Our Vision Clean Air

Santa Barbara County
Air Pollution Control District

NOV 05 2008

Certified Mail
Return Receipt Requested

Ron Vilarino
City of Santa Maria
2065 E. Main Street
Santa Maria, CA 93454

FID: 08704
Permit: P7R 10318 - R2
SSID: 08713

Re: Final Part 70 Permit Renewal / Reevaluation 10318 - R2

Dear Mr. Vilarino:

Enclosed is the final Part 70 Permit Renewal / Reevaluation (PT-70/Reeval) No. 10318 - R2 for the Santa Maria Regional Landfill 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 APCD 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 APCD.

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 APCD staff to discuss the terms of this permit will not stop or alter the 30-day appeal period.

Terry Dressler • Air Pollution Control Officer
260 North San Antonio Road, Suite A • Santa Barbara, CA • 93110 • www.sbcapcd.org • 805.961.8800 • 805.961.8801 (fax)

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 Ben Ellenberger of my staff at (805) 961-8879.

Sincerely,

Michael Goldman, Manager
Engineering & Compliance Division

enc: Final PT-70/Reeval 10318 - R2
Final Permit Evaluation
Air Toxics "Hot Spots" Fact Sheet APCD Form 12B

cc: City of Santa Maria Landfill 08704 Project File NC/SC
ECD Chron File
Craig Strommen (Cover letter only)
Ben Ellenberger (Cover letter only)

\\sbcapcd.org\Shares\Groups\ENGR\WP\PT70SRCE\PERMITS\LANDFILL\STMA-MSW\Part 70-APCD PTO 10318 R2\PT-70-Reeval 10318 R2 - Final Letter - 10-28-2008.doc

Santa Barbara County
Air Pollution Control District

FINAL

PERMIT to OPERATE No. 10318-R2
and
PART 70 OPERATING PERMIT No. 10318-R2

SANTA MARIA REGIONAL LANDFILL

2065 EAST MAIN STREET
SANTA MARIA, CALIFORNIA

OWNERS/OPERATORS

City of Santa Maria

Santa Barbara County
Air Pollution Control District

October 2008

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ABBREVIATIONS/ACRONYMS

AP-42	USEPA's *Compilation of Emission Factors*
APCD	Santa Barbara County Air Pollution Control District
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
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
lbs/day	pounds per day
lbs/hr	pounds per hour
LFG	landfill gas
M	mega (million)
MACT	Maximum Achievable Control Technology
MM	million
MMTE	Minnesota Methane Tajiguas LLC
MW	megawatt
mw	molecular weight
NAR	Nonattainment Review
NEI	net emissions increase
NEOT	NEO Tajiguas LLC
NG	natural gas
NMOC	non-methane organic compounds
NO_x	oxides of nitrogen
NO_2	nitrogen dioxide
NSPS	New Source Performance Standards

NESHAP	National Emissions Standards for Hazardous Air Pollutants
O_2	oxygen
PM	particulate matter
PM_{10}	particulate matter less than 10 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
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 (or scfm)	standard cubic feet per day (or 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 (APCD) 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, 55, 61, 63, 68, 70 and 82. The State regulations may be found in the California Health & Safety Code, Division 26, Section 39000 et seq. The applicable local regulations can be found in the APCD's Rules and Regulations.

Part 70 Permitting. This permitting action is the first renewal of the combined APCD Operating Permit / Federal Part 70 permit No. 10318 for the City of Santa Maria Landfill (CSML) stationary source. It also serves as the triennial APCD reevaluation. The Part 70 permit for the City of Santa Maria Landfill (CSML) is required under the Federal Title I New Source Performance Standards (NSPS) and the APCD's Part 70 Operating Permit program (Title V). The City of Santa Maria Landfill (SSID = 8713) is a Class III municipal solid waste landfill (in accord 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 or local rules and requirements. Sections 9.A, 9.B and 9.C of this permit are enforceable by the APCD, the USEPA and the 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 "APCD-only" enforceable.

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.

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 APCD 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 in situ using a vapor extraction system and handled using a collection and transport

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

system. The gas is treated and sent to the Marian Medical Center and burned in an IC engine to generate electricity. When the gas is not sent off site it is disposed of in one of two enclosed flares. When the gas is flared it is not first treated. The LFG extraction/collection/transport system and the enclosed flares are owned and operated by the City of Santa Maria. The gas treatment system and IC engine 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 landfill gas, and J&A Santa Maria, LLC's gas treatment system treats the landfill gas. 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 is located at the landfill. The IC engine is located at the Marian Medical Center, which is not contiguous or adjacent to the landfill.
- Are under common ownership, operation, or control. The gas treatment system is not under common ownership or control with the landfill. The gas treatment system is under common operation with the landfill, because operation of the gas treatment system is dependent on the production of landfill gas.

As described above, the landfill gas treatment system is part of the Santa Maria Regional Landfill stationary source. Since the gas treatment system is under separate ownership and operational control it is permitted separately from the landfill, under facility ID# 10854 and ATC/PTO 12223.

The processes involved are as follows:

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

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

- Enclosed Flares: Collected LFG, up to 1,100 scfm, is destroyed by one of the two ground-level enclosed flares through continuous combustion. The flares are typically used as a back-up when the IC engine at Marian Medical is out of service, or if there is excess gas above the capacity of the engine.

Figure 1 in Section 10, Attachment 10.5 shows the lay-out of the landfill, and in particular, the collection wells within the facility.

1.2.2 Facility New Source Review Overview: The equipment subject to NSR consists of the ground-level enclosed flare constructed after 1990. The landfill is a pre-1990 source. The following is a summary of significant past and present ATC and PTO permits and applications for this facility:

ATC 9547	8/28/96	ATC 9547 authorizing the construction of a 10.5 MMBtu/hr ground-level enclosed flare was issued to the City of Santa Maria.
PTO 9547	10/16/97	PTO 9547 was issued to the City of Santa Maria after the ground flare was source tested on 29 April 1997 and found to be in compliance with all applicable requirements.
ATC/PTO 10318	10/30/00	ATC/PTO 10318 was issued to the City of Santa Maria, allowing (a) an increase in the heat input rating of the flare to 13.5 MMBtu/hr, and (b) an increase in the design rating of the 'high heating value (HHV)' of the LFG from the earlier assumed value of 330 Btu/scf to the observed value of 450 Btu/scf.
ATC 12037	3/7/07	ATC 12037 authorized the construction of a new 20.0 MMBtu/hr flare, new blower, condensate knockout and associated controls. The existing 13.5 MMBtu/hr flare was retained as a backup unit.
PTO 12037		PTO 12037 is being directly incorporated into this permit reevaluation. A source test on 8/27/07 demonstrated compliance with permitted emissions limits.

1.2.3 Non-New Source Review Projects: The following project at the facility was not subject to NSR:

PTO 11559	10/19/05	PTO 11559 was issued for two emergency standby IC engines located at the landfill. These were existing engines which became subject to permit due to a change in Rule 202 (Exemptions), therefore this permit action was not subject to NSR.

1.3 Emission Sources

The emissions from the CSML come from several sources, such as: the landfill surface, the enclosed ground-level flares, the diesel-fired emergency standby generators, and various fugitive sources such as particulates from vehicles and earthmoving equipment. Section 4 of this permit provides the APCD's engineering analyses of these emission sources. Section 5 of this permit describes the allowable emissions from each permitted emissions unit and also lists the potential emissions from non-permitted emission units.

1.4 Emission Control Overview

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

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

- Use of enclosed ground-level 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: NEI emissions from the CSML do not require to be offset. These NEI emissions equal the permitted emissions for the flares at this facility, constructed after August 1996.

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 APCD Rules, all conditions in the APCD-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 and 3.2 for a list of federally enforceable requirements).

1.6.2. Insignificant Emissions Units: Insignificant emission units are defined under APCD 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 10.6 for the Insignificant Emissions Unit list)

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 60, Subpart WWW) and NESHAP (40 CFR 63, Subpart AAAA) for the LFG emissions units but neither subpart was in effect as of August 7, 1980; thus, fugitive LFG/ROC 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 APCD. 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 PTO

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 APCD 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. Richard Sweet
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 annual average of about 300 metric tons of municipal solid waste (MSW) per day (based on the past 3-years' data), usually generated in the Santa Maria Valley. It operates under a Solid Waste Facility Permit (revised May 15, 2007), which allows CSML to handle up to 778 metric tons per day or 858 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 to provide daily cover. The refuse is spread and compacted using a compactor. The processes involved are as follows:

Landfill: LFG emissions 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). Estimated NMOC emissions to atmosphere from the facility, using the USEPA-designed 'LFG Emissions Estimate Model' and AP-42 default values, are 85 tons/yr.

LFG Collection and Handling System: A system to collect landfill gas generated by refuse that is deposited in the CSML. This system is comprised of vertical and horizontal collection wells, a piping system, and a gas collection blower. A condensate water separator is used to remove water vapor from the LFG going to the blower; a condensate 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 the Marian Medical Center can not accept gas because the IC engine there is shut down, the LFG is sent to one of two flares at the landfill. If more gas is produced at the landfill than can be used by the Medical Center, one of the flares may operate to burn the excess gas.

Enclosed Flares: The 13.5 MMBtu/hour ground-level enclosed flare is a 6-foot diameter, 24-foot high unit. It is designed to burn up to 30,000 SCFH of collected landfill gas. The 13.5 MMBtu/hr flare is a back-up to the new 20.0 MMBtu/hr flare. The 20.0 MMBtu/hr ground-level enclosed flare is 7.5 feet in diameter and 27 feet tall. A small quantity of landfill condensate may be injected in either flare for disposal by 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 flash-back. The flare flame zone temperatures are maintained at by the automatic controllers at the temperature observed during the most recent compliant source test.

2.2 *Support Systems*

Condensate Management: Condensate is the liquid that condenses in the collection system piping from the cooling of moist warm gases as they leave the landfill and are transported to the flare unit. All condensate collected is stored in a 1,050-gallon holding tank. Condensate is disposed of by injection into the flare, or by being trucked off-site to an approved disposal facility. A 5-hp air compressor drives a pneumatic pump to inject the condensate into the flare for incineration. The landfill may only use condensate on-site as dust suppressant if it first gets written approval from the District.

2.3 *Detailed Process Equipment Listing*

A detailed listing of permitted and exempt equipment authorized under this permit is included in Attachments 10.2 and 10.3 respectively.

3.0 Regulatory Review

3.1 *Rule Exemptions*

⇒ APCD 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 IC engines associated with propelling vehicles.
- Section V.2 for storage of refined fuel oils with a gravity of $\leq 40°$ API Gravity
- Section V.8 for propane storage tank.

⇒ APCD 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:

- Compressor Lube Tanks

⇒ APCD 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. exempts compression ignition emergency standby engines. The two diesel fired emergency standby generators qualify for this exemption.

⇒ APCD 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.

⇒ APCD 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 tank 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 13.5 MMBtu/hr flare was authorized under ATC 9547 in August 1996 and PTO 9547 was issued in October 1997 under APCD Regulation VIII (*New Source Review*). The permit was revised and re-issued in October 2000 as ATC/PTO 10318. The 20.0 MMBtu/hr flare was authorized under ATC 12037 in March 2007. Both flares are subject to NSR.

3.2.2 40 CFR Part 60 {New Source Performance Standards}: The following NSPS apply to the CSML facility:

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

Information submitted by CSML indicates the facility obtained a permit for landfill operations in September 2001. This landfill has accepted waste on or after May 30, 1991 and therefore is subject to the Subpart WWW requirements per section 60.750. Because it has a design capacity in excess of 9 million mega-grams of municipal solid waste, and also has a calculated uncontrolled NMOC emission rate in excess of 50 mega-grams, Sections 60.752 through 60.759 apply to the CSML, its flares, and the gas treatment system..

Subpart WWW (NSPS for MSW Landfills):

Details of the applicable Subpart WWW requirements can be found in 61 Federal Register 9619 (12 March 1996). CSML's compliance status with its requirements is tabulated below.

Item	Subpart WWW Requirement Summary	Compliance Status
§ 60.752 - Standards for Air Emissions from MSW Landfills		
2	CSML uses an "active" landfill gas collection system. This system must meet the following requirements: • Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control; • Collect gas from each area, cell, or group of cells in the landfill in which waste has been in place for a period of 5 years or more if the cell is active; or 2 years or more if the area is closed or at final grade; • Collect gas at a sufficient extraction rate; and, • Minimize off-site migration of subsurface gas.	In compliance. CSML has provided the APCD with the required "Active Collection System Design" (ACSD) Plan per ATC/PTO 10318, Condition 10. The Plan, as approved by the APCD, documents CSML's compliance with this WWW requirement.
3	All collected gas must be routed to a control system meeting one of the following requirements: • The control system must be designed and operated to reduce NMOC by 98 weight percent; or, if an enclosed combustion device is used, it may alternately comply with a NMOC concentration limit of less than 20 ppmvd, as hexane at 3 percent oxygen, or; • The control system must treat the collected gas for subsequent sale or use.	In compliance. The flares have emissions of less than 20 ppmvd NMOC as hexane at 3% O_2. When the flares are not operated the gas is treated for subsequent sale to Marian Medical Center.
	• The control efficiency shall be established during an initial performance test under §60.8 using the test methods of §60.754(d).	In compliance. The 13.5 MMBtu/hr flare demonstrated its compliance with applicable limits during its first source test in April 1997. The 20.0 MMBtu/hr flare demonstrated its compliance with applicable limits during its first source test in September 2007.
	• The control device shall be operated within the parameter ranges established during the initial or most recent performance test. • Applicable §60.756 operating parameters must be monitored.	In compliance. The source test on June 15, 2006 showed the 13.5 MMBtu/hr flare to be meeting its BACT and Subpart WWW-required emission limits. The 20.0 MMBtu/hr flare has only been source tested once. In compliance as demonstrated through semi-annual reports.
	• The collection and control system must operate in compliance with all applicable provisions of §§60.753, 60.755 and 60.756.	In compliance as demonstrated through semi-annual reports.
Section § 60.753 - Operational Standards for Collection and Control Systems		
1	Operate the collection system with a negative pressure at each wellhead except under certain conditions indicative of a fire, area cover type, or decommissioned well.	semi-annual reports received to date show compliance with this specification.

