Santa Barbara County
Air Pollution Control District

PERMIT to OPERATE 10318-R3
and
PART 70 OPERATING PERMIT 10318

SANTA MARIA REGIONAL LANDFILL

2065 EAST MAIN STREET
SANTA MARIA, CALIFORNIA

OWNER AND OPERATOR

City of Santa Maria

Santa Barbara County
Air Pollution Control District

August 2017

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ABBREVIATIONS/ACRONYMS

AP-42	USEPA's *Compilation of Emission Factors*
ASTM	American Society for Testing Materials
ATC	Authority to Construct
BACT	Best Available Control Technology
Bhp	brake horsepower
Btu	British thermal unit
CAAA	Clean Air Act Amendments
CAC	California Administrative Code
CCR	California Code of Regulations
CEMS	continuous emissions monitoring
CFR	Code of Federal Regulations
CI	compression ignition
CO	carbon monoxide
DAS	Data Acquisition System
District	Santa Barbara County Air Pollution Control District
dscf	dry standard cubic foot
EQ	equipment
ESE	entire source emissions
EU	emission unit
°F	degree Fahrenheit
°C	degree Celsius
FID	facility identification
gal	gallon
gpm	gallons per minute
gr	grain
HAP	hazardous air pollutant (as defined by CAAA, Section 112(b))
H&SC	California Health and Safety Code
H_2S	hydrogen sulfide
IC	internal combustion
I&M	Inspection & Maintenance
ISO	International Standards Organization
k	kilo (thousand)
l	liter
lb	pound
lb/day	pounds per day
lb/hr	pounds per hour
LFG	landfill gas
M	mega (million)
MACT	Maximum Achievable Control Technology
MM	million
MW	megawatt
mw	molecular weight
NAR	Nonattainment Review
NFPA	National Fire Protection Agency
NG	natural gas
NMOC	non-methane organic compounds
NO_x	oxides of nitrogen
NO_2	nitrogen dioxide
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
ppm(vd or w)	parts per million (volume dry or weight)
psia	pounds per square inch absolute
psig	pounds per square inch gauge
PTO	Permit to Operate
PUC	public utility commission
ROC	reactive organic compounds, same as "VOC" as used in this permit
SBCPW	Santa Barbara County Department of Public Works
scf	standard cubic foot
scfd	standard cubic feet per day
scfh	standard cubic feet per hour
scfm	standard cubic feet per minute
SIP	State Implementation Plan
SMMR	Surface Monitoring Maintenance and Recordkeeping
SO_x	oxides of sulfur
SSID	stationary source identification
STP	standard temperature (60°F) and pressure (29.92 inches of mercury)
THC, TOC	total hydrocarbons, total organic compounds
tpq, TPQ	tons per quarter
tpy, TPY	tons per year
USEPA	United States Environmental Protection Agency
VE	visible emissions
w.c.	water column

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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 County is designated as an ozone nonattainment area for the state ambient air quality standards. The County is also designated a nonattainment area for the state PM_{10} ambient air quality standard. The federal requirements include regulations listed in the Code of Federal Regulations: 40 CFR Parts 50, 51, 52, 60, 61, 63, 68, 70 and 82. The State regulations may be found in the California Health & 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.

Part 70 Permitting: This is the third renewal of this Part 70 permit for the City of Santa Maria Landfill (CSML) and it satisfies the permit issuance requirements of the District's Part 70 operating permit program. The District's permit reevaluation has been combined with this Part 70 Permit renewal. 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). The CSML (SSID: 8713) is a Class III municipal solid waste landfill (in accordance with CCR Title 27 §20260) and includes a recycling and a 'household hazardous waste' collection program. 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 since 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 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 CSML, the regulatory agencies and the public to assess compliance.

Additionally, this permitting action directly incorporates a major Part 70 permit modification, applied for under PTO Mod 10318-01. This major modification is for the removal of PT-70/Reeval 10318-R2 Condition 9.C.1(b)(ii) which limited the capture rate of the landfill collection system to 1,100 scfm. The 1,100 scfm limit was based on the throughput capacity of the two enclosed flares and not the maximum amount of landfill gas which could be collected. Changes at the stationary source and process have warranted the removal of this condition.

Since the issuance of the last permit reevaluation, new facilities have been constructed which use the collected landfill gas. An electrical generator onsite at the CSML stationary source as well as two electrical generators at the Marian Medical Center combust collected landfill gas. All of these electrical generators are owned and operated by Janechek and Associates (J&A) Santa Maria, LLC. With these new operations, the landfill collection system limitation is outdated and has been removed from the permit. There are no changes to the flare potential to emit based on this change since each flare's use is still limited through a heat input limit condition.

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].

Landfill gas (LFG) 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. The gas is treated and sent to the Marian Medical Center or to the internal combustion (IC) engine located at the landfill. When the gas is not sent off site, it is combusted in one of two enclosed ground flares or the onsite 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, IC 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 IC engine are located at the landfill. The IC 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 is part of the Santa Maria Regional Landfill stationary source. Since the gas treatment system and electrical generator set are under separate ownership, these pieces of equipment are permitted separately under PTO 13281.

The processes involved at the stationary source are as follows:

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

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

- 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 a 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 the IC engine at Marian Medical and the onsite electrical generator 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.

- 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 IC engine and 1,426 kW electrical generator. The electrical generator is owned and operated by J&A Santa Maria, LLC, and is permitted separately under PTO 13281.

- 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.

1.2.2 Facility New Source Review (NSR) Overview: The equipment items subject to NSR consists of the combustion and associated support equipment. Additionally, a Part 70 significant modification is being incorporated directly into this reevaluation. See Section 1.1 for more details. The following is a summary of significant past and present ATC and PTO permits and applications for this facility:

PERMIT	FINAL ISSUED	PERMIT DESCRIPTION
ATC 9547	8/28/1996	Construction of a 10.500 MMBtu/hr ground level enclosed flare.
PTO 9547	10/16/1997	Operation of a 10.500 MMBtu/hr ground level enclosed flare.
ATC/PTO 10318	10/30/2000	Increase in the heat input rating of the flare to 13.500 MMBtu/hr, and an increase in the design rating of the high heating value (HHV) of the LFG from 330 Btu/scf to 450 Btu/scf.
PT-70/Reeval 10318-R1	7/1/2005	Reevaluation of landfill and flare operations.
ATC 12037	3/7/2007	Construction of a 20.000 MMBtu/hr flare, blower, condensate knockout, and associated controls. Existing 13.500 MMBtu/hr flare retained.
PTO 12037	11/5/2008	Operation of a 20.000 MMBtu/hr flare, blower, condensate knockout, and associated controls.
PT-70/Reeval 10318-R2	11/5/2008	Reevaluation of landfill and flare operations.

1.2.3 Facility Non-NSR Overview: The following permit at the facility was not subject to NSR:

PERMIT	FINAL ISSUED	PERMIT DESCRIPTION
PTO 11559	10/19/2005	Two existing emergency standby IC engines, permitted due to loss of Rule 202 exemption.

1.3 Emission Sources

The emissions from the CSML come from several sources including the landfill surface, enclosed ground flares, diesel-fired emergency standby generator, firewater engine, LFG condensate/leachate, and various fugitive sources such as particulates from vehicles and earthmoving equipment. Section 4 of this permit provides the District's engineering analyses of these emission sources. Section 5 of this permit describes the allowable emissions from each permitted emissions unit and lists the potential emissions from non-permitted emission units.

1.4 Emission Control Overview

Air pollution emission controls are utilized at the CSML facility. The emission controls employed at the facility include:

- Use of LFG collection system to route hydrocarbon laden gases to a control device for destruction.

- Use of enclosed ground flares with high efficiency burner design, adequate combustion zone residence time, and use of combustion zone temperature control systems.

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.

ERCs: CSML 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 SIP-approved District Rules, all conditions in the District-issued Authority to Construct 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 3.1, 3.2, and 3.3 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 (HAPs), that are less than 2 tons per year based on the unit's potential to emit and any HAP regulated under Section 112(g) of the Clean Air Act that does not exceed 0.5 ton per year based on the unit's potential to emit. 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 potential to emit (PTE) of a stationary source does not include fugitive emissions of any pollutant, unless the source is: (1) subject to a federal NSPS/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 CSML is subject to both NSPS (40 CFR Part 60, Subpart WWW) and NESHAP (40 CFR Part 63, Subpart AAAA, Subpart ZZZZ) for the LFG emissions units but neither subpart was in effect as of August 7, 1980. Thus, fugitive emissions are not included in the federal PTE. See Section 5.4 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. CSML 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. CSML 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 is 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. MACT/Hazardous Air Pollutants (HAPs): Part 70 permits also regulate emission of HAPs from major sources through the imposition of maximum achievable control technology (MACT), where applicable. See the Subpart AAAA requirements listed in Sections 3, 4, and 9 in 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 unit at this facility is subject to the CAM Rule. See Section 3.2.5.

1.6.10 Responsible Official: The designated responsible official and their mailing address are:

Mr. Shad Springer
Director, Utilities Department
City of Santa Maria
2065 East Main Street
Santa Maria, CA 93454-8026

2.0 Source and Process Description

2.1 Source and Process Description

2.1.1 Facility Description: The CSML was reportedly 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 reportedly ranges from about 20 feet to 40 feet. The estimated waste acceptance design capacity of the site is 346 million cubic feet, or about 9.8 million cubic meters.

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. The processes involved are as follows:

2.1.2.1 Landfill: 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).

2.1.2.2 LFG Collection System: A system to collect the LFG generated by the deposited organic matter. This system is comprised of vertical and horizontal collection wells, piping system, gas collection blower, and gas metering system. A condensate knockout is used to remove water vapor from the LFG going to the blower and a collection tank is used to hold the condensate. During normal operations the collected LFG is compressed, cooled, and filtered before being sent off-site to the Marian Medical Center for use. When Marian Medical Center cannot accept the gas, the LFG is sent to one of two enclosed ground flares (owned by the City of Santa Maria) or the electrical generator (owned by J&A Santa Maria, LLC) at the landfill.

2.1.2.3 Enclosed Ground Flares: The 13.500 MMBtu/hour enclosed ground flare is 6 feet in diameter and 24 feet tall. The 20.000 MMBtu/hr enclosed ground flare is 7.5 feet in diameter and 27 feet tall. A small quantity of landfill condensate may be injected in either of the flares for disposal via evaporation. The enclosed ground flares are equipped with automatic ignition systems, propane-fired pilots, an automatic temperature control system, and flame arrestor units to prevent flashback. The flare flame zone temperatures are maintained by automatic controllers at the temperature observed during the most recent compliant source test. Propane for the pilots is stored in a tank located next to the flares.

2.2 Support Systems

2.2.1 Condensate and Leachate Management: Condensate is the liquid that condenses in the collection system piping via the cooling of the moist, warm LFG once it leaves the landfill as it is being transported to the enclosed ground flares or IC engines. All condensate collected is stored in a 1,200 gallon holding tank. Condensate is disposed via injection into the enclosed ground flares, hauled off-site to an approved disposal facility, or used as a dust suppressant. A 5 horsepower air compressor drives a pneumatic pump to inject the condensate into the flare for incineration.

Leachate is the liquid that seeps through the body of the landfill. The bottom of the landfill is equipped with sumps and drainage system in order to capture this liquid. Three electric pumps push the leachate from the bottom of the lined cell to one of two 10,000-gallon holding tanks. From the holding tanks, leachate is hauled off-site to an approved disposal facility or used as a dust suppressant.

2.2.2 Emergency Standby Generator: A diesel-fired standby generator provides power to the facility in the event of a power outage. The engine is permitted to operate for 20 hours per year for maintenance and testing.

2.2.3 Firewater Engine: A diesel-fired firewater engine pumps water to the landfill or administrative building in the event of a fire. The engine is permitted to operate for 20 hours per year for maintenance and testing.

2.3 Detailed Process Equipment Listing

A detailed listing of permitted and exempt equipment authorized under this permit is included in Attachments 10.1 and 10.2 respectively.

3.0 Regulatory Review

3.1 Rule Exemptions

- District Rule 201 (Permits Required): CSML qualifies for exemptions under this rule since the equipment does not have a potential to emit. The following exemption applies to CSML:
    - Section A for two water tanks (120,000 gallons for firewater and 10,000 gallons for domestic use).
- District Rule 202 (Exemptions to Rule 201): CSML qualifies for a number of exemptions under this rule. An exemption from permit, however, does not grant relief from any applicable prohibitory rule unless specifically exempted by that prohibitory rule. The following exemptions apply to CSML:
    - Section D.8 for routine surface coating maintenance activities.
    - Section F.1.c for internal combustion (IC) engines used to propel on and off-road vehicles used at the CSML.
    - Section V.2 for storage of refined fuel oils with a gravity of $\leq 40°$ API Gravity (i.e. diesel storage tanks).
    - Section V.8 for propane storage tanks.
- District Rule 326 (Storage of Reactive Organic Compound Liquids): Per Section B.1.b, the following emission units are exempt from all provisions of the rule:
    - Diesel storage tanks
- District Rule 333 (Control of Emissions from Reciprocating Internal Combustion Engines): Section B.1.b exempts engines that are exempt from permit per Rule 202 from all the requirements of this rule. These include IC engines propelling vehicles that also power operational equipment at CSML, such as compactors, loaders etc. Section B.1.d. of the rule exempts compression ignition emergency standby generator engines as defined under California Code of Regulations, Title 17, Section 93115, Air Toxic Control Measure for Stationary Compression Ignited (CI) Engines. Both the diesel-fired emergency standby generator and firewater engine qualify for this exemption.
- District Rule 341 (Municipal Solid Waste Landfills): Section B exempts landfills which are subject to the requirements of Subpart WWW. This landfill is subject to the requirements of Subpart WWW, therefore Rule 341 does not apply.
- District Rule 346 (Loading of Organic Liquids): Per Section B.4, the transfer of liquefied natural gas, propane, butane or liquefied petroleum gases is not subject to this rule. Therefore, the transfer of propane to the propane storage tanks is exempt from this rule.

3.2 Compliance with Applicable Federal Rules and Regulations

3.2.1 40 CFR Parts 51/52 {*New Source Review (Nonattainment Area Review and Prevention of Significant Deterioration)*}: The 13.500 MMBtu/hr enclosed ground flare was permitted under ATC 9547 in August 1996. The 20.000 MMBtu/hr enclosed ground flare was permitted under ATC 12037 in March 2007. Both flares were permitted under District Regulation VIII (*New Source Review*). Compliance with this Part 70/Reeval 10318-R3 requirements and Regulation VIII ensures the flares will comply with the federal NSR requirements.

3.2.2 40 CFR Part 60 {*New Source Performance Standards*}: The following NSPS apply at CSML:

Subpart A	General Provisions
Subpart WWW	Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills

This landfill commenced construction, reconstruction, or modification on or after May 30, 1991, and therefore is subject to the requirements of Subpart WWW per §60.750(a). Information submitted by CSML indicates that this facility obtained a permit for landfill operations in September 2001. Since CSML has a design capacity in excess of 2.5 million megagrams, §60.752 through §60.759 of Subpart WWW apply.

Details of the applicable Subpart WWW requirements can be found in 61 Federal Register 9619 (March 12, 1996). A table with the Subpart WWW requirements can be found in Table 3.3.

The gas treatment system for Marian Medical Center and the internal combustion engine located at the landfill are also used to comply with Subpart WWW. However, since the gas treatment system and internal combustion engine are owned and operated by J&A Santa Maria, LLC, the requirements for these operations are covered by a separate permit (PTO 13281).

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*}: On January 16, 2003, the USEPA promulgated Subpart AAAA, a National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Hazardous Air Pollutants: Municipal Solid Waste Landfills. CSML is subject to Subpart AAAA since it is an area source required to comply with Subpart WWW standards. Subpart AAAA requires the following:

- Develop and implement a written *Startup, Shutdown, and Malfunction (SSM) Plan* according to the provisions of 40 CFR §63.3(e)(3).
- Comply with all Subpart WWW requirements including control system standards, collection system monitoring and continuous parameter monitoring (three-hour block monitoring average).

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.

Subpart ZZZZ (NESHAP for Stationary Reciprocating Internal Combustion Engines):

The emergency, diesel-fired, compression ignited stationary RICE and firewater engine located at this facility must meet maintenance, monitoring, recordkeeping, and reporting requirements. There are no emission limitations.

- Table 2.c.1 of the Subpart requires the following:
  - Change oil and filter every 500 hours of operation or annually, whichever comes first
  - Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary
  - Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
- §63.6625(f) requires the installation of a non-resettable hour meter if one is not already installed.
- §63.6650(h) requires the submittal of annual reports including the list of information specified in this section of the Subpart.
- §63.6655(f) requires the hours of operation of the engines to be recorded.

The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change interval.

3.2.5 40 CFR Part 64 {*Compliance Assurance Monitoring*}: 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 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. Compliance with this rule was evaluated and it was determined that this Subpart is not applicable to the enclosed ground flares at CSML. Though the flares qualify as control devices, Part 64.2(b)(1)(i) exempts sources from CAM requirements when the sources are regulated by NSPS proposed after November 15, 1990 (e.g. 40 CFR 60 Subpart WWW).

3.2.6 40 CFR Part 70 {*Operating Permits*}: Part 70 operating permits are required for sources subject to a NSPS. Since CSML is subject to Subpart WWW, this Subpart is applicable. Table 3.1 lists the federally enforceable District promulgated rules that are generic and apply to CSML. Tables 3.2 lists the federally enforceable promulgated rules that are unit-specific. These tables are based on data available from the District's administrative files and on CSML's Part 70 Operating Permit Application 10318-R3, filed April 29, 2011.

In its permit renewal application, CSML certified compliance with all existing District rules and permit conditions. Verification of ongoing compliance is required of CSML semi-annually. Issuance of this permit and compliance with all its terms and conditions as well as with the compliance schedule will ensure that CSML 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 & Safety Code*}: The administrative provisions of the Health & Safety Code apply to this facility.

3.3.2 California Administrative Code Title 17: These sections specify the standards by which abrasive blasting activities are governed throughout the State. All abrasive blasting activities at the CSML facility are required to conform to these standards. Compliance is typically assessed through onsite inspections. However, CAC Title 17 does not preempt enforcement of any SIP-approved rule that may be applicable to abrasive blasting activities.

3.3.3 Title 17 California Code of Regulations, Section 93115: The state *Airborne Toxics Control Measure for Stationary Compression Ignition Engines* (ATCM) applies to the stationary emergency backup diesel IC engines at the facility. This regulation requires the emergency backup diesel IC engines to be fired exclusively on CARB ultra-low sulfur diesel and limits maintenance and testing to 50 hours per year. Compliance is assessed through records of hours of operation and fuel use.

3.3.4 Title 17 California Code of Regulations, Subchapter 10, Article 4, Subarticle 6, §95460 to §95476: The California Methane Emissions from Municipal Solid Waste 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 a monitoring requirements for wellheads, methane destruction efficiency requirement for most control devices, surface methane emission standards, and reporting requirements. CSML's requirements for this new regulation are tabulated in Table 3.5 and the conditions found in Section 9.D.

3.4 Compliance with Applicable Local Rules and Regulations

3.4.1 Applicability Tables: Tables 3.1, 3.2, and 3.3 list the federally enforceable District promulgated rules that apply to the facility. Table 3.4 list the non-federally enforceable District Rules. Table 3.5 lists the non-federally enforceable state regulations for municipal solid waste landfills.

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

The following is a rule-by-rule evaluation of compliance for CSML:

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 enclosed ground flares, emergency standby generator, and firewater engine. Improperly maintained engines and flares 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 CSML 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 CSML 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 CSML 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 per scf at standard conditions.

Rule 306 - Dust and Fumes - Northern Zone: The CSML facility is considered a Northern Zone source. The maximum allowable concentrations are determined as a function of volumetric discharge, measured in scfm, and are listed in Table 305(a) of the rule. Emission units subject to this rule include the enclosed ground flares, emergency standby generator, and firewater 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, CARB diesel, and propane as fuels, 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 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 3 minutes and 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 CSML facility to 50 gr/100 scf (calculated as H_2S) {or 796 ppmvd} for gaseous fuels. However, this permit restricts the sulfur content of LFG burned in the enclosed ground flares to 6.3 gr/100 scf (100 ppmvd). Propane used at the facility shall meet Gas Processors Association specifications for propane or HD-5 and shall have a total sulfur content no greater than 15 gr/100 scf (239 ppmv). California Air Resources Board ultra-low sulfur diesel fuel with a maximum sulfur content of 15 ppmw shall be used for the emergency standby generator and firewater engine. Compliance with this requirement is demonstrated via gas analyses and vendor billing vouchers.

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 3,000 lb/day respectively). Solvents may be used at the CSML facility during normal operations for degreasing by wipe cleaning and for use in paints and coatings for maintenance operations. There is the potential to exceed the limits during significant surface coating activities. Per Condition 9.C.6 of this permit, CSML 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. Small-unheated solvent cleaners that are less than 1 gallon in capacity or having an evaporative surface area of less 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.6 of this permit, CSML 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 CSML is the industrial maintenance coating limit of 250-gram ROC per liter of coating, as applied. CSML 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 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.6 of this permit, CSML is required to maintain records to ensure compliance with this rule.

Rule 326 - Storage of Reactive Organic Liquids: This rule applies to equipment used to store reactive organic compound liquids with a vapor pressure greater than 0.5 psia. The condensate tank and leachate storage tanks are subject to this rule. The condensate tank is exempt from any control requirements because it has a capacity of less than 5,000 gallons. Compliance will be assessed via District inspections.

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 CSML will trigger the requirements of this rule. Compliance shall be based on site inspections.

Rule 333 - Control of Emissions from Reciprocating Internal Combustion Engines: This rule applies to all engines with a rated brake horsepower of 50 or greater that are fueled by liquid or gaseous fuels. The diesel fired emergency standby generator and firewater engine are exempt from this Rule per Section B.1.d.

Rule 341 – Municipal Solid Waste Landfills: This rule applies to all municipal solid waste landfills that commenced construction, reconstruction, or modification prior to May 30, 1991 and has accepted waste at any time since November 8, 1987 or has additional design capacity available for future expansion. Municipal solid waste landfills that are subject to the provisions of NSPS Subpart WWW are exempt from Rule 341 requirements. CSML is subject to Subpart WWW and therefore is exempt from Rule 341.

Rule 346 - Loading of Organic Liquids: This rule applies to the transfer of organic liquids into an organic liquid cargo vessel. For this rule only, an organic liquid cargo vessel is defined as a truck, trailer or railroad car. No loading of organic liquids occurs at the CSML.

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 359 – Flares and Thermal Oxidizers: This rule applies to the use of enclosed ground flares and thermal oxidizers at oil and gas production sources, petroleum refinery and related sources, natural gas services and transportation sources and wholesale trade in petroleum/petroleum products. Since the enclosed ground flares subject to this permit are not used at any of the sources detailed above, Rule 359 does not apply.

Rule 505 - Breakdown Conditions: This rule describes the procedures that CSML must follow when a breakdown condition occurs to any emissions unit associated with the CSML 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 permittee;

c. Is not the result of improper maintenance;

d. Does not constitute a nuisance as defined in Section 41700 of the 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 *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 tons per year of hydrocarbons, nitrogen oxides, carbon monoxide, or particulate matter. CSML is not required to submit an *Emergency Episode Plan* as part of permit issuance.

Rule 810 - Federal Prevention of Significant Deterioration: This rule was adopted January 20, 2011 and amended June 20, 2013 to incorporate the federal Prevention of Significant Deterioration (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 the last permit reevaluation, there have been nine source tests conducted at the facility. These source tests were conducted on May 12, 2009, May 13, 2010, September 9, 2010, May 24, 2011, June 5, 2012, June 13, 2013, November 5, 2014, and May 26, 2015. The most recent source tests for the 13.000 MMBtu/hr and 20.000 MMBtu/hr enclosed ground flares showed compliance with permit limits.

3.5.2 Violations: During the last inspection (March 12, 2017), the inspector did not document any violations of District or federal rules, or permit conditions at the time of inspection. Since the last permit reevaluation, two Notices of Violations (NOVs) have been issued to this facility:

NOV No. 9483: CSML failed to conduct quarterly LFG sampling during July to December 2009 reporting period.

NOV No. 10402: The 20.000 MMBtu/hr enclosed ground flare unit combustion temperature varied by more than +/- 5% on five separator one-hour occasions on August 18 and 19, 2012.

In addition to the NOVs listed above, there are currently pending enforcement actions under District review.

