following monitoring conditions apply to the LFG treatment system equipment:

i. *LFG Volume:* The volume of LFG treated by the LFG treatment system shall be monitored by a District-approved meter. [*Ref: ATC/PTO 12223*]

ii. *Positive Pressure Components:* Components containing LFG and under positive pressure shall be monitored quarterly for leaks using a portable analyzer meeting the requirements of Condition 9.C.1.b.iii. Any component leak shall be tagged and repaired within ten calendar days. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(3)*]

iii. *Portable Analyzer Calibration Requirements:* The portable analyzer used for the positive pressure calibration monitoring shall adhere to the following requirements:

1. *Calibration Method:* The portable analyzer shall meet the calibration, performance, and instrument specifications provided in EPA Method 21, except that methane shall replace all references to VOC. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(a); CCR Subchapter 10, Article 4, Subarticle 6 §95471(a)(1)*]

2. *Calibration Gas:* The calibration gas shall be methane. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(a)(2)*]

c. Recordkeeping: The following recordkeeping requirements apply to the LFG treatment system equipment:

i. *LFG Volume:* The permittee shall record the volume of LFG treated by the LFG treatment system on a monthly and annual basis. [*Ref: ATC/PTO 12223*]

ii. *Positive Pressure Components:* Results of the quarterly inspections for components containing LFG and under positive pressure. The permittee shall record the dates of the inspections, concentration of any components exceeding the permitted limit, description of any corrective actions taken, and dates of the corrective actions. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(3)*]

iii. *Calibration and Maintenance:* Records of calibration and maintenance of the portable analyzer, including the results of each calibration. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(a)*]

d. Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by Condition 9.C.5 of this permit.

C.2 **Landfill Gas Fired Engine.** The following equipment is included in this emissions unit category:

Device ID No.	Name
393304	Landfill Gas Fired Engine
395539	Oxidation Catalyst

a. Emission Limits: Mass emissions from the LFG-fired engine listed above shall not exceed the limits listed in Table 5.1-3. Compliance with this condition shall be based on the operational, monitoring, recordkeeping, reporting, and source testing conditions in this permit. In addition, the following specific emission limits apply:

i. *BACT and NSPS Emissions Limits:* Emissions from the LFG-fired engine shall not exceed the BACT limits of:

NO_X [1]	0.50 g/bhp-hr	38 ppmvd at 15 percent O_2
ROC [2]	0.40 g/bhp-hr	86 ppmvd at 15 percent O_2
CO	2.05 g/bhp-hr	308 ppmvd at 15 percent O_2

Compliance shall be based on annual source testing according to Table 4.4 and six minute average data points through the use of CEMS. Compliance with the BACT limits ensures compliance with NSPS emission limits. [*Ref: ATC 14932; 40 CFR Subpart JJJJ §60.4233(e)*]

ii. *NMOC/ROC Concentration Limits and Control Requirements:* Emissions of NMOC/ROC from the LFG-fired engine shall not exceed a NMOC/ROC stack concentration of 20 ppmvd at 3% O_2 (as hexane). Additionally, the LFG-fired engine shall reduce NMOC/ROC by 98 percent (mass basis) and not exceed a NMOC/ROC stack concentration of 86 ppmv at 15% O_2 (as methane). Compliance with this condition shall be based on the source testing condition of this permit. [*Ref: 40 CFR 63 Subpart AAAA §63.1959(b)(2)(iii)(B)(1)]*

iii. *Methane Control Requirements*: Emissions of methane from the LFG-fired engine shall not exceed a methane stack concentration of 3,000 ppmvd at 15% O_2. Compliance with this condition shall be based on the source testing condition of this permit. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95464(b)(3)(A)1, LMR Implementation Guidance Document, Question C.9 Page II-8*]

[1] NO_X as NO_2
[2] ROC as methane

iv. *CEMS Emissions Excursions:* Excursions of CEMS concentrations (ppmvd at 15% O_2) for NO_X or CO that are determined by the District to be directly attributable to LFG quality irregularities will not be considered a violation of this condition provided a *Corrective Action Plan* is implemented as required by Condition 9.C.12. [*Ref: ATC 14932*]

b. Operational Limits: The LFG-fired engine permitted herein is subject to the following operational restrictions listed below:

i. *Heat Input Limits:* The hourly, daily and annual heat input limits to the LFG-fired engine shall not exceed the values listed below. These limits are based on the design rating of the engine. Compliance with the heat input limits shall be based on fuel meter readings and the most recent gas analysis. [*Ref: ATC 14932*]

Make/Model	Device No.	Heat Input Limits		
		MMBtu/hr	MMBtu/day	MMBtu/yr
GE Jenbacher J420 GS-A82	393304	13.278	318.681	116,326.469

ii. *Usage Limits – Planned Startup/Shutdown Mode:* Planned startup/shutdown is defined as the period of time in which the LFG-fired engine is being taken out of service or brought back into service after maintenance work has been completed, and the engine is not operating at its designed temperature and load. Operation of the LFG-fired engine during these periods is limited to:

1. *Heat Input Limit:* 6.640 MMBtu/day, 46.477 MMBtu/quarter, and 185.906 MMBtu/yr.