Item	Subpart WWW Requirement Summary	Compliance Status
2	Operate each interior wellhead, as follows: • With a landfill gas temperature less than 55 °C and either a nitrogen or oxygen level less than 20 percent or 5 percent, respectively; or • With higher operating temperature and nitrogen/oxygen values upon demonstration that fires or the killing of methanogens are not occurring from such different values.	Semi-annual reports generally demonstrate compliance. Periodic exceedances have been observed. CSML has taken corrective action when exceedances have been observed.
3	Operate the collection system so that the methane concentration is less than 500 ppmv above background at the surface of the landfill. This shall be done by: • Using a surface testing program around and traversing the landfill at 30 meter intervals; and • Developing and following a surface monitoring design plan that includes a topographical map of the landfill and the monitoring route, and any rationale for site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from surface testing.	In compliance.
4	In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour.	In compliance, per ACSD Plan.
5	The landfill gas control system shall be operated at all times when collected gas is routed to the system.	In compliance, per ACSD Plan.
§ 60.755 - Compliance Provisions		
1	The provisions of this subpart apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for control devices (e.g., the enclosed ground flare).	Examination of the Semi-annual Reports received from the permittees indicates compliance with the five-day requirement for collection systems.
2	Shall monitor each collection well monthly for: • gauge pressure to determine if collection flow is adequate; and • nitrogen or oxygen content to assess if excess air infiltration is occurring.	In compliance per approved Active Collection System Design Plan (August, 2005).
5	Shall monitor for landfill surface methane concentrations on a quarterly basis, according to an approved surface testing plan, and use of specified testing and instrumentation requirements.	In compliance per approved Surface Monitoring, Maintenance and Recordkeeping (SMMR) Plan (September, 2005).
6	Shall implement a program to monitor landfill cover integrity and implement cover repairs as necessary on a monthly basis.	In compliance, per ACSD Plan.

Item	Subpart WWW Requirement Summary	Compliance Status
§ 60.756 - Monitoring of Operations		
1	For the active landfill gas collection system: • Each wellhead shall have a sampling port and a temperature measuring device. • The gauge pressure of the gas collection header shall be read monthly. • The wellhead nitrogen or oxygen concentration in the landfill gas shall be monitored on a monthly basis. • Each wellhead's temperature shall be monitored on a monthly basis.	In compliance. The approved semi-annual reports indicate that these measurements are obtained and recorded.
2	For the enclosed Ground Flare, CSML shall calibrate, maintain, and operate a gas flow rate measuring device that provides a measurement of gas flow to, or bypass of, the control device.	In compliance.
§§ 60.757 & 60.758 - Reporting and Recordkeeping Requirements		
1	The applicable requirements of these sections are fulfilled by submission to the APCD for review and approval the measurements and records required under the approved SMMR Plan, Active Collection System Design Plan, Active Exceptions System – Exceptions Report and Active Collection System – Well Monitoring Program.	In compliance, per ACSD Plan .
§ 60.759 – Specifications for Active Collection Systems		
1	This project uses an active collection system. This section specifies the requirements of acceptably designed systems.	In compliance, per ACSD Plan .

The gas treatment system for Marian Medical Center is also used to comply with subpart WWW. Since the gas treatment system is owned and operated by J&A Santa Maria, LLC, the requirements for the operation of the gas treatment system are covered by a separate permit (ATC/PTO 12223).

3.2.3 40 CFR Part 61 {*NESHAP*}: CSML facility is not subject to the provisions of this Subpart.

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 that is required to comply with all Subpart WWW standards. Subpart AAAA requires CSML to do the following:

- Develop and implement a written 'startup-shutdown-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 (3-hour block monitoring average).

Note that a Subpart AAAA 'monitoring' deviation occurs when one (1) or more hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid 1-hour data consists of measured values for at least three 15-minute monitoring periods within that hour.

3.2.5 40 CFR Part 64 {Compliance Assurance Monitoring}: This 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. Compliance with this rule was evaluated and it was determined that this Subpart is not applicable to the ground-level enclosed flare 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 an NSPS. Since CSML is subject to Subpart WWW this Subpart is applicable to CSML. Table 3.1 lists the federally enforceable APCD promulgated rules that are "generic" and apply to CSML. Tables 3.2.A and 3.2.B lists the federally enforceable promulgated rules that are "unit-specific" and apply to CSML. These tables (see later) are based on data available from the APCD's administrative files and on CSML's Part 70 Operating Permit Application No. 10318, filed January 17, 2001.

In its permit renewal application, CSML certified compliance with all existing APCD 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 engine at the facility. Compliance is assessed through records of hours of operation and fuel use.

3.4 Compliance with Applicable Local Rules and Regulations

3.4.1 Applicability Tables: In addition to Tables 3.1 and 3.2, Table 3.3 lists the non-federally enforceable APCD promulgated rules that apply to the CSML facility. Table 3.4 lists the adoption date of all rules applicable to this permit at the date of this permit's issuance.

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 the CSML facility:

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 H&SC and the SBCAPCD rules and regulations. To the best of the APCD's knowledge, CSML is operating in compliance with this rule.

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 flare. Improperly maintained flares have the potential to violate this rule. Compliance will be assured by requiring visible emissions monitoring and by maintaining the flare 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 APCD files that can be attributable to operation of the CSML facility. All nuisance complaints are investigated by the APCD and follow the guidelines outlined in Policy & Procedure I.G.2 (Compliance Investigations).

Rule 306 - 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 specified concentrations measured in gr/scf. The maximum allowable concentrations are determined as a function of volumetric discharge, measured in scfm, and are listed in Table 306(a) of the rule. Sources subject to this rule include the enclosed flares and the diesel IC engines. Improperly maintained flare components have the potential to violate this rule. Compliance will be assured by requiring the equipment to be maintained according to manufacturer maintenance schedules.

Rule 309 - Specific Contaminants: Under Section "A", no source may discharge sulfur compounds and combustion contaminants in excess of 0.2 percent as SO_2 (by volume) and 0.1 gr/scf (at 12% CO_2) respectively. Due to the use of LFG as fuel, sulfur and particulate combustion 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 1 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 APCD 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, PTO 12037 restricts the sulfur content of LFG burned in the flares to 6.3 gr/100 scf (100 ppmvd). Compliance with this requirement is achieved through the use of LFG sampling and analysis.

Rule 317 - Organic Solvents: This rule sets specific prohibitions against the usage of both photochemically and non- photochemically reactive organic solvents (40 lb/day and 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 in maintenance operations.

There is the potential to exceed the limits under Section B.2 during significant surface coating activities. Per condition C.3 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 1 square foot (aggregate cap of 10 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 C.3 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 will apply to the platform is for Industrial Maintenance Coatings that have a limit of 340 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 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 will allow the evaporation of the solvent into the atmosphere. Per condition C.3 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 is subject to this rule. Compliance will be assessed via APCD inspections.

Rule 327 - Organic Liquid Cargo Tank Vessel Loading: There are no organic liquid cargo tank vessel loading operations associated with this facility.

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. The rule includes an exemption from the control requirements of the rule for engines which operate less than 200 hours per calendar year. Since the emergency backup IC engine at the facility is operated less than 200 hours per calendar year, the control requirements of this rule do not apply.

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

a. Is not the result of neglect or disregard of any air pollution control law or rule or regulation;
b. Is not the result of an intentional or negligent act or omission on the part of the owner or operator;
c. Is not the result of improper maintenance;
d. Does not constitute a nuisance as defined in Section 41700 of the Health and Safety Code;
e. Is not a recurrent breakdown of the same equipment.

3.5 Compliance History

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

Violations: The last facility inspection was conducted on 05/22/07 The inspector found the facility to be in compliance with all APCD rules and permit conditions.

Between June 1, 2005 and April 14, 2008, four Notices of Violation (NOV) and two Notices to Comply (NTCs) were issued to CSML:

NOV No. 8320: Failure to log landfill gas parameters every 15 minutes.

NOV No. 8507: Operation of the flare for a 3 continuous hour period at an average combustion temperature more than 28 deg C below the temperature recorded during the most recent source test. 17 total events in the 3rd and 4th quarters of 2005.

NOV No. 8524: Loss of flare monitoring data for 4 periods in June and July 2006.

NOV No. 8525: Late filing of the Compliance Verification Report for the first half of 2006.

NTC No. 8879: Numerous recordkeeping and reporting shortfalls from January through June 2006.

NTC No. 8883: Failure to make a breakdown report using the prescribed Rule 505 procedures.

Table 3.1 - Generic Federally Enforceable APCD Rules

Generic Requirements	**Affected Emission Units**	**Basis for Applicability**
RULE 101: Compliance by Existing Installations	All emission units	Emission of pollutants
RULE 102: Definitions	All emission units	Emission of pollutants
RULE 103: Severability	All emission units	Emission of pollutants
RULE 201: Permits Required	All emission units	Emission of pollutants
RULE 202: Exemptions to Rule 201	Applicable emission units	Insignificant activities/emissions, per size/rating/function
RULE 203: Transfer	All emission units	Change of ownership
RULE 204: Applications	All emission units	Addition of new equipment or modification to existing equipment.
RULE 205: Standards for Granting Permits	All emission units	Emission of pollutants
RULE 206: Conditional Approval of Authority to Construct or Permit to Operate	All emission units	Applicability of relevant Rules
RULE 212: Emission Statements	All emission units	Administrative

Generic Requirements	Affected Emission Units	Basis for Applicability
RULE 301: Circumvention	All emission units	Any pollutant emission
RULE 302: Visible Emissions	All emission units	Particulate matter emissions
RULE 303: Nuisance	All emission units	Emissions that can injure, damage or offend.
RULE 306: PM Concentration – North Zone	Each PM source	Emission of PM in effluent gas
RULE 309: Specific Contaminants	All emission units	Combustion contaminants
RULE 311: Sulfur Content of Fuel	All combustion units	Use of fuel containing sulfur
RULE 317: Organic Solvents	Emission units using solvents	Solvent used in process operations.
RULE 321: Solvent Cleaning Operations	Emission units using solvents	Solvent used in process operations.
RULE 322: Metal Surface Coating Thinner and Reducer	Emission units using solvents	Solvent used in process operations.
RULE 323: Architectural Coatings	Paints used in maintenance and surface coating activities	Application of architectural coatings.
RULE 324: Disposal and Evaporation of Solvents	Emission units using solvents	Solvent used in process operations.
RULE 353: Adhesives and Sealants	Emission units using adhesives and sealants	Adhesives and sealants use.
RULE 505: Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded or rule requirements are not complied with.
REGULATION VIII: New Source Review	All emission units	Addition of new equipment or modification to existing equipment. Applications to generate ERC Certificates.

Table 3.2.A - Unit-Specific Federally Enforceable APCD Rules

Unit-Specific Requirements	Affected Emission Units	Basis for Applicability
RULE 326: Storage of Reactive Organic Compounds	Condensate storage tank	Stores ROCs with vapor pressure greater than 0.5 psia

Table 3.2.B - Unit-Specific Federally Enforceable NSPS Rule

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(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 specifications	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 5 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 1 year of first NMOC emission rate report showing NMOC > 50 MG/year, except as follows	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)(1-6)	Y
60.758	Recordkeeping Requirements	Y
60.758(a)	Design Capacity and Waste Acceptance Records (retain 5 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 5 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 5 years.	Y
60.759	Specifications for Active Collection Systems	Y

Table 3.3 – Non Federally-Enforceable APCD Rules

Requirement	Affected Emission Units	Basis for Applicability
RULE 210: Fees	All emission units	Administrative
RULES 501-504: Variance Rules	All emission units	Administrative
RULES 506-519: Variance Rules	All emission units	Administrative

Table 3.4 – Adoption Dates of APCD Rules Applicable at Issuance of Permit

Rule No.	Rule Name	Adoption Date
Rule 101	Compliance by Existing Installations: Conflicts	June 1981
Rule 102	Definitions	June 19, 2008
Rule 103	Severability	October 23, 1978
Rule 201	Permits Required	April 17, 1997
Rule 202	Exemptions to Rule 201	June 19, 2008
Rule 203	Transfer	April 17, 1997
Rule 204	Applications	April 17, 1997
Rule 205	Standards for Granting Permits	April 17, 1997
Rule 206	Conditional Approval of Authority to Construct or Permit to Operate	October 15, 1991
Rule 208	Action on Applications - Time Limits	April 17, 1997
Rule 212	Emission Statements	October 20, 1992
Rule 301	Circumvention	October 23, 1978
Rule 302	Visible Emissions	June 1981
Rule 303	Nuisance	October 23, 1978
Rule 306	Particulate Matter Concentration - Northern Zone	October 23, 1978
Rule 309	Specific Contaminants	October 23, 1978
Rule 311	Sulfur Content of Fuels	October 23, 1978
Rule 317	Organic Solvents	October 23, 1978
Rule 321	Solvent Cleaning Operations	September 18, 1997
Rule 322	Metal Surface Coating Thinner and Reducer	October 23, 1978
Rule 323	Architectural Coatings	July 18, 1996
Rule 324	Disposal and Evaporation of Solvents	October 23, 1978
Rule 333	Reciprocating IC Engines	June 19, 2008
Rule 353	Adhesives and Sealants	August 19, 1999
Rule 505	Breakdown Conditions (Section A, B1 and D)	October 23, 1978
Rule 603	Emergency Episode Plans	June 15, 1981

Rule No.	Rule Name	Adoption Date
Rule 801	New Source Review	April 17, 1997
Rule 802	Nonattainment Review	April 17, 1997
Rule 803	Prevention of Significant Deterioration	April 17, 1997
Rule 804	Emission Offsets	April 17, 1997
Rule 805	Air Quality Impact and Modeling	April 17, 1997
Rule 806	Emission Reduction Credits	April 17, 1997
Rule 808	New Source Review for Major Sources of Hazardous Air Pollutants	May 20, 1999
Rule 901	New Source Performance Standards (NSPS)	May 16, 1996
Rule 1001	National Emission Standards for Hazardous Air Pollutants (NESHAPS)	October 23, 1993
Rule 1301	General Information	September 18, 1997
Rule 1302	Permit Application	November 9, 1993
Rule 1303	Permits	November 9, 1993
Rule 1304	Issuance, Renewal, Modification and Reopening	November 9, 1993
Rule 1305	Enforcement	November 9, 1993

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 APCD'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 THC.

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

- The Landfill Gas Collection/Control System: Combustion emissions of NO_x, ROC, CO, SO_x, PM and PM_{10}. The emissions will come from the flare exhausts. Because of the low percentage of ROC in the landfill gas, and the small number of fugitive components in the gas compression and treatment system, fugitive ROC emissions from the gas collection and control system and from the gas treatment system are negligible.