3.5.3 Variances: Since the issuance of the last permit reevaluation, the City of Santa Maria 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 3.1 - 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 21, 2012
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	April 17, 1997
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
RULE 301: Circumvention	All emission units	Any pollutant emission	October 23, 1978
RULE 302: Visible Emissions	All emission units	Particulate matter emissions	June 1981
RULE 303: Nuisance	All emission units	Emissions that can injure, damage or offend.	October 23, 1978
RULE 304: 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

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
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 (NSPS)	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 (NESHAP)	Emergency Standby Generator, Firewater Engine	Engines to comply with emission standards found in the regulation	January 21, 2010
REGULATION XIII (RULES 1301-1305): Part 70 Operating Permits	All emission units	CSML is a major source	January 18, 2001

Table 3.2 - Unit-Specific Federally Enforceable District Rules

Unit-Specific Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
RULE 326: Storage of Reactive Organic Compounds	Condensate storage tank and leachate storage tanks	Stores ROCs with vapor pressure greater than 0.5 psia	December 14, 1993

Table 3.3 - Unit-Specific Federally Enforceable NSPS Rules

40 CFR Part 60, Subpart WWW	Standards of Performance for New Stationary Sources– Standards of Performance for Municipal Solid Waste Landfills (9/21/2006)	Federally Enforceable (Y/N)
§60.752(b)	Requirements for MSW Landfills with Design Capacity equal to or greater than 2.5 million Mg **and** 2.5 million m^3 (Large Designated Facilities)	Y
§60.752(b)(2)	Comply with all requirements in sections (b)(2)(i through iv)	Y
§60.752 (b)(2)(i)	Submit a Collection and Control System Design Plan	Y
§60.752 (b)(2)(ii)	Install a collection and control system	Y
§60.752 (b)(2)(iii)	Route collected gases to a control system	Y
§60.752 (b)(2)(iv)	Operate in accordance with §60.753, §60.755, and §60.756	Y
§60.753	Operational Standards for Collection and Control Systems	Y
§60.753(a)	Operate a Collection System in each area or cell	Y
§60.753(b)	Operate each wellhead under negative pressure	Y
§60.753(c)	Operate each wellhead under 55 °C, and 20 percent nitrogen or 5 percent oxygen	Y
§60.753(d)	Surface Leak Limit is < 500 ppm methane above background at landfill surface	Y
§60.753(e)	Vent all collected gases to a control system complying with §60.752(b)(2)(iii). If collection or control system inoperable, shut down gas mover and close all vents within 1 hour.	Y
§60.753(f)	Operate the control system at all times when collected gas is routed to the control system	Y
§60.753(g)	If monitoring demonstrates that §60.753(b), (c), or (d) are not being met, corrective action must be taken.	Y
§60.754	Test Methods and Procedures	Y
§60.755	Compliance Provisions	Y
§60.755(a)	Gas Collection Systems	Y
§60.755(a)(1)	Calculation Procedures for Maximum Expected Gas Generation Flow Rate	Y
§60.755(a)(2)	Vertical wells and horizontal collectors shall be of sufficient density to meet all performance specification	Y
§60.755(a)(3)	Measure wellhead pressure monthly. If pressure is positive, take corrective action (final corrective action = expand system within 120 days of initial positive pressure reading)	Y
§60.755(a)(5)	Monitor wellheads monthly for temperature and either nitrogen or oxygen. If readings exceed limits, take corrective action up to expanding system within 120 days of first excess	Y
§60.755(b)	Wells shall be placed in cells as described in design plan	Y
§60.755(c)	Procedures for complying with surface methane standard	Y
§60.755(d)	Instrumentation and procedures for complying with §60.755(c)	Y

40 CFR Part 60, Subpart WWW	Standards of Performance for New Stationary Sources– Standards of Performance for Municipal Solid Waste Landfills (9/21/2006)	Federally Enforceable (Y/N)
§60.755(e)	Provisions apply at all times except during startup, shutdown, or malfunction, provided the duration of these shall not exceed five days for collection systems or 1 hour for control systems.	Y
§60.756	Monitoring of Operations	Y
§60.757	Reporting Requirements	Y
§60.757(a)	Submit an Initial Design Capacity Report	Y
§60.757(b)	Submit Initial and Annual NMOC Emission Rate Report	Y
§60.757(c)	Submit a Collection and Control System Design Plan within one year of first NMOC emission rate report showing NMOC > 50 Mg/year.	Y
§60.757(d)	Submit a Closure Report within 30 days of waste acceptance cessation.	Y
§60.757(e)	Submit an Equipment Removal Report 30 days prior to removal or cessation of operation of control equipment.	Y
§60.757(f)	Submit Annual Reports containing information required by (f)(1) through (f)(6).	Y
§60.757(g)	Initial Performance Test Report Requirements (g)(1) through (g)(6).	Y
§60.758	Recordkeeping Requirements.	Y
§60.758(a)	Design Capacity and Waste Acceptance Records (retain five years).	Y
§60.758(b)	Collection and Control Equipment Records (retain for life of control equipment except 5 years for monitoring data).	Y
§60.758(c)	Records of parameters monitored pursuant to §60.756 and periods of operation when boundaries are exceeded (retain for five years).	Y
§60.758(d)	Plot map showing location of all existing and planned collectors with a unique label for each collector (retain for life of collection system).	Y
§60.758(e)	Records of any exceedance of §60.753, location of exceedance and re-monitoring dates and data (for wellheads and surface). Retain for five years.	Y
§60.759	Specifications for Active Collection Systems.	Y

Table 3.4 – 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

Table 3.5 – Non-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 system
§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

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 RACT, BACT, NSPS, NESHAP)
- Emission source testing, sampling, CEMS
- Process monitors needed to ensure compliance

Unless noted otherwise, default ROC/THC reactivity profiles from the District's document titled "*VOC/ROC Emission Factors and Reactivities for Common Source Types*" dated March 12, 2001 (version 1.2) were used to determine the non-methane, non-ethane fraction of total hydrogen carbons (THC).

The equipment located at the CSML generate air emissions from the following sources:

- Landfill and LFG Collection System: Fugitive ROC emissions associated with the aerobic and anaerobic decomposition of the municipal solid waste deposited into the landfill. LFG is routed to control systems via a collection system. Due to the LFG composition and small number of fugitive components in the gas collection system, ROC emissions from the collection system are negligible.
- Enclosed Ground Flares: NO_x, ROC, CO, SO_x, PM, PM_{10} and $PM_{2.5}$ emissions are generated from the combustion of LFG and propane.
- Condensate and Leachate: ROC emissions due to the use of condensate and leachate as a dust suppressant.
- Emergency Standby Generator: NO_x, ROC, CO, SO_x, PM, PM_{10} and $PM_{2.5}$ emissions are generated from the combustion of diesel during power outages, maintenance, and testing.
- Firewater Engine: NO_x, ROC, CO, SO_x, PM, PM_{10} and $PM_{2.5}$ emissions are generated from the combustion of diesel during emergency use, maintenance, and testing.
- Vehicles: NO_x, ROC, CO, SO_x, PM, PM_{10} and $PM_{2.5}$ emissions associated with fuel combustion from mobile (vehicular) sources such as earthmoving equipment, garbage trucks, and light duty vehicle operations within the landfill. These are not regulated under this permit.
- Fugitive Dust: PM, PM_{10} and $PM_{2.5}$ pollutants consist of fugitive dust emissions associated with earthmoving, blasting of new fill material borrow areas, and disturbed ground areas of the landfill, as well as traffic on the landfill's unpaved roads. These emissions have not been quantified in this permit.

4.2 Landfill and LFG Collection System

4.2.1 General: Table 5.1-4 of this permit shows the uncontrolled and controlled ROC emissions from the landfill surface associated with the aerobic and anaerobic decomposition of landfill waste. The data indicates a residual ROC fugitive emission rate of approximately 20.74 tons per year can occur when the LFG collection system is operating. These residual fugitive emissions are evaluated within this permit for compliance with the District Rules and Regulations, since these contribute to the CSML's stationary source emissions.

The uncontrolled fugitive organic gas emissions expected to be produced by the landfill will be reduced by approximately 83 percent in mass (about 104.32 tons per year of ROC) by operation of the LFG collection system. This system is comprised of vertical and horizontal wells that draw the produced LFG out of the refuse deposition zones in the landfill, and into the two to four inch diameter well pipes. The LFG is drawn out of the wells into an aboveground piping system that transmits the gas to a centralized collection point. At the time of permit issuance, 108 wells comprise the LFG collection system. Of the 108 wells, 90 are located in the landfill interior and 18 are located on the landfill parameter. The number of wells may vary as changes are made to the collection system. At the centralized location, a 15 horsepower electric blower or a J&A Santa Maria blower creates suction pressure (vacuum) on the wells and gas collection piping system so that the LFG is drawn out of the landfill.

A vertical condensate separator removes and collects the water vapor in the LFG prior to entering the blower. The condensate is stored in a 1,200-gallon aboveground tank. Collected condensate is disposed via direct injection into an enclosed ground flare, trucked offsite to an approved disposal facility, or used as an onsite dust suppressant. A pneumatic pump is used for when the condensate is injected into one of the enclosed ground flares.

When the collected LFG is sent to Marian Medical Center or used in the onsite J&A Santa Maria electrical generator, the gas is compressed. Then the LFG passes through an aftercooler to reduce the gas to ambient temperature and then through a coalescing filter to remove entrained liquids, particulates, and siloxanes. This treatment system is owned and operated by J&A Santa Maria, LLC and is permitted separately from the landfill. When the collected LFG is combusted in one of the enclosed ground flares, the gas is not treated following the condensate knockout.

The LFG collection system is required to be designed, maintained, monitored and operated to comply with the federal NSPS, Subpart WWW, Federal MACT, Subpart AAAA, and California's Methane Emissions from Municipal Solid Waste Landfills regulation. As such, this permit conditionally requires the use of a *Surface Monitoring, Maintenance, and Recording Plan*, *Active Collection System Design Plan*, as well as monitoring and reporting parameters related to the active collection system's operation.

The basic elements of these operating plans include monitoring and recordkeeping of the following key LFG collection system parameters:

- *Landfill Surface Methane Emissions Monitoring Program.* This determines if adequate and properly placed LFG collection wells are installed to collect LFG emissions. It also monitors the landfill's ground cover for cracks and other defects, and repairs any such defects that can create excessive direct-to-atmosphere leaks of LFG; and

- *Monitoring Each LFG Collection Well for Temperature, Pressure, and Oxygen/Nitrogen Content.* This ensures that the landfill is not "aerobicized" to prevent the possibility of initiating an underground landfill fire, or killing the anaerobes that generate the methane from the deposited refuse.

4.2.2 Emission Factors: Uncontrolled LFG emissions are calculated by using default values for L_o, k, and C_{NMOC} given in AP-42 and the landfill emission equation found in 40 CFR §60.754(a)(1)(ii) and California's Methane Emissions from Municipal Solid Waste Landfills regulation. The following equation is used:

$$M_{NMOC} = 2 * L_0 * R * (e^{-kc} - e^{-kt}) * C_{NMOC} * (3.6x10^{-9});$$

Where:

M_{NMOC} = Uncontrolled mass emission rate of NMOC in mega-grams per year
L_0 = Methane generation potential (100 m^3 per mega-gram of waste, default value
R = Average annual acceptance rate (6,026,534 tons in place/46 years = 131,011 tons/year = 118,842 Mg/year)
k = Methane generation rate constant (0.02/year, default value)
t = Age of landfill (in years, 46 years)
C_{NMOC} = Concentration of NMOC (2,420 ppmv as hexane, default value)
c = Time since closure, in years; for active landfills, c = 0 and $e^{-kc} = 1.0$

93 percent of NMOC in the LFG is assumed to be ROC based on the staff report for District Rule 341.

4.2.3 Emission Controls: LFG is extracted from the landfill and transported to the enclosed ground flare for NMOC and methane destruction. The required efficiency rate for NMOC is 98% or greater, or 20 ppmv at 3% oxygen (as hexane). The required efficiency rate for methane is 99% or greater (see Section 4.3).

Based on records from the second half of 2015 and first half of 2016 compliance verification reports, CSML is capturing approximately 32,380 m^3/day of LFG (see Table 5.1-5). The mass of NMOC controlled is calculated as follows:

$$M_C = Q_{LFG} * C_{NMOC} / SV / 10^9 * 365$$

Where:

M_C = Mass NMOC controlled (mega-grams per year)
Q_{LFG} = Quantity LFG captured (m^3/day)
C_{NMOC} = Concentration of NMOC (2,420 ppmv as hexane, default value)
SV = Specific volume (0.27 m^3/kg)

4.3 Enclosed Ground Flares

4.3.1 General: The collected LFG is routed to one of two City of Santa Maria owned enclosed ground flares or treated, compressed, and/or sent either to the onsite electrical generator or off-site generators at the Marian Medical Center which are owned and operated by J&A Santa Maria. The 20.000 MMBtu/hr enclosed ground flare is a Perennial Energy Inc FL-90-26-E and the 13.500 MMBtu/hr unit is a Perennial Energy Inc EF4-10.5-14303233-Z-00-10. Note that the smaller unit has a nominal rating of 10.000 MMBtu/hr but is permitted to operate and an overload

heat input of 13.500 MMBtu/hr. Both enclosed ground flares are equipped with an automatic ignition system, three thermocouples, propane-fired pilot, automatic temperature control system, flame arrestor, and safety shutdown system. A single blower supplies the collected LFG to the flares. A process logic control system directs the LFG from the gas collection system to either one of the enclosed ground flares. The controller program is interlocked to prevent both enclosed ground flares from operating simultaneously. Gas flow measurement stations, upstream from the flares, measure and record the LFG flow rate to the flares.

Each flare is equipped with three thermocouples. One thermocouple is used at a time to measure temperature inside the flare. The appropriate thermocouple is selected automatically based on the heat input to the flare. At low rates, the lowest thermocouple is selected. As the heat input rate to the flare increases, the middle thermocouple is selected. At high firing rates, the highest thermocouple is selected. The heat input rates at which each thermocouple are selected can be found in operation and maintenance manuals for each enclosed ground flare. The selected thermocouple also provides the input for the automatic temperature control system. By selecting the thermocouple at the appropriate height, sufficient residence time above the set point temperature is ensured. The combustion set-point temperature for each enclosed ground flare is established during source testing. If the thermocouple detects temperatures below the set point temperature, the automatic temperature control system closes louvers at the base of the flare to reduce excess air and increase the temperature. If the selected thermocouple detects high temperatures, the automatic temperature control system opens the louvers.

4.3.2 Emission Factors: The flare emission factors for NO_x and CO were set at BACT levels at the time of permit issuance for each of the enclosed ground flares. NO_x emission factors for the enclosed ground flares are 0.060 lb/MMBtu for the 13.500 MMBtu/hr unit and 0.050 lb/MMBtu for the 20.000 MMBtu/hr flare. The CO emission factor for both units is 0.400 lb/MMBtu. The ROC and PM factors are based on the information submitted in the ATC/PTO 9547 and ATC 12037 permit applications. The ROC factor is 0.080 lb/MMBtu for the 13.500 MMBtu/hr flare and 0.030 lb/MMBtu for the 20.000 MMBtu/hr flare. The PM factor for both units is 0.020 lb/MMBtu. The PM_{10} and $PM_{2.5}$ emission factors are assumed to be equal to the PM factor. The SO_x emission factor was determined using mass balance.

$$ER = EF * FPP * HHV$$

Where:

ER = Emission rate (lb/unit time period, i.e.: day, yr)
EF = Pollutant specific emission factor (lb/MMBtu)
FPP = Gas flow rate per operating period (MMscf/unit time period)
HHV = LFG fuel high heating value (Btu/scf)

4.3.3 Emission Controls: Emissions from the enclosed ground flares are controlled with high efficiency burner design, adequate combustion zone residence time (>0.6 seconds), and use of combustion zone temperature control systems.

Each flare must operate at a minimum temperature based on a three-hour block average. This minimum temperature requirement is established by Subpart WWW and California's Regulation to Reduce Methane Emissions from Municipal Solid Waste Landfills.

4.4 Emergency Standby Generator

4.4.1 General: The emergency diesel-fired generator is used during electrical outages to provide power to the facility. The engines are permitted to operate up to 2 hours per day and 20 hours per year for maintenance and testing. The engine is otherwise only permitted to operate during the loss of electrical power to the facility.

4.4.2 Emission Factors: The emission factors for the unit is based on the engine rating and year of manufacture. Default emission factors were used for the emergency standby generator. These emission factors are documented on the District's webpage at http://www.ourair.org/dice/emission-factors/. The SO_x emission factor was determined using mass balance.

Emissions are determined by the following equation:

$$ER = BHP * EF * OH * CF$$

Where:

ER = Emission rate (lb/time period)
BHP = Engine brake horsepower rating
EF = Pollutant specific emission factor (g/bhp-hr)
OH = Operating hours (hours/time period)
CF = Conversion factor from grams to pounds (1 lb/453.6 g)

4.5 Firewater Engine

4.4.1 General: The diesel-fired firewater engine is used to pump water to the landfill or onsite buildings in the event of a fire. The engine is permitted to operate up to 2 hours per day and 20 hours per year for maintenance and testing. The engine is otherwise only permitted to operate in the event of an emergency.

4.4.2 Emission Factors: The emission factors for the firewater engine is based on the engine rating and year of manufacture. Default emission factors were used for this unit. These emission factors are documented on the District's webpage at http://www.ourair.org/dice/emission-factors/. The SO_x emission factor was determined using mass balance.

Emissions are determined by the following equation:

$$ER = BHP * EF * OH * CF$$

Where:

ER = Emission rate (lb/time period)
BHP = Engine brake horsepower rating
EF = Pollutant specific emission factor (g/bhp-hr)
OH = Operating hours (hours/time period)
CF = Conversion factor from grams to pounds (1 lb/453.6 g)

4.6 Other Emission Sources

4.6.1 Condensate and Leachate: The use of LFG condensate and leachate as a dust suppressant emits ROCs. A spray truck is loaded with condensate or leachate, and the suppressant applied to a lined cell of the landfill equipped with a containment system. These activities are conducted on an as needed basis. The combined emissions from the use of condensate and leachate is limited to 2.40 pounds per day per the District's approval letter dated November 8, 2010. These emissions are determined by multiplying the volume of condensate and leachate used with the respective ROC concentration of condensate and leachate.

4.6.2 Exempt Onsite Mobile Source Emissions: These emissions were analyzed in the Second Supplemental EIR (February 2004), The EIR estimated that pollutant emissions associated with the onsite mobile source activity was as follows: NO_x = 28 tons/yr, ROC = 3 tons/yr, CO = 12 tons/yr, SO_x = 3 tons/yr and PM_{10} = 3 tons/yr. These emissions are permit exempt and not included in the potential to emit for the source.

4.6.3 Fugitive Dust: These emissions are listed in Table 4.3-3 of the Second Supplemental EIR (February 2004) as an update to the December 7, 1993 FEIR for the Santa Maria Regional Landfill Site Facility Permit (SCH # 92031045). The supplemental EIR reiterated the 1993 FEIR estimated PM_{10} emissions associated with landfill fugitive dust at 2.35 tons/day and 857 tons per year.

4.6.4 Blasting: Blasting is conducted on an as needed basis. Blasting may be needed to implement landfill expansion. The permittee estimates CSML may experience a maximum of two blasting events per year. These emissions are not quantified.

4.7 BACT/NSPS/NESHAP/MACT

4.7.1 BACT: Best Available Control Technology was required for the enclosed ground flares for NO_x and CO at the time of ATC permit issuances. Evaluation of NO_x and CO BACT included a review of SCAQMD, BAAQMD, and SJVUAPCD BACT databases applicable to non-hazardous landfill enclosed ground flares. BACT for both the 13.500 MMBtu/hr and 20.000 MMBtu/hr units was determined to be 0.060 lb/MMBtu for NOx and 0.400 lb/MMBtu for CO. However, the manufacturer guaranteed a NO_x emission rate of 0.050 lb/MMBtu for the 20.000 MMBtu/hr flare, so the lower emission factor was used. Further discussion of the emission factors can be found in Section 4.3.2 and Table 4.1.

The emergency standby generator and firewater engine were previously exempt from permit per Rule 202. On March 17, 2005, District Rule 202 {*Exemptions to Rule 201*} was revised to remove the compression-ignited engine (e.g., diesel) permit exemption for units rated over 50 brake horsepower (bhp). That exemption was removed to allow the District to implement the DICE ATCM. As a result, the emergency standby generator and firewater engine are not subject to BACT or NSR.

4.7.2 NSPS: Discussion of applicability and compliance status regarding with New Source Performance Standards (40 CFR Part 60 Subpart WWW) is presented in Section 3.2. An engineering analysis for the affected equipment is found in the sections above.

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

4.7.4 MACT: CSML is subject to the USEPA-promulgated MACT standards of Subpart AAAA and Subpart ZZZZ. Subpart AAAA requires CSML to do the following:

- Develop and implement a written *Startup, Shutdown, and Malfunction (SSM) Plan* according to the provisions of 40 CFR §63.6(e)(3).

- Comply with all Subpart WWW requirements including control system standards, collection system monitoring and continuous parameter monitoring (three-hour block monitoring average).

Note: Subpart AAAA monitoring deviation occurs when one or more hours during the 3-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 CSML's compliance with these federal standards.

4.8 CEMS/Process Monitoring/Meter Calibration

4.8.1 CEMS: CSML is not required to install Continuous Emissions Monitor Systems (CEMS).

4.8.2 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:

Landfill Surface

- Portable analyzer for surface emissions monitoring
- Anemometer for wind speed

LFG Collection System

- Portable analyzer for O_2 wellhead monitoring (see Section 4.9.2 for alternative compliance option)
- Manometer or magnehelic gauge for wellhead pressure
- Thermocouple or thermometer for wellhead temperature
- Flow meter for totalized collected LFG
- Portable analyzer for components under positive pressure

Enclosed Ground Flares

- Flow meter for LFG
- Flow meter for LFG condensate injection
- Thermocouples for combustion temperature
- Portable analyzer for components under positive pressure

Condensate Knockout

- Flow meter for LFG condensate

Leachate Tanks

- Flow meter for leachate

Emergency Standby Generator

- Non-resettable hour meter for hours of operation

Firewater Engine

- Non-resettable hour meter for hours of operation

The above process monitoring requirements shall be implemented according to a *Process Monitor Calibration and Maintenance Plan* (to be updated). This plan shall detail the specific meters and related monitoring and recording system required to be installed at this facility per the conditions of this permit. The plan shall identify the operating ranges of each meter, as well as meter calibration methodologies and frequencies. 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 CSML, by written notice, to install additional process monitors. Table 4.2 identifies the minimum emission sources, emissions control operating parameters, and monitoring frequencies that the District requires to be monitored.

4.9 Source Testing/Sampling

4.9.1 Source Testing: CSML is required to follow the District Source Test Procedures Manual (May 24, 1990 and all subsequently approved updates). 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.

The parameters to be source tested biannually are listed below, and include more specific requirements as identified in Table 4.3. Source testing requirements can be found in Condition 9.C.9. 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:

- Enclosed Ground Flare Exhaust (NO_x, ROC, Methane, and CO)

4.9.2 Sampling: At a minimum, the process streams below are required to be sampled and analyzed on a quarterly basis:

- LFG: Sample to be taken downstream of the blower and condensate knockout, and upstream of the enclosed ground flares. Analyzes required include total sulfur (ppmv), hydrogen sulfide content (ppmv), higher heating value (Btu/scf), methane (percent by volume) and carbon dioxide (percent by volume).

- LFG Condensate: Composition analysis per EPA Method 8260C.

- Leachate: Composition analysis per EPA Method 8260C.

As an alternative compliance option to monthly wellhead oxygen measurements (see Section 4.8.2), the permittee may take a monthly LFG sample from the wellheads and analyze the nitrogen concentration.

As necessary to ensure compliance with this permit and applicable rules and regulations, the District may require the project, 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 ASTM methods are acceptable. It is important that all sampling and analysis be traceable by chain of custody procedures.

4.10 *Part 70 Engineering Review: Hazardous Air Pollutant Emissions*

Hazardous air pollutant (HAP) emission were determined for the flare per USEPA's AP-42 listed emission factors, LFG per Environmental Analytical Service Inc Laboratory Analysis Report on the flare gas, and the diesel engines per Ventura County Air Pollution Control District AB2588 Combustion Emission Factors for diesel internal combustion engines. The HAP factors and emissions for each of these sources are documented in Tables 5.5 and 5.6.