2. *Operating Hours:* 0.50 hours/day, 3.50 hours/quarter, and 14.00 hours/year. [*Ref: ATC 14932*]

iii. *LFG-Fired Engine Downtime*: The LFG-fired engine shall be operated at all times when LFG is routed to the engine. In the event the engine is not operating:

1. The gas mover system routing LFG to the engine 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. If LFG is being produced from CSML at a rate that exceeds the capacity of all online LFG control systems at the landfill (i.e., the LFG-fired engine permitted herein as well as the flares permitted under Pt 70/PTO 10318-R4), efforts to repair the control systems must be initiated and completed in a manner such that downtime is kept to a minimum, and (a) control system(s) with capacity sufficient to handle all LFG produced by CSML must be returned to operation.

iv. *Fuel Type Limit:* The engine shall only combust LFG. [*Ref: ATC 14932*]

v. *LFG Sulfur Content:* The total sulfur content (calculated as H_2S at standard conditions, 60 °F and 14.7 psia) of the LFG burned in the LFG-fired engine shall not exceed 0.63 gr/100 scf (10 ppmvd). [*Ref: ATC 14932*]

vi. *Operational Temperature:* The LFG-fired engine shall be operated within the parameter ranges established during the most recent source test. The LFG-fired engine combustion temperature shall not operate less than 28°C (50°F) below the average combustion temperature during the most recent source test for any three-hour block monitoring period. [*Ref: 40 CFR 63 Subpart AAAA §63.1983(c)(1)(i)]*

vii. *LFG Release:* Operation of this equipment shall not result in the release of raw LFG into the atmosphere. Any breakdown[1] or malfunction which results in emissions of raw LFG shall be reported to the District (Attn: *Engineering Supervisor*) within one hour of occurrence, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere. [*Ref: ATC 14932*]

viii. *HAP Emissions:* The LFG-fired engine shall be operated in a manner that reasonably minimizes HAP emissions. By meeting BACT requirements and monitoring emissions with a CEMS, the LFG-fired engine will be operated in a manner that reasonably minimizes HAP emissions. [*Ref: 40 CFR Subpart ZZZZ §63.6625(c)*]

ix. *Stack Height:* The height of the LFG-fired engine exhaust stack shall be at least 14 feet above grade. [*Ref: ATC 14932*]

x. *Visible Emissions*: The LFG-fired engine shall not emit visible emissions as dark or darker than 20 percent opacity for a period or periods aggregating more than three minutes in any one hour. [*Ref: District Rule 302*]

xi. *Positive Pressure Components:* Components containing LFG and under positive pressure shall be monitored quarterly for leaks using a portable analyzer meeting the requirements of Condition 9.C.1.b.iii. Any component leak shall be tagged and repaired within ten calendar days. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(3)*]

c. Monitoring: The following monitoring conditions apply to the LFG-fired engine:

i. *Hours of Operation*: The LFG-fired engine shall be equipped with a totalizing non-resettable hour meter. The hour meter shall be operational at all times the engine is operated. The permittee shall monitor the daily and annual hours of operations for the LFG-fired engine. [*Ref: ATC 14932*]

ii. *Startup/Shutdown Mode Hours:* The permittee shall monitor the daily, quarterly, and annual hours the LFG-fired engine operates in the startup/shutdown mode. [*Ref: ATC 14932*]

[1] Rule 505 breakdown relief is available for administrative relief from enforcement action for qualifying breakdowns less than 24 hours in duration. Variance relief is available for longer time periods.