- Landfill Operations including Wells and Well Headers: Excluding Title II-regulated vehicular emissions at the facility, there are two basic sources and types of emissions:

  ⇒ Fugitive hydrocarbon emissions from the soil cover associated with the aerobic and anaerobic decomposition of the municipal solid waste deposited into the landfill. The landfill's hydrocarbon emissions at the soil surface are reduced by operation of the Landfill Gas Collection System.

  ⇒ PM and PM_{10} pollutants, also known as "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.

- The emergency backup diesel IC engine: Combustion emissions of NO_x, ROC, CO, SO_x, PM, and PM_{10}.

In summary, the operations authorized under this permit generate combustion emissions from the landfill gas control system (the enclosed ground flares) and from the diesel IC engine, and landfill surface fugitive emissions of NMOC though on a reduced level through the installation of a landfill gas collection system. Additional sources of emissions are onsite earthmoving activities.

4.2 Landfill and Landfill Gas Collection System

4.2.1 General: Fugitive NMOC gas emissions from the landfill soil cover occurs at the rate of about 85 tons per year, even after the collection system is installed and operated. These residual

fugitive emissions are evaluated within this permit for compliance with the APCD Rules and Regulations, since these contribute to the CSML's stationary source emissions.

LFG Collection: The uncontrolled fugitive NMOC emissions that are produced by the landfill are reduced by operation of the landfill gas (LFG) collection system. This system is comprised of vertical and horizontally oriented wells to draw the LFG produced out of the refuse deposited in the landfill, and into the 2-4" diameter well pipes. Currently, 48 wells comprise the LFG collection system, with the depth of the wells varying with the depth of the waste. The number of wells may vary as changes are made to the collection system.

LFG Transport: The landfill gas is drawn out of the well pipes into an aboveground piping system that transmits the gas to a centralized collection point. At the centralized location, there is an electric motor driven blower with an 1100 cfm capacity.

LFG Treatment Plant: When the collected LFG is sent to Marian Medical Center it is first compressed, then passed through an aftercooler which reduces the gas to ambient temperatures, then through a coalescing filter which removes 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. Because the LFG is mostly methane and CO_2, fugitive ROC emissions from the treatment facility are negligible.

A vertical condensate water separator removes and collects the water vapor in the LFG before it enters the blower. The condensate is stored in a 1050 gallon above ground tank. Condensate water collected in the tank is disposed of by direct injection into a flare or by being trucked off-site to an approved disposal facility. A pneumatic pump is used for injection.

The landfill gas collection system is required to be designed, maintained, monitored and operated to comply with the federal NSPS, Subpart WWW and Federal MACT, Subpart AAAA. As such, this permit conditionally requires the use of a Surface Monitoring, Maintenance, and Recording Plan [Condition 9.C.1.(c)(iii)], an Active Collection System Design Plan and Updates (Condition C.9), requirements to monitor under the Active Collection Systems Well Monitoring and report all Exceptions under the Subpart WWW reporting requirements [Conditions 9.C.1.(c) and (d)].

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

- Landfill surface methane emissions monitoring program. This will determine if adequate and properly placed landfill gas collection wells are installed to fully collect landfill gas emissions. It will also monitor the landfill's ground cover for cracks and other defects, and repair any such defects that could create excessive direct-to-atmosphere leaks of landfill gas; and
- Monitoring each landfill gas collection well for temperature, as well as its oxygen, or 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 landfill gas 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). 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 (5,243073 tons in place/38 years = 137,976 tons/year = 125,169 Mg/year)
k = methane generation rate constant (0.02/year, default value)
t = age of landfill (in years, about 38 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 the non-methane organic compounds in the LFG are assumed to be ROC based on the staff report for APCD Rule 341.

4.2.3 Emission Controls: LFG is extracted from the landfill and transported to the enclosed flare for NMOC destruction at a destruction rate of greater than 98% (see next section). Based on records from 2007 compliance verification reports, CSML is capturing approximately 12,000 m^3/day of landfill gas. This was estimated by taking the average daily quantity of gas collected from sixty days throughout the year (see Attachment 10.1). The mass of NMOC controlled is calculated as follows:

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

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)
V_M = molar volume (23.70 m^3/kg-mol)
M_M = molar mass (86.2 kg/kg-mol hexane)

4.3 Enclosed Ground Flares

4.3.1 General: LFG collected from the landfill containing methane and NMOC is routed to one of two enclosed ground-level flares or treated, compressed, and sent off-site to be used as fuel gas. The flare with a nominal rating of 10 MMBtu/hour (Note: It is permitted to operate at an overload of 13.5 MMBtu/hour) is manufactured by Perennial Energy Inc., Model EF4-10.5-14303233-Z-00-10. It is approximately 6' in diameter with a grade level height of 24'. The flare comes equipped with an automatic ignition system, three thermocouples, a propane-fired pilot, an automatic temperature control system, a flame arrestor, and a safety shutdown system.

The flare with a rating of 20 MMBTU/hr is a Perennial Energy, Inc. (PEI) Model FL-90-26-E enclosed ground flare. A single blower supplies the collected landfill gas to one or the other flare. A process logic control system directs the landfill gas from the gas collection system to either one of the flares. The controller program is interlocked to prevent both flares from operating simultaneously.

Gas flow measurement stations upstream from the flares measures and records the gas flow rate to the flares. Landfill gas containing NMOC is sent to the flare burner where 98% or more of the NMOC is destroyed.

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 manually 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, and at high firing rates the highest thermocouple is selected. The heat input rates at which each thermocouple should be selected are included in the operation and maintenance manual for each 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 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 increases the louvers.

4.3.2 Emission Factors: Flare emission factors for NOx, and CO are set in agreement with California Air Resources Board (CARB) published BACT limits for ground-level enclosed flares. These emission factors are: NO_x = 0.06 lb/MMBtu (for the 13.5 MMBtu/hr flare) and 0.05 lb/MMBtu (for the 20.0 MMBtu/hr flare); and CO = 0.40 lb/MMBtu. The NO_x emission factor for the 20.0 MMBtu/hr flare is lower based on manufacturer's data submitted with the ATC application. ROC factor of 0.080 lb/MMBtu, SOx emission factor of 0.0512 lb/MMBtu, and PM/PM_{10} factors of 0.02 lb/MMBtu, used in this PTO, are based on the ATC/PTO 9547 and 12037 applications submitted by the applicant. Emissions from these units are calculated as follows:

$$ER = EF \times FPP \times HHV$$

where:

ER	=	emission rate (lb/unit time period, i.e.: hrs, day, qtr, yr)
EF	=	pollutant specific emission factor (lb/MMBtu)
FPP	=	gas flow rate per operating period (MMSCF/unit time period)
HHV	=	landfill gas fuel high heating value (Btu/SCF)

4.3.3 Emission Controls: Use of enclosed flare with high efficiency burner design, adequate combustion zone residence time (>0.6 seconds), and use of combustion zone temperature control system at the temperature demonstrating compliance with emission limits during the most recent source test.

Each flare must operate at a minimum temperature based on a three hour average. This minimum temperature requirement is established by subpart WWW. Each flare is also required to operate within +/- 5 percent of the set-point temperature, with any excursions out of the +/- 5 percent range not lasting more than 60 minutes. This temperature range is established to ensure the flares meet BACT emission limits. Compliance with the +/-5 percent range was previously determined based on any one temperature reading. This was changed to a 60 minute period to allow for minor fluctuations in LFG flow and quality.

4.4 Emergency Standby Engines

4.4.1 General: There are two diesel-fired IC engines powering electrical generators. Each engine is permitted to operate for 20 hours per year for maintenance and testing, otherwise the engines are only permitted to operate during the loss of electrical power to the facility.

4.4.2 Emission Factors: Mass emission estimates are based on the maximum allowed hours for maintenance and testing. Emissions are determined by the following equations:

E1, lb/day = Engine Rating (bhp) * EF (g/bhp-hr) * Daily Hours (hr/day) * (lb/453.6 g)
E2, tpy = Engine Rating (bhp) * EF (g/bhp-hr) * Annual Hours (hr/yr) * (lb/453.6 g) * (ton/2000 lb)

The emission factors (EF) were chosen based on each engine's rating and age. Default emission factors are documented on the APCD's webpage at http://www.sbcapcd.org/eng/atcm/dice/dice_efs.htm. Daily hours are assumed to be 2 hours per day

4.5 Other Emission Sources

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

4.5.2 Blasting: Blasting is conducted on an as needed basis. Blasting may be needed to implement landfill expansion. Permittee estimates CSML may experience a maximum of two blasting events per year.

4.5.3 Exempt Onsite Mobile Source Emissions: Emissions from APCD permit-exempt and Title II-regulated onsite mobile sources were also analyzed in the Second Supplemental EIR (February 2004). The Supplemental EIR-estimated tail-pipe emissions associated with onsite mobile sources are:

⇨ NOx = 28 tons/yr, ROC = 3 tons/yr, CO = 12 tons/yr, SOx = 3 tons/yr and PM_{10} = 3 tons/yr.

4.6 BACT/NSPS/NESHAP/MACT

4.6.1 BACT: The net emission increases at the facility in 1996 and again in 2000 were deemed by the APCD to have triggered BACT requirements, based on APCD's NSR Rules. BACT was determined to be enclosed ground flare. Emissions of NOx and CO from the enclosed ground-level flare were limited to concentration levels reflecting BACT. The 20.0 MMBtu/hr flare installed in 2007 was also required to meet BACT limits for NO_x. The BACT limit of 0.06 lb NO_x/MMBtu is used as the emission factor for the 13.5 MMBtu/hr flare, but the manufacturer guarantees 0.05 lb NO_x/MMBtu for the 20.0 MMBtu/hr flare, so the lower limit applies to the 20.0 MMBtu/hr flare. Emission factors are listed in Section 4.3.3.

The emergency standby engines were exempt from permit under previous versions of Rule 202. They were issued PTOs due to a loss of exemption when the rule was revised. Therefore the emergency standby engines are not subject to NSR or BACT.

4.6.2 NSPS: Discussion of applicability and compliance status regarding with New Source Performance Standards, i.e., 40 CFR 60, Subpart WWW was presented in Section 3.2. An engineering analysis for the affected equipment was provided in Sections 4.2 and 4.3 above.

4.6.4 NESHAP: CSML has not identified any equipment or processes that are subject to an applicable National Emission Standard for Hazardous Air Pollutants.

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

- Develop and implement a written 'startup-shutdown-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 (3-hour block monitoring average).

These requirements have been included in this permit, Section 9.C, to ensure CSML's compliance with the Federal standards.

4.7 CEMS/Process Monitoring/Meter Calibration

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

4.7.2 Process Monitoring: In many instances, ongoing compliance beyond a single (snap shot) source test is assessed through process monitoring systems. These process monitors are in place and 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 will be required to be calibrated and maintained in good working order:

Landfill and Landfill Gas Collection System:
⇒ Landfill Gas Extraction Portable Wellhead Monitor
⇒ Landfill Gas Collection Bypass Lockout System

Enclosed Flare:
⇒ Flare LFG Flow Meter/Recorder
⇒ Enclosed Flare Combustion Zone Temperature Indicator(s) and Recorder

Emergency Standby Engines:
⇒ Non-resettable hour meter

As necessary to ensure compliance with this permit and applicable rule and regulations, the APCD may require CSML, by written notice, to install additional process monitors.

Table 4.1 below identifies the minimum emission sources, emissions control operating parameters, and monitoring frequencies that the APCD requires to be monitored for the enclosed ground flares. Applicable monitoring requirements for the flare are listed in Condition 9.C.2.(c).

Table 4.1
Process Monitoring: Inspection & Maintenance Program

Emission Source Enclosed Ground Flare	Monitoring Method	Monitoring Frequency (minimum)
Emission Control Parameter		
A) Stack Temperature	1) Thermocouple calibrated according to Process Monitor Calibration and Maintenance Plan specified in Condition 9.C.6. Temperature recorded to strip chart.	1) Continuous
B) Landfill Gas Flow to Enclosed Ground Flare	1) Flow meter. Flow meter output recorded onto strip chart.	1) Continuous
	2) Quarterly landfill gas analysis as specified in Condition 9.C.2.(c)(iv) and (d)(ii).	2) Quarterly Analysis

4.7.3 Meter Calibration: To ensure that appropriate calibration and maintenance procedures are applied to the metering specified in Section 4.7.2 above, a Process Monitor Calibration and Maintenance Plan is required from CSML (see also permit condition in Section 9.C.6). This Plan would take into consideration manufacturer recommended maintenance and calibration schedules, or where manufacturer guidance is not available, the recommendations of comparable equipment manufacturers and good engineering judgment are utilized.

4.8 Source Testing/Sampling

4.8.1 Source Testing: CSML is required to follow the APCD Source Test Procedures Manual (May 24, 1990 and all subsequently approved updates). The parameters to be source tested are listed below in Table 4.2, and include more specific requirements as identified. The APCD 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, NMOC, and CO)

Table 4.2
Flare Source Test Requirements

Emission Points	Pollutants/Parameters	Test Method
Flare Stack	NO_X – ppm_v & lb/hour	EPA Method 7E
	CO – ppm_v & lb/hour	EPA Method 10
	NMOC, mass In & Out; Alternately: NMOC Out, ppmvd as hexane @ 3 % oxygen	EPA Method 25 (*) or Method 18(**)
	Sampling Point Determination	EPA Method 1
	Stack Gas Flow Rate	EPA Method 2
	O_2, CO_2, Dry Mol Wt	EPA Method 3
	Moisture Content	EPA Method 4
	Combustion Temperatures	Test flare operating at an approved temperature, per APCD-approved ST Plan.
Gas Line	Fuel Gas Flow	Plant Gas Meter
	Higher Heating Value	ASTM D-1826-88
	Total Sulfur Content	ASTM D-1072

Specific Requirements:

a. Alternative methods may be acceptable on a case-by-case basis.
b. This test is required to characterize the maximum hourly potential to emit when fired on natural gas for NO_X and CO in units of ppm, lbs/MMBtu and pounds/hour. The test shall be performed at the maximum achievable gas flow rate to the flare.
c. The emission rates shall be based on EPA Methods 2 and 4, or Method 19 along with the heat input rate.
d. For NO_X, CO and O_2, a minimum of three 40-minute runs shall be obtained during each test.
e. (*): For compliance determinations using Method 25 for NMOC ppmvd out, divide the measured ppmvd by six to obtain hexane equivalents.
f. (**): For compliance determinations using Method 18, the minimum list of compounds to be tested shall be consistent with those published in AP-42, Section 2.4 applicable to Landfill Gas emissions and control devices.