Table 4.1: Best Available Control Technology Requirements

Emission Source	Pollutant	BACT Technology	BACT Performance Standard
13.500 MMBtu/hr Enclosed Flare	NO_x	Lo NO_x Burner	0.060 lb/MMBtu
13.500 MMBtu/hr Enclosed Flare	CO	Lo NO_x Burner	0.400 lb/MMBtu
20.000 MMBtu/hr Enclosed Flare	NO_x	Lo NO_x Burner	0.050 lb/MMBtu
20.000 MMBtu/hr Enclosed Flare	CO	Lo NO_x Burner	0.400 lb/MMBtu

Table 4.2: Process Monitoring Requirements

Parameter Number	Monitoring Location	Parameter Monitored	Monitoring Method	Monitoring Frequency
1	Landfill Surface	Methane Concentration	Portable Analyzer	Quarterly
		Wind Speed	Anemometer	Quarterly
2	LFG Collection System	Oxygen	Portable Analyzer	Quarterly
		Pressure	Manometer or Magnehelic Gauge	Quarterly
		Temperature	Thermocouple or Thermometer	Quarterly
		LFG Flow	Flow meter	Continuously
		LFG Components	Portable Analyzer	Quarterly
3	Enclosed Ground Flare	LFG Flow	Flow meter	Continuously
		LFG Condensate Flow	Flow meter	Continuously
		Combustion Temperature	Thermocouple or thermometer	Quarterly
		LFG Components	Portable Analyzer	Quarterly
4	Condensate Knockout	LFG Condensate Flow	Flow meter	Continuously
5	Leachate Storage Tanks	Leachate Flow	Flow meter	Continuously
6	Emergency Standby Generator	Operational Hours	Non-resettable hour meter	Continuously
7	Firewater Engine	Operational Hours	Non-resettable hour meter	Continuously

Table 4.3: Enclosed Ground Flare Source Test Requirements

Emission & Limit Test Points	Pollutants	Parameters (b)	Test Methods (a),(b)	Destruction Efficiency	13.500 MMBtu/hr Mass Emissions (lb/hr)	20.000 MMBtu/hr Mass Emissions (lb/hr)
Flare Stack	NO_x	ppmv, lb/hr	EPA Method 7E, CARB Method 100		0.81	1.00
	ROC	Inlet and outlet ppmv, lb/hr	EPA Method 25, EPA Method 25A(g), EPA Method 25C (f)	98% (mass basis) or 20 ppmv outlet at 3% O_2 (as hexane)	1.08	0.60
	Methane	Inlet and outlet ppmv, lb/hr	EPA Method 18, EPA Method 25, EPA Method 25A (g)	99% (mass basis)		
	CO	ppmv, lb/hr	EPA Method 10, CARB Method 100		5.40	8.00
	Sampling Point Det.		EPA Method 1			
	Stack Gas Flow Rate	cfm	EPA Method 2			
	O_2	Dry, Mol. Wt	EPA Method 3			
	Moisture Content	percent	EPA Method 4			
	Temperature (h)	°C or °F	Thermocouple			
Fuel Gas	Fuel Gas Flow Rate	scfm	Fuel Gas Meter (d)			
	Higher Heating Value	Btu/scf	ASTM D 1826-88			
	Total Sulfur Content (c)	ppm	ASTM D 1072			

Table Notes:

(a) Alternative methods may be acceptable on a case-by-case basis.
(b) A minimum of three 40-minute runs shall be obtained during each test.
(c) 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.
(d) Fuel meter shall be calibrated within 60 days of the source test date. Results shall be corrected for temperature and pressure at STP (60°F and 14.7 psia)
(e) Destruction rate efficiency = [100 × (inlet mass – outlet mass)] ÷ (inlet mass)
(f) EPA Method 25C may only be used on the enclosed ground flare inlet.
(g) 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).
(h) Temperature to be measured every 15 minutes at a minimum and averaged over the course of the source test.

5.0 Emissions

5.1 General

Emissions calculations are divided into permitted and exempt categories. District Rule 202 lists what equipment is exempt from permit. The permitted emissions for each emissions unit are based on the equipment's Potential to Emit (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 federal PTE calculation using the definition of potential to emit used in Rule 1301. Section 5.5 provides the estimated Hazardous Air Pollutants (HAP) emissions from CSMLs. Section 5.6 provides the estimated emissions from 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 allowed operational limits of the enclosed ground flare, emergency standby generator, and firewater engine. Worst-case ROC emissions related to the condensate evaporation in the flare are expected to be less than 0.10 lb per hour of ROCs and considered insignificant.

The permitted emission limits for the emergency standby generator and firewater engine are based on maintenance and testing operations only. Emissions from the engines during emergency operations are not considered part of the facility potential to emit.

Table 5.1-1 lists the heat input ratings (MMBtu/hr) for the enclosed ground flares, horsepower rating of the engines, and operating schedule for each of the combustion units. Table 5.1-2 lists emission factors used in calculating the enclosed ground flare and engines PTE. The daily and annual combustion unit PTE are listed in Table 5.1-3 using the input parameters provided in Tables 5.1-1 and 5.1-2.

Landfill NMOC and ROC fugitive emissions are calculated using the formula provided in Section 4.2.2 and captured LFG data found in Table 5.1-5. The landfill fugitive PTE is listed in Table 5.1-4. Condensate and leachate ROC emissions from dust suppression are reported in Table 5.2 and based on written District approval granted on November 8, 2010.

5.3 Permitted Emission Limits - Facility Totals

The total permitted facility emissions, based on permitted emissions from each emissions unit and the different operational scenarios, are reported in Table 5.2. Additionally, the potential to emit for the CSML stationary source is shown in Table 5.4.

5.4 Part 70: Federal Potential to Emit for the Facility

Table 5.3 lists the federal Part 70 potential to emit. Fugitives are counted in the federal PTE if the facility was subject to any applicable NSPS or NESHAP requirement was in effect as of August 7, 1980, or included in the 29-category source list specified in 40 CFR 70.2. CSML is subject to both NSPS (40 CFR 60, Subpart WWW) and NESHAP (40 CFR Part 63, Subpart AAAA, Subpart ZZZZ) but neither subpart was in effect as of August 7, 1980. Additionally, landfills are not listed in 40 CFR 70.2. Therefore, fugitive LFG emissions are not included in the federal potential to emit.

5.5 *Part 70: Hazardous Air Pollutant Emissions for the Facility*

Total emissions of hazardous air pollutants (HAP) attributed to CSML are computed for this permit. HAP emission factors are shown in Table 5.5 and HAP emissions are listed in Table 5.6.

5.6 *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), IC engines associated with propelling vehicles (Rule 202.F.1.c and Rule 333.B.1.b), diesel storage tanks (Rule 202.V.2), and propane storage tanks (Rule 202.V.8). Insignificant activities are defined under District Rule 1301 as any activities with a potential to emit less than 2 tons per year, or any HAP potential to emit less than 0.5 tons per year. No emission units at CSML are considered insignificant emission units.

Table 5.1-1: COMBUSTION EQUIPMENT INFORMATION

No.	Make/Model	Device ID	Flare Use	Specifications				Operating Limitations				Fuel Properties	
				Burner Type	Fuel Type	Unit Rating (MMBtu/hr)	Fuel Flow Rate (scf/hr)	On-Line		Heat Input Limit		HHV[1] (Btu/scf)	Total Sulfur (ppmv)
								hr/day	hr/year	per day	per year		
1	Perennial Energy	006910	LFG Combustion	Gas	LFG	13.500	30,000	24	8,760	324.000	118,260.000	450	100
2	Perennial Energy	109207	LFG Combustion	Gas	LFG	20.000	44,444	24	8,760	480.000	175,200.000	450	100

No.	Make/Model	Device ID	Engine Use	Horsepower Rating	Operating Limitations	
					hr/day	hr/year
3	Cummins 6CTA8.3-F1	107057	Firewater	240	2	20
4	Cummins DGFA 4955539	107058	Emergency Backup	277	2	20

Notes:

1. 450 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

No.	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$	GHG	Units
1	0.0600	0.0800	0.4000	0.0512	0.020	0.020	0.020	115.373	lb/MMBtu
2	0.0500	0.0300	0.4000	0.0512	0.020	0.020	0.020	115.373	lb/MMBtu
3	6.9000	0.9990	8.5000	0.0060	0.400	0.400	0.400	556.600	lb/MMBtu
4	6.9000	0.9990	8.5000	0.0060	0.400	0.400	0.400	556.600	lb/MMBtu

Notes:

1. An HHV of 330 Btu/scf was used to compute the SO_x emission factor to be conservative.

Table 5.1-3: COMBUSTION EQUIPMENT EMISSION LIMITS

No.	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
1	19.44	3.55	25.92	4.73	129.60	23.65	16.59	3.03	6.48	1.18	6.48	1.18	6.48	1.18	37,380.85	6,822.01
2	24.01	4.38	14.40	2.63	192.00	35.04	24.58	4.49	9.60	1.75	9.60	1.75	9.60	1.75	55,379.04	10,106.67
3	7.30	0.04	1.06	0.01	8.99	0.04	0.01	0.00	0.42	0.00	0.42	0.00	0.42	0.00	588.99	2.94
4	8.43	0.04	1.22	0.01	10.38	0.05	0.01	0.00	0.49	0.00	0.49	0.00	0.49	0.00	679.80	3.40
Total	**39.74**	**4.46**	**28.20**	**4.74**	**211.38**	**35.14**	**24.60**	**4.49**	**10.51**	**1.76**	**10.51**	**1.76**	**10.51**	**1.76**	**56,647.83**	**10,113.02**

Notes:

(1) Emissions for item 2 includes a propane pilot component based on AP-42 factors and on the use of 20 gallons of propane per month for startup events

(2) Only one of the two flares (items 1 and 2) may be fired at any given time. The worst case combustion equipment emissions reflect this operational restriction.

Table 5.1-4: LANDFILL FUGITIVE EMISSIONS

Date Landfill Opened	1970
Current Year	2016

Uncontrolled Landfill Fugitive Emission Formula per AP-42

$$M_{NMOC} = 2L_0R(e^{-kc} - e^{-kt})(C_{NMOC})(3.6x10^{-9})$$

Name	Variable	Value	Units
Refuse methane generation potential [2]	L_o	100	m^3/Mg
Average annual acceptance [3]	R	118,842.17	Mg/yr
Methane generation constant [2]	k	0.02	1/yr
Years since closure	c	0	yrs
Age of landfill	t	46	yrs
Concentration of NMOC [2]	C_{NMOC}	2420	ppm as hexane
Conversion factor	--	3.60E-09	--

Uncontrolled NMOC Emissions, Mg/yr	124.55	Mg NMOC/yr
Uncontrolled NMOC Emissions, tons/yr	137.30	tons NMOC/year
Amount of NMOC Collected, tons/yr [5]	115.00	tons NMOC/year
Fugitive NMOC Emissions to Atmosphere, tons/yr	22.30	tons NMOC/year
Fugitive ROC[5] Emissions to Atmosphere, tons/yr	20.74	tons ROC/year

Notes:

1. Mass Conversion from Mg to ton= 1.1024
2. Reference: AP-42 Section 2.4 for Municipal Solid Waste Landfills (October 2008)
3. Calculated using current waste in place and age of landfill from second half 2015 CVR report.
4. NMOC concentration based on most recent source conducted in May 2016.
5. See Table 5.1-5 for calculation.
6. ROC/NMOC = 0.93 (ref: SBCAPCD Rule 341, Staff Report September 18, 1997)

Table 5.1-5: CAPTURED LANDFILL GAS

Month	Gas Collected (scf) [1]
July	30,066,727
August	32,057,283
September	28,821,993
October	32,392,360
November	32,479,840
December	27,373,588
January	41,644,850
February	35,096,392
March	30,509,757
April	37,058,625
May	46,991,408
June	44,026,361
Annual Total	**418,519,184**
Daily Average	**1,143,495**

Conversation and Captured Gas Calculation

1,143,495	scf/day of captured landfill gas
32,380	m^3/day of captured landfill gas [3]
78.36	m^3/day of captured NMOC [4]
285.02	kg/day of captured NMOC [5]
104.32	Mg/year of captured NMOC
115.00	**TPY of captured NMOC [6]**

Notes:

1. Monthly gas collected volumes are from Second Half 2015 CVR and First half 2016 CVR.
2. Days in reporting period is 366 days.
3. 1 m^3 is equal to 35.3147 cubic feet
4. NMOC concentration is equal to 2,420 ppmv (default value per AP-42)
5. 1 kg NMOC is equal to 0.2749304 m^3 NMOC (see the administraive file of this permit for calculations)
6. 1 Mg is equal to 1.1024 tons.

Convert NMOC m^3 to kg
379.62 scf/lbmol
0.30 m/ft
86.20 lb/lb-mol
0.45 kg/lb
0.27 m^3/kg NMOC

Table 5.2
CSML - PT-70/Reeval 10318-R3
Facility Potential to Emit (FID: 10854)

Equipment Permitted Emissions														
Equipment Category	**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**
Flares	24.01	4.38	25.92	4.73	192.00	35.04	24.58	4.49	9.60	1.75	9.60	1.75	9.60	1.75
Emergency Standby Generators	15.73	0.08	2.28	0.01	19.38	0.10	0.01	0.00	0.91	0.00	0.91	0.00	0.91	0.00
Landfill Fugitives			113.66	20.74										
Condensate and Leachate- Dust Suppression			2.40	0.44										
Total Emissions	**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**

Notes:
1. See Table 5.1-3 for the flare's worst case permitted emissions.

Table 5.3
CSML - PT-70/Reeval 10318-R3
Facility Federal Potential to Emit (FID: 08704)

Equipment Permitted Emissions														
Equipment Category	**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**
Flares	24.01	4.38	25.92	4.73	192.00	35.04	24.58	4.49	9.60	1.75	9.60	1.75	9.60	1.75
Emergency Standby Generators	15.73	0.08	2.28	0.01	19.38	0.10	0.01	0.00	0.91	0.00	0.91	0.00	0.91	0.00
Landfill Fugitives			--	--										
Condensate and Leachate- Dust Suppression			2.40	0.44										
Total Emissions	**39.74**	**4.46**	**30.60**	**5.18**	**211.38**	**35.14**	**24.60**	**4.49**	**10.51**	**1.76**	**10.51**	**1.76**	**10.51**	**1.76**

Notes:
1. See Table 5.1-3 for the flare's worst case permitted emissions.

Table 5.4
CSML - PT-70/Reeval 10318-R3
Stationary Source Potential to Emit (SSID: 08713)

Stationary Source Permitted Emissions														
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 Landfill (FID: 10854)	52.01	9.49	41.61	7.59	260.06	47.46	1.04	0.19	5.26	0.96	5.26	0.96	5.26	0.96
Total Emissions	**91.75**	**13.95**	**185.87**	**33.51**	**471.44**	**82.60**	**25.64**	**4.68**	**15.77**	**2.72**	**15.77**	**2.72**	**15.77**	**2.72**

Table 5.5
CSML - PT-70/Reeval 10318-R3
HAP Emission Factors

Emission Factors

Equipment Category	Description	Dev No	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Butadiene	1,1-Dichloroethane	1,1,-Dichloroethene	1,2-Dichloroethane	1,2-Dibromoethane	2-Butanone (Methyl ethyl ketone)	1,4-Dioxane	Acetaldehyde	Acetonitrile	Acrolein	Acrylonitrile	Arsenic	Beryllium
Combustion - Engines																		
	Emergency Backup DICE	107057	–	–	–	2.17E-01	–	–	–	–	–	–	7.83E-01	–	3.39E-02	–	1.60E-03	–
	Emergency Backup DICE	107058	–	–	–	2.17E-01	–	–	–	–	–	–	7.83E-01	–	3.39E-02	–	1.60E-03	–
Combustion - Flare	LFG Combustion	006910	3.37E-01	–	–	–	4.37E-01	–	1.35E+00	–	–	4.55E-03	6.53E-01	7.96E+00	9.33E-02	4.50E-03	5.91E-02	–
	LFG Combustion	109207	3.37E-01	–	–	–	4.37E-01	–	1.35E+00	–	–	4.55E-03	6.53E-01	7.96E+00	9.33E-02	4.50E-03	5.91E-02	–
Fugitives																		
	Total Fugitives		4.00E-02	6.00E-02	6.00E-02	1.66E-01	6.00E-02	6.00E-02	6.00E-02	4.80E-03	5.44E+00	8.29E-03	7.74E-02	–	–	3.00E-01	–	–

Emission Factors

Benzene	Benzyl Chloride	Bromomethane	Cadmium	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chromium (Total)	Cobalt	Copper	1,4-Dichlorobenzene	Dichloromethane	Ethylbenzene	Formaldehyde	Hydrogen sulfide	Hexane	HCl
1.86E-01	–	–	1.50E-03	–	–	2.00E-04	–	–	6.00E-04	–	4.10E-03	–	–	1.09E-02	1.73E+00	–	2.69E-02	1.86E-01
1.86E-01	–	–	1.50E-03	–	–	2.00E-04	–	–	6.00E-04	–	4.10E-03	–	–	1.09E-02	1.73E+00	–	2.69E-02	1.86E-01
8.59E-01	–	–	1.43E-03	–	3.76E-02	8.69E-01	–	5.60E-02	4.64E-03	–	4.86E+00	–	4.29E-01	–	1.77E-01	–	–	1.61E-03
8.59E-01	–	–	1.43E-03	–	3.76E-02	8.69E-01	–	5.60E-02	4.64E-03	–	4.86E+00	–	4.29E-01	–	1.77E-01	–	–	1.61E-03
5.09E-01	1.81E-02	2.10E-02	–	2.00E-01	4.00E-02	7.20E-02	9.10E-02	4.00E-02	–	–	–	6.47E-01	6.00E-02	5.28E+00	1.17E-02	9.40E+01	–	–

Emission Factors																		
HF	Iso-Octane	Lead	Manganese	Mercury	Methyl Tert-butyl ether (MTBE)	PAHs (Not Incl. Naphthalen)	Naphthalene	Nickel	Selenium	Styrene	Tetrachloroethylene	Toluene	Trichloroethene	Vinyl Acetate	Vinyl Chloride	Xylene	Units	References
–	–	8.30E-03	3.10E-03	2.00E-03	–	3.62E-02	1.97E-02	3.90E-03	2.20E-03	–	–	1.05E-01	–	–	–	4.24E-02	lb/1000 gal	A
–	–	8.30E-03	3.10E-03	2.00E-03	–	3.62E-02	1.97E-02	3.90E-03	2.20E-03	–	–	1.05E-01	–	–	–	4.24E-02	lb/1000 gal	A
2.15E-01	–	–	2.92E-03	–	–	–	1.75E-04	1.43E-03	–	–	–	1.09E+02	1.13E+00	–	7.64E-02	7.96E-01	lb/MMscf	B
2.15E-01	–	–	2.92E-03	–	–	–	1.75E-04	1.43E-03	–	–	–	1.09E+02	1.13E+00	–	7.64E-02	7.96E-01	lb/MMscf	B
–	–	–	–	–	1.18E-01	–	1.07E-01	–	–	4.11E-01	1.57E-01	3.90E+00	8.50E-02	2.48E-01	1.33E-01	1.47E+01	ppmv	C

References:

A - VCAPCD AB 2588 Combustion Emission Factors (2001) - Diesel Combustion Factors (internal combustion)

B - Emission factors are based on a Santa Maria Landfill Source Test, September 2010, and supplemented with the maximum emission factors from California Air Toxics Emission Factors (CATEF) for missing HAPs

C1 - Emission factors are based on the maximum values from 4 years (2009 to 2013) of LFG samples from Tajiguas Landfill in santa barbara County. Pollutants detected at non-detection levels were included at their detec

C2 - Supplemented with AP-42 draft Table 2.4-1 (October 2008), "LFG Constituents for Landfills With Waste in Place On Or After 1992", when no compound was measured.

Table 5.6
CSML - PT-70/Reeval 10318-R3
Annual HAP Emissions

Equipment Category	Description	Dev No	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Butadiene	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	1,2-Dibromoethane	2-Butanone (Methyl ethyl ketone)	1,4-Dioxane	Acetaldehyde	Acetonitrile	Acrolein	Acrylonitrile	Arsenic	Beryllium
		MW	133.40	167.86	133.40	54.10	98.96	97.00	98.96	187.88	72.11	88.12	44.06	41.05	56.06	53.06	74.92	9.01
Combustion - Engines																		
	Emergency Backup DICE[1]	107057	–	–	–	2.97E-05	–	–	–	–	–	–	1.07E-04	–	4.63E-06	–	2.19E-07	–
	Emergency Backup DICE[1]	107058	–	–	–	3.43E-05	–	–	–	–	–	–	1.24E-04	–	5.35E-06	–	2.52E-07	–
Combustion - Flare	LFG Combustion	006910	4.43E-02	–	–	–	5.74E-02	–	1.77E-01	–	–	5.98E-04	8.58E-02	1.05E+00	1.23E-02	5.92E-04	7.76E-03	–
	LFG Combustion	109207	6.56E-02	–	–	–	8.51E-02	–	2.63E-01	–	–	8.86E-04	1.27E-01	1.55E+00	1.82E-02	8.76E-04	1.15E-02	–
Fugitives																		
	Total Fugitives[2,3]		1.02E-02	1.92E-02	1.52E-02	1.71E-02	1.13E-02	1.11E-02	1.13E-02	1.72E-03	7.46E-01	1.39E-03	6.49E-03	–	–	3.03E-02	–	–
		Total HAPs (TPY):	**1.20E-01**	**1.92E-02**	**1.52E-02**	**1.72E-02**	**1.54E-01**	**1.11E-02**	**4.51E-01**	**1.72E-03**	**7.46E-01**	**2.87E-03**	**2.20E-01**	**2.60E+00**	**3.04E-02**	**3.18E-02**	**1.93E-02**	**0.00E+00**

Benzene	Benzyl Chloride	Bromomethane	Cadmium	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chromium (Total)	Cobalt	Copper	1,4-Dichlorobenzene	Dichloromethane	Ethylbenzene	Formaldehyde	Hydrogen sulfide	Hexane	HCl
78.12	126.58	94.95	112.41	76.13	153.81	112.56	64.52	119.38	52.00	58.93	63.55	147.01	84.94	106.17	30.03	34.08	86.18	36.46
2.55E-05	–	–	2.05E-07	–	–	2.73E-08	–	–	8.20E-08	–	5.60E-07	–	–	1.49E-06	2.36E-04	–	3.68E-06	2.55E-05
2.94E-05	–	–	2.37E-07	–	–	3.15E-08	–	–	9.46E-08	–	6.47E-07	–	–	1.72E-06	2.72E-04	–	4.24E-06	2.94E-05
1.13E-01	–	–	1.88E-04	–	4.94E-03	1.14E-01	–	7.36E-03	6.10E-04	–	6.39E-01	–	5.64E-02	–	2.33E-02	–	–	2.12E-04
1.67E-01	–	–	2.78E-04	–	7.32E-03	1.69E-01	–	1.09E-02	9.04E-04	–	9.46E-01	–	8.35E-02	–	3.45E-02	–	–	3.14E-04
7.57E-02	4.36E-03	3.79E-03	–	2.90E-02	1.17E-02	1.54E-02	1.12E-02	9.09E-03	–	–	–	1.81E-01	9.70E-03	1.07E+00	6.68E-04	6.09E+00	–	–
3.56E-01	**4.36E-03**	**3.79E-03**	**4.66E-04**	**2.90E-02**	**2.40E-02**	**2.99E-01**	**1.12E-02**	**2.73E-02**	**1.51E-03**	**0.00E+00**	**1.58E+00**	**1.81E-01**	**1.50E-01**	**1.07E+00**	**5.89E-02**	**6.09E+00**	**7.92E-06**	**5.81E-04**

HF	Iso-Octane	Lead	Manganese	Mercury	Methyl Tert-butyl ether (MTBE)	PAHs (Not Incl. Naphthalen)	Naphthalene	Nickel	Selenium	Styrene	Tetrachloroethylene	Toluene	Trichloroethene	Vinyl Acetate	Vinyl Chloride	Xylene	TOTAL HAPS
20.01	114.23	207.20	54.94	200.59	88.15		128.18	58.69	78.96	104.16	165.82	92.13	131.38	86.09	62.5	106.16	
–	–	1.13E-06	4.24E-07	2.73E-07	–	4.95E-06	2.69E-06	5.33E-07	3.01E-07	–	–	1.44E-05	–	–	–	5.79E-06	4.65E-04
–	–	1.31E-06	4.89E-07	3.15E-07	–	5.71E-06	3.11E-06	6.15E-07	3.47E-07	–	–	1.66E-05	–	–	–	6.69E-06	5.37E-04
2.82E-02	–	–	3.84E-04	–	–	–	2.30E-05	1.88E-04	–	–	–	1.43E+01	1.48E-01	–	1.00E-02	1.05E-01	1.70E+01
4.18E-02	–	–	5.68E-04	–	–	–	3.40E-05	2.78E-04	–	–	–	2.12E+01	2.20E-01	–	1.49E-02	1.55E-01	2.52E+01
–	–	–	–	–	1.98E-02	–	2.61E-02	–	–	8.14E-02	4.95E-02	6.84E-01	2.12E-02	4.06E-02	1.58E-02	2.97E+00	1.23E+01
7.00E-02	**0.00E+00**	**2.44E-06**	**9.53E-04**	**5.89E-07**	**1.98E-02**	**1.07E-05**	**2.62E-02**	**4.67E-04**	**6.48E-07**	**8.14E-02**	**4.95E-02**	**3.62E+01**	**3.90E-01**	**4.06E-02**	**4.07E-02**	**3.23E+00**	**5.45E+01**

Notes:

1 - Default fuel properties for diesel (i.e,. BSFC value of 7800 (Btu/bhp-hr) and a HHV of 137000 (Btu/gal) are from Tables 5 and 6 of the SBCAPCD's Piston IC Engine Technical Reference Document (2002). https://www.ourair.org/wp-content/uploads/sbcapcdicerefdoc.pdf

2 - Fugitive emissions are calculated based on a molar volume of 379.62 scf/lb-mole for landfill gas (See "Controlled Landfill Gas" Tab).