iii. *LFG Volume:* The permittee shall continuously monitor the daily and annual volume of LFG combusted in the LFG-fired engine (in units of scf). The LFG-fired engine shall be equipped with a dedicated non-resettable temperature and pressure corrected fuel meter which records the flow to the device at least every 15 minutes. The fuel meter shall be accurate to within one percent (1%) of the full scale reading. The fuel meter shall be calibrated annually (at least once every 12 months) in accordance with the fuel meter manufacturer's written procedures. The data recorder and continuous monitoring devices shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications. A valid hour of data must have measured values for at least three 15-minute monitoring periods during that hour. Calibration records shall be maintained and made available for District inspection. [*Ref: 40 CFR 63 Subpart AAAA §63.1961(d), 40 CFR Subpart ZZZZ §63.6655(c); CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(1)(B*]

iv. *LFG Fuel Sulfur Content*: The total sulfur content (calculated as H_2S at standard conditions, 60 °F and 14.7 psia) of the LFG combusted in the engine shall be sampled quarterly in accordance with ASTM-D1072 or a District-approved equivalent method. Additionally, on a quarterly basis, a sample of the LFG shall be extracted from the LFG-fired engine inlet and analyzed for methane (percent by volume) and carbon dioxide (percent by volume) using appropriate ASTM sampling and analysis techniques. [*Ref: ATC 14932; CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(C)*]]

v. *LFG Methane and Carbon Dioxide Content*: On a quarterly basis, a sample of the LFG shall be extracted from the LFG-fired engine inlet and analyzed for methane (percent by volume) and carbon dioxide (percent by volume) using appropriate ASTM sampling and analysis techniques. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(C)*]

vi. *LFG Heat Content*: On a weekly basis, a sample of the LFG shall be extracted from the LFG-fired engine inlet and analyzed for HHV (in units of Btu/scf) using District-approved ASTM sampling and analysis techniques. [*Ref: ATC 14932*]

vii. *Operational Temperature:* The LFG-fired engine combustion temperature data shall be monitored at least every fifteen minutes with a District-approved thermocouple, which has an accuracy of plus or minus (±) 1 percent of the temperature being measured expressed in degrees Celsius or Fahrenheit and equipped with an electronic or other District-approved data recorder. This equipment shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications. The temperature data shall be averaged for three continuous hourly periods (block average) to assess the required compliance with LFG-fired engine temperature limits. The three hour data must comprise of three consecutive hours of valid data and each valid hour of data shall have measured values for at least three 15-minute monitoring periods during that hour. The LFG-fired engine set point temperature logged whenever it is changed as allowed under this permit. [*Ref: 40 CFR 63 Subpart AAAA §60.1961(b)(1)*]

viii. *Downtime:* The date, time, and cause of each instance of LFG-fired engine downtime exceeding one hour, the reason for the downtime, and the date and time of restart shall be documented by the operator. Any corrective actions taken shall also be monitored. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(B)*]

ix. *Engine Calibration and Maintenance Logs*: Calibration and maintenance of the LFG-fired engine's monitoring devices and meters, including the results of each calibration [*Ref: ATC 14932; 40 CFR Subpart JJJJ §60.4243(b)(2)(ii)*]

x. *Source Testing*: The permittee shall perform source testing of the emissions and process parameters listed in Table 4.4. The permittee shall adhere to the requirements of Condition 9.C.6. [*Ref: ATC 14932; CCR Subchapter 10, Article 4, Subarticle 6 §95464(b)(4)*]

xi. *Positive Pressure Components:* Results of the quarterly inspections for components containing LFG and under positive pressure. The permittee shall record the dates of the inspections, concentration of any components exceeding the permitted limit, description of any corrective actions taken, and dates of the corrective actions. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(3)*]

d. Recordkeeping: The following recordkeeping requirements apply to the LFG-fired engine:

i. *Operating Hours*: An operating hours log shall be maintained that details the number of operating hours on each day the LFG-fired engine is operated and the cumulative total monthly and annual hours. [*Ref: ATC 14932*]

ii. *Startup/Shutdown Mode Hours*: An operating hours log shall specify the time, duration, reason and type (planned or unplanned) of when the LFG-fired engine is in startup/shutdown mode. The log shall also document the cumulative quarterly and annual hours. [*Ref: ATC 14932*]

iii. *Fuel Gas Use*: The total amount of LFG combusted in the LFG-fired engine shall be recorded on a daily, monthly, and annual basis in units of scf and MMBtu. [*Ref: ATC 14932; 40 CFR Subpart ZZZZ §63.6650(g)(1); 40 CFR Subpart ZZZZ §63.6655(c)*]

iv. *LFG Fuel Sulfur Content*: The results from the quarterly sampling of the total sulfur content (calculated as H_2S at standard conditions, 60 °F and 14.7 psia) of the LFG combusted in the engine shall maintained. [*Ref: ATC 14932; CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(3),CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(C)*]