Thirty (30) days before each source test, the project shall submit a Source Testing (ST) Plan to the APCD consistent with the requirements of the APCD's Source Test Procedures Manual. The plan must be approved by the APCD prior to the source test. Source test results will be compared with the following emission limit summary table to determine compliance with the terms and conditions of this permit (ref: Table 5.1-3 & 4):

Item No./Equipment	Specification	NO_x	ROC	NMOC	CO
13.5 MMBtu/hr Flare ID# 006910	lb/MMBtu	0.06	0.08	----	0.40
	ppmvd @ 3% O_2	----	----	20 (as hexane)	----
	Destruction Efficiency	----	----	98% optional	----
	lb/hr	0.81	1.08	----	5.40
20.0 MMBtu/hr Flare ID# 109207	lb/MMBtu	0.05	0.03	----	0.40
	ppmvd @ 3% O_2	----	----	20 (as hexane)	----
	Destruction Efficiency	----	----	98% optional	----
	lb/hr	1.00	0.60	----	8.00

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

⇒ Landfill Gas: Sample taken on a quarterly basis after the blower unit at CSML and prior to the inlet to the enclosed ground flare. Analysis is required for hydrogen sulfide fraction (by EPA Method 15), the high heating value (HHV) of LFG (in units of Btu/scf), and total sulfur composition (per EPA Method 16).

As necessary to ensure compliance with this permit and applicable rules and regulations, the APCD may require the project, by written notice, to sample additional process streams in a manner and frequency specified by the APCD. All sampling and analyses are required to be performed according to APCD-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.

4.9 Part 70 Engineering Review: Hazardous Air Pollutant Emissions

Hazardous air pollutant (HAP) emissions were determined for the flare per USEPA's AP-42 listed emission factors. Those HAP emissions are noted in Tables 10.1-1 and 10.1-2.

5.0 Emissions

5.1 General

Emissions calculations are divided into "permitted" and "exempt" categories. APCD 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 (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 potential-to-emit for each emissions unit. Section 5.4 provides the federal potential to emit calculation using the definition of potential to emit used in Rule 1301. Section 5.5 provides the estimated HAP emissions from the CSML facility. Section 5.6 provides the estimated emissions from permit

exempt. Section 5.7 provides the net emissions increase calculation for the facility and the stationary source. In order to accurately track the emissions from a facility, the APCD uses a computer database. Table 10.4 contains the APCD'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. Worst-case ROC emissions related to the condensate evaporation in the flare are expected to be less than 0.1 lbs ROC per hour and considered insignificant.

For the flares, mass emissions rates of criteria pollutants are calculated as follows:

lb/hr = EF * Q = lb/MMBtu * MMBtu/hr
lb/day = lb/hr * hr/day
tons/qtr = lb/hr * hr/qtr ÷ 2000 lb/ton
tons/yr= lb/hr * hr/yr ÷ 2000 lb/ton

where:
EF = pollutant specific emission factor shown in Table 5.1-2 for the equipment unit.
Q = permitted maximum hourly heat input rate for the equipment unit shown in Table 5.1.

For the emergency IC engines mass emission rates of criteria pollutants are calculated as follows:

lb/hr = EF * hp * lb/gram = gram/hp-hr * hp * 1lb/453.6 grams
lb/day = lb/hr * hr/day
tons/qtr = lb/hr * hr/qtr ÷ 2000 lb/ton
tons/yr= lb/hr * hr/yr ÷ 2000 lb/ton

where:
EF = pollutant specific emission factor shown in Table 5.1-2 for the equipment unit.

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

See Table 5.1-1 for the authorized gross hourly heat input rate (MMBtu/hr), and the daily and annual operating hour limits for each emission unit. Table 5.1-2 lists emission factors used in calculating combustion equipment emissions.

The daily and annual flare emission limits are calculated using the input parameters provided in Table 5.1-1 and 5.1-2, and are listed in Tables 5.1-3. The landfill fugitive NMOC emissions (annual only) are computed using the formula provided in Section 4.2.2 and are listed in Table 5.1-4.

5.3 Permitted Emission Limits - Facility Totals

Total permitted facility emissions, based on permitted emissions from each emissions unit, are reported in Table 5.2

5.4 Part 70: Federal Potential to Emit for the Facility

Table 5.3 lists the federal Part 70 potential to emit. Fugitive emissions are excluded from the federal definition of potential to emit unless the source belongs to one of the categories listed in 40 CFR 70.2. Since landfills are not listed in 40 CFR 70.2, 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 the enclosed flare and the landfill fugitive surface emissions are shown in Tables 10.1-1 and 10.1-2.

5.6 Permit-Exempt Emission Sources/Part 70 Insignificant Emissions

No equipment unit at CSML is exempt from APCD permits, pursuant to Rule 202. *Insignificant emission units* are defined under APCD Rule 1301 as any regulated air pollutant emitted from the unit, excluding 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. No emission units at CSML are considered insignificant emission units.

5.7 Net Emissions Increase Calculation

All emissions subject to NSR after November 1990 contribute to the Net Emissions Increase Calculation (NEI). The diesel IC engines are not subject to NSR, therefore they do not contribute to the NEI. The NEI for the CSML is shown below.

TABLE - Stationary Source NEI

City of Santa Maria Landfill

II. Stationary Source "P1s"

Enter all stationary source "P1" NEI-90s below:

Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
PTO 10318	Jun-05	19.44	3.55	25.92	4.73	129.60	23.65	16.59	3.03	6.48	1.18	6.48	1.18
PTO 12037		24.01	4.38	14.40	2.63	192.00	35.04	24.58	4.49	9.60	1.75	9.60	1.75
Totals		**24.01**	**4.38**	**25.92**	**4.73**	**192.00**	**35.04**	**24.58**	**4.49**	**9.60**	**1.75**	**9.60**	**1.75**

Notes: 1 Permit condition prohibits simultaneous operation of both flares. Worst case NEI is based on PTE of 20 MMBTU/hr flare except for ROC.

III. Stationary Source "P2" NEI-90 Decreases

Enter all facility "P2" NEI-90s below:

Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
Totals		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

IV. Stationary Source Pre-90 "D" Decreases

Enter all stationary source "D" decreases below:

Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
Totals		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

V. Calculated Stationary Source NEI-90

Table below summarizes stationary source NEI-90 as equal to: I+ (P1-P2) -D

Term	NOx		ROC		CO		SOx		PM		PM10	
	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
I	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
P1	24.01	4.38	25.92	4.73	192.00	35.04	24.58	4.49	9.60	1.75	9.60	1.75
P2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NEI-90	**24.01**	**4.38**	**25.92**	**4.73**	**192.00**	**35.04**	**24.58**	**4.49**	**9.60**	**1.75**	**9.60**	**1.75**

Table 5.1-1
COMBUSTION EQUIPMENT

No.	Make/Model	APCD Device No.	Flare Use	Flare Specifications: Burner Type	Fuel Type	Burner Rating	Fuel Flow Rate(scf/hr)	Operating Limitations: On-Line (hr/day)	On-Line (hr/year)[a]	Use (MMBtu) (per day)	Use (MMBtu) (per year)	Fuel Properties: HHV[b] (Btu/scf)	Total Sulfur (ppmv)
1	Perennial Energy	006910	LFG Combustion	Gas	LFG	13.5 MMBtu/hr	30,000	24	8,760	324.00	118,260	450	100
2	Perennial Energy	109207	LFG Combustion	Gas	LFG	20 MMBtu/hr	44,444	24	8,760	480.00	175,200	450	100

	Make/Model	APCD Device No.	Engine Use	hp rating	Use (hr/day)	Use (hr/year)
3	Cummins 6CTA8.3-F1	107057	Emergency Backup	240	2	20
4	Cummins DGFA 4955539	107058	Emergency Backup	277	2	20

Table 5.1-2
EMISSION FACTORS[c]

No.	NOx (lb/MMBtu)	ROC (lb/MMBtu)	CO (lb/MMBtu)	SOx (lb/MMBtu)	PM (lb/MMBtu)	PM10 (lb/MMBtu)
1	0.0600	0.0800	0.4000	0.0512	0.020	0.020
2	0.0500	0.0300	0.4000	0.0512	0.020	0.020
	NOx (g/bhp-hr)	ROC (g/bhp-hr)	CO (g/bhp-hr)	SOx (g/bhp-hr)	PM (g/bhp-hr)	PM10 (g/bhp-hr)
3	6.9000	0.9990	8.5000	0.0060	0.400	0.400
4	6.9000	0.9990	8.5000	0.0060	0.400	0.400

Table 5.1-3
EXHAUST GAS EMISSION LIMITS

No.	NOx lb/day	NOx ton/year	ROC lb/day	ROC ton/year	CO lb/day	CO ton/year	SOx lb/day	SOx ton/year	PM lb/day	PM ton/year	PM10 lb/day	PM10 ton/year
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
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
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
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

Notes:

(a) Permit is conditioned to allow only one flare to operate at any one time.
(b) 450 Btu/scf is a representative heating value, the actual heat value of the gas varies throughout the year.
(c) An HHV of 330 Btu/scf is used to compute SO_2 E.F. in order to be conservative.
(d) 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

Table 5.1-4

City of Santa Maria Landfill Part 70/APCD PTO 10318 R2

Landfill Fugitive Emissions:

Date Landfill Opened	1970	*(assumed)*
Current Date	2008	

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

Refuse methane generation potential[2]	100	Lo (m3/Mg)
Average annual acceptance[3]	125169.00	R (Mg/yr)
Methane generation constant[2]	0.02	k (1/yr)
Years since closure	0	c (yrs)
Age of landfill	38	t (yrs)
Concentration of NMOC[2]	2420	C_{NMOC} *(ppm as hexane)*
Conversion factor	3.60E-09	

Uncontrolled NMOC Emissions, Mg/yr	116.10	Mg NMOC/yr
Uncontrolled NMOC Emissions, tons/yr	127.99	tons NMOC/year
Amount of NMOC Collected, tons/yr[4]	42.64	tons NMOC/year
Fugitive NMOC Emissions to Atmosphere, tons/yr	85.35	tons NMOC/year
Fugitive ROC[5] Emissions to Atmosphere, tons/yr	79.37	tons ROC/year

Notes:

1 Mass Conversion Constant (Mg/ton) = 1.1024

2 Ref: AP-42

3 Calculated using current waste in place and age of landfill (ref: City of Santa Maria 2nd half of 2007 CVR report)

4 Based on gas collection records

5 ROC/NMOC = 0.93 (ref: SBCAPCD Rule 341, Staff Report September 18, 1997)

Table 5.2
City of Santa Maria Landfill Part 70/APCD PTO 10318 R2
Total Permitted Facility Emissions

A. HOURLY (lb/hr)

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Combustion - Flares	1.00	0.60	8.00	1.02	0.40	0.40
Combustion - IC Engines	7.86	1.14	9.69	0.01	0.46	0.46
Fugitive - LFG	-	18.12	-	-	-	-
Totals =	8.86	19.86	17.69	1.03	0.86	0.86

B. DAILY (lb/day)

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Combustion - Flares	24.01	14.40	192.00	24.58	9.60	9.60
Combustion - IC Engines	15.73	2.28	19.38	0.01	0.91	0.91
Fugitive - LFG	-	434.91	-	-	-	-
Totals =	39.74	451.59	211.38	24.60	10.51	10.51

C. ANNUAL (ton/yr)

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Combustion - Flares	4.38	2.63	35.04	4.49	1.75	1.75
Combustion - IC Engines	0.08	0.01	0.10	0.00	0.00	0.00
Fugitive - LFG	-	79.37	-	-	-	-
Totals =	4.46	82.01	35.14	4.49	1.76	1.76

Table 5.3
City of Santa Maria Landfill Part 70/APCD PTO 10318 R2
Federal Potential to Emit

A. HOURLY (lb/hr)

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Combustion - Flares	1.00	0.60	8.00	1.02	0.40	0.40
Combustion - IC Engines	7.86	1.14	9.69	0.01	0.46	0.46
Fugitive - LFG	-	-	-	-	-	-
Totals =	8.86	1.74	17.69	1.03	0.86	0.86

B. DAILY (lb/day)

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Combustion - Flares	24.01	14.40	192.00	24.58	9.60	9.60
Combustion - IC Engines	15.73	2.28	19.38	0.01	0.91	0.91
Fugitive - LFG	-	-	-	-	-	-
Totals =	39.74	16.68	211.38	24.60	10.51	10.51

C. ANNUAL (ton/yr)

Equipment Category	NOx	ROC	CO	SOx	PM	PM10
Combustion - Flares	4.38	2.63	35.04	4.49	1.75	1.75
Combustion - IC Engines	0.08	0.01	0.10	0.00	0.00	0.00
Fugitive - LFG	-	-	-	-	-	-
Totals =	4.46	2.64	35.14	4.49	1.76	1.76

6.0 Air Quality Impact Analyses

6.1 Modeling

Air quality modeling was not required for this stationary source.

6.2 Increments

An air quality increment analysis was not required for this stationary source

6.3 Monitoring

Air quality monitoring is not required for this stationary source.

6.4 Health Risk Assessment

A Health Risk Assessment was not required for this stationary source.

7.0 CAP Consistency, Offset Requirements and ERC's

7.1 General

The CSML Stationary Source is located in an ozone nonattainment area, since Santa Barbara County is nonattainment for the state ozone ambient air quality standards. In addition, the County is nonattainment with the state PM_{10} ambient air quality standard. Therefore, 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 maintenance of federal and progress towards attainment of state ambient air quality standards. Under APCD regulations, any modifications at the CSML that result in an emissions increase of any nonattainment pollutant exceeding 25 lbs/day must apply BACT (NAR). 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 55 lbs/day for all non-attainment pollutants except PM_{10} for which the level is 80 lbs/day.

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 APCD 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.

7.3 Offset Requirements

The CSML Stationary Source does not currently require emission offsets.

7.4 Emission Reduction Credits

The CSML Stationary Source does not generate or provide emission reduction credits.