3 - An example calculation for Total Landfill Fugitives is below:

TPY: EF (ppmv) * 10^-6 * Total Fugitive Raw Landfill Gas (scf/yr) / Molar Volume(scf/lb-mole) * MW(lb/lb-mole) / 2000(lbs/ton)

4 - 1 kg NMOC is equal to 0.27493 m3 NMOC (See "Controlled Landfill Gas" tab note 5).

5 - NMOC in Landfill gas is 136 ppm per the May 2016 source test.

6.0 Air Quality Impact Analyses

6.1 Modeling

Air quality modeling was not required for this facility.

6.2 Increments

An air quality increment analysis was not required for the equipment subject to this permit. However, an air quality increment analysis was performed when J&A Santa Maria, LLC installed the IC engine and generator at the stationary source. The AQIA demonstrated that the installation of the engine would not cause an ambient air quality standard or increment to be exceeded. Details of the AQIA can be found in PTO 13281.

6.3 Monitoring

Air quality monitoring is not required for this facility.

6.4 Health Risk Assessment

A health risk assessment was not required for the equipment subject to this permit. However, 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, LLC prior to the installation of the IC engine at the Santa Maria Landfill Gas Power Plant. 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 for cancer and chronic and acute non-cancer risk adopted by the District's Board of Directors. The HRA was based on residential lifetime exposure duration of 70 years. The calculated risk values and applicable thresholds are as follows:

	Santa Maria Landfill Max Risks	Significance Threshold
Cancer risk:	**3.68 /million**	**≥10/million**
Chronic non-cancer risk:	**0.015**	**≥ 1**
Acute non-cancer risk:	**0.367**	**≥ 1**

Based on these results, the equipment at the City of Santa Maria stationary source did not cause exceeded significant risk to the community. See PTO 13281 for complete details regarding the HRA.

7.0 CAP Consistency, Offset Requirements and ERCs

7.1 General

Santa Barbara County is in nonattainment for the state ozone ambient air quality standards. In addition, the County is nonattainment with the state PM_{10} ambient air quality standard. 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 lbs/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 lbs/day for all attainment pollutants and precursors (except carbon monoxide and $PM_{2.5}$) and 25 tons/year for all non-attainment pollutants and precursors (except carbon monoxide and $PM_{2.5}$).

7.2 Clean Air Plan

Santa Barbara County's air quality has historically violated both the state and federal ozone standards. Since 1999, however, local air quality data show that every monitoring location in the County complied with the federal one-hour ambient air quality standard for ozone. The Santa Barbara County Air Pollution Control District adopted the 2001 Clean Air Plan (2001 CAP) that demonstrated attainment of the federal one-hour ozone standard and continued maintenance of that standard through 2015. Consequently, on August 8, 2003, the United States Environmental Protection Agency (USEPA) designated Santa Barbara County as an attainment area for the federal one-hour ozone standard.

On June 15, 2004, USEPA replaced the federal one-hour ozone standard with an eight-hour ozone standard for Santa Barbara County and most parts of the country. This eight-hour ozone standard, originally promulgated by USEPA on July 18, 1997, is set at 0.08 parts per million measured over eight hours and is more protective of public health and more stringent than the federal one-hour standard. For the purposes of the federal eight-hour ozone standard, Santa Barbara County has been designated attainment.

On August 16, 2007, the District Board adopted the 2007 Clean Air Plan to chart a course of action that will provide for ongoing maintenance of the federal eight-hour ozone standard through the year 2014 as well as the expeditious attainment of the state one-hour ozone standard. These plans have been developed for Santa Barbara County as required by both the 1998 California Clean Air Act and the 1990 Federal Clean Air Act Amendments.

In 2015, the District Board adopted the 2013 Clean Air Plan. The 2013 Plan provides a three year update to the 2010 Clean Air Plan. As Santa Barbara County has yet to attain the state eight-hour ozone standard, the 2013 Clean Air Plan demonstrates how the District plans to attain that standard. The 2013 Clean Air Plan therefore 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 not required to offset emissions at this time because this permitting action is not subject to NSR.

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 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/Permit to Operate is exempt from CEQA.

9.0 Permit Conditions

This section lists the applicable permit conditions for the CSML. Section A lists the standard administrative conditions. Section B lists generic permit conditions, including emission standards, for all equipment in this permit. Section C lists conditions affecting specific equipment. Section D lists non-federally enforceable (i.e., District and State) permit conditions. Conditions listed in Sections A, B, and 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.

9.A Standard Administrative Conditions

The following federally enforceable administrative permit conditions apply to the CSML:

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 Section 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.** The permittee shall comply with the requirements of the District, Rule 505 (Upset/Breakdown Rule) and/or District Rule 1303.F, whichever is applicable to the emergency situation. In order to maintain an affirmative defense under Rule 1303.F, the permittee shall provide the District, in writing, a "notice of emergency" within two (2) working days of the emergency. The "notice of emergency" shall contain the information/documentation listed in Sections (1) through (5) of Rule 1303.F. [*Ref: 40 CFR §70.6(g); District Rule 1303.F*]

A.12 **Compliance Plan.**

a. The permittee shall comply with all federally-enforceable 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 federally-enforceable 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 Authority to Construct;

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, or Rule 1303.F: Emergency Provisions. [*Ref: District Rule 1303.D.1; 40 CFR §70.6(a)(3)*]

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 the 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 conditions are federally-enforceable. These rules apply to the equipment and operations at CSML, as they currently exist. Compliance with these requirements is discussed in Section 3.4.2. 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.

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 grain per cubic foot of gas at standard conditions. [*Ref: District Rule 304*]

B.5 **Dust and Fumes - North 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, and diesel fuel billing records or other data showing the certified sulfur content for each shipment. [*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 CSML's compliance with the Condition 9.C.6 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 the Condition 9.C.6 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 the Condition 9.C.6 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 the Condition 9.C.6 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 the Condition 9.C.6 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 reactive organic compound 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, B1 and D. [*Ref: District Rule 505*]

B.15 **CARB Registered Portable Equipment.** State registered portable equipment shall comply with State registration requirements. A copy of the State registration shall be readily available whenever the equipment is at the facility. [*Ref: District Rule 202*]

9.C Requirements and Equipment Specific Conditions

C.1 **Landfill.** The following equipment items are included in this emissions category:

District Device No.	Name
391484	Landfill Surface

a. Emission Limits: Mass emissions from the landfill shall not exceed the limits listed in Table 5.2. Compliance with this condition shall be based on the operational, monitoring, recordkeeping, and reporting conditions in this permit. In addition, the following specific emission limits apply:

i. *Federal Instantaneous Landfill Surface Emissions:* No location on the landfill surface may exceed a methane concentration of 500 ppmv above background as determined by the federal instantaneous surface emissions monitoring requirements of Conditions 9.C.1.c.iii through 9.C.1.c.ix. [*Ref: 40 CFR Subpart WWW §60.753(d)*]

b. Operational Limits: The landfill is subject to the following operational restriction listed below:

i. *Design Capacity:* The total amount of municipal solid waste placed in the CSML shall not exceed a maximum of 278,654 metric tons per year. [*Ref: ATC/PTO 10318*]

c. Monitoring: The following monitoring conditions apply to the landfill:

i. *Waste Values:* The permittee shall monitor current amount of solid waste in-place and the year-by-year waste acceptance rate for the CSML. [*Ref: 40 CFR Subpart WWW §60.758(a); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(F)*]

ii. *Asbestos and Non-Degradable Waste*: The permittee shall monitor the nature, date of deposition, amount, and location of asbestos-containing or non-degradable waste excluded from collection as well as any nonproductive areas excluded from collection. [*Ref: 40 CFR Subpart WWW §60.758(d); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(G)*]

iii. *Federal Instantaneous Surface Emissions Monitoring*. The permittee shall conduct federal instantaneous surface monitoring of the landfill surface on a quarterly basis. If the provisions identified in Condition 9.C.1.c.ix have been fulfilled, monitoring may be conducted on an annual basis. A reading exceeding the limit specified in Condition 9.C.1.a.i shall be recorded as an exceedance, and the following actions shall be taken [*Ref: 40 CFR Subpart WWW §60.755(c)(1)*]:

1. *First Exceedance:* Within ten calendar days of a measured exceedance, corrective action shall be taken by the permittee such as, but not limited to cover maintenance or repair, or well vacuum adjustments; and the location shall be re-monitored. [*Ref: 40 CFR Subpart WWW §60.755(c)(4)(ii)*]

2. *Second Exceedance:* If the re-monitoring of the exceedance location shows a second exceedance, additional corrective action shall be taken and the location shall be re-monitored again no later than ten calendar days after the second exceedance. [*Ref: 40 CFR Subpart WWW §60.755(c)(4)(iii)*]

    a. *Second Exceedance Re-Monitoring:* If the re-monitoring of the location does not show a second exceedance, the location shall be re-monitored one month from the initial exceedance. If the one-month re-monitoring shows compliance with Condition 9.C.1.a.i, no further monitoring of that location is required until the next quarterly monitoring period. However, if the one-month re-monitoring shows an exceedance, corrective actions shall be taken. [*Ref: 40 CFR Subpart WWW §60.755(c)(4)(iv)*]

3. *Third Exceedance:* If the re-monitoring shows a third exceedance, the permittee shall install a new or replacement well as determined to achieve compliance no later than 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the District for approval [*Ref: 40 CFR Subpart WWW §60.755(c)(4)(v)*]

iv. *Federal Instantaneous Monitoring Spacing*: The permittee shall conduct federal instantaneous surface emissions monitoring around the perimeter of the collection area and along a pattern that traverse the landfill at 30-meter intervals. [*Ref: 40 CFR Subpart WWW §60.753(d); 40 CFR Subpart WWW §60.755(c)(1)]*

v. *Federal Instantaneous Monitoring Areas:* Federal instantaneous surface emissions monitoring shall be conducted where visual observations indicate elevated concentrations of LFG, such as distressed vegetation and cracks or seeps in the cover. Areas with steep slopes or other dangerous areas may be excluded from the surface testing. [*Ref: 40 CFR Subpart WWW §60.753(d)*]

vi. *Portable Analyzer Calibration Requirements:* The portable analyzer used for the federal instantaneous surface emission monitoring shall adhere to the following requirements [*Ref: 40 CFR Subpart WWW §60.755(d)(1)*]:

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: 40 CFR Subpart WWW §60.755(d)(1)*]

2. *Calibration Gas:* The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air. [*Ref: 40 CFR Subpart WWW §60.755(d)(2)*]

vii. *Portable Analyzer Requirements During Monitoring Events:*

1. *Background Concentration*: The background concentration shall be determined by moving the probe inlet upwind and downwind at least 30 meters from the waste mass boundary of the landfill. [*Ref: 40 CFR Subpart WWW §60.755(c)(2)*]

2. *Probe Height from Ground:* The probe inlet shall be placed within five to ten centimeters of the ground while conducting surface emissions monitoring. [*Ref: 40 CFR Subpart WWW §60.755(c)(3)*]

viii. *Meteorological Conditions*: Surface emissions monitoring shall be performed during typical meteorological conditions. [*Ref: 40 CFR Subpart WWW §60.755(c)(3)*]

ix. *Federal Instantaneous Monitoring Frequency:* Any closed landfill that has no federal instantaneous surface monitoring exceedances of the permitted limits after three consecutive quarterly monitoring periods may switch to annual monitoring. The permittee shall submit an updated *Surface Monitoring and Recordkeeping Plan* prior to the implementation of any monitoring frequency changes. Any exceedances of the permitted limits during the annual monitoring will result in a return to quarterly federal instantaneous surface monitoring of the landfill. [*Ref: 40 CFR Subpart WWW §60.756(f)*]

d. Recordkeeping: The following records for the landfill shall be maintained by the permittee and shall be made available to the District upon request:

i. *Waste Values:* The current amount of solid waste in-place and the year-by-year waste acceptance rate. [*Ref: 40 CFR Subpart WWW §60.758(a); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(F)*]

ii. *Asbestos and Non-Degradable Waste*: Records detailing the nature, date of deposition, amount, and location of asbestos-containing or non-degradable waste excluded from collection as well as any nonproductive areas excluded from collection. [*Ref: 40 CFR Subpart WWW §60.758(d)(2); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(G)*]

iii. *Federal Instantaneous Surface Emissions Monitoring Recordkeeping*:

1. The concentration date, time, and location of each federal instantaneous monitoring readings in excess of 500 ppmv (measured as methane). [*Ref: 40 CFR Subpart WWW §60.757(f)(5); Surface Monitoring and Recordkeeping Plan*]

2. The concentration of the re-monitoring events for each location with a measured concentration greater than 500 ppmv and if the re-monitoring event showed compliance. [*Ref: 40 CFR Subpart WWW §60.757(f)(5); Surface Monitoring and Recordkeeping Plan*]

3. Corrective actions taken to repair the leaks as a result of measured exceedances and dates of repair. [*Ref: Surface Monitoring and Recordkeeping Plan*]

iv. *Calibration and Maintenance:* Records of calibration and maintenance of the portable analyzers, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

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.8 of this permit.

C.2 **Landfill Gas Collection System.** The following equipment items are included in this emissions category:

District Device No.	Name
105956	Landfill Gas Extraction Wells
105957	Landfill Gas Collection Piping
109208	Landfill Gas Blower

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

i. *Collection System Specifications:* The permittee shall satisfy the following specifications for the LFG collection system:

1. *Extraction Component Material:* The LFG extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. [*Ref: 40 CFR Subpart WWW §60.759(b)(1)*]

2. *Perforations:* Collection devices such as wells and horizontal collectors shall be perforated to allow LFG entry without head loss sufficient to impair performance across the intended extent of control. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or LFG into the air. Perforations shall be situated with regard to the need to prevent excessive air infiltration. Any gravel used around pipe perforations shall be of a dimension so as not to penetrate or block perforations. [*Ref: 40 CFR Subpart WWW §60.759(b)(1)*]

3. *Header Pipes and Connector Assembly:* Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness. The collected LFG shall be conveyed to the control system through the collection header pipe(s). [*Ref: 40 CFR Subpart WWW §60.759(b)(3)*]

4. *LFG Mover Equipment:* The LFG mover equipment shall be sized to handle the maximum LFG generation flow rate expected over the intended use period of the LFG moving equipment. [*Ref: 40 CFR Subpart WWW §60.759(c); CCR Subchapter 10, Article 4, Subarticle 6 §95464(a)(1)(F)*]

5. *Vertical Wells Location:* Vertical wells shall address the occurrence of water within the landfill. [*Ref: 40 CFR Subpart WWW §60.759(b)(2)*]

6. *Construction Holes and Trenches:* Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including centering of pipes and placement of gravel backfill. [*Ref: 40 CFR Subpart WWW §60.759(b)(2)*]

7. *Offsite Migration:* The collection system shall be designed to minimize off-site migration of subsurface LFG. [*Ref: 40 CFR Subpart WWW §60.759(a)(2)*]

ii. *Routing of the LFG:* Route all the collected LFG to a gas control device and operate the LFG collection and control system at all times the collected LFG is routed to the system. [*Ref: 40 CFR Subpart WWW §60.752(b)(2)(iii); 40 CFR Subpart WWW §60.753(f); CCR Subchapter 10, Article 4, Subarticle 6 §95464(b)(1)(A)*]

iii. *Areas of Gas Collection:* Collect LFG at a sufficient extraction rate from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of five years or more if active; or two years or more if closed or at final grade. The wells shall have a sufficient density to maintain emission and migration control to meet the operational limits of this permit. [*Ref: 40 CFR Subpart WWW §60.752(b)(2)(ii)(A)(2); 40 CFR Subpart WWW §60.759(a)*]

iv. *Closing Valves:* In the event the collection or control system is inoperable, the LFG mover system shall be shut down and all valves in the collection and control system contributing to venting of the LFG to the atmosphere shall be closed within one hour. [*Ref: 40 CFR Subpart WWW §60.753(e)*]

v. *Wellheads:* The permittee shall satisfy the following operational requirements for LFG collection system's wellheads:

1. *Sampling Port:* The permittee shall install a sampling port as well as a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead. [*Ref: 40 CFR Subpart WWW §60.756(a)*]

2. *Wellhead Gauge Pressure Requirement*: Each wellhead shall be operated under a vacuum (negative pressure), except under conditions indicative of a fire, use of a geomembrane or synthetic cover, or decommissioned well. Gauge pressure shall be determined using a hand-held manometer, magnehelic gauge, or other pressure measuring device approved by the District. The device shall be calibrated and operated in accordance with the manufacturer's specifications. [*Ref: 40 CFR Subpart WWW §60.753(b); CCR Subchapter 10, Article 4, Subarticle 6 §95464(c)*]

3. *Wellhead Temperature:* Operate each interior wellhead (defined as any wellhead located inside the perimeter of the landfill waste) in the collection system with a LFG temperature less than 55 °C. The permittee may establish a higher operating temperature value at a particular well. A higher operating value demonstration shall be submitted to the District for approval and shall include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. The demonstration shall satisfy both criteria in order to be approved. [*Ref: 40 CFR Subpart WWW §60.753(c)*]

4. *Wellhead Nitrogen and Oxygen:* Operate each interior wellhead in the collection system with either a nitrogen level less than 20% or oxygen level less than 5%. The permittee may establish a higher nitrogen or oxygen value at a particular well. A higher operating value demonstration shall be submitted to the District for approval and shall include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. The demonstration shall satisfy both criteria in order to be approved. [*Ref: 40 CFR Subpart WWW §60.753(c)*]

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

i. *LFG Collected*: The total daily and annual quantity (in scf) of LFG collected (downstream of the condensate knockout) shall be continuously monitored by a District-approved device. [*Ref: PT-70/Reeval 10318-R1; CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(B)*]

ii. *Cover Integrity:* Monitor the landfill cover integrity on a monthly basis and implement repairs as necessary. [*Ref: 40 CFR Subpart WWW §60.753(c)(5)*]

iii. *Wellhead Pressure:* Measure gauge pressure in the LFG collection header at each individual well on a monthly basis. If there is any positive pressure reading, the permittee shall take the following actions: [*Ref: 40 CFR Subpart WWW §60.756(a)(1); CCR Subchapter 10, Article 4, Subarticle 6 §95469(c)*]

1. *Initial Corrective Action:* The permittee shall initiate corrective action within five calendar days of the positive pressure measurement except under conditions indicative of a fire, use of a geomembrane or synthetic cover, or decommissioned well. [*Ref: 40 CFR Subpart WWW §60.755(a)(3); CCR Subchapter 10, Article 4, Subarticle 6 §95469(c)(1)*]

2. *Further Corrective Actions:* If negative pressure cannot be achieved without excess air infiltration within fifteen calendar days of the first measurement, the permittee must initiate further action, including, but not limited to, any necessary expansion of the gas collection system. Corrective action, including any expansion of the gas collection and control system, must be completed and any new wells must be operating within 120 calendar days of the date the positive pressure was first measured. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [*Ref: 40 CFR Subpart WWW §60.755(a)(3); CCR Subchapter 10, Article 4, Subarticle 6 §95469(c)(2); CCR Subchapter 10, Article 4, Subarticle 6 §95469(c)(3)*]

iv. *Wellhead Nitrogen or Oxygen, and Temperature:* For the purposes of identifying whether excess air infiltration into the landfill is occurring, each well shall be monitored monthly for temperature, and nitrogen or oxygen. If a well exceeds one of these operating parameters, the permittee shall take the following actions: [*Ref: 40 CFR Subpart WWW §60.756(a)(2); 40 CFR Subpart WWW §60.756(a)(3)*]

1. *Initial Corrective Action:* The permittee shall initiate corrective action within five calendar days of the measured exceedance. [*Ref: 40 CFR Subpart WWW §60.755(a)(5)*]

2. *Further Corrective Actions:* If a correction of the exceedance cannot be achieved within fifteen calendar days of the first measurement, the permittee shall expand of the gas collection system within 120 calendar days of the initial exceedance. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [*Ref: 40 CFR Subpart WWW §60.755(a)(5)*]

v. *Wellheads and Collection System Analyzer Methods and Requirements:*

1. *Oxygen Concentration:* The wellhead oxygen concentration shall be determined by an oxygen meter using Method 3A or Method 3C. For all three methodologies, the span shall be set between 20% and 50% of the span, a data recorder is not required, only two calibration gases are required: a zero and span, a calibration error check is not required, and the allowable sample bias, zero drift, and calibration drift are ±10 percent. An alternative test method may be used if approved by the District. [*Ref: 40 CFR Subpart WWW §60.753(c)(2)*]

2. *Nitrogen Concentration:* The nitrogen level shall be determined using Method 3C. An alternative test method may be used if approved by the District. [*Ref: 40 CFR Subpart WWW §60.753(c)(1)*]

vi. *Calibration and Maintenance Logs:* Calibration and maintenance of the LFG collection system's monitoring devices and meters, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

vii. *Downtimes:* Date and duration of all periods when the entire collection system is not operating in excess of five days, and the reason for the downtime. [*Ref: 40 CFR Subpart WWW §60.757(f)(4)*]

viii. *Well Density:* The density of wells, horizontal collectors, surface collectors, or other LFG extraction devices. [*Ref: 40 CFR Subpart WWW §60.758(b)(1)(ii)*]

c. Recordkeeping: The following records for the LFG collection system equipment shall be maintained by the permittee and shall be made available to the District upon request:

i. *LFG Collected:* Daily and annual volume of collected LFG (in scf). [*Ref: PT-70/Reeval 10318-R1; CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(B)*]

ii. *Cover Integrity:* Records of the monthly cover integrity monitoring events, including the dates of the monitoring events, if repairs were necessary, and any corrective actions taken due to the monitoring events. [*Ref: 40 CFR Subpart WWW §60.753(c)(5)*]

iii. *Wellhead Recordkeeping:*

1. Records of the monthly wellhead gauge pressure measurements including the dates of the measurements. [*Ref: 40 CFR Subpart WWW §60.756(a)(1); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(E)*]

2. Location and well identification number of gauge pressure exceedances including the dates and results of re-monitoring events, and whether or not the second reading is an exceedance. [*Ref: 40 CFR Subpart WWW §60.756(a)(1); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(E)*]

3. Records of the monthly measurement of nitrogen or oxygen concentration in the LFG including the dates of the measurements. [*Ref: 40 CFR Subpart WWW §60.756(a)(2)*]

4. Location and well identification number of nitrogen or oxygen concentration exceedances including the dates and results of re-monitoring events, and whether or not the second reading is an exceedance. [*Ref: 40 CFR Subpart WWW §60.756(a)(2)*]

5. Records of the monthly wellhead temperature measurements including the dates of the measurements. [*Ref: 40 CFR Subpart WWW §60.756(a)(3)*]

6. Location and well identification number of temperature exceedances including the dates and results of re-monitoring events, and whether or not the second reading is an exceedance. [*Ref: 40 CFR Subpart WWW §60.756(a)(3)*]

7. Description of the corrective actions taken as a result of measured exceedances and dates of repair. [*Ref: 40 CFR Subpart WWW §60.756(a); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(E)*]

iv. *Calibration and Maintenance:* Records of calibration and maintenance of the LFG collection system's monitoring devices and meters, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

v. *Downtimes:* Periods when the entire collection system is not operating in excess of five days and the reason for the downtime. [*Ref: 40 CFR Subpart WWW §60.757(f)(4)*]

vi. *Well Density:* The density of wells, horizontal collectors, surface collectors, or other LFG extraction devices. [*Ref: 40 CFR Subpart WWW §60.758(b)(1)(ii)*]

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 the Condition 9.C.8 of this permit.