v. *LFG Heat Content*: On a weekly basis, the HHV of the LFG (Btu/Scf) shall be measured and recorded using the District-approved ASTM sampling and analysis techniques. [*Ref: ATC 14932; 40 CFR Subpart ZZZZ §63.6650(g)(1)*]

vi. *LFG-Fired Engine Operational Temperature*: All block three-hour periods of operation during which the average temperature difference was more than 28°C (50°F) below the average combustion temperature during the most recent source test. Records shall include the set point temperature from the most recent source test and the date and time of any changes to the set point temperature. [*Ref: 40 CFR Subpart AAAA §63.1983(c)(1(i)*]

vii. *Downtime:* Records of the date, time, and cause of each instance of LFG-fired engine downtime in excess of one hour and the date and time of restart, and any corrective actions taken shall be retained in an operator's log. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(B)*]

viii. *Engine Calibration and Maintenance Logs*: Engine calibration and maintenance logs shall be maintained, as detailed in the District-approved *Engine Inspection and Maintenance Plan*. [*Ref: ATC 14932; 40 CFR Subpart JJJJ §60.4243(b)(2)(ii)*]

ix. *Source Test Results*: Results of any source tests conducted including NMOC/ROC outlet concentration or destruction efficiency, average combustion temperature measured at least every 15 minutes, and average temperature over the course of the source test. [*Ref: ATC 14932; CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(H)*]

x. *Meter Problems*: The permittee shall record any problems or errors suspected with the fuel or hour meters. [*Ref: 40 CFR Subpart ZZZZ §63.6650(g)(3)*]

xi. *Control Device Life Records*: The permittee shall maintain the following records, for the life of the LFG-fired engine: the control device vendor specifications and parameters measured during the initial source test. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(2)*]

xii. *Positive Pressure Components:* Results of the quarterly inspections for components containing LFG and under positive pressure. The permittee shall record the dates of the inspections, concentration of any components exceeding the permitted limit, description of any corrective actions taken, and dates of the corrective actions. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(3)*]

xiii. *LFG Sampling:* Results of the quarterly measurements of the LFG for methane (percent by volume) and carbon dioxide (percent by volume). [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(C)*]

xiv. *Source Test Results:* Results of any source tests conducted including methane destruction efficiency. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(H)*]

xv. *Control Device Parameters:* The permittee shall maintain the following records for the LFG-fired engine: LFG control device type, year of installation, rating, fuel type, and the total amount of LFG combusted in the

control device. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(D)*]

xvi. *Control Device Life Records:* The permittee shall maintain the following records, whether in paper, electronic, or other format, for the life of each LFG control device: percent reduction of methane achieved during the initial source test or compliance determination. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(2)*]

e. Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the Condition 9.C.5 of this permit.

C.3 S**olvent Usage.** The following equipment items are included in this emissions category:

District Device No.	Name
None	Solvent Use

a. Operational Limits: Use of solvents for cleaning, degreasing, thinning and reducing shall conform to the requirements of District Rules 317, 321, and 324. Compliance with these rules shall be assessed through compliance with the monitoring, recordkeeping and reporting conditions in this permit and facility inspections. In addition, the permittee shall comply with the following:

i. *Containers*: Vessels or containers used for storing materials containing organic solvents shall be kept closed unless adding to or removing material from the vessel or container. [*Ref: ATC/PTO 12223*]

ii. *Materials*: All materials that have been soaked with cleanup solvents shall be stored, when not in use, in closed containers that are equipped with tight seals. [*Ref: ATC /PTO 12223*]

iii. *Solvent Leaks*: Solvent leaks shall be minimized to the maximum extent feasible or the solvent shall be removed to a sealed container and the equipment taken out of service until repaired. A solvent leak is defined as either the flow of three liquid drops per minute or a discernable continuous flow of solvent. [*Ref: ATC /PTO 12223*]

b. Recordkeeping: The permittee shall record in a log the following on a monthly basis for each solvent used which is subject to Rule 317, 321, or 324: amount used, purpose for its use, the percentage of ROC by weight (as applied), the solvent density, whether the solvent is photochemically reactive, the resulting emissions of ROC to the atmosphere in units of pounds per month and the resulting emissions of photochemically reactive solvents to the atmosphere in units of pounds per month. Product sheets (Material Safety Data Sheets [MSDS] or equivalent) detailing the constituents of all solvents shall be maintained in a readily accessible location at the landfill facility. [*Ref: ATC /PTO 12223*]

c. Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by Condition 9.C.5 of this permit.

