



SEP 10 2013

Mr. Michael Carroll
North County Sanitary Landfill
PO Box 1810
Stockton, CA 95201

Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)
District Facility # N-1119
Project # N-1130071

Dear Mr. Carroll:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project incorporates the California Air Resources Board regulation (Methane Emissions from Municipal Solid Waste Landfills) into the current permit. The facility is also removing a limit on the number of vapor extraction wells, limiting the flare temperature to the recent source test, clarifying the recording of temperatures every 15 minutes, inspecting the gas collection system for leaks and operating the gas collection system under negative pressure.

After addressing all comments made during the 45-day EPA comment period, the District intends to issue the Authority to Construct with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Seyed Sadredin

Executive Director/Air Pollution Control Officer

Northern Region

4800 Enterprise Way
Modesto, CA 95356-8718

Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)

1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region

34946 Flyover Court
Bakersfield, CA 93308-9725

Tel: 661-392-5500 FAX: 661-392-5585

SEP 10 2013

Mr. Michael Carroll
Page 2

Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Warner", is positioned above the printed name.

David Warner
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

San Joaquin Valley Air Pollution Control District

Application Review for Methane Emissions from Municipal Solid Waste Landfills

Facility Name: San Joaquin County,
Department of Public Works
Solid Waste Division – North
County landfill

Date: March 19, 2013

Mailing Address: P O Box 1810
Stockton, CA 95201

Engineer: Dan Klevann
Lead Engineer: Allan Phillips

Contact Person: Michael Carroll
Telephone: 209-468-8504
Fax: 209-468-3078

Application #(s): N-1119-1-9

Project #: N-1130071

Deemed Complete: January 31, 2013

I. PROPOSAL:

San Joaquin County, North County landfill (NC) is requesting that an Authority to Construct (ATC) be issued for their existing municipal solid waste (MSW) landfill for various modifications. The California Air Resources Board (CARB) regulation (Methane Emissions from Municipal Solid Waste Landfills - California Code of Regulations Title 17, Subchapter 10, Article 4, Subarticle 6, sections 95460 through 95476) went into effect on June 17, 2010. The District entered into a Memorandum of Understanding (MOU) with CARB on October 20, 2011 to implement and enforce the methane emission regulation. This regulation is being enforced through the District's permitting program.

Based on the information provided by the applicant, the District has determined that the MSW facilities landfill gas collection and control system (GCCS) was installed prior to the date of the ARB regulation. NC is not installing additional equipment or changing the method of operation. Therefore, an ATC will be issued which incorporates the CARB requirements for controlling methane emissions from the existing MSW landfill facility.

The facility has also requested some changes to the existing permit conditions. Those changes are to remove the limit for the number of wells since the wells are not used in calculating landfill emissions, limiting the minimum flare temperature to the most recent source test, recording temperatures every 15 minutes, inspecting the landfill gas collection system for leaks, and operating the landfill gas system under negative pressure.

NC has received their Title V Permit on June 30, 2002. This modification can be classified as a Title V minor modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. NC must apply to administratively amend their Title V permit.

II. APPLICABLE RULES:

Rule 2010: Permits Required (12/17/92)
Rule 2201: New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520: Federally Mandated Operating Permits (6/21/01)
Rule 4101: Visible Emissions (2/17/05)
Rule 4102: Nuisance (12/17/92)
Rule 4642: Solid Waste Disposal Sites (4/16/98)
California Health & Safety Code Section 41700 (Public Nuisance)
California Health & Safety Code Section 42301.6 (School Notice)
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines
California Code of Regulations Title 17, Subchapter 10, Article 4, Subarticle 6, sections 95460 through 95476: Methane Emissions from Municipal Solid Waste Landfills

III. PROJECT LOCATION:

The facility is located at 17720 E Harney Lane in Lodi, California.

IV. PROCESS DESCRIPTION:

The facility operates a MSW landfill. The facility has provided information to indicate that the quantity of waste in place is greater than 450,000 tons. The landfill is equipped with a landfill gas collection and control system (N-1119-1).