8.0 Lead Agency Permit Consistency

The APCD is the lead agency for this permitting process. Pursuant to CEQA Guidelines Section 15300.4 and Section 1 of Appendix A (APCD List of Exempt Projects) of the APCD'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., APCD only) permit conditions. Conditions listed in Sections A, B, and C are enforceable by the USEPA, the APCD, the State of California and the public. Conditions listed in Section D are enforceable only by the APCD 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 APCD 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 CSML consistent with all written data, specifications and assumptions included with the application and supplements thereof (as documented in the APCD's project file) and with the APCD's analyses under which this permit is issued as documented in the permit analyses prepared for and issued with this permit. [Re: ATC/PTO 10318]

A.2 **Reimbursement of Costs**. All reasonable expenses, as defined in APCD Rule 210, incurred by the APCD, APCD contractors, and legal counsel for all activities that follow the issuance of this PTO permit, including but not limited to permit condition implementation, compliance verification and emergency response, directly and necessarily related to enforcement of this operating permit shall be reimbursed by CSML as required by Rule 210. [Re: ATC/PTO 10318, APCD Rule 210]

A.3 **Compliance.** Nothing contained within this permit shall be construed by CSML to allow the violation of any local, State or Federal rule, regulation, ambient air quality standard or air quality increment. [Re: ATC/PTO 10318]

A.4 **Compliance with Permit Conditions.**

(a) CSML shall comply with all permit conditions.
(b) This permit does not convey property rights or exclusive privilege of any sort to CSML.
(c) Noncompliance with any permit conditions is grounds for permit termination, revocation and re-issuance, modification, enforcement action, or for denial of permit renewal. Any permit non-compliance constitutes a violation of the Clean Air Act and its implementing regulations or of APCD Rules or both, as applicable.
(d) The permittee shall not use the "need to halt or reduce a permitted activity in order to maintain compliance" as a defense for noncompliance with any permit condition.

(e) A pending permit action or notification of anticipated noncompliance by CSML does not stay any permit condition.
(f) Within a reasonable time period, CSML 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.

(ii) 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. [Re: 40 CFR Part 70.6.(a)(6), APCD Rule 1303.D.1]

A.5 **Emergency Provisions.** CSML shall comply with the requirements of the APCD, Rule 505 (Upset/Breakdown rule) and/or APCD Rule 1303.F, whichever is applicable to the emergency situation. In order to maintain an affirmative defense under Rule 1303.F, CSML shall provide the APCD, in writing, a "notice of emergency" within 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. [Re: 40 CFR 70.6(g), APCD Rule 1303.F]

A.6 **Compliance Plan.**

(a) CSML shall comply with all federally enforceable requirements that become applicable during the permit term, in a timely manner.
(b) For all applicable equipment, CSML shall implement and comply with any specific compliance plan required under any federally-enforceable rules or standards.
[Re: APCD Rule 1302.D.2]

A.7 **Right of Entry.** The Regional Administrator of USEPA, the Control Officer, or their authorized representatives, upon the presentation of credentials, shall be permitted by CSML to enter upon the premises where its Part 70 Source is located or where records must be kept:

(a) To inspect 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 Permit to Operate;
(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. Monitoring of emissions can include source testing.
[Re: APCD Rule 1303.D.2]

A.8 **Severability.** The provisions of this Permit to Operate are severable and if any provision of this Permit to Operate is held invalid, the remainder of this Permit to Operate shall not be affected thereby. [Re: APCD Rules 103 and 1303.D.1]

A.9 **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 APCD. Any operation of the source by CSML 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 the APCD rules.

CSML shall apply for renewal of the Part 70 permit no later than 6 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: APCD Rule 1304.D.1]

A.10 **Payment of Fees.** CSML shall reimburse the APCD for all its Part 70 permit processing and compliance monitoring 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 APCD and the USEPA pursuant to section 502(a) of the Clean Air Act. [Re: APCD Rules 1303.D.1 and 1304.D.11, 40 CFR 70.6(a)(7)]

A.11 **Deviations from Permit Requirements.** CSML shall submit a written report to the APCD 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 APCD in accordance with Rule 505. Breakdown Conditions or Rule 1303.F Emergency Provisions. [APCD Rule 1303.D.1, 40 CFR 70.6(a) (3)]

A.12 **Reporting Requirements/Compliance Certifications.** CSML shall submit compliance certification reports to the USEPA *annually* and to the Control Officer every six months. These reports shall be submitted on APCD 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 1 and March 1, respectively, each year. Supporting monitoring data shall be submitted in accordance with the "Semi-Annual Monitoring/Compliance Verification Report" condition in section 9.C. CSML shall include a written statement from the responsible official, which certifies the truth, accuracy, and completeness of the reports. [Re: APCD Rules 1303.D.1, 1302.D.3, 1303.2.c]

A.13 **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 APCD-only enforceable section of this permit are federally enforceable or subject to the public/USEPA review [Re: CAAA, § 502(b)(6), 40 CFR 70.6(b)]

A.14 **Recordkeeping Requirements.** CSML shall maintain records of required monitoring information that include the following:

(a) The date, place and time of sampling or measurements or maintenance activity ;
(b) operating conditions at the time of sampling or measurement or maintenance activity;
(c) date, place, name of company or entity that performed the analyses or measurement or maintenance activity and the methods used; and
(d) results of the analyses or measurement or maintenance. Additionally, records must be kept that document the date of analysis and the analytical techniques or methods used.

The records (electronic or 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 CSML and shall be made available to the APCD upon request. [Re: APCD Rule 1303.D.1.f, 40 CFR 70.6(a)(3)(ii)(A)]

A.15 **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 CSML, except that a shorter notice may be given in case of an emergency.

(b) Inaccurate Permit Provisions: If the APCD or the USEPA 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 APCD or the USEPA determines that the permit must be revised or revoked to assure compliance with any applicable requirement including a federally enforceable requirement, the permit shall be reopened. Such re-openings shall be made as soon as practicable.

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.
[Re: 40 CFR 70.7(f), 40 CFR 70.6(a)]

A.16 **Emission Factor Revisions.** The APCD may update the emission factors for any calculation based on USEPA AP-42 or APCD emission factors at the next permit modification or permit reevaluation to account for USEPA and/or APCD revisions to the underlying emission factors.

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 the CSML facility, as they currently exist. Compliance with these requirements is discussed in Section 3.4.2. In the case of a discrepancy between the wording of a condition and the applicable APCD rule, the wording of the rule shall control.

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

B.2 **Visible Emissions (Rule 302).** CSML 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.

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

B.4 **PM Concentration - North Zone (Rule 306).** CSML shall not discharge into the atmosphere, from any source, particulate matter in excess of the concentrations listed in Table 306(a) of Rule 306. [Re: APCD Rule 306]

B.5 **Specific Contaminants (Rule 309).** CSML shall not discharge into the atmosphere from any single emission source any sulfur compounds, hydrogen sulfide, combustion contaminants and carbon monoxide in excess of the standards listed in Sections A, E and G of Rule 309. [Re: APCD Rule 309]

B.6 **Organic Solvents (Rule 317).** CSML 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 Solvent Usage condition in this permit. [Re: APCD Rule 317]

B.7 **Solvent Cleaning Operations (Rule 321).** CSML 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 APCD inspection of operations and with the Solvent Usage condition in this permit. [Re: APCD Rule 321]

B.8 **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 Solvent Usage condition in this permit and facility inspections. [Re: APCD Rule 322]

B.9 **Architectural Coatings (Rule 323).** CSML 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 Solvent Usage condition in this permit and facility inspections. [Re: APCD Rule 323]

B.10 **Disposal and Evaporation of Solvents (Rule 324).** CSML 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 Solvent Usage condition in this permit and facility inspections. [Re: APCD Rule 324]

B.11 **Adhesives and Sealants (Rule 353).** The permittee 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.
/Re: APCD Rule 353/

B.12 **Breakdowns (Rule 505).** The permittee shall promptly report breakdowns that result in violations of emission limitations or restrictions prescribed by APCD Rules or by this permit; such reporting shall be made in conformance with the requirements of Rule 505, Sections A, B1, and D.

B.13 **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. [Re: APCD Rule 202]

B.14 **Equipment Identification.** Identifying tag(s) or name plate(s) shall be displayed on the equipment to show manufacturer, model number, and serial number. The tag(s) or plate(s) shall be issued by the manufacturer and shall be affixed to the equipment in a permanent and conspicuous position.

9.C *Requirements and Equipment Specific Conditions*

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

Device No.	Name
105956	Landfill Gas Collection System: Gas extraction wells as described by the Active Collection System Design Plan.
105957	Landfill Gas Collection Piping: HDPE piping connecting the LFG wells to the blower.
109213	Condensate Knockout
105961	Condensate water holding tank, 1,050 gallons capacity, 5'1" diameter by 8'1" high; a 1300 gallon secondary container is placed around the tank.
103977	Pneumatic pump, driven by a 5 hp air electric motor air compressor; used to inject condensate water directly into the flare.
109208	Landfill Gas Blower, New York Blower Model 2606A, 15 hp.

(a) Emission Limits: Mass emissions of fugitive NMOC and ROC from the landfill surface shall not exceed the limits listed in Table 5.1-4.

(b) Operational Limits: The following operational limits apply to the Municipal Solid Waste Landfill and Gas Collection System as specified:

(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: Part 70 PTO 10318 Application]

(ii) Landfill Gas Capture Rate – The landfill collection system shall not exceed a maximum landfill gas (dry) capture rate of 1100 scfm [Ref: ATC 12037]

(iii) Collection System – Areas of Collection – LFG collection system shall be operated such that gas is collected from each area, cell, or group of cells in the landfill in which solid waste has been in place for either 5 years or more if active or 2 years or more if closed or at final grade. Collection system configuration and areas of gas collection shall be monitored through CSML's Active Collection System Design (ACSD) Plan. See Condition 9.C.8 of this permit. [Ref: 40 CFR 60.753 (a)]

(iv) Collection System – Well Pressure - LFG collection system shall be operated such that each wellhead registers a negative pressure – except under the following conditions: (1) a fire or increased well temperature, (2) use of a geo-membrane or synthetic cover, or (3) a decommissioned well. If positive pressure is detected in a well during monthly monitoring it will not be a violation of this permit as long as the condition is corrected per condition 9.C.1.(c)(iv). [Ref: 40 CFR 60.753 (b)]

(v) Collection System – Wellhead Operation – LFG collection system shall be operated such that each interior wellhead in the collection system shall operate with a landfill

gas temperature less than 55° C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. If a gas temperature greater than 55° C or a nitrogen level greater than 20 percent or an oxygen level greater than 5 percent is detected in a well during monthly monitoring it will not be a violation of this permit as long as the condition is corrected according to the timelines of Subpart WWW Section 60.755(a). [Ref: 40 CFR 60.753 (c)]

(vi) Collection System – Surface Emissions – LFG collection system shall be operated so that methane concentration is less than 500 parts per million above back ground at the surface of the landfill. Surface methane emissions greater than 500 ppm detected during quarterly monitoring will not be a violation of this permit as long as the condition is corrected according to the timelines of Subpart WWW Section 60.755(c). [Ref: 40 CFR 60.753 (d)]

(vii) Collection System - Operation – Except during startups, shutdowns, or malfunctions the LFG collection system shall be operated with a sufficient extraction rate, as defined in 40 CFR 60.751 and such that all collected gases are vented to a control device. Further, the permittee shall operate the collection system as specified in the ACSD Plan.

(viii) Collection System – Startup Shutdown and Malfunction - In the event any portion of the collection system is inoperable through malfunction, maintenance, or system rework, that portion shall be shutdown and all valves contributing to venting of the gas to the atmosphere shall be closed within one hour of shutdown. Under no condition shall the entire landfill gas collection system be inoperable for greater than 120 consecutive hours. [Ref: 40 CFR 60.753 (e)]

(ix) Collected Landfill Gas and Purging of Vessels – All collected landfill gases from the following activities shall be directed to a permitted control device: de-gassing, purging or blowing down any tank, vessel or container that contains landfill gases due to activities that include, but are not limited to, process or equipment turnarounds, process upsets or agency ordered safety tests. [Ref: 40 CFR 60.753 (e) and (f)]

(x) Landfill Gas Condensate Usage - All landfill gas condensate collected by CSML shall be disposed either by incineration in the enclosed flare or through off-site disposal at an approved facility, e.g., TSDF. Landfill gas condensate collected by CSML shall not in whole, or in part, be used as a dust control suppressant at the CSML without written APCD approval in advance. [Re: APCD Rule 303]

(c) Monitoring: CSML is subject to the following NSPS, MACT and Part 70 periodic monitoring requirements (Ref: 40 CFR 60 Subpart WWW, §60.755, §60.756, 40 CFR 63 Subpart AAAA, 40 CFR 70.6(a)(3)(i) (B)):

(i) Design Capacity – Semi-annually the total amount of municipal solid waste in place at the end of the period and the amount of waste placed in the landfill during the period shall be recorded (all in units of tons).

(ii) Landfill Gas Capture Rate – The total quantity of landfill gas collected, after it has passed the condensate separator vessel, shall be continuously monitored by APCD approved monitoring devices. These devices shall be calibrated and maintained per the Process Monitor Calibration and Maintenance Plan.

(iii) Surface Monitoring, Maintenance and Recordkeeping Plan - The permittee shall implement the provisions of the Surface Monitoring, Maintenance and Recordkeeping (SMMR) Plan (dated May 2000) as approved by the APCD on October 30, 2000, and any updates thereof. The monitoring shall include measuring surface methane concentrations on a quarterly basis and ground cover assessment on a monthly basis. An updated SMMR Plan shall be submitted for APCD approval within 30 days of any proposed changes to the plan.

(iv) Well Monitoring Program – CSML shall monitor on a monthly basis the temperature, pressure (or vacuum), and nitrogen or oxygen content of each active well. If any parameters are outside of permitted limits they must be corrected according to the timelines established in Subpart WWW, Section 60.755(a).. If corrective action is necessary the well shall be re-monitored within 15 days of the first measurement to determine whether the corrective action was successful. If the parameters can not be brought into compliance within 15 calendar days of the first measurement, the collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance.

(d) Recordkeeping: CSML is subject to the following NSPS, MACT and Part 70 recordkeeping requirements (Ref: 40 CFR 60, Subpart WWW §60.758, 40 CFR 63, Subpart AAAA, 40 CFR 70.6(a)(iii)(3)(A)):

(i) Design Capacity – For each semi-annual calendar period, records shall be maintained documenting the total waste placed in the landfill during the period in tons, and the total solid waste in place at the landfill in tons.

(ii) Landfill Gas Capture Rate – For each semi-annual calendar period, daily records shall be maintained documenting the total landfill gas collected in scf/day and the maximum hourly flow rate for each day in scf/hour.

(iii) Surface Monitoring, Maintenance and Recordkeeping Plan – Quarterly records of the activities conducted under the SMMR Plan shall be maintained. Records shall include (a) date of quarterly monitoring activities for each well, (b) location of the well where an actual reading exceeding 500 ppmv methane above background level was obtained, (c) the date of exceedance and (d) all corrective actions taken to mitigate the exceedance.