C.4 **Recordkeeping.** All records and logs required by this permit and any applicable District, state or federal rule or regulation shall be maintained for a minimum of five calendar years from the date of information collection and log entry at the J&A Santa Maria II, LLC facility unless otherwise noted in a permit condition. These records or logs shall be readily accessible and be made available to the District upon request.

C.5 **Compliance Verification Reports.** Twice a year, the permittee shall submit a compliance verification report to the District. Each report shall be used to verify compliance with the prior two calendar quarters. The first report shall cover calendar quarters 1 and 2 (January through June) and shall be submitted no later than September 1. The second report shall cover calendar quarters 3 and 4 (July through December) and shall be submitted no later than March 1. Each report shall contain information necessary to verify compliance with the emission limits and other requirements of this permit (if applicable for that reporting period). These reports shall be in a format approved by the District, with one hard copy and one PDF copy. All logs and other basic source data not included in the report shall be available to the District upon request. The second report shall also include an annual report summarizing the activities for the calendar year. Pursuant to Rule 212, a completed *District Annual Emissions Inventory* questionnaire shall be included in the annual report or submitted electronically via the District website.

The report shall include the following information:

a. Landfill Gas Treatment System:

i. *LFG Volume:* The volume of LFG treated by the LFG treatment system on a monthly and annual basis. [*Ref: ATC/PTO 12223*]

ii. *Positive Pressure Components:* Results of the quarterly inspections for components containing LFG and under positive pressure. The permittee shall record the dates of the inspections, concentration of any components exceeding the permitted limit, description of any corrective actions taken, and dates of the corrective actions. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(3)*]

iii. *Calibration and Maintenance:* Records of calibration and maintenance of the portable analyzer, including the results of each calibration. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(a)*]

b. LFG-Fired Engine:

i. *Operating Hours*: Daily and annual records of the hours of operations for the LFG-fired engine. [*Ref: ATC 14932*]

ii. *Startup/Shutdown Mode Hours*: Times, durations of each occurrence, reasons and type (planned or unplanned), cumulative quarterly hours, and cumulative annual hours of when the LFG-fired engine is in startup/shutdown mode. [*Ref: ATC 14932*]

iii. *Fuel Gas Use*: Records of the daily, monthly, and annual volume of LFG combusted in the LFG-fired in units of scf and MMBtu. [*Ref: ATC 14932; 40 CFR Subpart ZZZZ §63.6650(g)(1)*]]

iv. *LFG Fuel Content*: Results of the quarterly measurements of the LFG for total sulfur content (ppmv), methane (percent by volume) and carbon dioxide (percent by volume). [*Ref: ATC 14932*]

v. *LFG Heat Content*: Results of the weekly measurements of the LFG HHV (Btu/scf). [*Ref: ATC 14932; 40 CFR Subpart ZZZZ §63.6650(g)(1)*]

vi. *Operational Temperature*: All block three-hour periods of operation during which the average temperature difference was more than 28°C (50°F) below the average combustion temperature during the most recent source test. Records shall include the set point temperature from the most recent source test and the date and time of any changes to the set point temperature. [*Ref: 40 CFR Subpart AAAA §63.1983(c)(1)(i)*]

vii. *Downtime:* Records of the date, time, and cause of each instance of LFG-fired engine downtime in excess of one hour and the date and time of restart, and any corrective actions taken shall be retained in an operator's log. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(B)*]

viii. *Engine Calibration and Maintenance Logs*: Records of LFG-fired engine calibration and maintenance of the LFG-fired engine's monitoring devices and meters, including the results of each calibration. [*Ref: ATC 14932; 40 CFR Subpart JJJJ §60.4243(b)(2)(ii)*]

ix. *Source Test Results:* Results of any source tests conducted including ROC/NMOC and methane outlet concentration or destruction efficiency, average combustion temperature measured at least every 15 minutes, and average temperature over the course of the source test. [*Ref: ATC 14932; CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(H)*]

x. *Meter Problems*: The permittee shall report any problems or errors suspected with the fuel or hour meters. [*Ref: 40 CFR Subpart ZZZZ §63.6650(g)(3)*]

xi. *Positive Pressure Components:* Results of the quarterly inspections for components containing LFG and under positive pressure. The permittee shall record the dates of the inspections, concentration of any components exceeding the permitted limit, description of any corrective actions taken, and dates of the corrective actions. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(3)*]

xii. *Control Device Parameters:* The permittee shall maintain the following records for the LFG-fired engine: LFG control device type, year of installation, rating, fuel type, and the total amount of LFG combusted in the control device. *[Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(D)]*

c. Solvent Usage:

i. On a monthly basis: the amount of solvent used, the percentage of ROC by weight (as applied), the solvent density, the amount of solvent reclaimed, whether the solvent is photochemically reactive and the resulting emissions of ROC and photochemically reactive solvents to the atmosphere in units of pounds per month. [*Ref: ATC/PTO 12223*]