C.3 **Enclosed Ground Flares.** The following equipment items are included in this emissions category:

District Device No.	Name
006910	Enclosed Ground Flare 1
109207	Enclosed Ground Flare 2
105960	Gas Flow Measurement System

a. Emission Limits: Mass emissions from the enclosed ground flares shall not exceed the limits listed in Table 5.2. 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. *Oxides of Nitrogen (NO_x) Emission Limits:* Emissions of NO_x (as NO_2) from the 13.500 MMBtu/hr enclosed ground flare shall not exceed a NO_x stack emission rate of 0.060 lb/MMBtu. Compliance with this condition shall be based on the source testing condition of this permit. [*Ref: ATC/PTO 10318*]

ii. *Oxides of Nitrogen (NO_x) Emission Limits:* Emissions of NO_x (as NO_2) from the 20.000 MMBtu/hr enclosed ground flare shall not exceed a NO_x stack emission rate of 0.050 lb/MMBtu. Compliance with this condition shall be based on the source testing condition of this permit. [*Ref: ATC 12037*]

iii. *Non-Methane Organic Compounds (NMOC)/Reactive Organic Compounds (ROC) Concentration Limits and Control Requirements*: Emissions of NMOC/ROC from either of the enclosed ground flares shall not exceed a ROC stack concentration of 20 ppmvd at 3% O_2 (as hexane). Alternatively, the enclosed ground flare shall reduce NMOC/ROC by 98 percent (mass basis). Compliance with this condition shall be based on the source testing condition of this permit. [*Ref: 40 CFR Subpart WWW §60.752(b)(2)(iii)(B)*]

iv. *Carbon Monoxide (CO) Emission Limits*: Emissions of CO from either of the enclosed ground flares shall each not exceed a CO stack emission rate of 0.400 lb/MMBtu. Compliance with this condition shall be based on the source testing condition of this permit. [*Ref: ATC 12037; ATC/PTO 10318*]

b. Operational Limits: The enclosed ground flares permitted herein are subject to the following operational restrictions listed below:

i. *Heat Input Limits:* The hourly, daily, and annual heat input limits to the enclosed ground flares shall not exceed the values listed below. These limits are based on the design rating of the enclosed ground flare. Compliance with heat input limits shall be based on the fuel meter readings and the most recent gas analysis. [*Ref: ATC 12037; ATC/PTO 10318*]

Make/Model	Device No.	Heat Input Limits		
		MMBtu/hr	MMBtu/day	MMBtu/yr
PEI EF4-10.5	006910	13.500	324.000	118,260.000
PEI FL-90-26-E	109207	20.000	480.000	175,200.000

ii. *Fuel Type Limit:* The enclosed ground flares shall only combust LFG and propane. [*Ref: ATC 12037; ATC/PTO 10318*]

iii. *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 enclosed ground flares shall not exceed 6.3 grains per 100 cubic feet (100 ppmvd). [*Ref: ATC 12037; ATC/PTO 10318*]

iv. *Flare Ignition System Operation*: The flare outlet for the enclosed ground flares shall be equipped with an automatic ignition system including a pilot-light gas source or equivalent system, or shall operate with a pilot flame present at all times with the exception of purging events for automatic ignited equipped flares. [*Ref: ATC 12037; ATC/PTO 10318*]

v. *Propane Pilot Gas:* Propane shall be used as the enclosed ground flares' pilot fuel gas. The propane shall meet Gas Processors Association specifications for propane or HD-5 and shall have a total sulfur content no greater than

15 gr/100 scf (239 ppmv). Compliance with this condition shall be based on the listed sulfur content of each fuel shipment as certified in the fuel suppliers billing vouchers. [*Ref: PT-70/Reeval 10318-R3*]

vi. *Flame Present:* A flame shall be present at all times combustible gases are routed to the enclosed ground flares. [*Ref: ATC 12037; ATC/PTO 10318*]

vii. *Flare Operational Temperature:* The enclosed ground flares shall be operated within the parameter ranges established during the most recent source test. Except for startup and shutdown periods, the enclosed ground flares combustion temperature shall not operate less than 28 °C below the average combustion temperature during the most recent source test for any three-hour block monitoring period. [*Ref: 40 CFR Subpart WWW §60.758(c)(1)(i); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(K)1*]

viii. *Thermocouple Selection*: The thermocouples used to monitor and control the enclosed ground flares' combustion temperature shall be selected based on the LFG heat input rate, and the procedure described in the operation and maintenance manual for each enclosed ground flare. [*Ref: ATC 12037; ATC/PTO 10318*]

ix. *Flare Station Controller*: Only one of the enclosed ground flares shall operate at any time. A programmable logic controller (PLC) shall control the operation of the enclosed ground flares as well as the transportation of the LFG through the single flare LFG blower. The PLC program shall have an interlock mechanism that prohibits the simultaneous operation of both enclosed ground flares. [*Ref: ATC 12037*]

x. *Visible Emissions*: The flare 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. *Flare Downtime*: Each flare shall be operating at all times when combustible gases are routed through the flare except for periods of startup, shutdown or malfunction not to exceed one hour each. [Ref: *40 CFR Subpart WWW §60.753(f); 40 CFR Subpart WWW §60.755(e)*]

c. Monitoring: The following monitoring conditions apply to the enclosed ground flares:

i. *LFG Volume:* The permittee shall continuously monitor the daily and annual volume of LFG combusted in each enclosed ground flare (in units of scf). Each enclosed ground flare shall be equipped with at least one dedicated District-approved gas flow meter, which records the flow to the device at least every 15 minutes. 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. [*Ref: 40 CFR Subpart WWW §60.756(b)(2)(i); CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(1)(B); Process Monitor Calibration and Maintenance Plan*]

ii. *Hours of Operation*: The permittee shall monitor the daily and annual hours of operations for each enclosed ground flare. [*Ref: ATC 12037; ATC/PTO 10318*]

iii. *Operational Temperature:* Each enclosed ground flare 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 flare 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. Each enclosed ground flares' set point temperature and selected thermocouples shall be marked and logged whenever it is changed as allowed under this permit. [*Ref: 40 CFR Subpart WWW §60.758(b)(2)(i); CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(1)(A); Process Monitor Calibration and Maintenance Plan*]

iv. *Thermocouple Switch Points*: The permittee shall monitor the parameters used for the programmed thermocouple switch points (high, middle, and low LFG flow) and when thermocouples were replaced. [*Ref: PT-70/Reeval 10318-R3*]

v. *Flare Flame:* The presence of a flame in each flare shall be continuously monitored by a self-checking UV flame detector or equivalent device that detects the presence of a pilot flame. [*Ref: ATC/PTO 10318; PT-70/Reeval 10318-R2*]

vi. *LFG Sampling*: On a quarterly basis, a sample of the LFG shall be extracted downstream of the collection system blower and analyzed for total sulfur content (ppmv), hydrogen sulfide (ppmv), and higher heating value (Btu/scf) using appropriate ASTM sampling and analysis techniques. See Section 9.D for additional parameters to be analyzed. [*Ref: ATC 12037; ATC/PTO 10318*]

vii. *Propane:* The volume of propane delivered and the date of each delivery shall be recorded. On an annual basis, the permittee shall obtain the higher heating value and total sulfur content of the propane based on the fuel suppliers billing vouchers and/or certificates. [*Ref: PT-70/Reeval 10318-R3; CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(G)*]

viii. *Shutdown:* The date, time, and cause of each instance of flare shutdown exceeding one hour and the date and time of restart shall be documented by the operator. Any corrective actions taken shall also be monitored. [*Ref: 40 CFR Subpart WWW §60.757(f)(3); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(B); ATC 12037; ATC/PTO 10318*]

ix. *Visible Emissions*: Once per calendar quarter for each enclosed ground flare, the permittee shall perform a visible emissions inspection for a one-minute period while the enclosed ground flare is operating. If an enclosed ground flare does not operate during a calendar quarter, no monitoring is required. If visible emissions

are detected from an enclosed ground flare during any inspection, then an USEPA Method 9 visible emissions evaluation (VEE) shall be performed immediately for a six-minute period for that flare. CSML staff or their consultant, certified in VEE, shall perform the VEE. A visible emissions inspection is not required for an enclosed ground flare if that flare did not burn LFG during the calendar quarter. [*Ref: District Rule 302*]

x. *Calibration and Maintenance Logs:* Calibration and maintenance of the enclosed ground flares' monitoring devices and meters, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

xi. *Source Testing:* The permittee shall perform source testing of the emissions and process parameters listed in Table 4.3. The permittee shall adhere to the requirements of Condition 9.C.9. [*Ref: 40 CFR Subpart WWW §60.754(d); CCR Subchapter 10, Article 4, Subarticle 6 §95464(b)(4)*]

d. Recordkeeping: The following records for the enclosed ground enclosed shall be maintained by the permittee and shall be made available to the District upon request:

i. *LFG Volume*: Records of the daily and annual volume of LFG combusted in each enclosed ground flare (in units of scf). [*Ref: 40 CFR Subpart WWW §60.756(b)(2)(i); CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(1)(B); Process Monitor Calibration and Maintenance Plan*]

ii. *Flare Hours of Operation*: Daily and annual records of the hours of operations for each flare. [*Ref: ATC 12037; ATC/PTO 10318*]

iii. *Flare Operational Temperature*: All block three-hour periods of operation during which the average temperature difference was more than 28 °C below the average combustion temperature during the most recent source test. Records shall include the flare 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 WWW §60.758(c)(1(i)); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(K)1*]

iv. *Thermocouple Switch Points*: Records of the parameters used for the programmed thermocouple switch points (high, middle, and low flow) and when thermocouples were replaced. [*Ref: PT-70/Reeval 10318-R3*]

v. *Flare Flame*: The date and time whenever the flame detector indicates the loss of a flame in either of the enclosed ground flares, the corrective actions taken, and the date and time when the flare was restarted. [*Ref: ATC/PTO 10318; PT-70/Reeval 10318-R2*]

vi. *LFG Sampling:* Results of the quarterly measurements of the LFG for total sulfur content (ppmv), hydrogen sulfide (ppmv), and higher heating value (Btu/scf). Section 9.D for additional recordkeeping requirements for the LFG sampling requirements. [*Ref: ATC 12037; ATC/PTO 10318*]

vii. *Propane:* Records of the date and volume of each propane delivery and the total volume delivered for the year. On an annual basis, the permittee shall record the higher heating value and total sulfur content of the propane based on the fuel suppliers billing vouchers. [*Ref: PT-70/Reeval 10318-R3; CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(G)*]

viii. *Shutdown:* Records of the date, time, and cause of each instance of enclosed ground flare shutdown 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: 40 CFR Subpart WWW §60.757(f)(3); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(B); ATC 12037; ATC/PTO 10318*]

ix. *Visible Emissions Monitoring*: Records of each quarterly inspection shall be maintained. The records shall include the date and time of each inspection, whether a Method 9 VEE was required and the opacity of any visible emissions detected. [*Ref: District Rule 302*]

x. *Calibration and Maintenance:* Records of calibration and maintenance of the enclosed ground flares' monitoring devices and meters, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

xi. *Source Test Results:* Results of any source tests conducted including NMOC outlet concentration or destruction efficiency, average combustion temperature measured at least every 15 minutes, and average temperature over the course of the source test. See Section 9.D for additional enclosed ground flare source test requirements. [*Ref: 40 CFR Subpart WWW §60.754(d); 40 CFR Subpart WWW §60.758(b)(2)(ii); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(H)*]

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.8 of this permit.

C.4 **Condensate and Leachate Management.** The following equipment items are included in this emissions category:

District Device No.	Name
109213	Condensate Knockout
105961	Condensate Holding Tank
103977	Air Compressor
390416	Leachate Pumps
390417	Leachate Holding Tanks

a. Emission Limits: Mass emissions from the condensate and leachate management equipment shall not exceed the limits listed in Table 5.2. Compliance with this condition shall be based on the operational, monitoring, recordkeeping, and reporting conditions in this permit. [*Ref: District Condensate Disposal Letter 11-5-2010*]

b. Operational Limits: The condensate and leachate management equipment permitted herein is subject to the following operational restrictions listed below:

i. *Nuisance*: Per District Rule 303, the use of LFG condensate and leachate for dust suppression shall not create a public nuisance. If the District or the City of Santa Maria receives any complaints of nuisance odors from CSML, the use of LFG condensate and leachate for dust suppression shall be stopped until the District provides written approval that these activities may resume. [*Ref: District Condensate Disposal Letter 11-5-2010; District Rule 303*]

c. Monitoring: The following monitoring conditions apply to the condensate and leachate management equipment:

i. *Sampling*: On a quarterly basis, a sample of the LFG condensate shall be extracted from the condensate holding tank and analyzed for ROC content using EPA Method 8260C. Likewise, on a quarterly basis, a sample of leachate shall be extracted from one of the two leachate holding tanks and analyzed for ROC content using EPA Method 8260C. [*Ref: District Condensate Disposal Letter 11-5-2010*]

ii. *Disposal*: On a daily basis, the permittee shall monitor the quantity of disposed condensate and leachate, and the method of disposal (incinerated, taken off-site, or dust suppression). The permittee shall note which of the enclosed ground flares was used for condensate incineration. If the average daily condensate injection rate to either flare exceeds 1.0 gallon per minute (gpm), the permittee shall notify the District within three days and perform a source test in accordance with the District's *Source Test Procedures Manual* (revised May 1990 and any subsequent revisions) if required in writing by the District. The daily volume of LFG condensate and leachate used for dust suppression shall be measured by either:

1. A meter on the condensate holding tank/leachate holding tank if the liquid is loaded from the storage tank into the spray truck, or

2. By an in line meter on the tank truck hose, if condensate/leachate is drawn from sumps directly into the spray truck.

It will be assumed that all condensate and leachate is applied on the day it is loaded into the spray truck. [*Ref: District Condensate Disposal Letter 11-5-2010; ATC 12037; ATC/PTO 10318*]

iii. *Calibration and Maintenance*: Calibration and maintenance of the condensate and leachate management monitoring devices and meters, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

d. Recordkeeping: The following records for the condensate and leachate management equipment shall be maintained by the permittee and shall be made available to the District upon request:

i. *Sampling*: Results of the quarterly measurements of the LFG condensate and leachate for ROC content. [*Ref: District Condensate Disposal Letter 11-5-2010*]

ii. *Disposal*: Daily records shall be maintained of the quantity of disposed condensate and leachate, and the method of disposal. [*Ref: District Condensate Disposal Letter 11-5-2010*]

iii. *Calibration and Maintenance*: Records of calibration and maintenance of the condensate and leachate management monitoring devices and meters, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

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.8 of this permit.

C.5 **Diesel Fired Engines.** The following equipment items are included in this emissions category:

District Device No.	Name
107057	Firewater Engine
107058	Emergency Standby Generator

a. Operational Limits: The emergency standby generator and firewater engine permitted herein are subject to the following operational restrictions listed below:

i. *Maintenance Requirements:* Existing emergency compression ignition RICE must comply with the following:

1. Change oil and filter every 500 hours of operation or annually, whichever comes first, for each engine. Alternatively, the permittee may utilize an oil analysis program specified in 40 CFR 63 Subpart ZZZZ §63.6625(i). If all the requirements detailed in this section of the regulation are satisfied, the permittee shall not be required to change the oil. [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

2. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary for each engine. [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary for each engine. [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

ii. *Startup and Shutdown:* Minimize the emergency standby electrical generator engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [*Ref: 40 CFR 63 Subpart ZZZZ §63.6625(h); 40 CFR 63 Subpart ZZZZ Table 2.c*]

iii. *Maintenance Checks*: The emergency standby generator engine and firewater engine may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. [*Ref: 40 CFR 63 Subpart ZZZZ §63.6640(f)(2)(i)*]

b. Monitoring: The following monitoring conditions apply to the emergency standby generator and firewater engine:

i. *Engine Maintenance*: The permittee shall monitor the frequency of oil and filter changes, and the inspections of the air cleaner, hoses, and belts for each engine. This shall include the engines' hours of operation between the oil changes and the various inspections. [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

ii. *Hours of Operation*: For each engine, the permittee shall monitor how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [*Ref: 40 CFR 63 Subpart ZZZZ §63.6655(f)*]

c. Recordkeeping: The permittee shall record and maintain the information listed below for the emergency standby generator engine and firewater engine. Log entries shall be retained for a minimum of 36 months from the date of entry. Log entries made within 24 months of the most recent entry shall be retained on-site, either at a central location or at the engines' location, and made immediately available to the District staff upon request. Log entries made from 25 to 36 months from most recent entry shall be made available to District staff within five working days from request. District Form ENF-92 (*Diesel-Fired Emergency Standby Engine Recordkeeping Form*) can be used for this requirement.

i. The date of each emergency standby generator engine and firewater engine oil change, the number of hours of operation since the last oil change, and the date and results of each oil analysis. [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

ii. The date of each emergency standby generator engine and firewater engine air filter inspection and the number of hours of operation since the last air filter inspection. Indicate if the air filter was replaced as a result of the inspection. [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

iii. The date of each emergency standby generator engine and firewater engine hose and belts inspection and the number of hours of operation since the last hose and belt inspection. Indicate if any hose or belt was replaced as a result of the inspection. [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

iv. For each engine, the hours which were spent for emergency operation, including what classified the operation as emergency and how many hours were spent for non-emergency operation. [*Ref: 40 CFR 63 Subpart ZZZZ §63.6655(f)*]

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 the Condition 9.C.8 of this permit.

C.6 **Solvent Usage.** The following equipment items are included in this emissions category:

District Device No.	Name
391485	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 permittees 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: PT-70/PTO 10318*]

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: PT-70/PTO 10318*]

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: PT-70/PTO 10318*]

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; and, 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 (MSDS or equivalent) detailing the constituents of all solvents shall be maintained in a readily accessible location at the landfill facility. [*Ref: PT-70/PTO 10318*]

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 the Condition 9.C.8 of this permit.

C.7 **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 CSML 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.8 **Compliance Verification Reports.** Twice a year, the permittee CSML shall submit a compliance verification report (CVR) 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 1st. The second report shall cover calendar quarters 3 and 4 (July through December) and shall be submitted no

later than March 1st. Each report shall contain information necessary to verify compliance with the emission limits and other requirements of this permit. These reports shall be in a format approved by the District, with one hard copy and one electronic 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 web site. The report shall include the following information:

a. Landfill:

i. *Waste Values:* The current amount of solid waste in-place and the year-by-year waste acceptance rate. [*Ref: 40 CFR Subpart WWW §60.758(a); CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(4)*]

ii. *Asbestos and Non-Degradable Waste*: Records detailing the nature, date of deposition, amount, and location of asbestos-containing or non-degradable waste excluded from collection as well as any nonproductive areas excluded from collection. [*Ref: 40 CFR Subpart WWW §60.758(d)(2); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(G)*]

iii. *Federal Instantaneous Surface Emissions Monitoring Recordkeeping*:

1. The concentration, date, time, and location of each federal instantaneous monitoring reading in excess of 500 ppmv (measured as methane). [*Ref: 40 CFR Subpart WWW §60.757(f)(5); Surface Monitoring and Recordkeeping Plan*]

2. The concentration of the re-monitoring events for each location with a measured concentration greater than 500 ppmv and if the re-monitoring event showed compliance. [*Ref: 40 CFR Subpart WWW §60.757(f)(5); Surface Monitoring and Recordkeeping Plan*]

3. Corrective actions taken to repair the leaks as a result of measured exceedances, and dates of repair. [*Ref: Surface Monitoring and Recordkeeping Plan*]

iv. *Calibration and Maintenance:* Records of calibration and maintenance of the portable analyzers, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

b. Landfill Gas Collection System:

i. *LFG Collected:* Daily and annual volume of collected LFG (in scf). [*Ref: PT-70/Reeval 10318-R1; CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(B)*]

ii. *Cover Integrity:* Records of the monthly cover integrity monitoring events including the dates of the monitoring events, if repairs were necessary, and any corrective actions taken due to the monitoring events. [*Ref: 40 CFR Subpart WWW §60.753(c)(5)*]

iii. *Wellhead Reporting:*

1. Records of the monthly wellhead gauge pressure measurements including the dates of the measurements. [*Ref: 40 CFR Subpart WWW §60.756(a)(1); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(E)*]

2. Location and well identification number of gauge pressure exceedances including the dates and results of re-monitoring events. [*Ref: 40 CFR Subpart WWW §60.757(f)(1); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(E)*]

3. Records of the monthly measurement of nitrogen or oxygen concentration in the LFG including the dates of the measurements. *[Ref: 40 CFR Subpart WWW §60.756(a)(2)*]

4. Location and well identification number of nitrogen or oxygen concentration exceedances including the dates and results of re-monitoring events. [*Ref: 40 CFR Subpart WWW §60.757(f)(1)*]

5. Records of the monthly wellhead temperature measurements including the dates of the measurements. [*Ref: 40 CFR Subpart WWW §60.756(a)(3)*]

6. Location and well identification number of temperature exceedances including the dates and results of re-monitoring events. [*Ref: 40 CFR Subpart WWW §60.757(f)(1)*]

7. Description of the corrective actions taken as a result of measured exceedances and dates of repair. [*Ref: 40 CFR Subpart WWW §60.756(a); 40 CFR Subpart WWW §60.757(f)(6); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(E)*]

iv. *Calibration and Maintenance:* Records of calibration and maintenance of the LFG collection system's monitoring devices and meters, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

v. *Downtimes:* Periods when the collection system is not operating in excess of five days, including individual well shutdown and disconnection times, and the reason for the downtime. [*Ref: 40 CFR Subpart WWW §60.757(f)(4)*]

vi. *Well Density:* The density of wells, horizontal collectors, surface collectors, and other LFG extraction devices. [*Ref: 40 CFR Subpart WWW §60.758(b)(1)(ii)*]

c. Enclosed Ground Flares:

i. *LFG Volume*: Records of the daily and annual volume of LFG combusted in each enclosed ground flare (in units of scf). [*Ref: 40 CFR Subpart WWW §60.756(b)(2)(i); CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(B); Process Monitor Calibration and Maintenance Plan*]

ii. *Flare Hours of Operation*: Daily and annual records of the hours of operations for each flare. [*Ref: ATC 12037; ATC/PTO 10318*]

iii. *Flare Operational Temperature*: All block three-hour periods of operation during which the average temperature difference was more than 28 °C below the average combustion temperature during the most recent source test. Records shall include the flare 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 WWW §60.758(c)(1(i)); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(K)1*]

iv. *Thermocouple Switch Points*: Records of the parameters used for the programmed thermocouple switch points (high, middle, and low flow) and when thermocouples were replaced. [*Ref: PT-70/Reeval 10318-R3*]

v. *Flare Flame*: The date and time whenever the flame detector indicates the loss of a flame in either of the enclosed ground flares, the corrective actions taken, and the date and time when the flare was restarted. [*Ref: ATC/PTO 10318; PT-70/Reeval 10318-R2*]

vi. *LFG Sampling:* Results of the quarterly measurements of the LFG for total sulfur content (ppmv), hydrogen sulfide (ppmv), and higher heating value (Btu/scf). [*Ref: ATC 12037; ATC/PTO 10318*]

vii. *Propane:* Records of the date and volume of each propane delivery and the total volume delivered for the year. On an annual basis, the higher heating value and total sulfur content of the propane based on the fuel suppliers billing vouchers. [*Ref: PT-70/Reeval 10318-R3; CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(G)*]

viii. *Shutdown:* Records of the date, time, and cause of each instance of enclosed ground flare shutdown in excess of one-hour and the date and time of restart, and any corrective actions taken. [*Ref: 40 CFR Subpart WWW §60.757(f)(3); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(B); ATC 12037; ATC/PTO 10318*]

ix. *Visible Emissions Monitoring*: Records of each quarterly visible emissions inspection including the date and time of each inspection, whether a Method 9 VEE was required and the opacity of any visible emissions detected. [*Ref: District Rule 302*]

x. *Calibration and Maintenance:* Records of calibration and maintenance of the enclosed ground flares' monitoring devices and meters, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

xi. *Source Test Results:* Results of any source tests conducted including NMOC 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: 40 CFR Subpart WWW §60.754(d); 40 CFR Subpart WWW §60.758(b)(2)(ii); CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(H); CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(F)]*

d. Condensate and Leachate Management:

i. *Sampling*: Results of the quarterly measurements of the LFG condensate and leachate for ROC content. [*Ref: District Condensate Disposal Letter 11-5-2010*]

ii. *Disposal*: Daily records of the quantity of disposed condensate and leachate, and the method of disposal. [*Ref: District Condensate Disposal Letter 11-5-2010*]

iii. *Calibration and Maintenance*: Records of calibration and maintenance of the condensate and leachate management monitoring devices and meters, including the results of each calibration. [*Ref: Process Monitor Calibration and Maintenance Plan*]

e. Diesel Fired Engines:

i. The date of each engine oil change, the number of hours of operation since the last oil change, and the date and results of each oil analysis (if conducted). [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

ii. The date of each engine air filter inspection and the number of hours of operation since the last air filter inspection. Indicate if the air filter was replaced as a result of the inspection. [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

iii. The date of each engine's hose and belts inspection and the number of hours of operation since the last hose and belt inspection. Indicate if any hose or belt was replaced as a result of the inspection. [*Ref: 40 CFR 63 Subpart ZZZZ Table 2.c*]

iv. For each engine, the hours which were spent for emergency operation, including what classified the operation as emergency and how many hours were spent for non-emergency operation. [*Ref: 40 CFR 63 Subpart ZZZZ §63.6655(f)*]

f. 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: PT-70/PTO 10318*]

g. General Reporting Requirements:

i. *Breakdown and Variances*: Breakdowns and variances reported or obtained per Regulation V along with the excess emissions that accompanied each occurrence. [*Ref: District Rule 504; District Rule 505; District Rule 506*]

C.9. **Source Testing.** The following source testing provisions shall apply:

a. The permittee shall conduct stack emissions testing of air emissions and process parameters listed in Table 4.3 for each enclosed ground flare every 24 months except as provided below. If a flare has operated less than 200 hours in each of the two previous calendar years, CSML may extend the source test deadline by 12 months. If 36 months after the previous source test, the flare has still operated less than 200 hours in each of the three previous calendar years, CSML may extend the source test deadline by another 12 months. Regardless of the total hours of operation, each flare must be tested at least once every 48 months. 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 of the air emissions and process parameters listed in Table 4.3 shall be performed no later than 45 days after the anniversary date of the initial source test. June 1st shall be used as the anniversary date.