(iv) Collection System Records – A landfill schematic shall be maintained to comply with the Subpart WWW requirements for documentation. The schematic shall document current areas of collection, areas of landfill closure or final grade, current collection system and well configuration. The schematic shall be updated whenever changes to the collection system occur due to repair, rework or shut down of existing wells, or installation of new wells.

(v) Collection System – Wellhead Operation – Monthly records shall be maintained for each interior wellhead in the collection system related to the following: wellhead LFG temperature (° F), wellhead nitrogen or oxygen level (%). The records shall flag the flowing: (a) any monitored wellhead gas temperature reading equal to or greater than 55 °C or (b) wellhead gas constituent concentration of either equal to or greater than 5% by volume of O_2 or equal to or greater than 20% by volume of N_2, along with the date and time of such observations, i.e., of (a) and (b). The records shall also include the dates and times of all mitigation actions taken to bring any out-of-bound temperature and/or wellhead nitrogen/oxygen levels within the normal limits prescribed by Subpart WWW, Section 60.753(c). The dates on which the normal levels were regained shall also be listed.(see also Condition 9.C.10)

(vi) Active Collection System – Exceptions Records – Records shall be maintained detailing any exceptions to operations standards for the active collection system. These exceptions include collection and control system exceedances, e.g., exceedances of wellhead pressure, temperature, nitrogen, or oxygen readings or exceedances of control device combustion temperatures or flow rates. The records shall also include a description for and the duration of all periods when (a) the control devices were not operating, and when (b) the collection system was not operating.

(vii) Collected Condensates – Daily records shall be maintained of the quantity of condensate disposed of and the method of disposal (incinerated, taken off-site, etc.).

(e) Reporting: A semi-annual and annual report detailing the operation and the monitoring activities shall be provided to the APCD per Condition 9.C.4 of this permit. [Ref: 40 CFR 70.6 and Subpart WWW, Section 60.757]

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

Device ID No.	Name
006910	Landfill Gas Flare, 13.5 MMBtu/hour rating: Perennial Energy, Model EF4-10.5-14203333-Z-00-10, 6' diameter by 24' high, equipped with an automatic ignition system, 3 thermocouples, a propane-fired pilot, an automatic temperature control system, a flame arrestor, and a safety shutdown system.
109207	Landfill Gas Flare, 20 MMBtu/hour rating: Perennial Energy, Model FL-90-26-E, 7.5' OD by 27' high, equipped with an automatic ignition system, 3 thermocouples, a propane-fired pilot, an automatic temperature control system, a flame arrestor, and a safety shutdown system.
103980	Propane system; consisting of two tanks equipped with regulators set at different pressures. The primary pilot's tank is set at a high pressure and the secondary pilot's tank is set a t a low pressure.
105960	Gas Flow Measurement System: Flow meters to record LFG flow to each flare.

(a) Emission Limits: Mass emissions from the flare systems listed above shall not exceed the limits listed in Tables 5.1-3. Compliance with this condition shall be based on the monitoring, recordkeeping and reporting conditions in this permit.

(i) Oxides of Nitrogen (NO_X) Emissions Standard: Stack emissions of NO_X (as NO_2) from the 13.5 MMBtu/hr flare (Device ID # 006910) shall not exceed an emission standard of 0.06 lbs/MMBtu. Compliance with this condition shall be based on source testing. (Ref: ATC/PTOs 9547,10318)

(ii) Oxides of Nitrogen (NO_X) Emissions Standard: Stack emissions of NO_X (as NO_2) from the 20.0 MMBtu/hr flare (Device ID # 109207) shall not exceed an emission standard of 0.05 lbs/MMBTU. Compliance with this condition shall be based on source testing. (Ref: ATC 12037)

(iii) Carbon Monoxide (CO) Emissions Standard: Stack emissions of CO from either flare shall not exceed an emission standard of 0.40 lb/MMBtu. Compliance with this condition shall be based on source testing. (Ref: ATC/PTOs 9547,10318, 12037)

(iv) Non-methane Organic Compound (NMOC) Emission Limits or Destruction Efficiency: Emissions of NMOC from either flare exhaust shall not exceed a concentration of 20 ppmvd, as hexane equivalent, corrected to 3 percent excess oxygen concentration. Alternately, each ground flare shall demonstrate a NMOC destruction efficiency of at least 98 percent by mass of NMOC contained within the landfill gas to be flared. Compliance with these provisions shall be demonstrated by source testing. (Ref: ATC/PTOs 9547,10318, 12037)

(v) Sulfur in Fuel Limit: The total sulfur content (calculated as H_2S at standard condition of 60°F and 14.7 psia) of the gaseous fuel burned at the facility shall not exceed 6.3 grams per 100 cubic feet (100 ppmvd). (Ref: ATC 12037) [Additional Ref: 40 CFR 60, Subpart WWW, 40 CFR 70.6]

(b) Operational Limits: The following operational limits apply to the enclosed LFG flares as specified:

(i) Enclosed Flare Heat Input Limits: The permittee shall comply with the following heat input limits. Compliance with heat input limits shall be based on fuel meter readings and the most recent fuel gas (HHV-based) analysis. (Ref: ATC 12037)

Table 2.1 Flare Heat Input Limits

Device No.	Heat Input Limits		
	MMBTU/hr	MMBTU/day	MMBTU/yr
006910	13.5	324.0	118260.0
109207	20.0	480.0	175200.0

(ii) Flare Station Controller: No more than one of the two flares, i.e. the 20 MMBTU/hr flare (Device ID # 109207) or the 13.5 MMBTU/hr flare (Device ID # 006910), shall operate at any time. Flare operation and landfill gas transport through the single flare LFG blower to either the 13.5 MMBTU/hr flare or to the 20 MMBTU/hr flare shall be controlled by a programmable logic controller (PLC). The PLC program shall have an interlock mechanism that prohibits the simultaneous operation of both flares. (Ref: ATC 12037)

(iii) Flare Ignition System Operation: The flare outlet for the 13.5 MMBtu/hr flare 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 purge periods for automatic ignition equipped flares. (Ref: ATC/PTO 10318, 12037)

(iv) Flare Flame Monitoring: The presence of the flame in the flare pilot for the 13.5 MMBtu/hr flare shall be continuously monitored using a self-checking UV detector or an equivalent device that detects the presence of a pilot flame. (Ref: ATC/PTO 10318)

(v) Flare Ignition System Operation: The flare outlet for the 20.0 MMBtu/hr flare shall be equipped with an automatic ignition system including a spark ignition device and a pilot-light propane gas source. Pilot shall not be a continuous flame pilot type.

(vi) Flare Downtime: Each flare shall be operating at all times when combustible gasses are routed through the flare except for periods of startup, shutdown or malfunction not to exceed one hour each. [Ref: Subpart WWW, Section 60.755(e)]

(vii) Flare Temperature Set Point: Except for startup and shutdown periods of no more than one hour, each flare shall operate with a set-point temperature equal to or greater than the temperature observed during the last source test for the flare which demonstrated compliance with the applicable emission limits for all pollutants. However, in no case shall the flare operate with a set point temperature below 1400 °F.

(viii) Thermocouple Selection: The thermocouple used to monitor and control temperature shall be selected based on the landfill gas heat input rate and the procedure described in the operation and maintenance manual for each flare.

(ix) Combustion Temperature Deviation: (a) Each flare shall not operate for any three continuous hour periods at an average combustion temperature more than 28 °C (50.4 °F) below the set point temperature established per 9.C.2.(b)(vii) above; and (b) the flare unit's combustion temperature shall not vary by more than +/- 5 percent from the temperature controller set-point (per 9.C.2.(b)(vii) above) for any continuous 60 minute period. [Ref: ATC/PTO 10318, 12037]

(x) Flare Manual Flow Damper Operation: CSML shall maintain the blade settings of each flare's manual flow damper in the position established during the most recent compliant source test. CSML shall mark this position in the presence of the APCD inspector during the source test. CSML shall obtain written approval from the APCD prior to changing the flow damper setting, and source testing may be required. Each flare shall be operated at all times with the blades of its manual flow damper set in the marked configuration.

(xi) CSML shall maintain each flare in accordance with the manufacturer-recommendations. A copy of the manufacturer's Operation & Maintenance manual shall be kept on site for APCD inspection.

(xii) During periods of flare standby (when landfill gas is routed offsite to sales), the flare temperature set point requirements are not applicable.

(c) Monitoring: The equipment in this section is subject to all the monitoring requirements listed in Subpart WWW, Subpart AAAA, 40 CFR 70.6 and ATC/PTO 10318. The following monitoring requirements apply to the flare relief system:

(i) Flare Unit Non-operation: For each instance that either flare unit goes out of operation, its shutdown time/date/shutdown event duration and its restart time/date/startup event duration shall be logged in.

(ii) Flare Gas Flow Parameters: Each hour's LFG flow to the flare unit shall be continuously monitored with the flow rate data to be logged in every fifteen minutes. The monitoring shall use an APCD approved recordable fuel gas meter dedicated to each flare. Each meter shall be calibrated and maintained according to manufacturer's specifications and frequencies per APCD-approved Process Monitor Calibration and Maintenance Plan. Calibration records shall be maintained and made available for APCD inspection upon request. Note: 'A

valid hour of data' must have measured values for at least three (3) 15-minute monitoring periods during that hour. [Ref: 40 CFR 63.1965 (b)]

(iii) Combustion Temperature: Combustion temperature data shall be monitored for each flare unit every fifteen minutes; the data shall be averaged for three continuous hourly periods (block average) to assess the required compliance with flare temperature limits. The three-hour block 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. A strip chart, or any other APCD-approved method of tracking the actual ground flare combustion temperature shall be used. The ground flare's set point temperature and selected thermocouple shall be marked and logged whenever it is changed as allowed under this permit. [Ref: 40 CFR 63.1965 (b)]

(iv) Manual Flow Damper Setting: CSML shall inspect the manual flow damper configuration monthly to ensure that blade-settings obtained and marked during the last successful source test, or as approved by the APCD, have remained unaltered.

(v) Flare Flame Monitoring: The presence of the flame in each flare shall be continuously monitored using a self-checking U. V. detector or an equivalent device that detects the presence of a flame.

(vi) Enclosed Flare Fuel Gas Analysis: A sample of LFG shall be extracted after the blower unit on a calendar quarterly basis and analyzed for total sulfur compounds, hydrogen sulfide and high heating value of the gas, using appropriate ASTM sampling and analysis techniques.

(vii) Process Monitoring Systems: All enclosed flare process monitoring devices shall be properly operated, maintained, and calibrated according to the Process Monitor Calibration and Maintenance Plan including:

⇒ Flare flow meter/recorder

⇒ Enclosed Flare Combustion Zone Temperature Indicator(s) and Recorder

(viii) Source Testing: Source testing shall be performed in accordance with condition C.5 of this PTO.

(ix) Landfill Condensate: The permittee shall track the rate of condensate injection into each flare by maintaining onsite logs for total volume injected and total injection time on a daily basis. Condensate injection into each flare does not need to be recorded on days the flares do not operate. If the average daily condensate injection rate to either flare exceeds 1.0 gallon per minute (gpm), the permittee shall notify the APCD within three days and perform a source test in accordance with the APCD's *Source Test Procedures Manual* (revised May 1990 and any subsequent revisions) if required in writing by the APCD.

(x) Visible Emissions: Once per calendar quarter for each flare, CSML shall perform a visible emissions inspection for a one-minute period while the flare is

operating. If a flare does not operate during a calendar quarter no monitoring is required. If visible emissions are detected from a 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 a flare if that flare does not burn LFG during the quarter. [Ref: Rule 302]

(d) Recordkeeping: The following records shall be maintained:

(i) Enclosed Flare Parameters: Continuous records of flare fuel flow (in scfm), hours of operation and maximum hourly flare fuel use (in scfh) shall be kept for each flare.

(ii) Enclosed Flare Fuel Gas Analysis: Results of laboratory analysis of quarterly LFG samples extracted and analyzed for total sulfur compounds, hydrogen sulfide and high heating values shall be maintained.

(iii) Control System Performance: Source test records shall be maintained to document compliance with the control efficiency requirements for each flare.

(iv) Thermocouple Selection: Each time the thermocouple selection is changed, the thermocouple selected and the heat input rate to the flare shall be recorded. Routine maintenance inspections that require changing thermocouple selection to check thermocouple functionality do not need to be recorded, as long as the thermocouple selection is returned to the correct setting within 15 minutes.

(v) Enclosed Flare Combustion Temperature: Records of the temperature set point, thermocouple readings, and heat input rate shall be kept for each flare each time the temperature set point is changed. Records of average combustion temperature measured at least every 15 minutes and averaged over a 3-hour block period shall be kept for each flare. These records shall be used to demonstrate compliance with (a) the flare combustion temperature requirements of Subpart WWW and (b) the 'valid data submittal' requirements of Subpart AAAA. Records of all deviations shall be logged and recorded.

(vi) Flare Operation Data: The date, time, and duration of occurrence for all start-ups, shutdowns and malfunctions shall be maintained for each flare.

(vii) Manual Flow Damper Setting: CSML shall maintain a log of the monthly inspection of the manual flow damper blade for each flare.

(viii) Maintenance and Calibration Logs: CSML shall maintain all maintenance and calibration logs for each flare, the flare temperature controllers and recorders, the flare fuel flow meters, the landfill gas methane surface emissions monitor, and landfill gas collection well data monitor(s).
[Ref: 40 CFR 60 Subpart WWW, 40 CFR 53 Subpart AAAA & 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.

(e) Reporting: A semi-annual and annual report detailing the operation and the monitoring activities listed above shall be provided to the APCD per Condition 9.C.4 of this PTO. [Ref: 40 CFR 70.6, 40 CFR 60 Subpart WWW, 40 CFR 63 Subpart AAAA and ATC/PTO 10318]

C.3 **Solvent Usage.** The following equipment is included in this emissions unit category:

EQ No.	Name
8704-3-1	Solvent Usage

(a) Operational Limits: Use of solvents for cleaning, degreasing, thinning and reducing shall conform to the requirements of APCD Rules 317 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.

(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.

(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.

(b) Recordkeeping: The permittees shall record in a log the following on a monthly basis for each solvent used which is subject to Rule 317 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.