V. EQUIPMENT LISTING:

Current PTO:

N-1119-1-4: 12.4 MILLION CUBIC METER CAPACITY (185 ACRES) MUNICIPAL SOLID WASTE LANDFILL WITH A LANDFILL GAS COLLECTION SYSTEM SERVED BY A 24.4 MMBTU/HR PEI MODEL FL-90-32-E ENCLOSED GROUND FLARE

ATC:

N-1119-1-9: MODIFICATION OF 12.4 MILLION CUBIC METER CAPACITY (185 ACRES) MUNICIPAL SOLID WASTE LANDFILL WITH A LANDFILL GAS COLLECTION SYSTEM SERVED BY A 24.4 MMBTU/HR PEI MODEL FL-90-32-E ENCLOSED GROUND FLARE: ADD REQUIREMENTS FOR METHANE CONTROL PER CARB REGULATION, ADJUST FLARE TEMPERATURE, CLARIFY FLARE RECORDS, AND CLARIFY LEAK CRITERIA.

VI. EMISSION CONTROL TECHNOLOGY EVALUATION:

The landfill is equipped with a landfill gas collection and control system.

VOCs are emitted at landfills when decomposing material that is collected by the landfill offgasses. This gas is mainly methane gas which is not considered an ozone precursor, but a significant portion of this gas is also non-methane organic hydrocarbon (NMOC) which does contribute to the formation of ozone. The gas is collected and incinerated in an enclosed flare, which results in the formation of combustion pollutants which includes NO_x, SO_x, PM₁₀, CO, and any remaining uncombusted VOCs. However, the flare is at least 98% efficient at destroying VOC emissions, therefore the benefit of VOC reduction outweighs the resulting criteria pollutant formation. Further, the flare meets the latest BACT standards, as discussed in Section VIII below.

It is noted that 40 CFR 60 Subpart WWW requires a design check of the LFG collection and control system to show that it is indeed designed properly to achieve this level of control. However, NC is not subject to the full requirements of Subpart WWW, therefore no design check is required. NC will continue to monitor NMOC emissions utilizing Tier 2 methods as described in Subpart WWW and the operating permit, and will be required to submit design check specifications upon becoming subject to the full requirements of Subpart WWW.

The methane that is emitted from the decomposition of wastes is controlled by being collected and burned in a landfill gas collection system and enclosed flare.

VII. CALCULATIONS:

A. Assumptions

- Facility operates 24 hours per day (worst-case)
- LPG is only used to ignite the flare; landfill gas is of sufficient quality that a sustained flame is possible without supplemental fuel (applicant proposed)
- Maximum flowrate for the collection system is 800 scfm (applicant proposed)
- Flare's maximum firing rate is 24.4 MMBtu/hr (applicant proposed)
- Effluent flowrate of flare is 10,900 scfm (based on 2007 source test, worst-case low LFG methane content extrapolation)

- All NMOC in LFG are considered VOC, and measured as hexane unless otherwise stated (worst-case)
- Molecular weight of Hexane = 86.18 lb/lb-mole (AP-42, 2.4.4.2 and Periodic Table of the Elements)
- Standard molar volume of gas = 379.5 ft³/lb-mole
- Landfill is expected to close in the year 2037 with NMOC emission rate of 145 megagrams/year (applicant proposed)
- As shown in Section VII.C.1 below, emissions are based on maximum firing for 8,760 hours per year, therefore these emissions are worst-case

B. Emission Factors

Emission factors are from previous project N-1060159 which is the original permitting action for the LFG collection and control system.

Pre-project NMOC generation rate is 29.0 megagram/year (from the Tier 2 report for 2006)

Post-project maximum NMOC concentration will be based on the worst case of 20 ppmv NMOC @ 3% O₂ or 98% control from the flare, which is calculated and discussed in the calculation section below (applicant proposed)

Flare Emission Factors

Pollutant	EF (lb/MMBtu)	Source
NO _x	0.06	applicant proposed
SO _x	0.03	applicant proposed
PM ₁₀	0.034	AP-42, Table 2.4-5 (11/98)
CO	0.09	applicant proposed

PM₁₀ Emissions from Earthmoving Activities – Intermediate and Final Covering

PM₁₀ emissions are calculated according to US EPA's AP-42 equation for material handling and drop-equation in Section 13.2.4.

$$E = k(0.0032) \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \text{ (pound [lb]/ton)}$$

Where k is equal to 1 (worst-case particle size), U is equal to 15 mph (worst-case for SJV wind patterns), and M is equal to 3% (driest the soil would be during summer months). Inputting these values into the above equation yields an emission factor of **0.008 lbs PM₁₀/ton** of soil moved.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

PE1 is based on PE2 from project, N-1071796.