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 12037; ATC/PTO 10318*]

C.10 **BACT.** The permittee shall apply emission control technology and plant design measures that represent Best Available Control Technology (BACT) to the operation of the equipment/facilities as described in this permit and the District's evaluation for this permit. Section 4.7 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 12037; ATC/PTO 10318*]

C.11 **Process Stream Sampling and Analysis.** The permittee shall sample and analyze the process streams listed in Section 4.9 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.8. All sampling and analysis shall be traceable by chain of custody procedures. [*Ref: 40 CFR §70.6*]

C.12 **Startup, Shutdown and Malfunction (SSM) Plan.** The permittee shall implement a *SSM Plan* as required by 40 CFR §63.6(e)(3). The *SSM Plan* shall be updated and submitted to the District for approval within 60 days of final permit issuance. Additionally, the permittee shall submit a plan update for District approval whenever any changes to the plan, or there are any changes to the CSML LFG collection system or enclosed flares. Such plan updates shall be submitted before the change is implemented. [*Ref: 40 CFR §63.6(e)(3); 40 CFR, Subpart WWW §63.1960*]

C.13 **Process Monitor Calibration and Maintenance Plan.** All CSML process monitoring devices listed in Section 4.8 of this permit shall be properly operated and maintained according to manufacturer recommended specifications. The permittee shall implement a District-approved *Process Monitor Calibration and Maintenance Plan* (to be updated) for the life of the project. The *Process Monitor Calibration and Maintenance Plan* shall be updated and submitted to the District for approval within 60 days of final permit issuance. [*Ref: 40 CFR §70.6*]

C.14 **Surface Monitoring Maintenance and Recordkeeping (SMMR) Plan.** The permittee shall implement a *SMMR Plan* (to be updated) for the life of the project. This plan shall address AB32, New Source Performance Standards, and surface emissions monitoring requirements. The *SMMR Plan* shall be updated and submitted to the District for approval within 60 days of final permit issuance. [*Ref: 40 CFR Subpart WWW §60.753(d)]*

C.15 **Active Collection System Design (ACSD) Plan.** The permittee shall implement an *ACSD Plan* for the life of the project. This plan shall address how the facility will comply with the requirements of 40 CFR Subpart WWW and California Methane Emissions from Municipal Solid Waste Landfills regulation as applicable. The *ACSD Plan* shall be updated and submitted to the District by a certified professional engineer for approval within 60 days of final permit issuance. The *ACSD Plan* shall be amended or updated when a modification to the gas collection and control system is made. Modifications subject to a plan amendment or update include, but not limited to, changes to well density (i.e. number of wells per acre) due to the installation or removal of wells, installation of a blower, or replacement of a control device. Regular maintenance or well replacement do not require a plan update or amendment. An amended or updated *ACSD Plan* shall be submitted to the District by a certified professional engineer within 90 days of modification completion. [*Ref: 40 CFR Subpart WWW §60.752(b)(2)(i); CCR Subchapter 10, Article 4, Subarticle 6 §95464(a)(4); CCR Subchapter 10, Article 4, Subarticle 6 §95464(a)(5); CCR Subchapter 10, Article 4, Subarticle 6 §95464(e)(1), Implementation Guidance Document for the Regulation to Reduce Methane Emissions from Municipal Solid Waste Landfill, Page II-8, #7*]

C.16 **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. These documents shall be implemented for the life of the project:

a. *Start-up, Shutdown, and Malfunction (SSM) Plan* (to be updated)

b. *Process Monitor Calibration and Maintenance Plan* (to be updated)

c. *Surface Monitoring Maintenance and Recordkeeping (SMMR) Plan* (to be updated)

d. *Active Collection System Design (ACSD) Plan* (to be updated)

e. Operation and Maintenance Manuals for each enclosed ground flare

C.17 **Equipment Removal Report.** Permittee shall submit an equipment removal report to the District 30 days prior to removal or cessation of operation of the control equipment. [*Ref: 40 CFR Subpart WWW §60.757(e); CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(2)*]

C.18 **Closure Report.** Permittee shall submit a closure report to the District within 30 days of cessation of waste acceptance. [*Ref: 40 CFR Subpart WWW §60.757(d); CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(1)*]

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 & Safety Code. District-approved alternative compliance options for these requirements were granted in December 26, 2014 letter to the permittee and can be found in the administrative files of this permit and facility.

D.1 **Landfill.** The following equipment items are included in this emissions category:

District Device No.	Name
391484	Landfill Surface

a. Emission Limits: Mass emissions from the landfill shall not exceed the limits listed in Table 5.2. Compliance with this condition shall be based on the operational, monitoring, recordkeeping, and reporting conditions in this permit. In addition, the following specific emission limits apply:

i. *State Instantaneous Landfill Surface Emissions:* Except as provided in Conditions 9.D.1.a.iii, 9.D.1.a.iv, and 9.D.1.a.v, no location on the landfill surface may exceed a methane concentration of 500 ppmv, other than non-repeatable, momentary readings, as determined by the state instantaneous surface emissions monitoring requirements of Conditions 9.D.1.b.i, 9.D.1.b.iii, and 9.D.1.b.v through 9.D.1.b.x. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95465(a)(1)*]

ii. *Integrated Landfill Surface Emissions:* Except as provided in Conditions 9.D.1.a.iii, 9.D.1.a.iv, and 9.D.1.a.v, no location on the landfill surface may exceed a methane concentration of 25 ppmv as determined by integrated surface emissions monitoring requirements of Conditions 9.D.1.b.ii through 9.D.1.b.ix, and 9.D.1.b.xi [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95465(a)(2)*]

iii. *Landfill Working Face:* The requirements of Condition 9.D.1.a.i and 9.D.1.a.ii do not apply to the working face of the landfill or to areas of the landfill surface where the landfill cover material has been removed and refuse has been exposed for the purpose of installing, expanding, replacing, or repairing components of the LFG, leachate, or gas condensate collection and removal system, or for law enforcement activities requiring excavation. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95466(a)*]

iv. *Well Raising:* The requirements of Condition 9.D.1.a.i and 9.D.1.a.ii do not apply to individual wells involved in well raising provided the following conditions are met:

1. New fill is being added or compacted in the immediate vicinity around the well. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95464(d)(1)*]

2. Once installed, a LFG collection well extension is sealed or capped until the raised well is reconnected to a vacuum source. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95464(d)(2)*]

v. *Repairs and Temporary Shutdown of LFG Collection System Components:* The requirements of Condition 9.D.1.a.i and 9.D.1.a.ii do not apply to individual LFG collection system components that must be temporarily shut down in order to repair the components, due to catastrophic events such as earthquakes, to connect new LFG collection system components to the existing system, to extinguish landfill fires, or to perform construction activities pursuant to Condition 9.D.1.a.iii, provided the following requirements are met:

1. Any new LFG collection system components required to maintain compliance with this permit shall be designed by a professional engineer based on site specific conditions. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95464(e)(1)*]

2. Methane emissions are minimized during shutdown in accordance with industry-wide accepted practices. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95464(e)(2)*]

b. Monitoring: The following monitoring conditions apply to the landfill:

i. *State Instantaneous Surface Emissions Monitoring*. The permittee shall conduct state instantaneous surface monitoring of the landfill surface on a quarterly basis. If the provisions identified in Condition 9.D.1.b.x have been fulfilled, monitoring shall be conducted on an annual basis. A reading exceeding the limit specified in Condition 9.D.1.a.i shall be recorded as an exceedance, and the following actions shall be taken [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(1)*]:

1. *First Exceedance:* Within ten calendar days of a measured exceedance, corrective action shall be taken by the permittee such as, but not limited to cover maintenance or repair, or well vacuum adjustments; and the location shall be re-monitored. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(1)(B)*]

2. *Second Exceedance:* If the re-monitoring of the exceedance location shows a second exceedance, additional corrective action shall be taken and the location shall be re-monitored again no later than ten calendar days after the second exceedance. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(1)(B)1*]

a. *Second Exceedance Re-Monitoring:* If the re-monitoring of the location does not show a second exceedance, additional corrective action must be taken and the location must be re-monitored again no later than ten calendar days after the second exceedance. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(1)(B)1*]

3. *Third Exceedance:* If the re-monitoring shows a third exceedance, the permittee shall install a new or replacement well as determined to achieve compliance no later than 120 calendar days after detecting the third exceedance. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(1)(B)2*]

ii. *Integrated Surface Emissions Monitoring.* The permittee shall conduct integrated surface monitoring of the landfill surface on a quarterly basis. If the provisions identified in Condition 9.D.1.b.xi have been fulfilled, monitoring shall be conducted on an annual basis. Integrated surface readings shall be recorded and then averaged for each grid. A reading exceeding the limit specified in Condition 9.D.1.a.ii shall be recorded as an exceedance and the following actions shall be taken: [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(2)*]

1. *First Exceedance:* Within ten calendar days of a measured exceedance, corrective action shall be taken by the permittee such as, but not limited to, cover maintenance or repair, or well vacuum adjustments and the grid shall be re-monitored. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(2)(B)*]

2. *Second Exceedance:* If the re-monitoring of the grid shows a second exceedance, additional corrective action shall be taken and the grid shall be re-monitored again no later than ten calendar days after the second exceedance. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(2)(B)*]

    a. *Second Exceedance Re-Monitoring:* If the re-monitoring of the grid shows a second exceedance, additional corrective action must be taken and the location must be re-monitored again no later than ten calendar days after the second exceedance. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(2)(B)1*]

3. *Third Exceedance:* If the re-monitoring in the grid shows a third exceedance, the permittee shall install a new or replacement well as determined to achieve compliance no later than 120 calendar days after detecting the third exceedance. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(2)(B)2*]

iii. *State Instantaneous and Integrated Monitoring Spacing*: The permittee shall conduct state instantaneous and integrated surface emissions monitoring in a walking pattern of no more than a 25-foot intervals. These intervals shall traverse each monitoring grid for both the state instantaneous and integrated surface emissions monitoring. If the permittee has no exceedances of the limits after any four consecutive quarterly monitoring periods or can demonstrate that in the past three years that there were no measured exceedances of the limits, the walking pattern spacing may be increased to 100-foot intervals. The permittee shall submit an updated *Surface Monitoring and Recordkeeping Plan* prior to the implementation of any spacing increase. The permittee shall return to a 25-foot spacing interval upon any exceedances of the limits specified in Condition 9.D.1.a.i or 9.D.1.a.ii that cannot be remediated within ten calendar days or upon any exceedances detected during a compliance inspection. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(1)(B)1; CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(1)(B)2*]

iv. *State Instantaneous and Integrated Monitoring Grids:* The permittee shall monitor the landfill surface based on a topographic map of the MSW landfill drawn to scale. This map shall divide the entire landfill surface into individually identified 50,000 square foot grids with the location of the grids and the LFG collection system clearly marked and identified. The grids shall be used for state instantaneous and integrated surface emissions monitoring. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(1)(B)2*]

v. *State Instantaneous and Integrated Monitoring Areas:* State instantaneous and integrated surface emissions monitoring shall be conducted on the landfill surface areas with cover penetrations, distressed vegetation, cracks or seeps. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(2)(D)*]

vi. *Portable Analyzer Calibration Requirements:* The portable analyzer used for the state instantaneous surface emission monitoring and integrated surface emission monitoring shall adhere to the following requirements [*CCR Subchapter 10, Article 4, Subarticle 6 §95471(a)*]:

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)*]

vii. *Probe Height from Ground:* The probe inlet shall be placed within three inches of the ground while conducting state instantaneous surface emission monitoring and integrated surface emission monitoring. [*CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(1)(A)*]]

viii. *Wind Speeds:* State instantaneous surface emission monitoring and integrated surface emission monitoring shall be terminated when the average wind speed exceeds five miles per hour or the instantaneous wind speed exceeds ten miles per hour. Average on-site wind speed shall also be determined in an open area at fifteen-minute intervals using an on-site anemometer with a continuous recorder and data logger for the entire duration of the monitoring event. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(1)(C)*]

ix. *Meteorological Conditions*: State instantaneous surface emission monitoring and integrated surface emission monitoring shall be conducted only when there has been no measurable precipitation in the preceding 72 hours. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(1)(D)*]

x. *State Instantaneous Monitoring Frequency:* Any closed or inactive landfill, or any closed or inactive areas on an active landfill that have no state instantaneous surface monitoring exceedances of the permitted limits after four consecutive quarterly monitoring periods may be monitored annually. The permittee shall submit an updated *Surface Monitoring and Recordkeeping Plan* prior to the

implementation of any monitoring frequency changes. Any exceedances of the permitted limits specified in Condition 9.D.1.a.i during the annual monitoring that cannot be remediated within ten calendar days will result in a return to quarterly integrated surface monitoring of the landfill. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(1)(C); CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(1)(D)*]

xi. *Integrated Monitoring Frequency:* Any closed or inactive landfill, or any closed or inactive areas on an active landfill that have no integrated surface monitoring exceedances of the permitted limits after four consecutive quarterly monitoring periods may be monitored annually. The permittee shall submit an updated *Surface Monitoring and Recordkeeping Plan* prior to the implementation of any monitoring frequency changes Any exceedances of the permitted limits specified in Condition 9.D.1.a.ii during the annual monitoring that cannot be remediated within ten calendar days will result in a return to quarterly integrated surface monitoring of the landfill. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(2)(C); CCR Subchapter 10, Article 4, Subarticle 6 §95469(a)(2)(D)*]

c. Recordkeeping: The following records for the landfill shall be maintained by the permittee and shall be made available to the District upon request:

i. *State Instantaneous Surface Emissions Monitoring Recordkeeping*:

1. The concentration date, time, and location of each state instantaneous monitoring reading in excess of 200 ppmv (measured as methane). [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(D)*]

2. The concentration of the re-monitoring events for each location with a measured concentration greater than 200 ppmv and if the re-monitoring event showed compliance. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(D)*]

3. Corrective actions taken to repair the leaks as a result of measured exceedances and dates of repair. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(D)*]

4. Wind speed during state instantaneous surface sampling. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(D)*]

ii. *Integrated Surface Emissions Monitoring Recordkeeping:*

1. The concentration, date, time, and location of the affected grid of each integrated monitoring reading in excess of 25 ppmv (measured as methane). [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(3)(B)*]

2. The concentration of the re-monitoring events for each grid with a measured concentration greater than 25 ppmv and if the re-monitoring event showed compliance. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(3)(B)*]

3. Description of the corrective actions taken to repair the leaks as a result of measured exceedances and dates of repair. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(3)(B)*]

4. Wind speed during integrated surface sampling. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(3)(C)*]

iii. *Flow Rate:* The expected gas generation flow rate determined as prescribed in the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, Chapter 3 using a recovery rate of 75 percent. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(C)*]

d. Reporting: On an annual basis, a report detailing the previous twelve month's activities shall be provided to the District. The report shall list all the data required by the Annual Compliance Report Condition D.6.

D.2 **LFG Collection System.** The following equipment items are included in this emissions category:

District Device No.	Name
105956	Landfill Gas Extraction Wells
105957	Landfill Gas Collection Piping
109208	Landfill Gas Blower

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

i. *Positive Pressure Components:* The permittee shall operate the LFG collection 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)*]

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

i. *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.v. Any component leak shall be tagged and repaired within ten calendar days. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(3)*]

ii. *Construction Activities*: The permittee maintain a log of construction activities at the landfill including a description of the actions being taken, the areas of the MSW landfill that will be affected by these actions, the reason the actions are required, any LFG collection system components that will be affected by these actions, and if these construction activities are part of a LFG collection system expansion. This log shall also include the construction start and finish dates, projected equipment installation dates, and projected shut down times for individual LFG collection system components; and a description of the mitigation measures taken to minimize methane emissions and other potential air quality impacts. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(J)*]

iii. *Downtimes:* Date and duration of all periods when the entire collection system is not operating in excess of five days, including individual well shutdown and disconnection times, and the reason for the downtime. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(A)*]

c. Recordkeeping: The following records for the LFG collection system equipment shall be maintained by the permittee and shall be made available to the District upon request:

i. *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)*]

ii. *Construction Activities*: Records of any construction activities including a description of the actions being taken, the areas of the MSW landfill that will be affected by these actions, the reason the actions are required, any LFG collection system components that will be affected by these actions, and if these construction activities are part of a LFG collection system expansion. Construction start and finish dates, projected equipment installation dates, and projected shut down times for individual LFG collection system components; and a description of the mitigation measures taken to minimize methane emissions and other potential air quality impacts. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(J)*]

iii. *Downtimes:* Periods when the entire collection system is not operating in excess of five days, including individual well shutdown and disconnection times, and the reason for the downtime. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(A)*]

d. Reporting: On an annual basis, a report detailing the previous twelve month's activities shall be provided to the District. The report shall list all the data required by the Annual Compliance Report Condition D.6.

D.3 **Enclosed Ground Flares.** The following equipment items are included in this emissions category:

District Device No.	Name
006910	Enclosed Ground Flare 1
109207	Enclosed Ground Flare 2
105960	Gas Flow Measurement System

a. Emission Limits: Mass emissions from the enclosed ground flares shall not exceed the limits listed in Table 5.2. Compliance with this condition shall be based on the operational, monitoring, recordkeeping, and reporting conditions in this permit. In addition, the following specific emission limits apply:

i. *Methane Control Requirements*: Each enclosed ground flare shall reduce methane by 99 percent by weight. Compliance with this condition shall be based on the source testing conditions of this permit. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95464(b)(2)(A)1*]

b. Operational Limits: The enclosed ground flares permitted herein is subject to the following operational restrictions listed below:

i. *Venting:* During restart or startup of each enclosed flare, there shall be a sufficient flow of propane to the burner to prevent unburned collected LFG from being emitted to the atmosphere. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95464(b)(2)(A)3*]

ii. *Positive Pressure Components:* The permittee shall operate the enclosed ground flares 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)*]

iii. *Flare Features:* Each enclosed ground flare shall be equipped with automatic dampers, an automatic shutdown device, and a flame arrester. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95464(b)(2)(A)2*]

c. Monitoring: The following monitoring conditions apply to the enclosed ground flares:

i. *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.v. Any component leak shall be tagged and repaired within ten calendar days. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95469(b)(3)*]

ii. *LFG Sampling*: On a quarterly basis, a sample of the LFG shall be extracted downstream of the collection system blower and analyzed for methane (percent by volume) and carbon dioxide (percent by volume) using appropriate ASTM sampling and analysis techniques. See Section 9.C for additional parameters to be analyzed. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(C)*]

d. Recordkeeping: The following records for the enclosed ground flares shall be maintained by the permittee and shall be made available to the District upon request:

i. *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)*]

ii. *LFG Sampling:* Results of the quarterly measurements of the LFG for methane (percent by volume) and carbon dioxide (percent by volume). See Section 9.C for additional recordkeeping requirements for the LFG sampling requirements. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(C)*]

iii. *Source Test Results:* Results of any source tests conducted including methane destruction efficiency. See Section 9.C for additional enclosed ground flare source test requirements. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(H)*]

iv. *Control Device Parameters:* The permittee shall maintain the following records of each LFG control device: 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)*]

v. *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: the control device vendor specifications, expected gas generation flow rate, and 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 an annual basis, a report detailing the previous twelve month's activities shall be provided to the District. The report shall list all the data required by the Annual Compliance Report Condition D.6.

D.4 **Diesel Fired Engines.** The following equipment items are included in this emissions category:

District Device No.	Name
107057	Firewater Engine
107058	Emergency Standby Generator

a. Emission Limits: Mass emissions from emergency standby generator and firewater 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, and reporting conditions in this permit.

b. Operational Limits: The emergency standby generator and firewater engine permitted herein are subject to the following operational restrictions listed below:

i. *Fire Water Engine Use:* The firewater engine subject to this permit shall not be operated for more than 2 hours per day and 20 hours per year for maintenance and testing purposes[ab]. [*Ref: PT-70/Reeval 10318-R2*]

ii. *Emergency Standby Engine Use:* The emergency standby generator subject to this permit shall not be operated for more than 2 hours per day and 20 hours per year for maintenance and testing purposes[a,b]. [*Ref: PT-70/Reeval 10318-R2*]

iii. *Impending Rotating Outage Use:* The emergency standby generator engine subject to this permit may be operated in response to the notification of an impending rotating outage if all the conditions cited in the ATCM are met. [*Ref: Stationary Compression Ignition Engines ATCM §93115.6(a)(2)*]

iv. *Fuel and Fuel Additive Requirements:* The permittee may only add fuel and/or fuel additives to the emergency standby generator engine and firewater engine or any fuel tank directly attached to the engine that comply with the ATCM. [*Ref: Stationary Compression Ignition Engines ATCM §93115.5(b)(5)*]

c. Monitoring: The following monitoring conditions apply to the emergency standby generator and firewater engine:

i. *Non-Resettable Hour Meter*: The emergency standby generator engine and firewater engine subject to this permit shall have installed a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District has determined (in writing) that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the permittee's compliance history. [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(d)(1)*]

d. Recordkeeping: The permittee shall record and maintain the information listed below for the emergency standby generator engine and firewater engine. Log entries shall be retained for a minimum of 36 months from the date of entry. Log entries made within 24 months of the most recent entry shall be retained on-site, either at a central location or at the engines' location, and made immediately available to the District staff upon request. Log entries made from 25 to 36 months from most recent entry shall be made available to District staff within five working days from request. District Form ENF-92 (*Diesel-Fired Emergency Standby Engine Recordkeeping Form*) can be used for this requirement.

i. Emergency use hours of operation [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(A)*]

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[a] "maintenance and testing" is defined in the ATCM and may also be found on the District webpage at https://www.ourair.org/wp-content/uploads/ES_MT_DICE_Definitions.pdf

[b] As used in the permit, "ATCM" means Section 93115, Title 17, California Code of Regulations. Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines

ii. Maintenance and testing hours of operation [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(B)*]

iii. Hours of operation for emission testing to show compliance with the ATCM {if specifically allowed for under this permit} [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(C)*]

iv. Hours of operation to comply with the requirements of National Fire Protection Association (NFPA) 25/100 [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(E)*]

v. Hours of operation for all uses other than those specified in items (i) – (iv) above along with a description of what those hours were for [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(F)*]

vi. Fuel purchase records that demonstrate that only fuel meeting the requirements of the ATCM is purchased and added to each standby engine, or to any fuel tank directly attached to each engine. [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(H)*]

e. Reporting: On an annual basis, a report detailing the previous twelve month's activities shall be provided to the District. The report shall list all the data required by the Annual Compliance Report Condition D.6.