(c) Reporting: A semi-annual and annual report detailing the operation activities shall be provided to the APCD per Condition 9.C.4 below. [Ref: 40 CFR 70.6 (a)(1)(3)(B)]]

C.4 **Compliance Verification Reports.** Twice a year, CSML shall submit a monitoring and compliance verification report (CVR) to the APCD. Each report shall be used to verify compliance with the prior two calendar quarters. The first report shall cover calendar quarters 1

and 2 (January through June) and shall be submitted no later than September 1. The second report shall cover calendar quarters 3 and 4 (July through December) and shall be submitted no later than March 1. Each report shall contain information necessary to verify compliance with the emission limits and other requirements of this permit. These reports shall be in a format approved by the APCD. All logs and other basic source data not included in the report shall be available to the APCD upon request. The March 1 report shall also include an annual report for the prior four quarters. Pursuant to Rule 212, the annual report shall include a completed APCD Annual Emissions Inventory questionnaire, or submitted electronically via the APCD web site. The report shall include the following information [Ref: APCD Rules 1303.D.1, 1302.D.3, 1303.2.c]:

(a) Landfill and Collection System:

(i) Total amount of municipal solid waste in place at the end of each reporting period, and amount of waste placed in the landfill during the reporting period, in tons

(ii) Total landfill gas collected daily after it has passed the condensate separator vessel (in scf/day); also the maximum daily flow (in scf/day) for the reporting period shall be flagged in the CVR.

(iii) Tons per quarter of uncontrolled fugitive NMOC emissions from the landfill along with the appropriate supporting data. The NMOC emission calculations shall be performed per AP-42, Fifth Edition (Compilation of Air Pollutant Emission Factors, Volume 1: Stationary, Point and Area Sources) guidelines. The fourth quarter report shall include tons per year totals for all pollutants by this emission unit.

(iv) Quarterly landfill surface emissions monitoring data consistent with the SMMR Plan including date and location of any exceedance of 500-ppm methane landfill surface concentration, dates of re-monitoring, and report of mitigation measures conducted.

(v) Updates to the Active Collection System Design Plan shall be noted and the date the revised plan was submitted to the District shall be included in the CVR.

(vi) Quarterly process stream analyses reporting landfill gas sample results for total sulfur compounds, hydrogen sulfide, and high heating value as required under condition 9.C.7.

(vii) Monthly well monitoring data as required by condition 9.C.1.(d)(v).

(viii) Exceptions Report pursuant to requirements of the Active Collection System – Exceptions Report program of condition 9.C.1(d) (vi) including exceedances of wellhead pressure, temperature, nitrogen, or oxygen readings as monitored by the Active Collection System – Well Monitoring Program. In addition, exceedances of control device combustion temperature or flow rate limits, description and duration of all periods when all control devices were not operating for a period in excess of 1 hour and the length of time the devices were not operating, and periods when the entire collection system was not operating in excess of 5 days shall be reported.

(ix) The daily quantity of condensate disposed and the method of disposal for each day that condensate is removed from the storage tank.

(b) Enclosed Ground-level Flares:

(i) Production Report (on a daily basis): i) the total SCF per day of landfill gas burned by each flare; ii) the maximum hourly landfill gas flow (scfh) for each day; iii) the operating hours per day of each flare; iv) the total volume of condensate injected and total injection time on a daily basis for each flare on days that the condensate injection system is operated.

(ii) Tons per quarter totals of all applicable pollutants generated by each flare along with the appropriate supporting data. The fourth quarter report shall include tons per year totals for all pollutants by each flare calculated based on the most recent source test data.

(iii) On an annual basis, the ROC and NO_x emissions from all permit exempt activities such as maintenance activities involving surface coating activities.

(iv) Breakdowns and variances reported/obtained per Regulation V along with the excess emissions that accompanied each occurrence.

(v) Minimum '3-hour block average' combustion temperature for each flare for each day.

(vi) The thermocouple selection and heat input rate to the flare for each time the thermocouple selection is changed.

(vii) (a) Periods when either flare operated for a three continuous hour period at an average combustion temperature more than 28 °C below the average temperature established during the most recent source performance test for that flare. (b) Periods when either flare operated for 60 continuous minutes with a combustion temperature more than five percent higher or lower than the set point temperature.

(viii) Monitored downtime summary for the collection system and each flare, including explanation and corrective action.

(ix) Summary data for each flare source test each year a source test is performed, including all data for combustion temperatures recorded during the source test.

In addition, operator log entries, strip charts, magnetic tapes, computer printouts, circular charts or diskettes, whichever is applicable, shall be provided upon request to the APCD.

(c) General Reporting Requirements:

(i) General solvent usage report. If no solvents subject to Rule 317 or 324 are used during the reporting period, that shall be stated in the report.

(ii) Monitoring system calibration report as required by the Process Monitoring and Maintenance Plan of condition 9.C.6, listing monitoring system under calibration or maintenance, calibration schedule, date of actual calibration or maintenance, and any specifics as to calibration or maintenance conducted.
[Ref: ATC/PTO 10318, 40 CFR 70.6]

C5 **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 4.2 for each flare once 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. The permittee shall submit a written source test plan to the APCD for approval at least thirty (30) days prior to initiation of each source test. The source test plan shall be prepared consistent with the APCD's "Source Test Procedures Manual" (revised May 24, 1990). The permittee shall obtain written District approval of the source test plan prior to source testing. The APCD shall be notified at least ten (10) calendar days prior to the start of source testing to arrange for a mutually agreeable source test date when District personnel may observe the test.

(b) Source test results shall be submitted to the APCD 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. All APCD costs associated with the review and approval of all plans and reports and the witnessing of tests shall be paid by the permittees as provided for by APCD Rule 210. Source test results shall document CSML's compliance status with mass emission rate limits in Section 5 and applicable permit conditions, APCD applicable Rules, and NSPS. Any District certified source test result which indicates that Permit to Operate emission limitations have been exceeded shall constitute a violation of the Permit to Operate.

(c) 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 APCD approval before deferring or discontinuing a scheduled test, or performing maintenance on the equipment item on the scheduled test day. 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 APCD. If the test cannot be completed on the scheduled day, then the test shall be rescheduled for another time with prior authorization by the APCD. Failing to perform the source test of an equipment item on the scheduled test day without a valid reason and without APCD's authorization shall constitute a violation of this permit.

(d) The APCD may extend the above timelines for good cause upon written request from CSML. The written request shall be submitted to the APCD at least 14 days prior to the applicable deadline date. [Ref: ATC/PTO 10318]

C6. **Process Monitoring System.** The process monitoring devices listed below shall be properly operated, maintained, and calibrated according to the instrument manufacturer's instructions or good engineering practice if no such instructions are available:

⇒ Landfill gas surface emissions monitor (methane); and

⇒ Landfill gas collection well operations monitor(s) that gather the following data: a) well gas temperature; b) well gas pressure/vacuum; and c) well gas nitrogen or oxygen contents.

⇒ Flare flow meter/recorder

⇒ Enclosed Flare Combustion Zone Temperature Indicator(s) and Recorder

CSML shall update and submit to the APCD within 30 days its *Process Monitoring and Maintenance Plan* that identifies the proposed instruments, their operating specifications, capabilities & procedures, and their calibration and maintenance requirements whenever any equipment or procedures identified in the plan are changed. CSML shall respond to any APCD comments on the proposed plan and/or provide requested information within 30 days of receipt of such comments or requests. The *Plan*, once approved by the APCD, may only be revised upon written request by CSML, and approval of the APCD. [Ref: ATC/PTO 10318]

C.7 **Process Stream Sampling and Analysis.** CSML shall sample and analyze the landfill gas quarterly for hydrogen sulfide fraction (by EPA Method 15), the high heating value (HHV) of LFG (in units of Btu/scf), and total sulfur composition (per EPA Method 16). All process stream samples shall be taken according to APCD-approved ASTM methods/procedures and must follow traceable chain of custody procedures. CSML shall maintain logs and records documenting the results from all process stream analyses (in a format approved by the APCD). [Ref: 40 CFR 70.6]

C.8 **Active Collection System Design Plan and Updates.** CSML shall update the Active Collection System Design (ACSD) Plan and submit it to the APCD within 30 days of this permit's final issuance date and within 30 days of any changes to the active collection system. The ACSD Plan shall document how the project meets the requirements of 40 CFR Subpart WWW, §60.759, §60.753 and §60.755 as applicable. The ACSD Plan shall include the following components: the repair/rework, shut down, or installation of existing/new wells required to maintain surface or perimeter methane emissions; mitigation actions to bring wellhead temperatures and oxygen/nitrogen levels within permitted limits; the density of wells, horizontal collectors, surface collectors, and other gas extraction devices [Ref: 40 CFR, Subpart WWW, §60.755(b) and 60.755(c)(4)(v)]

C.9 **Startup, Shutdown and Malfunction Plan and Updates.** The SSM Plan shall be implemented as required by 40 CFR 63.6(e)(3). The SSM Plan shall be updated and submitted to the APCD for approval whenever any changes to the Plan or any changes in the collection and control system operations are made at CSML; such updates shall be submitted before the change is implemented. [Ref: 40 CFR 63.1960 and 63.1965(a) and (c)]

C.10 **Documents Incorporated by Reference.** The documents listed below, including any APCD-approved updates thereof, are incorporated herein and shall have the full force and effect of a permit condition for this operating permit. These documents shall be implemented for the life of the Project and shall be made available to APCD inspection staff upon request.

(i) Surface Monitoring Maintenance and Recordkeeping Plan. (as approved on October 3, 2005).

(ii) Active Collection System Design Plan (to be submitted to the APCD for approval within 30 days of the final issuance of this permit)

(iii) Start-up, Shutdown and Malfunction Plan. (as approved on April 8, 2008)

(iv) Process Monitoring and Maintenance Plan (to be submitted to the APCD for approval within 30 days of the final issuance of this permit).
[Ref: 40 CFR 70.6]

(v) Operation and Maintenance Manual for each enclosed ground flare (to be submitted to the APCD for approval within 30 days of the final issuance of this permit).

C.11 **Equipment Removal Report.** Permittee shall submit an equipment removal report to the APCD 30 days prior to removal or cessation of operation of the control equipment. [Ref: 40 CFR §60.757(e)]

C.12 **Closure Report.** Permittee shall submit a closure report to the APCD within 30 days of cessation of waste acceptance. [Ref: 40 CFR §60.757(d)]

9.D APCD-Only Conditions

The following section lists permit conditions that are not enforceable by the USEPA or the public. However, these conditions are enforceable by the APCD and the State of California. These conditions are issued pursuant to APCD 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.

D.1 **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 & Safety Code Section 42307 *et seq.* [*Re: ATC/PTO 10318*]

D.2 **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. [*Re: ATC/PTO 10318*]

D.3 **Odorous Organic Sulfides.** CSML shall not discharge into atmosphere H2S 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. [Re: APCD Rule 310]

D.4 **Diesel IC Engines.** The following equipment is included in this emissions unit category:

Device No.	Name
107057	240 bhp Cummins Model 6CTA8.3-F1 emergency backup diesel IC engine
107058	277 bhp Cummins Model DGFA 4955539 emergency backup diesel IC engine

(a) Emission Limits: Mass emissions from the IC engines listed above shall not exceed the limits listed in Tables 5.1-3. Compliance with this condition shall be based on the monitoring, recordkeeping and reporting conditions in this permit.

(b) Operational Restrictions: The equipment permitted herein is subject to the following operational restrictions listed below. Emergency use operations, as defined in the ATCM[b], have no operational hours limitations.

(i) Maintenance & Testing Use Limit: The in-use stationary emergency standby diesel-fueled CI engine(s) subject to this permit shall not be operated for more than 20 hours per year for maintenance and testing[c] purposes.

(ii) Impending Rotating Outage Use: The in-use stationary emergency standby diesel-fueled CI engine(s) 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.

(iii) Fuel and Fuel Additive Requirements: The permittee may only add fuel and/or fuel additives to the engine or any fuel tank directly attached to the engine that comply with the ATCM.

(c) Monitoring: The equipment permitted herein shall have installed a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the APCD 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 owner or operator's compliance history.

(d) Recordkeeping: The permittee shall record and maintain the information listed below. 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

[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

[c] "maintenance and testing" is defined in the ATCM and may also be found on the APCD webpage at http://www.sbcapcd.org/eng/atcm/dice/ES_MT_DICE_Definitions.pdf

location or at the engine's location, and made immediately available to the APCD staff upon request. Log entries made from 25 to 36 months from most recent entry shall be made available to APCD staff within 5 working days from request. APCD Form ENF-92 (*Diesel-Fired Emergency Standby Engine Recordkeeping Form*) can be used for this requirement.

(i) emergency use hours of operation;
(ii) maintenance and testing hours of operation;
(iii) hours of operation for emission testing to show compliance with the ATCM {if specifically allowed for under this permit}.
(iv) initial start-up hours {if specifically allowed for under this permit}.
(v) hours of operation to comply with the requirements of NFPA 25/100 {if applicable}.
(vi) hours of operation for all uses other than those specified in items (a) – (d) above along with a description of what those hours were for.
(vii) The owner or operator shall document fuel use through the retention of fuel purchase records that demonstrate that the only fuel purchased and added to an emergency standby engine or engines, or to any fuel tank directly attached to an emergency standby engine or engines, meets the requirements of the ATCM.

(e) **Reporting.** By March 1 of each year, a written report documenting compliance with the terms and conditions of this permit and the ATCM for the previous calendar year shall be provided by the permittee to the APCD (Attn: *Annual Report Coordinator*). All logs and other basic source data not included in the report shall be made available to the APCD upon request. The report shall include the information required in the Recordkeeping Condition above. With the exception of the ISC hours under item (h), this reporting requirement may be satisfied by using APCD Form ENF-92 (*Diesel-Fired Emergency Standby Engine Recordkeeping Form*).

D.5 **Temporary Engine Replacements - DICE ATCM.** Any reciprocating internal combustion engine subject to this permit and the stationary diesel ATCM may be replaced temporarily only if the requirements (a – f) listed herein are satisfied.

(a) The permitted engine is in need of routine repair or maintenance.

(b) The permitted engine that is undergoing routine repair or maintenance is returned to its original service within 180 days of installation of the temporary engine.

(c) 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 that is being temporarily replaced. At the written request of the permittee, the APCD may approve a replacement engine with a larger rated horsepower than the permitted engine 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.

(d) The temporary replacement engine shall comply with all rules and permit requirements that apply to the permitted engine that is undergoing routine repair or maintenance.

(e) 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 faxed (fax: 961-8801) to the APCD (Attn: Engineering Supervisor).

(f) Within 14 days upon return of 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 faxed (fax: 961-8801) to the APCD (Attn: Engineering Supervisor).