C.6 **Source Testing.** The following source testing provisions shall apply:

a. The permittee shall conduct source testing of air emissions and process parameters listed in Table 4.4 of this permit. The LFG-fired engine shall be source tested no less than once every 12 months based on the date of the previous source test. More frequent source testing may be required if the equipment does not comply with permitted limitations or if other compliance problems, as determined by the District, occur. Source testing shall be performed on an annual basis no later than 45 days after the anniversary dates of the initial source test.

b. The permittee shall submit a written source test plan to the District for approval at least thirty (30) days prior to initiation of each source test. The source test plan shall be prepared consistent with the District's *Source Test Procedures Manual* (revised May 1990 and any subsequent revisions). The permittee shall obtain written District approval of the source test plan prior to commencement of source testing. The District shall be notified at least ten (10) calendar days prior to the start of source testing activity to arrange for a mutually agreeable source test date when District personnel may observe the test.

c. Source test results shall be submitted to the District within forty-five (45) calendar days following the date of source test completion and shall be consistent with the requirements approved within the source test plan. Source test results shall document the permittee's compliance status with mass emission rates and applicable permit conditions, rules and NSPS (if applicable). All District costs associated with the review and approval of all plans and reports and the witnessing of tests shall be paid by the permittee as provided for by District Rule 210.

d. A source test for an item of equipment shall be performed on the scheduled day of testing (the test day mutually agreed to) unless circumstances beyond the control of the operator prevent completion of the test on the scheduled day. Such circumstances include mechanical malfunction of the equipment to be tested, malfunction of the source test equipment, delays in source test contractor arrival and/or set-up, or unsafe conditions on site. Except in cases of an emergency, the operator shall seek and obtain District approval before deferring or discontinuing a scheduled test, or performing maintenance on the equipment item on the scheduled test day. If the test cannot be completed on the scheduled day, then the test shall be rescheduled for another time with prior authorization by the District. Once the sample probe has been inserted into the exhaust stream of the equipment unit to be tested (or extraction of the sample has begun), the test shall proceed in accordance with the approved source test plan. In no case shall a test run be aborted except in the case of an emergency or unless approval is first obtained from the District. Failing to perform the source test of an equipment item on the scheduled test day without a valid reason and without District's authorization shall constitute a

violation of this permit. If a test is postponed due to an emergency, written documentation of the emergency event shall be submitted to the District by the close of the business day following the scheduled test day.

The timelines in (a), (b), and (c) above may be extended for good cause provided a written request is submitted to the District at least three (3) days in advance of the deadline, and approval for the extension is granted by the District. [*Ref: ATC 13281*]

C.7 **Continuous Emission Monitoring System.** The permittee shall implement a CEMS program for emissions and process parameters as specified in Table 4.2. The permittee shall implement the District-approved *CEMS Plan* and the CEMS monitors shall be in place and functional for the life of the project. The District shall use the CEMS data alone or in combination with other data, to verify and enforce permit conditions. Excess emissions indicated by the CEMS systems shall be considered a violation of the applicable emission limits.

a. The CEMS shall be installed and operated to measure the LFG-fired engine exhaust stack concentration for NO_X (as NO_2), CO, and O_2 on a dry basis. In addition, the system shall convert the actual NO_X and CO concentrations to corrected NO_X and CO concentrations at 15% O_2 and continuously record the stack NO_X and CO concentrations, stack O_2 concentration, and corrected NO_X and CO concentrations at 15% O_2. This monitoring system shall comply with the requirements of Rule 328 and the District *CEMS Protocol* (October 22, 1992).

b. On a semi-annual basis, the permittee shall submit data for CEMS downtime and CEMS detected excess emissions in a format approved by the District. This report shall be submitted for each calendar quarter in accordance with the requirements of Rule 328 and the District-approved *CEMS Plan* (approved August 30, 2011).

C.8 **Data Telemetry.** The permittee shall telemeter monitoring data to the District as specified by Condition 9.C.7 of this permit. The data telemetry equipment shall be in place and functional for the life of the project consistent with the specified conditions listed above. This telemetry equipment shall be compatible with the District's Central DAS.