D.5 **Recordkeeping.** The permittee must maintain copies of the records and reports required by Section 9.D for at least five years, whether in paper, electronic, or other format, and provide them to the Executive Officer within five business days upon request. Records and reports must be kept at a location within the State of California. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(3)*]

D.6 **Annual Compliance Reporting.** In addition to its required semiannual reporting, the permittee shall also submit an annual report to the District. By March 1st of the following year containing the information listed below. These reports shall be in a format approved by the District, with one hard copy and one electronic PDF copy. All logs and other basic source data not included in the report shall be available to the District upon request. The annual compliance report shall include the following information:

a. Landfill:

i. *State Instantaneous Surface Emissions Monitoring Recordkeeping*:

1. The concentration, date, time, and location of each state instantaneous monitoring reading in excess of 200 ppmv (measured as methane). [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(D)*]

2. Corrective actions taken to repair the leaks as a result of measured exceedances, and dates of repair. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(D)*]

3. Wind speed during state instantaneous surface sampling. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(D)*]

ii. *Integrated Surface Emissions Monitoring Recordkeeping:*

1. The concentration, date, time, and location of the affected grid of each integrated monitoring reading in excess of 25 ppmv (measured as methane). [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(3)(B)*]

2. The concentration of the re-monitoring events for each grid with a measured concentration greater than 25 ppmv and if the re-monitoring event showed compliance. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(3)(B)*]

3. Description of the corrective actions taken to repair the leaks as a result of measured exceedances, and dates of repair. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(3)(B)*]

4. Wind speed during integrated surface sampling. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95471(c)(3)(C)*]

iii. *Flow Rate:* The expected gas generation flow rate determined as prescribed in the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, Chapter 3 using a recovery rate of 75 percent. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(C)*]

b. Landfill Gas Collection System:

i. *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)*]

ii. *Construction Activities*: Records of any construction activities including a description of the actions being taken, the areas of the MSW landfill that will be affected by these actions, the reason the actions are required, any LFG collection system components that will be affected by these actions, and if these construction activities are part of a LFG collection system expansion. The log of construction start and finish dates, projected equipment installation dates, and projected shut down times for individual LFG collection system components; and a description of the mitigation measures taken to minimize methane emissions and other potential air quality impacts. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(J)*]

iii. *Downtimes:* Periods when the entire collection system is not operating in excess of five days, including individual well shutdown and disconnection times, and the reason for the downtime. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(a)(1)(A)*]

c. Enclosed Ground Flares:

i. *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)*]

ii. *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)*]

iii. *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); CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(F)*]

iv. *Control Device Parameters:* The permittee shall maintain the following records of each LFG control device: 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)]*

d. Diesel Fired Engines:

i. Emergency use hours of operation [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(A)*]

ii. Maintenance and testing hours of operation [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(B)*]

iii. Hours of operation for emission testing to show compliance with the ATCM {if specifically allowed for under this permit} [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(C)*]

iv. Hours of operation to comply with the requirements of National Fire Protection Association (NFPA) 25/100 [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(E)*]

v. Hours of operation for all uses other than those specified in items (i) – (iv) above along with a description of what those hours were for [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(F)*]

vi. The owner or operator shall report fuel use through the retention of fuel purchase records that demonstrate that the only fuel purchased and added to the emergency standby generator engine or firewater engine, or to any fuel tank directly attached

to the emergency standby generator engine or firewater engine, meets the requirements of the ATCM. [*Ref: Stationary Compression Ignition Engines ATCM §93115.10(f)(1)(H)*]

e. General Reporting Requirements:

i. *Landfill Information*: MSW landfill name, owner and operator, address, solid waste information system (SWIS) identification number, and status (active, inactive, closed). [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(A)*]

ii. *Plot Map:* Most recent topographic map of the site showing the areas with final cover and a geomembrane and the areas with final cover without a geomembrane with corresponding percentages over the landfill surface [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(I)*]

iii. *Gas Shipped Offsite:* The total volume of LFG shipped offsite, the composition of the landfill gas collected (reported in percent methane, and percent carbon dioxide by volume), and the recipient of the gas. [*Ref: CCR Subchapter 10, Article 4, Subarticle 6 §95470(b)(3)(H)*]

D.5 **Odorous Organic Sulfides**. CSML 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.

D.6. **Temporary Engine Replacements - DICE ATCM.** Any reciprocating internal combustion engine subject to this permit and the stationary diesel ATCM may be temporarily replaced only if the requirements (a – h) listed herein are satisfied.

a. The permitted engine that is being temporarily replaced is in need of routine repair or maintenance.

b. The permitted engine does not have a cracked block, unless the block will be replaced under manufacturer's warranty.

c. Replacement parts are available for the permitted engine.

d. The permitted engine is returned to its original service within 180 days of installation of the temporary engine.

e. The temporary replacement engine has the same or lower manufacturer rated horsepower and same or lower potential to emit of each pollutant as the permitted engine. At the written request of the permittee, the District may approve a replacement engine with a larger rated horsepower if the proposed temporary engine has manufacturer guaranteed emissions (for a brand new engine) or source test data (for a previously used engine) less than or equal to the permitted engine.

f. The temporary replacement engine shall comply with all rules and permit requirements that apply to the permitted engine.

g. For each permitted engine to be temporarily replaced, the permittee shall submit a completed *Temporary IC Engine Replacement Notification* form (Form ENF-94) within 14 days of the temporary engine being installed. This form may be sent hardcopy, or can be e-mailed (e-mail: engr@sbcapcd.org) to the District (Attn: Engineering Supervisor).

h. Within 14 days of returning the original permitted engine to service, the permittee shall submit a completed *Temporary IC Engine Replacement Report* form (Form ENF-95). This form may be sent hardcopy, or can be e-mailed (e-mail: engr@sbcapcd.org) to the District (Attn: Engineering Supervisor).

Any engine in temporary replacement service shall be immediately shut down if the District determines that the requirements of this condition have not been met. If the requirements of this condition are not met, the permittee must obtain an ATC before installing or operating a temporary replacement engine.

D.7 **Permanent Engine Replacements.** The permittee may install a new engine in place of an engine permitted herein without first obtaining an ATC only if the requirements (a – f) listed herein are satisfied.

a. The permitted stationary diesel-fueled engine is an E/S engine, a firewater pump engine or an engine used for an essential public service (as defined by the District).

b. The permitted engine breaks down, cannot be repaired, and needs to be replaced by a new permanent engine.

c. The facility provides "good cause" (in writing) for the need to install a new permanent engine before an ATC can be obtained for a new engine.

d. The new permanent engine must comply with the requirements of the ATCM for new engines. A temporary replacement engine may be used while the new permanent engine is being procured only if it meets the requirements of the *Temporary Engine Replacements - DICE ATCM* permit condition.

e. An ATC application for the new permanent engine must be submitted to the District within 15 days of the existing engine being replaced and the ATC must be obtained no later than 180 days from the date of engine replacement (these timelines include the use of a temporary engine).

f. For each new permanent engine installed pursuant to this condition, the permittee shall submit a completed *Permanent IC Engine Replacement Notification* form (Form ENF-96) within 14 days of the new engine being installed. This form may be sent hardcopy, or can be e-mailed (e-mail: engr@sbcapcd.org) to the District (Attn: Engineering Supervisor).

Any engine installed pursuant to this condition shall be immediately shut down if the District determines that the requirements of this condition have not been met.

D.8 **Notification of Non-Compliance.** Owners or operators who have determined that they are operating their stationary diesel-fueled engine(s) in violation of the requirements specified in the ATCM shall notify the District immediately upon detection of the violation and shall be subject to District enforcement action.

D.9 **Notification of Loss of Exemption.** Owners or operators of in-use stationary diesel-fueled CI engines, who are subject to an exemption specified in the ATCM from all or part of the requirements of the ATCM, shall notify the District immediately after they become aware that the exemption no longer applies and shall demonstrate compliance within 180 days after notifying the District.

D.10 **Enrollment in a DRP/ISC - January 1, 2005.** Any stationary diesel IC engine rated over 50 bhp that enrolls for the first time in a Demand Response Program/Interruptible Service Contract (as defined in the ATCM) on or after January 1, 2005, shall first obtain a District Authority to Construct permit to ensure compliance with the emission control requirements and hour limitations governing ISC engines.

AIR POLLUTION CONTROL OFFICER

AUG 23 2017

DATE

It is recommended that this permit be granted with the conditions as specified in the permit.

AQ Engineer/Technician	August 22, 2017	Supervisor	8/22/17
	Date		Date

Notes:

(a) This permit supersedes PT-70/Reeval 10318-R2 and PT-70 ADM 14686
(b) Permit Triennial Reevaluation Due Date: August 2020

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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

10.4 Facility Map

10.5 Draft Comments

10.1 Equipment List

A PERMITTED EQUIPMENT

1 Landfill Surface

Device ID #	**391484**	***Device Name***	**Landfill Surface**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

2 Landfill Gas Collection System

2.1 Landfill Gas Extraction Wells

Device ID #	**105956**	***Device Name***	**Landfill Gas Extraction Wells**
Rated Heat Input		*Physical Size*	104.00 Total Wells
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	104 wells as of March 2017		

2.2 Landfill Gas Collection Piping

Device ID #	**105957**	***Device Name***	**Landfill Gas Collection Piping**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	The piping links the extraction wells to the blower.		

2.3 Landfill Gas Blower

Device ID #	**109208**	***Device Name***	**Landfill Gas Blower**
Rated Heat Input		*Physical Size*	15.00 Horsepower (Electric Motor)
Manufacturer	New York Blower	*Operator ID*	
Model	2606A	*Serial Number*	11008131-01
Location Note			
Device Description			

3 Landfill Gas Control System

3.1 Enclosed Ground Flare 1

Device ID #	**006910**	***Device Name***	**Enclosed Ground Flare 1**
Rated Heat Input	13.500 MMBtu/Hour	*Physical Size*	
Manufacturer	Perennial Energy Inc	*Operator ID*	
Model	EF4-10.5	*Serial Number*	
Location Note			
Device Description	Dimensions: 6 foot diameter by 24 feet high		

3.2 Enclosed Ground Flare 2

Device ID #	**109207**	***Device Name***	**Enclosed Ground Flare 2**
Rated Heat Input	20.000 MMBtu/Hour	*Physical Size*	
Manufacturer	Perennial Energy Inc	*Operator ID*	
Model	FL-90-26-E	*Serial Number*	
Location Note			
Device Description	Dimensions: 7.5 foot diameter by 27 feet high		

3.3 Gas Flow Measurement System

Device ID #	**105960**	***Device Name***	**Gas Flow Measurement System**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	System is used to measure and continuously record gas flow from the collection system to the enclosed ground flare		

4 LFG Condensate System

4.1 Condensate Knockout

Device ID #	**109213**	***Device Name***	**Condensate Knockout**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Dimensions: 30 inches diameter x 96 inches high		

4.2 Condensate Holding Tank

Device ID #	**105961**	***Device Name***	**Condensate Holding Tank**
Rated Heat Input		*Physical Size*	1200.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	1,200 gallon capacity, dimensions: 5.083 foot diameter x 8.083 feet high, condensate is disposed of by injection into one of the enclosed ground flares, trucked from facility to approved disposal site, or used for onsite dust suppression; connected to carbon filter		

4.3 Air Compressor

Device ID #	**103977**	***Device Name***	**Air Compressor**
Rated Heat Input		*Physical Size*	5.00 Horsepower (Electric Motor)
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Drives the pneumatic pump used to send the condensate from the tank to the enclosed ground flares		

5 Leachate System

5.1 Leachate Pumps

Device ID #	**390416**	***Device Name***	**Leachate Pumps**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Three electric pumps		

5.2 Leachate Holding Tanks

Device ID #	**390417**	***Device Name***	**Leachate Holding Tanks**
Rated Heat Input		*Physical Size*	10000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Two 10,000 gal holding tanks, closed top, connected by a value to keep tank levels equal		

6 Emergency Standby Generator

Device ID #	107058	*Maximum Rated BHP*	277.00
Device Name	Emergency Standby Generator	*Serial Number*	46078457
Engine Use	Electrical Power	*EPA Engine Family Name*	ICEXC0505ABA
Manufacturer	Cummins	*Operator ID*	Engine #10
Model Year	2001	*Fuel Type*	CARB Diesel - ULSD
Model	6CTA8.3-G2		
DRP/ISC?	No	*Healthcare Facility?*	No
Daily Hours	2.00	*Annual Hours*	20
Location Note			
Device Description	Engine is used to provide electrical power to the facility in the event of loss of power from the grid, EPA family: ICEXC0505ABA, model year: 2001, diesel fired, operated up to 2 hours per day and 20 hours per year for maintenance and testing, equipped with a non-resettable hour meter, Tier 1 certified engine		

7 Firewater Engine

Device ID #	107057	*Maximum Rated BHP*	240.00
Device Name	Firewater Engine	*Serial Number*	45986955
Engine Use	Electrical Power	*EPA Engine Family Name*	413
Manufacturer	Cummins	*Operator ID*	Engine #9
Model Year	2000	*Fuel Type*	CARB Diesel - ULSD
Model	6CTA8.3-F1		
DRP/ISC?	No	*Healthcare Facility?*	No
Daily Hours	2.00	*Annual Hours*	20
Location Note			
Device Description	Engine is used to provide electrical power to the fire suppression system, EPA family: 143, model year: 2000, diesel fired, operated up to 2 hours per day and 20 hours per year for maintenance and testing, equipped with a non-resettable hour meter		

8 **Solvent Use**

Device ID #	**391485**	***Device Name***	**Solvent Use**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Non-wipe cleaning solvent use		

B EXEMPT EQUIPMENT

1 **Propane Tanks**

Device ID #	**103980**	***Device Name***	**Propane Tanks**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	Yes	*District Rule Exemption:*	.202.V.8 Storage Of Liquefied/Compressed Gases
Location Note	One tank located at each location: flare station, truck wash, scale house, and administrative building		
Device Description	Four propane tanks		

2 **Diesel Storage Tank 1**

Device ID #	**390382**	***Device Name***	**Diesel Storage Tank 1**
Rated Heat Input		*Physical Size*	500.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:*	202.V.2 Storage Of Refined Fuel Oil W/Grav <=40 API
Location Note			
Device Description	For the diesel emergency standby generator		

3 **Diesel Storage Tank 2**

Device ID #	**390414**	***Device Name***	**Diesel Storage Tank 2**
Rated Heat Input		*Physical Size*	250.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:*	202.V.2 Storage Of Refined Fuel Oil W/Grav <=40 API
Location Note			
Device Description	For the diesel firewater engine		

4 **Firewater Tank**

Device ID #	**390418**	***Device Name***	**Firewater Tank 1**
Rated Heat Input		*Physical Size*	120000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:*	201.A No Potential To Emit Air Contaminants
Location Note			
Device Description			

5 **Water Tank**

Device ID #	**390419**	***Device Name***	**Water Tank**
Rated Heat Input		*Physical Size*	10000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:*	201.A No Potential To Emit Air Contaminants
Location Note			
Device Description	For domestic use		

10.2 List of Exempt/Insignificant Emissions Units

1. Two water tanks (Rule 201.A)
2. Four propane storage tanks (Rule 202.V.8)
3. Two diesel storage tanks (Rule 202.V.2)
4. Solvent use (wipe cleaning only)
5. Blasting (Rule 202.P.13)

10.3 IDS Database Emission Tables

PERMIT POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	39.74	144.26	211.38	24.60	9.60	9.60	9.60
lb/hr							
TPQ							
TPY	4.46	25.92	35.14	4.49	1.76	1.76	1.76

FACILITY POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	39.74	144.26	211.38	24.60	9.60	9.60	9.60
lb/hr							
TPQ							
TPY	4.46	25.92	35.14	4.49	1.76	1.76	1.76

FEDERAL POTENTIAL TO EMIT

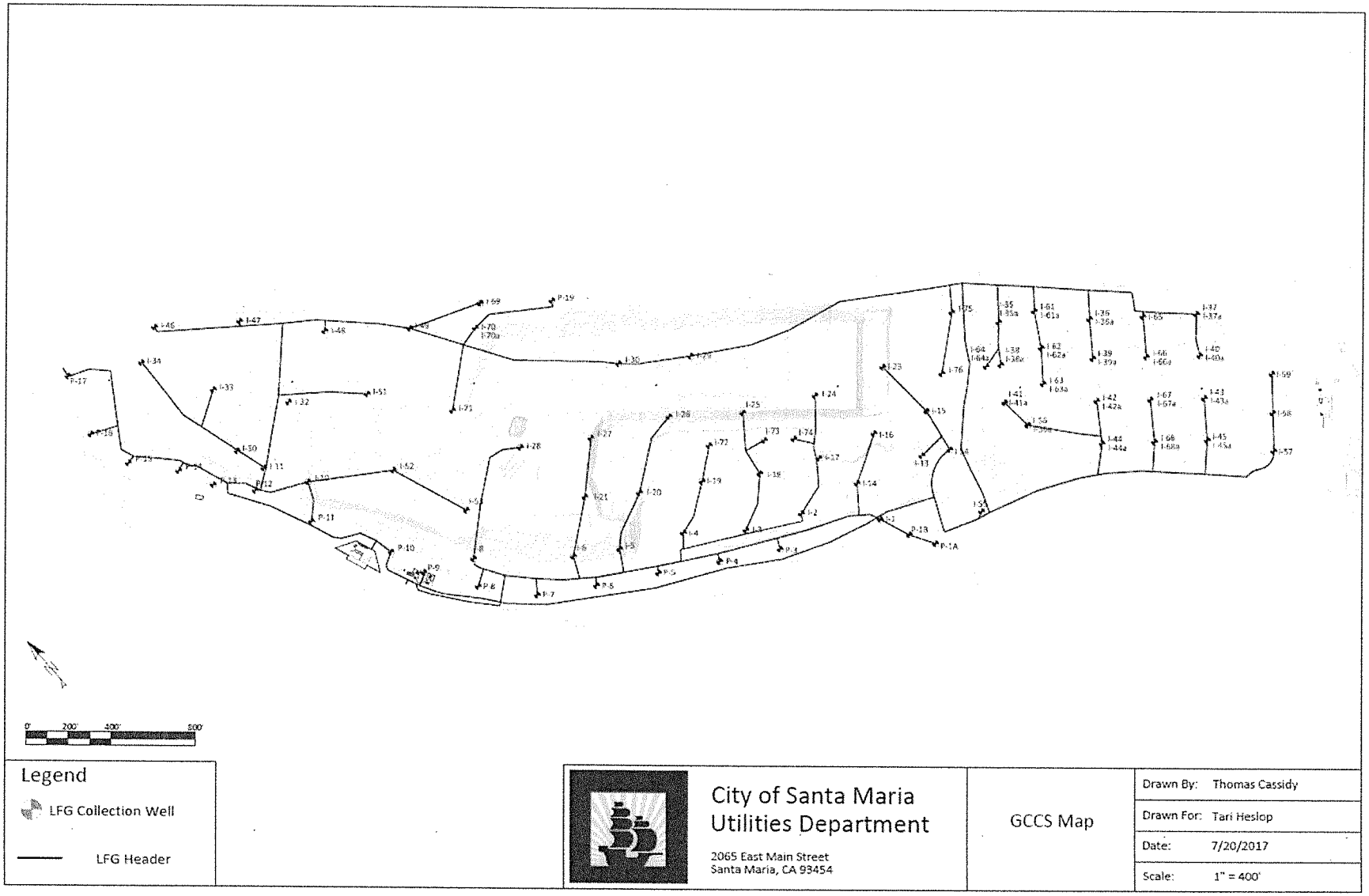
	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	39.74	30.60	211.38	24.60	9.60	9.60	9.60
lb/hr							
TPQ							
TPY	4.46	5.18	35.14	4.49	1.76	1.76	1.76

STATIONARY SOURCE POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	91.75	185.87	471.44	25.64	15.77	15.77	15.77
lb/hr							
TPQ							
TPY	13.95	33.51	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.

10.4 Facility Map (As of Permit Issuance)



10.5 Draft Comments

Comment No. 1

On Page 1 under Section 1.1, there is a typo in the fourth paragraph. The City requests for the typo "warrantied" be corrected to "warranted" in the sentence "Changes at the stationary source and process have warrantied the removal of this condition." The sentence would be corrected to "Changes at the stationary source and process have ***warranted*** the removal of this condition."

District Response: Correction has been made.

Comment No. 2

On Page 1 under Section 1.1, there are two typos in the fifth paragraph. The City requests for the typo "collect" be corrected to "collected" in the sentence "...as well as two electrical generators at the Marian Medical Center combust collect landfill gas" and for the word "will" be removed from the sentence "There will are no changes to the flare potential to emit..." The sentences would be corrected to "...as well as two electrical generators at the Marian Medical Center combust ***collected*** landfill gas..." and "There are no changes to the flare potential to emit..."

District Response: Corrections have been made.

Comment No. 3

On Page 2 under Section 1.1.1, second paragraph, the City requests to add the internal combustion (IC) engine at the landfill, owned and operated by J&A Santa Maria, LLC (J&A), to the equipment that uses treated landfill gas. The sentence would be corrected to the following:

"The gas is treated and sent to the Marian Medical Center and to the IC engine located at the landfill."

District Response: Requested changes have been made.

Comment No. 4

On Page 3 under Section 1.1.1, third bullet, the City requests that the description for the electrical generator be accurately described. The IC engine at the landfill operates concurrently with the generators at Marian Medical Center. As such, the City requests the following sentence be deleted:

~~"If treated gas is not transported to Marian Medical Center, treated LFG is used to power an electrical generator, which provides electricity to the grid."~~

District Response: A portion of the requested changes have been made. Only the inaccurate information of, "If treated gas is not transported to Marian Medical Center" has been removed.

Comment No. 5

On Page 4 under Section 1.5, the City requests that the word "is" be added to the sentence "...the CSML stationary source not required to offset emissions at this time..." The sentence would be corrected to "...the CSML stationary source ***is*** not required to offset emissions at this time..."

District Response: Correction has been made.

Comment No. 6

On Page 6 under Section 1.6.10, the responsible official's information is provided. It specifically notes that Shad Springer is the responsible official. The City requests that that responsible official be noted as simply the Director, Utilities Department so that a permit modification would not be required if the Director changes during the permit term. The information under Section 1.6.10 would be noted as the following:

Director, Utilities Department
City of Santa Maria
2065 East Main Street
Santa Maria, CA 93454-8026

District Response: Requested changes have not been made. A specific person needs to be listed as the Responsible Official.

Comment No. 7

On Page 7 under Section 2.1.2, the City requests the date of the issuance of the Solid Waste Facility Permit be corrected to October 2013. The sentence would be corrected as follows:

"It operates under a Solid Waste Facility Permit (revised ***October 2013***), which allows..."

District Response: Requested changes have been made.

Comment No. 8

On Page 7 under Section 2.1.2, the City requests to add more detailed information regarding landfill operations, including the use of tarps and alternative daily cover (ADC). The sentence would be revised as follows:
Landfill operations consist of a "fill-and-cover method" using onsite soils, ***tarps, and alternative daily cover (ADC)*** to provide daily cover.

District Response: Requested changes have been made.

Comment No. 9

On Page 7 under Section 2.1.2.3, the City requests to delete the information noting that the 13.5 million British Thermal Units per hour (MMBtu/hr) flare is a backup to the 20 MMBtu/hr flare. The flare that is operated is based upon the operations of J&A and the volume/flow of LFG that is needed to be flared. As such, the City requests to delete the following sentence:

"~~This flare is a backup to the 20.000 MMBtu/hr flare.~~"

The City requests all additional references throughout the permit, including Section 4.3.1, noting that the 13.5 MMBtu/hr flare as backup be removed.