Any engine in temporary replacement service shall be immediately shut down if the APCD determines that the requirements of this condition have not been met. This condition does not apply to engines that have experienced a cracked block (unless under manufacturer's warranty), to engines for which replacement parts are no longer available, or new engine replacements {including "reconstructed" engines as defined in the ATCM}. Such engines are subject to the provisions of New Source Review and the new engine requirements of the ATCM.

D.6 **Permanent Engine Replacements.** The permittee may install a new engine in place of a permitted E/S engine, fire water pump engine or engine used for an essential public service that breaks down and can not be repaired, without first obtaining an ATC permit only if the requirements (a – e) listed herein are satisfied.

(a) The permitted stationary diesel IC engine is an E/S engine, a fire water pump engine or an engine used for an essential public service (as defined by the APCD).

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

(c) The facility provides "good cause" (in writing) for the immediate need to install a permanent replacement engine prior to the time period before an ATC permit can be obtained for a new engine. The new engine must comply with the requirements of the ATCM for new engines. If a new engine is not immediately available, a temporary engine may be used while the new replacement engine is being procured. During this time period, the temporary replacement engine must meet the same guidelines and procedures as defined in the permit condition above (*Temporary Engine Replacements - DICE ATCM*).

(d) An Authority to Construct application for the new permanent engine is submitted to the APCD within 15 days of the existing engine being replaced and the APCD permit for the new engine is obtained no later that 180 days from the date of engine replacement (these timelines include the use of a temporary engine).

(e) For each permitted engine to be permanently replaced pursuant to the condition, the permittee shall submit a completed *Permanent IC Engine Replacement Notification* form (Form ENF-96) within 14 days of either the permanent or temporary engine being installed. This form may be sent hardcopy, or can be faxed (fax: 961-8801) to the APCD (Attn: Engineering Supervisor).

Any engine installed (either temporally or permanently) pursuant to this permit condition shall be immediately shut down if the APCD determines that the requirements of this condition have not been met.

D.7 **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 APCD immediately upon detection of the violation and shall be subject to APCD enforcement action.

D.8 **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 APCD immediately after they become aware that the exemption no longer applies and shall demonstrate compliance within 180 days after notifying the APCD.

D.9 **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 an APCD Authority to Construct permit to ensure compliance with the emission control requirements and hour limitations governing ISC engines.

AIR POLLUTION CONTROL OFFICER

NOV 05 2008

Date

NOTES:

(a) Permit Triennial Reevaluation Due Date: July 2011

(b) Part 70 Operating Permit Expiration Date: July 2011

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

AQ Engineer 10/28/8 Engineering Supervisor 10/28/08

10.0 Attachments

10.1 Emission Calculation Documentation

10.2 Equipment List

10.3 List of Insignificant Emission Units

10.4 IDS Data Base Emission Table

10.5 Facility Map/Plot Plan

10.6 Permittee Comments and APCD Responses

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10.1 EMISSION CALCULATION DOCUMENTATION

Landfill Gas Controlled

	LFG Captured scf/day		
	January 2007	April 2007	September 2007
	480544	412253	438234
	480383	416370	430736
	461976	414000	432071
	421901	411886	442508
	443000	409762	442538
	442656	407476	433583
	443835	404802	443622
	444077	402968	448255
	442907	286544	443619
	421647	205955	444086
	454724	271380	448937
	444658	413284	448858
	443009	406702	449910
	443525	406691	448841
	443624	402935	448692
	447368	398693	452855
	443586	301952	450524
	444121	443329	451873
	442655	440394	432681
	439700	434696	455999
Average	**446494.8**	**384603.6**	**444421.1**

Convert m^3 to kg	
379.62122	scf/lbmol
0.3048	m/ft
86.2	lb/lb-mol
0.4535923	kg/lb
0.2749302	m^3/kg NMOC

425173.17 ft^3 lfg captured/day

12039.563 m^3 lfg captured/day

Assume: 2420 C_{NMOC} *(ppm as hexane)*

29.135743 m^3 NMOC captured/day

105.97506 kg NMOC captured/day

38.680897 Mg NMOC captured/year

42.642 ton NMOC captured/year

10.2 Equipment List

PT-70/Reeval 10318 R2 / FID: 08704 City of Santa Maria Landfill / SSID: 08713

A PERMITTED EQUIPMENT

1 Emergency Standby Diesel Engine #9

Device ID #	107057	*Maximum Rated BHP*	240.00
Device Name	Emergency Standby Diesel Engine #9	*Serial Number*	45986955
Engine Use	Electrical Power	*EPA Engine Family Name*	413
Manufacturer	Cummins	*Operator ID*	
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 facility in the event of loss of power from the grid.		

2 Emergency Standby Diesel Engine #10

Device ID #	107058	*Maximum Rated BHP*	277.00
Device Name	Emergency Standby Diesel Engine #10	*Serial Number*	46078457
Engine Use	Electrical Power	*EPA Engine Family Name*	ICEXC0505ABA
Manufacturer	Cummin	*Operator ID*	
Model Year	2001	*Fuel Type*	CARB Diesel - ULSD
Model	6CTA8.3-02		
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.		

3 Landfill Gas Collection System

3.1 Landfill Gas Extraction Wells

Device ID #	**105956**	***Device Name***	**Landfill Gas Extraction Wells**
Rated Heat Input		*Physical Size*	48.00 Total Wells
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	48 wells (as of December 2007)		

3.2 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*	
Location Note			
Device Description			

3.3 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 of 30 inches diameter x 96 inches high		

3.4 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.		

4 Landfill Gas Control System

4.1 Enclosed Ground Flare

Device ID #	**109207**	***Device Name***	**Enclosed Ground Flare**
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	Overall dimensions 27 feet high x 7.5 feet OD.		

4.2 Enclosed Ground Flare

Device ID #	**006910**	***Device Name***	**Enclosed Ground Flare**
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	The flare is approximately 6 feet in diameter by 24 feet high. Backup to the 20 MMBtu/hr flare.		

4.3 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 flare		

5 LFG Condensate System

5.1 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 water from the tank to the flare.		

5.2 Condensate Water Holding Tank

Device ID #	**105961**	***Device Name***	**Condensate Water Holding Tank**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	1,050 gallon capacity, 5'-1" diameter by 8'-1" high. A 1,300 gallon secondary container is placed around the water tank. Condensate water collected in the tank is disposed of by injection into the flare.		

B EXEMPT EQUIPMENT

1 Propane System

Device ID #	**103980**	***Device Name***	**Propane System**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	Yes	*APCD Rule Exemption:*	
Location Note			
Device Description	Propane tanks equipped with regulators set at different pressures. The pressure in the piping will indicate which tank is in operation (primary/high pressure or secondary/low pressure).		

10.3 LIST OF INSIGNIFICANT EMISSION UNITS [a]

1. Propane, two storage tanks (Rule 202.V.8)

2. Solvent use (wipe cleaning only)

[a] Each unit has a PTE < 2 TPY of any regulated pollutant and < 5 TPY of any regulated HAP.

10.4 IDS Data Base Emission Tables

Table 1
Permitted Potential to Emit (PPTE)

	NOx	ROC	CO	SOx	PM	PM_{10}
lb/day	39.74	451.59	211.38	24.60	10.51	10.51
tons/year	4.46	82.01	35.14	4.49	1.76	1.76

Table 2
Facility Potential to Emit (FPTE)

	NOx	ROC	CO	SOx	PM	PM_{10}
lb/day	39.74	451.59	211.38	24.60	10.51	10.51
tons/year	4.46	82.01	35.14	4.49	1.76	1.76

Table 3
Federal Pt-70 Facility Potential to Emit (PT70 FPTE)

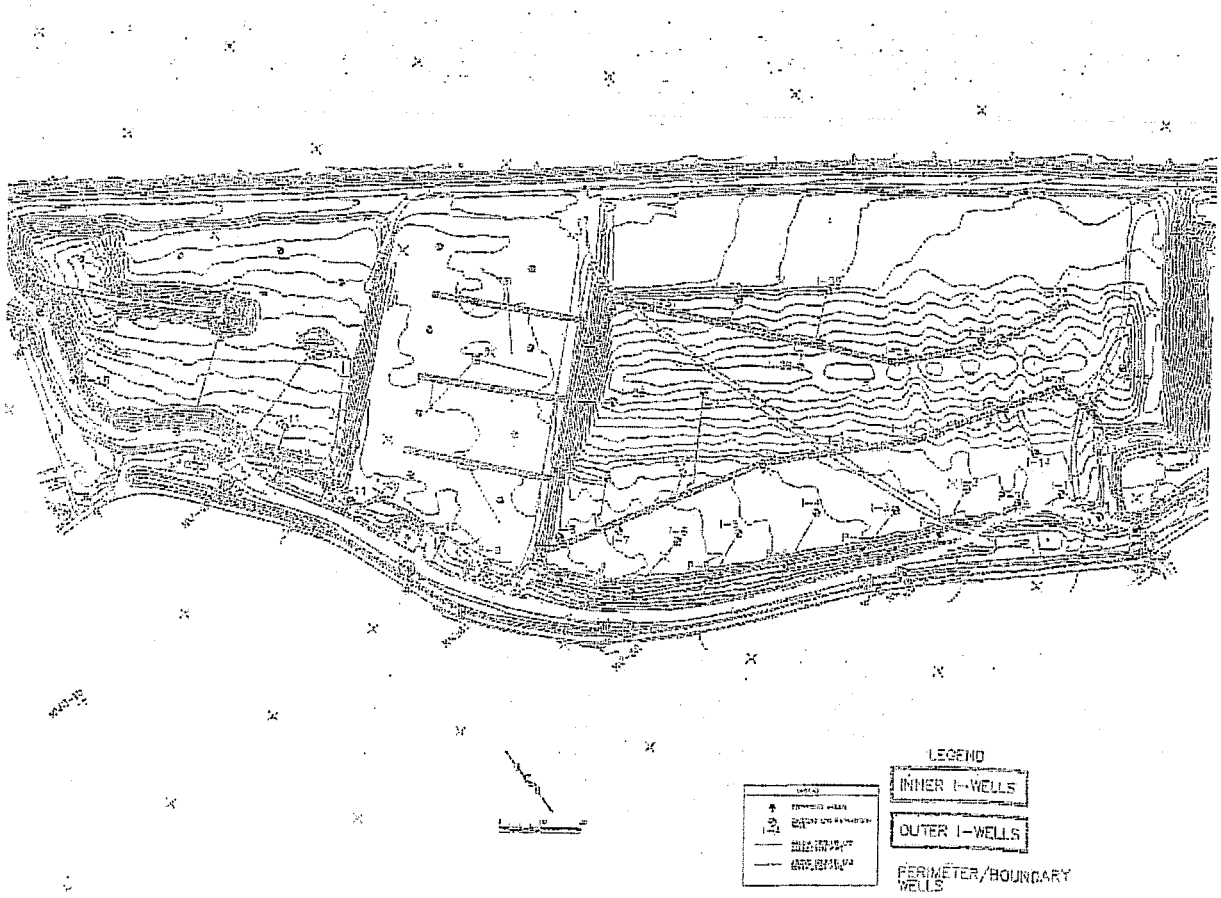
	NOx	ROC	CO	SOx	PM	PM_{10}
lb/day	39.74	16.68	211.38	24.60	10.51	10.51
tons/year	4.46	2.64	35.14	4.49	1.76	1.76

Table 4
Facility Net Emission Increase (FNEI-90)

	NOx	ROC	CO	SOx	PM	PM_{10}
lb/day	24.01	25.92	192.00	24.58	9.60	9.60
tons/year	4.38	4.73	35.04	4.49	1.75	1.75

10.5 Facility Map/Plot Plan

City of Santa Maria Landfill



10.6 Permittee Comments and APCD Responses

No.	*Section*	*Subject*	*CSML Comment*	*APCD Response*
1.	9.C.1	Condensate Usage	The use of condensate for dust control does not have blanket approval, but the APCD has included a mechanism for obtaining written approval prior to use.	Agreed.
2.	3.2.2	Gas Treatment	Language in 3.2.2 was not changed to differentiate between the City being required to treat the gas prior to sending it to Marian Hospital and Janechek & Associates treating the gas because it is required before using it in the co-generation engine. There are several other references to Marian/J&A having separate permit requirements, so we are assuming this language will not adversely impact the City's compliance since there are not conditions relevant to gas treatment.	Treating landfill gas before it is sent to Marian Medical Center is required by Subpart WWW. Because the collection and control equipment is owned and operated by Janechek and Associates compliance with this requirement is the responsibility of Janechek and Associates.

No.	Section	Subject	CSML Comment	APCD Response
3.	Tables 5.1-1 through 5.1-3	SO_x emission limits	All information on permitted emission limits came from the ATC and PTO, except for SO_x emission limits for flare 1.	SO_x emission limits are based on the landfill gas sulfur limit. The landfill gas sulfur limit was reduced to 100 ppmv by ATC 12037. Per City comments on page 5-2 of the Title V Permit Renewal Application the landfill gas sulfur limit was made consistent for both flares.
4.	Table 5.1-4	Landfill Emissions	Table 5.1-4 values are default values from AP-42, which are higher than actual for our site. Calculations based on actual data do and will vary.	Agreed. The emissions calculated in Table 5.1-4 are not an emission limit, but are only an estimation of landfill emissions. The emissions calculations use default values to provide a conservative estimate.
5.	9.C.2	Thermocouple Selection	Flare thermocouple selection is to be based on procedures in the O&M Manual. Records of thermocouple selection are required when the thermocouple is changed. Records are not required when checking for thermocouple selection and the controller is set back to the original thermocouple within 15 minutes.	Agreed.
6.	9.C.2	Combustion Temperature	There is still a condition that combustion temperature not deviate from the set point by more than 5%, but now with the understanding it is based on a 1	Agreed.

No.	Section	Subject	CSML Comment	APCD Response
			hour period instead of 15 minutes.	
7.	9.C.1	Condensate Injection	Condensate injection is not to exceed 1 gpm for either flare and records are to be kept daily whenever the flares operate (i.e. whenever injection occurs).	Records of condensate injection are required for each day the flare operates. If no condensate injection is recorded on a day that a flare is operating, it will be assumed that no condensate was injected on that day.
8.	9.C.2	Visible Emissions	Visible emissions inspections are still required for each quarter the flare operates. We suggest this be done upon start up of each flare so as to ensure that it gets done since neither flare operates continuously.	Agreed. Performing a visible emissions inspection upon the first start up of each quarter is a good way to ensure compliance with this requirement.