C.9 **Central Data Acquisition System Operation and Maintenance Fee.** The permittee shall connect the CEMS to the District's Central DAS. In addition, the permittee shall reimburse the District for the cost of operating and maintaining the DAS. The permittee shall be assessed an annual fee, based on the District's fiscal year, collected semi-annually.

a. Pursuant to Rule 210 III.A., the permittee shall pay fees specified below. The District shall use these fees to operate, maintain, and upgrade the DAS in proper running order. Fees shall be due and payable pursuant to governing provisions of Rule 210, including consumer price index (CPI) adjustments.

FEE DESCRIPTION	FEE [1]
Per CEMS, ambient or meteorological parameters required by permit to be transmitted real-time to the District Central DAS	$1,323 semi-annually

b. All ongoing costs and anticipated future capital upgrades are the District's responsibility and are accomplished within the above stated DAS fee. This fee is intended to cover the annual operating budget and upgrades of the DAS and may be revised during the triennial permit reevaluation.

c. The fees prescribed in this condition shall expire if and when the District Board of Directors adopts a DAS Operation and Maintenance Fee schedule and such fee becomes effective.

C.10 **Best Available Control Technology.** The permittee shall apply emission control technology and plant design measures that represent BACT to the operation of the equipment and facilities as described in this permit and the District's evaluation for this permit. Section 4.4 and Table 4.1 of this permit define the specific control technology and performance standard emission limits for BACT. The BACT shall be in place, and shall be operational at all times, for the life of the project. BACT related monitoring, recordkeeping and reporting requirements are defined in those specific permit conditions. BACT related requirements are also defined in the source testing permit condition herein. [*Ref: ATC 14932*]

C.11 **Process Stream Sampling and Analysis.** The permittee shall sample and analyze the process streams listed in Section 4.5 and Table 4.3 of this permit. All process stream samples shall be taken according to District approved methods by a third party (unless otherwise specified), and shall be analyzed within the time limits specified by the applicable sampling method from the time of collection. All sampling and analysis data/results shall be submitted to the District in accordance with Condition 9.C.5. All sampling and analysis shall be traceable by chain of custody procedures. [*Ref: 40 CFR §70.6*]

C.12 **Corrective Action Plan.** The permittee shall submit a *Corrective Action Plan* for District review and approval if either of the following conditions occur:

a. Three or more CEMS NO_X or CO emissions excursions attributed to biogas quality irregularities occur in any calendar quarter.

b. Four or more CEMS NO_X or CO emissions excursions attributed to biogas quality irregularities occur in a calendar year.

The *Corrective Action Plan* shall be submitted within 30 days after reaching either action level above, and shall be fully implemented by the permittee within 180 days of submittal. The *Corrective Action Plan* submittal shall present options for eliminating or minimizing the number of LFG quality induced excursions, and identify a preferred approach. The options considered shall include a fuel gas quality (Btu) or oxygen analyzer upstream, and a system to blend or substitute public utility commission (PUC) natural gas during periods of LFG irregularities. [*Ref: ATC 14932*]

[1] All fees shall be due and payable pursuant to the governing provisions of Rule 210, including CPI adjustments.

C.13 **Documents Incorporated by Reference.** The documents listed below, including any District-approved updates thereof, are incorporated herein and shall have the full force and effect of a permit condition for this operating permit. These documents shall be implemented for the life of the Project and shall be made available to District inspection staff upon request.

a. *Engine Inspection and Maintenance Plan* (approved October 27, 2021)

b. *CEMS Plan* (approved October 27, 2021)

C.14 **Equipment Removal Report.** The permittee shall submit an equipment removal report to the District 30 days prior to removal or cessation of operation of the control equipment. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(2)*]

9.D District and State Conditions

The following section lists permit conditions that are not enforceable by the USEPA or the public. However, these conditions are enforceable by the District and the State of California. These conditions are issued pursuant to District Rule 206 (*Conditional Approval of Authority to Construct or Permit to Operate*), which states that the Control Officer may issue an operating permit subject to specified conditions. Permit conditions have been determined as being necessary for this permit to ensure that operation of the facility complies with all applicable local and state air quality rules, regulations and laws. Failure to comply with any condition specified pursuant to the provisions of Rule 206 shall be a violation of that rule, this permit, as well as any applicable section of the California Health and Safety Code.

D.1 **Odorous Organic Sulfides**. The permittee shall not discharge into atmosphere H_2S and organic sulfides that result in ground-level impact beyond the facility property boundary in excess of either 0.06 ppmv averaged over 3 minutes and 0.03 ppmv averaged over 1 hour.