District Response: Requested changes have been made throughout the permit.

Comment No. 10

On Page 8 under Section 2.2.1, the City requests that the condensate storage tank size be corrected to reflect conditions at the site. The condensate storage tank is 1,200 gallons, not 1,050 gallons. The City requests this change be made throughout the permit, including under Section 4.2.1 and Section 10.1.A.4.2. The sentence would be corrected as follows:

"All condensate collected is stored in a ***1,200*** gallon holding tank."

In addition, the City requests the sentence, "Three electric pumps pull the leachate this collection system so the leachate can be piped to one of two 10,000-gallon holding tanks" be corrected to the following:

"Three electric pumps ***push*** the leachate ***from the bottom of the lined cell*** to one of two 10,000-gallon holding tanks."

District Response: Condensate tank size has been updated throughout the permit. Other requested changes have been made.

Comment No. 11

On Page 9 under Section 3.1, the City requests the sentence, "CSML qualifies for a exemptions under this rule..." be corrected to the following:

"CSML qualifies for exemptions under this rule..."

District Response: Correction has been made.

Comment No. 12

On Page 9 under Section 3.1, the City requests that clarification be added to the exempted water tanks. Only one tank noted is for firewater as the other is for domestic use. The City requests this be clarified throughout the permit including under Section 10.1.B.4, 10.1.B.5, and Section 10.2. The description of the tanks would be changed to the following:

- Section A for two ~~fire~~water tanks (120,000 gallons ***for firewater*** and 10,000 gallons ***for domestic use***).

District Response: Requested changes have been made. Equipment list has been updated accordingly.

Comment No. 13

On Page 9 under Section 3.1, the City requests the sentence, "Section B.1.d. of the rule exempts compression ignition emergency standby generator engines as defined under California Code of R3egulationss, Title 17, Section 93115..." be corrected to the following:

"Section B.1.d. of the rule exempts compression ignition emergency standby generator engines as defined under California Code of ***Regulations***, Title 17, Section 93115..."

District Response: Correction has been made.

Comment No. 14

On Page 10 under Section 3.2.2, the City requests that the gas treatment system located at the landfill, that is owned and operated by J&A, be included in the equipment covered by a separate permit. The gas treatment system at the landfill should not be subject to the requirements of the New Source Performance Standards (NSPS) Subpart WWW under this Part 70 permit. The City requests the sentence to be changed to the following:

"The gas treatment system for Marian Medical Center ***and the internal combustion engine located at the landfill are*** also used to comply with Subpart WWW. However, since the gas treatment system is owned and operated by J&A, the requirements for the operation of the gas treatment system are covered by a separate permit..."

District Response: Requested changes have been made. The other sentences in the paragraph have also been revised in order to be consistent.

Comment No. 15

On Page 12 under Section 3.3.3, the City requests the word "for" should be removed from the sentence, "This regulation requires the emergency backup diesel IC engines to be fired exclusively on CARB ultra-low sulfur diesel and limits maintenance and testing to 50 hours per year for...". The City requests for it to be corrected to the following:

"This regulation requires the emergency backup diesel IC engines to be fired exclusively on CARB ultra-low sulfur diesel and limits maintenance and testing to 50 hours per year."

District Response: Correction has been made.

Comment No. 16

The City requests clarification as to the importance or necessity of Section 3.5, Compliance History. This section will become outdated prior to the next issuance of the Part 70 permit and therefore seems irrelevant. In addition, the information, specifically, the source tests dates, are incorrect for the majority noted. As such, the City requests to remove the compliance history from the permit.

District Response: Requested changes have not been made. The Compliance History section is standard language in all District permits and will not be removed. The source test dates have been corrected based on District records.

Comment No. 17

The City requests Section 60.753(c) under Table 3.3 be corrected such that wellheads must meet the standard 20 percent nitrogen or 5 percent oxygen, not both, in accordance with rule. The City requests the following change below:

"Operate each wellhead under 55° C, ***and*** 20 percent nitrogen ***or*** 5 percent oxygen."

District Response: Correction has been made.

Comment No. 18

On Page 22 under Section 4.1, the City requests to correct the language regarding the use of the firewater engine, as it is not used for power outages. The City requests the following change below:

"NO_x, ROC, CO, SO_x, PM, PM_{10} and $PM_{2.5}$ emission are generated from the combustion of diesel during ***emergency use***, maintenance, and testing."

District Response: Requested changes have been made.

Comment No. 19

On Page 23 under Section 4.2.1, the City requests that the exact number of wells be removed from the permit. The number of wells has already changed since the draft permit was issued and will change once the permit is issued. The permit will be obsolete as soon as it is finalized and it is unclear what value this provides. This also includes removing the number of wells from Section 10.1.A.2.1. In addition, the City requests that the horsepower of the blower be removed as this is also unnecessary information and not accurate. The City requests the language regarding wells be modified as follows:

"***Interior and perimeter*** wells comprise the LFG collection system. ~~Of the 104 wells, 85 are located in the landfill interior and 19 are located on the landfill perimeter.~~ The number of wells may vary as changes are made to the colletion system. At the centralized location, a ~~15 horsepower electric~~ blower creates suction pressure (vacuum) on the wells and gas collection piping system so that the LFG is drawn out of the landfill."

District Response: Requested changes not made. Based on a July 10, 2017 email from the permittee, the facility has a total of 108 wells (90 interior and 18 perimeter wells). The District will add the stipulation that these values were "at the time of permit issuance". Additionally, based on the same email, the District has revised the process description to note that the J&A Santa Maria blower or the previously noted 15 hp blower may be used for landfill gas extraction.

Comment No. 20

On Page 24 under Section 4.2.3, the City requests the language be updated to reflect the allowable non-methane organic compound (NMOC) emission rate from enclosed landfill gas (LFG) flares of 20 ppmv as hexane at 3 percent oxygen. Per the New Source Performance Standards (NSPS), LFG flares must meet 98% destruction efficiency of NMOCs or 20 ppmv as hexane at 3 percent oxygen.

District Response: Requested changes have been made.

Comment No. 21

On Page 24 under Section 4.3.1, the City requests the language be clarified that the LFG can be routed to the IC engine at the landfill and/or the IC engines at the Marian Medical Center. The City requests the sentence to be corrected as follows:

"The collected LFG is routed to one of two City of Santa Maria owned enclosed ground flares or treated, compressed, and sent to the onsite electrical generator ***and/or*** off-site generators at the Marian Medical Center..."

District Response: Requested changes have been made.

Comment No. 22

On Page 28 under Section 4.8.2, the City requests the section under Process Monitoring be modified to provide flexibility for instruments that may not require calibration. The proposed language is as follows:

"At a minimum, the following process monitors are required to be operate, calibrated ***(if necessary), and/or*** maintained in good working order:"

District Response: Requested changes have not been made. However, "(as applicable)" has been added to "calibrated". The District will not add the "add/or" since it could be interpreted as allowing the permittee to do only do one of "operate, calibrate[d], and maintain in good working order" for the facility's process monitors.

Comment No. 23

The City requests that the requirement for a portable analyzer for nitrogen oxides (NOx) be removed from the requirements under Section 4.8.2 on Page 28. There is no combustion from wellheads. If the intent was to note a requirement for a portable analyzer for nitrogen; then the City requests this be removed since nitrogen levels cannot be analyzed in this manner. Accurate nitrogen readings from wellheads must be analyzed in a laboratory, and oxygen is used as the compliance parameter.

District Response: The District has corrected NO_x to nitrogen. However, the nitrogen reference has not been removed from the permit since the regulations allow the permittee to monitor the wellhead nitrogen or oxygen. . Based the response, language has been added to Section 4.9.2 regarding nitrogen sampling. Additionally, language has been added to Section 4.8.2 and 4.9.2 to clarify that the permittee only needs to monitor/sample one of the two parameters.

Comment No. 24

The City requests that the requirement for monitoring of NOx and carbon monoxide (CO) using a portable analyzer on a quarterly basis in Table 4.2 on Page 31 be removed. There is no basis for NOx and CO monitoring at the collection system and there are no emissions to monitor since combustion does not occur at the wells, but at the control devices.

District Response: Correction has been made. The Table 4.2 NOx reference has been removed and the CO has been revised to oxygen.

Comment No. 25

The City requests that the term "at 3 percent oxygen" be added to the condition in Table 4.3 on Page 32 for ROCs. The flare stack will meet either 98% destruction efficiency or 20 ppmv outlet as hexane at 3% oxygen.

District Response: Requested changes have been made.

Comment No. 26

The City requests clarification as to the importance of Table 5.1-5 Captured Landfill Gas on Page 38. The gas collected covers the period of one year over 2015 and 2016. It is unclear what value this table has in the Part 70 permit since these years have passed, and the amount of collected landfill gas is always changing.

District Response: In order to calculate the ROC potential to emit from the landfill surface, the amount of captured NMOC needs to be determined. Table 5.1-5 shows how this captured NMOC value was calculated. The 115.00 TPY of captured NMOC found in Table 5.1-5 is used in Table 5.1-4 to calculate the potential to emit of the landfill surface.

While the District acknowledges that the collected landfill gas volume is continuously changing, historical data from past CVRs is the most representative method available to determine the amount of captured NMOC.

Comment No. 27

On Page 55, Condition 9.C.1.c.iii, the City requests that language be added to reduce the monitoring frequency from quarterly to annual if the requirements for closed landfills, or closed areas are met.

District Response: Per 40 CFR Subpart WWW §60.756(f), "Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring". Condition 9.C.1.c.viii has been added to allow for annual instantaneous surface emissions monitoring for when the landfill is closed. Additionally, condition 9.C.1.c.iii has been revised to reflect these changes. Note that Subpart WWW does not state that closed areas of a landfill are able to change to annual monitoring. The federal regulations only address closed landfills; therefore, that portion of the requested change have not been made.

Comment No. 28

On Page 59, Condition C.2.a.ii, the City requests that the sentence, "Route all the collected LFG to a gas control device or and operated the LFG collection and control system at all times the collected LFG is routed to the system" be corrected as follows:

"Route all the collected LFG to a gas control device and ***operate*** the LFG collection and control system at all times the collected LFG is routed to the system"

District Response: Correction has been made.

Comment No. 29

On Page 61, Condition C.2.b.iii.1, the City requests that the sentence "The permittee shall initiate corrective action within five calendar days of the positive pressure measurement under conditions indicative of a fire, use of a geomembrane or synthetic cover, or decommissioned well" to be corrected as follows:

"The permittee shall initiate corrective action within five calendar days of the positive pressure measurement ***except*** under conditions indicative of a fire, use of a geomembrane or synthetic cover, or decommissioned well."

District Response: Correction has been made.

Comment No. 30

On Page 62, Condition C.2.b.vii, the City requests that the complete requirement under the NSPS for reporting downtime for the entire collection system be included, which states that reporting is for time periods greater than 5 days. The City requests the condition to be changed as follows:

"Downtimes: Date and duration of all periods when the entire collection system is not operating ***in excess of 5 days***, and the reason for the downtime."

District Response: Correction has been made.

Comment No. 31

On Page 62, Condition C.2.b.viii, the City requests clarification on what monitoring is required for well density. It appears this requirement should be moved to the recordkeeping requirements of C.2.c. In addition, the City requests that the reference be corrected from 40 CFR Subpart WWW 60.758(c)(1) to 758(b)(1)(ii).

District Response: The monitoring condition 9.C.2.b.viii is based on the recordkeeping condition 9.C.2.c.vi. This condition was added to make the monitoring, recordkeeping, and reporting conditions as consistent as possible. The monitoring requirement for the well density is intended to ensure that the permittee knows when wells are added or removed. Finally, the regulation reference has been updated for the monitoring, recordkeeping, and reporting conditions.

Comment No. 32

On Page 66, Condition C.3.c.v, the City requests that the sentence, "The presence of a flame in each flare shall be continuously monitored by a self-checking UV flame detector or equivalent device that detects the presence of a pilot flare." be corrected as follows:

"The presence of a flame in each flare shall be continuously monitored by a self-checking UV flame detector or equivalent device that detects the presence of a pilot ***flame***."

District Response: Correction has been made.

Comment No. 33

On Page 66, Condition C.3.c.vii, the City requests that the term "monitoring" be replaced with "obtain". There are no monitoring requirements for the use of propane gas obtained from a vendor. The City requests the requirements be corrected as follows:

"On an annual basis, the permittee shall ***obtain*** the higher heating value and total sulfur content of the propane based on the fuel suppliers billing vouchers ***and/or certificates***."

District Response: Requested changes have been made.

Comment No. 34

On Page 68, Condition C.3.d.vi, the City requests that the sentence, "Results of the quarterly annual measurements of the LFG for..." be corrected as follows:

"Results of the quarterly ~~annual~~ measurements of the LFG for..."

The City requests this also be corrected on Page 86 under Section D.3.d.ii.

District Response: Corrections have been made.

Comment No. 35

On Page 73, Condition C.8.a.iii.1, the City requests that the sentence, "The concentration, date, time, and location of each instantaneous monitoring readings in excess of 500 ppmv..." be corrected as follows:

"The concentration, date, time, and location of each instantaneous monitoring ***reading*** in excess of 500 ppmv..."

District Response: Correction has been made.

Comment No. 36

On Page 74, Condition C.8.b.iii.2, Condition C.8.b.iii.4, and Condition C.8.b.iii.6, the permittee must report the location and well identification number of exceedances, and whether or not the second reading is an exceedance. The City requests that the District remove the language requiring the permittee to note whether the second reading is an exceedance. Per the NSPS, the permittee has 15 days to correct well exceedances. In that 15-day span, the permittee is not limited in the number of monitoring events it can perform. As such, the second reading holds no significance and should be removed.

District Response: Requested changes have been made.

Comment No. 37

On Page 75, Condition C.8.c.vi, the City requests that the sentence, "Results of the quarterly annual measurements of the LFG for..." be corrected as follows:

"Results of the quarterly ~~annual~~ measurements of the LFG for..."

District Response: Correction has been made.

Comment No. 38

On Page 77, Condition C.9.a, the City requests that the anniversary date for source testing shall be June 1. It is unclear what the basis for the current date of February 28 when historically, source tests at the facility have been conducted in May/June annually, and District staff indicated in 2015 that this date could not be changed. The sentence would be corrected as follows:

"***June 1st*** shall be used as the anniversary date."

District Response: Requested changes have been made.

Comment No. 39

On Page 79, Conditions C.12, C.13, C.14 and C.15 require the submittal of plan updates for the Startup, Shutdown, and Malfunction (SSM) Plan, Process Monitor Calibration and Maintenance Plan, Surface Monitoring Maintenance and Recordkeeping (SMMR) Plan, and Active Collection System Design (ACSD) Plan within 30 days of final permit issuance. The City requests 60 days to submit updates to the four (4) plans to allow sufficient time for updating the detailed documents.

District Response: Requested changes have been made.

Comment No. 40

On Page 79, Condition C.15 requires that an active collection system design plan must be submitted for approval within 30 days of final permit issuance and within 30 days of any changes to the active collection system. No updates are needed for when collection wells temporarily taken offline for construction or maintenance work, if the construction or maintenance work takes less than 30 days to complete. We believe that this condition stating that any time there is a change to the active collection system, a design change under the design plan must be submitted for approval within 30 days of any changes to the active collection system, to be inconsistent with how wells are handled in other jurisdictions under the NSPS and the National Emission Standards for Hazardous Air Pollutants (NESHAP). Wells can be temporarily decommissioned without approval. These determinations are generally predicated on the fact that the GCCS operator needs flexibility to take wells off-line to avoid potential air intrusion and to limit the potential for subsurface fires. There are a number of reasons beyond construction or maintenance as listed in the condition where wells would be taken offline. In addition, submitting a design plan change request every time a well is taken offline outside of the two exceptions above, or if offline for more than 30 days, is onerous and creates a lot of paperwork. It also is not functional with the typical operation of a GCCS.

As part of the NESHAP and for compliance with the NSPS, the City must comply with the SSM requirements. The landfill's SSM Plan contains allowances for startup, shutdown or malfunction of the GCCS, whether the entire GCCS or individual components of the GCCS (i.e. control devices, individual wells, etc.) are affected. The SSM Plan provides guidance for procedures for operating and maintaining the GCCS during SSM events. As such, individual well shutdown, under an SSM event, is allowed without notification to regulators as long as it is included as part of the semi-annual SSM reporting. This is standard practice for all NSPS landfills across the United States. To resolve this issue and provide a paper trail for compliance, the City proposes that a table showing the well SSM events be provided to the District on a quarterly basis, in lieu of submitting an active collection system design plan update.

We understand that permanently removing a well from the active gas collection system or expansion of the GCCS is considered a design change, and we would submit an updated GCCS map to the District within 30 days of the modification.

District Response: Requested changes have not been made. The permit condition has been updated to be consistent with the requirement of the CCR Subchapter 10, Article 4, Subarticle 6 and CARB's Implementation Guidance Document for the Regulation to Reduce Methane Emissions from Municipal Solid Waste Landfill, Page II-8.

Comment No. 41

Conditions 9.D.1 through D.3 detail the requirements under the AB 32 Landfill Methane Rule (LMR) regulation. It does not appear that the alternatives to AB 32 LMR that were submitted on June 23, 2011 are addressed in these Conditions. The City requests that a reference to the approved alternatives that were granted by the District on December 26, 2014 be included by reference as follows:

"**Landfill.** The facility is subject to the following landfill requirements ***and/or approved alternatives:***"

District Response: Edits have made to the Section D introduction to reflect the previously approved alternative compliance options.

Comment No. 42

On Page 81, Condition No. 9.D.1.b.i notes that instantaneous surface monitoring of the landfill surface must be conducted on a quarterly basis. The City requests that the language from AB 32 LMR be added to include the allowed reduction in frequency to annual if any closed or inactive MSW landfill, or any closed or inactive areas on an active MSW landfill that has no monitoring exceedances of the limit after four consecutive quarterly monitoring periods. The language was included for the integrated surface sampling but not instantaneous.

District Response: Requested changes have been made. New language has been added to Conditions 9.C.1 and 9.D.1 to separate the requirements of the Subpart WWW and AB32 LMR instantaneous surface emissions monitoring.

Comment No. 43

Conditions D.2.b.iii, D.2.c.iii, and D.6.b.iii require the permittee to monitor, keep records, and report of all periods when any portion of the collection system is not operating in excess of five days, including individual well shutdown and disconnection times, and the reason for the downtime. This requirement is not consistent with the AB 32 LMR nor NSPS. The AB 32 LMR in Section 95470(a)(1)(A) states you must maintain records of "All gas collection system downtime exceeding five calendar days..." This is in reference to the NSPS 40 CFR 60.757(f)(4) which requires reporting "All periods when the collection system was not operating in excess of 5 days." These regulations require recordkeeping and reporting of the entire gas collection system downtime greater than five days, not a portion of the system. As such, the City requests that the requirements in Conditions D.2.biii, D.2.c.iii, and D.6.b.iii be modified as follows:

"Downtimes: Periods when the ***entire*** collection system is not operating in excess of five days, including individual well shutdown and disconnection times, and the reason for the downtime."

District Response: Correction has been made.

Comment No. 44

On Page 89, Condition D.6.a.i.2 requires the permittee to report the concentration of the re-monitoring events for each location with a measured concentration greater than 200 ppmv and if the re-monitoring event showed compliance. Per AB 32 LMR, there is no requirement to re-monitor exceedances of 200 ppmv. Per Section 95470(a)(1)(D), to which the District is referencing, the requirement is to provide records of all instantaneous surface readings of 200 ppmv or greater. This includes location of readings between 200 and 499 ppmv. An exceedance of 200 ppmv does not necessarily require re-monitoring unless the exceedance is greater than 500 ppmv. The City requests the District revise the condition to as follows:

"The concentration of the re-monitoring events for each location with a measured concentration greater than ***500*** ppmv and if the re-monitoring event showed compliance."

District Response: The permit condition has been removed because condition 9.C.8.a.iii.2 covers situations when the measured concentration is greater than 500 ppmv.

Comment No. 45

On Page 91, Condition D.6.e.ii, the City requests clarification for the plot map requirements. The reference to the condition is noted as AB 32 LMR (California Code of Regulations); however, the AB LMR does not require to identify each existing and planned collector in the system. As such, the City requests this language be removed or at least clarified that the plot map must show LFG collectors.

District Response: Condition language has been updated to reflect the exact wording in AB 32 LMR.

Comment No. 46

The City requests that Condition 10.1.A.3.1 and 3.2 be corrected to note the proper flare identification. The description in 3.1 is Flare 2 and the description in 3.2 is actually Flare 1. Flare 2 is the 20 MMBtu/hr flare and Flare 1 is the 13.5 MMBtu/hr flare.

District Response: Requested changes have been made. Permit sections 9.C.3 and 9.D.3 have also been updated.

Comment No. 47

The City requests that Condition 10.1.A.7 be modified to reflect the correct device description for the firewater engine, as the firewater engine is not used to power the facility in the event of a power loss. The device description should be modified as follows:

"Engine is used to provide electrical power to the ***fire suppression system***, EP family..."

District Response: Correction has been made.

Comment No. 48

The City requests that the exempt propane tanks under Condition 10.1.B.1 be described under the device description. There are four propane tanks at the landfills, but only one is used at the flare station. The City is requesting that that flare yard be noted under the Location Note and/or Device Description. In addition, the number of tanks under Condition 10.2.2 should reflect the number of tanks in Condition 10.1.

District Response: Requested changes have been made.

Condition No. 49

The City requests that the specific exempt diesel storage tanks under Condition 10.1.B.2 be described under the device description. The City is under the assumption that the 500 gallon storage tank noted as Diesel Storage Tank 1 is in reference to the tank that is used for the diesel engine backup generator and Diesel Storage Tank 2 is in reference to the tank that is used for the diesel engine firewater pump. As such, the City is requesting that this be noted under the Device Descriptions for each.

District Response: Requested changes have been made.

Condition No. 50

The City requests that the Facility Map be excluded from Section 10.4 of the permit. It is unclear what value this map brings to the permit, which will be outdated before the permit is finalized. The City provides updated facility maps on a semi-annual basis; therefore, including an obsolete map before the permit is even issued appears to be extraneous.

District Response: Requested changes not made. The permittee provided the District with an updated map to add to the attachments. The District noted that the map was current as of permit issuance.

Santa Barbara County
Air Pollution Control District

AUG 23 2017

Certified Mail 9261 2901 1220 3900 0846 32
Return Receipt Requested

Jeff Clarin P.E.
City of Santa Maria
2065 E. Main Street
Santa Maria, CA 93454

FID: 08704
Permit: P7R 10318 - R3
SSID: 08713

Re: Final Part 70 Permit Renewal / Reevaluation 10318 - R3

Dear Mr. Clarin:

Enclosed is the final Part 70 Permit Renewal / Reevaluation (PT-70/Reeval) No. 10318 - R3 for a landfill gas collection and control system at 2065 E. Main Street in Santa Maria.

Please carefully review the enclosed documents to ensure that they accurately describe your facility and that the conditions are acceptable to you. Note that your permitted emission limits may, in the future, be used to determine emission fees.

You should become familiar with all District rules pertaining to your facility. This permit does not relieve you of any requirements to obtain authority or permits from other governmental agencies.

This permit requires you to:

- Follow the conditions listed on your permit. Pay careful attention to the recordkeeping and reporting requirements.
- Ensure that a copy of the enclosed permit is posted or kept readily available near the permitted equipment.
- Promptly report changes in ownership, operator, or your mailing address to the District.

If you are not satisfied with the conditions of this permit, **you have thirty (30) days from the date of this issuance to appeal this permit to the Air Pollution Control District Hearing Board** (ref: California Health and Safety Code, §42302.1). Any contact with District staff to discuss the terms of this permit will not stop or alter the 30-day appeal period.

Please include the facility identification (FID) and permit numbers as shown at the top of this letter on all correspondence regarding this permit. If you have any questions, please contact Kevin Brown of my staff at (805) 961-8826.

Sincerely,

Michael Goldman, Manager
Engineering Division

enc: Final PT-70/Reeval 10318 - R3
Final Permit Evaluation
Air Toxics "Hot Spots" Fact Sheet District Form 12B

cc: City of Santa Maria Landfill 08704 Project File
Engr Chron File
Kevin Brown (Cover letter only)

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