AIR POLLUTION CONTROL OFFICER

DATE

Charlotte Mountain	1/9/2025		
AQ Engineer/Technician	Date	Supervisor	Date

Notes:

(a) This permit supersedes Part 70/PTO 13281, ATC 14932, PTO 14932, ATC 15570, and PTO 15570.
(b) Permit Triennial Reevaluation Due Date: March 2027

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10.0 Attachments

10.1 Equipment List

10.2 List of Exempt/Insignificant Emissions Units

10.3 IDS Database Emission Tables

10.1 Equipment List

A PERMITTED EQUIPMENT

1 Landfill Gas Fired Engine

Device ID #	**393304**	***Device Name***	**Landfill Gas Fired Engine**
Rated Heat Input	12.072 MMBtu/Hour	*Physical Size*	1966.00 Brake Horsepower
Manufacturer	GE Jenbacher	*Operator ID*	
Model	J 420 GS-A82	*Serial Number*	
Location Note			
Device Description	Lean-burn, four-stroke engine with air-fuel ratio controller powering a 1.426 MW electrical generator		

1.1 Oxidation Catalyst

Device ID #	**395539**	***Device Name***	**Oxidation Catalyst**
Rated Heat Input		*Physical Size*	
Manufacturer	Miratech	*Operator ID*	
Model	IQS-26-12-L1	*Serial Number*	
Location Note			
Device Description	Controls emissions from the landfill gas fired engine. 38 ppmv at 15% oxygen for NOx, 86 ppmv at 15% oxygen for ROC (as methane), 308 ppmv at 15% oxygen for CO.		

1.2 Continuous Emission Monitoring System

Device ID #	**114890**	***Device Name***	**Continuous Emission Monitoring System**
Rated Heat Input		*Physical Size*	
Manufacturer	ESC Dataa Systems	*Operator ID*	
Model	8832	*Serial Number*	
Location Note	Santa Maria Landfill		
Device Description	Serves Jenbacher generator engine		

2 Compressor 1

Device ID #	**395536**	***Device Name***	**Compressor 1**
Rated Heat Input		*Physical Size*	100.00 Horsepower (Electric Motor)
Manufacturer	Hoffman	*Operator ID*	
Model	74107	*Serial Number*	
Location Note			
Device Description	Maximum flow of 4,400 scfm, maximum pressure of 16 psig		

3 Compressor 2

Device ID #	**395537**	***Device Name***	**Compressor 2**
Rated Heat Input		*Physical Size*	100.00 Horsepower (Electric Motor)
Manufacturer	Hoffman	*Operator ID*	
Model	74107	*Serial Number*	
Location Note			
Device Description	Maximum flow of 4,400 scfm, maximum pressure of 16 psig		

4 Landfill Gas Treatment System

Device ID #	**395538**	***Device Name***	**Landfill Gas Treatment System**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Dimensions: 6' L x 6' W x 8' H, capacity of 5,000 pounds activated carbon, hydrogen sulfide and siloxane removal system, reduces the sulfur content of the landfill gas to 10 ppmv		

E DE-PERMITTED EQUIPMENT

1 Landfill Gas Fired Engine

Device ID #	**114889**	***Device Name***	**Landfill Gas Fired Engine**
Rated Heat Input	12.072 MMBtu/Hour	*Physical Size*	1966.00 Brake Horsepower
Manufacturer	GE Jenbacher	*Operator ID*	
Model	J 420 GS-A82	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Lean-burn, four-stroke engine with air-fuel ratio controller powering a 1.426 MW electrical generator		

10.2 List of Exempt/Insignificant Emissions Units

1. Solvent use (wipe cleaning only)

10.3 IDS Database Emission Tables

PERMIT POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	52.01	41.61	260.05	1.08	5.26	5.26	5.26
lb/hr							
TPQ							
TPY	9.49	7.59	47.46	0.20	0.96	0.96	0.96

FACILITY POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	52.01	41.61	260.05	1.08	5.26	5.26	5.26
lb/hr							
TPQ							
TPY	9.49	7.59	47.46	0.20	0.96	0.96	0.96

FEDERAL POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	52.01	41.61	260.05	1.08	5.26	5.26	5.26
lb/hr							
TPQ							
TPY	9.49	7.59	47.46	0.20	0.96	0.96	0.96

STATIONARY SOURCE POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	91.75	185.87	471.43	25.68	15.77	15.77	15.77
lb/hr							
TPQ							
TPY	13.95	33.52	82.60	4.68	2.72	2.72	2.72

Notes:
(1) Emissions in these tables are from IDS.
(2) Because of rounding, values in these tables shown as 0.00 are less than 0.005, but greater than zero.