Landfill Gas Flare Emissions

Daily Emissions

Pollutant	EF (lb/MMBtu)	Flare Rating (MMBtu/hr)	Hours of Operation/day	lb pollutant/day
NOx	0.06	24.4	24	35.1
SOx	0.03	24.4	24	17.6
PM10	0.034	24.4	24	19.9
CO	0.09	24.4	24	52.7

Annual Emissions

Pollutant	lb/day	day/year	lb pollutant/yr
NOx	35.1	365	12,812
SOx	17.6	365	6424
PM10	19.9	365	7264
CO	52.7	365	19,236

The applicant states that at the end of the useful life of the landfill, NMOC emissions are estimated to be 145 megagrams of VOC per year. PE1 will be based upon this value in order to avoid the facility having to re-apply for VOC emissions every year as waste is collected and NMOC emissions are increased. The applicant is required to calculate NMOC on an annual basis by the Integrated Waste Management Board, therefore these measurements will be used to show that NMOC does not exceed 145 megagrams.

The flare manufacturer has guaranteed that the device will have a VOC control destruction efficiency of 98%. Therefore:

$145,000,000 \text{ g/year} \times (1 - 0.98) \div 453.6 \text{ g/lb} = 6,393 \text{ lb VOC/year}$, and 17.5 lb VOC/day (based upon 365 days/year)

Establishing the daily emission limit for VOC emissions from flare based on 20 ppmv NMOC emissions:

Per the NSPS, landfill facilities may comply with the federal requirements by showing that VOC emissions are less than 20 ppmv @ 3% O₂ should the flare fail to show 98% control.

Concentration (ppmv) \times Effluent Flow Rate (ft³/min) \times 1 lb-mole/379.5 ft³ \times Mol. Wt. (lb/lb-mole) \times 1440 min/day

$20 \text{ ppmv} \times 1 \text{ part}/1,000,000 \text{ parts} \times 10,200 \text{ scfm} \times 1 \text{ lb-mole}/379.5 \times 86.18 \text{ lb/lb-mole} \times 1440 \text{ min/day} = 66.7 \text{ lb/day}$

Annual emissions will therefore be: $66.7 \text{ lbs VOC/day} \times 365 \text{ days/year} = 24,349 \text{ lbs VOC/year}$

Since the existing DEL of 17.5 lb VOC/day is less than 66.7 lbs per day, the existing DEL will be replaced with 66.7 lbs VOC/day as the site's maximum potential to emit. However, the following condition will replace the existing DEL-enforcing condition that requires 98% VOC control.

- The VOC destruction efficiency for the flare shall be at least 98% by weight or VOC emissions shall not exceed 20 ppmv @ 3% O₂ as hexane. [District NSR Rule] Y

PM10 Emissions from Earthmoving Activities

The following is provided to show the recalculation of the baseline emissions for PM10 emissions from earthmoving activities at this landfill. The new baseline emissions are based on current AP-42 methodology in Section 13.2.4 (11/98).

The applicant has stated that during final closure activities, up to 20,000 tons of soil may be moved per day. Therefore maximum, worst-case emissions are calculated:

$0.008 \text{ lb PM10/ton of soil moved} \times 20,000 \text{ tons soil moved/day} = 160 \text{ lbs PM10/day}$, and $58,400 \text{ lbs PM10/year}$ (based on 365 days of final cover operations per year).

2. Post Project Potential to Emit (PE2)

All criteria pollutant emissions for the LFG-fired flare remain the same as PE1.

PM10 Emissions from Earthmoving Activities

Emissions of PM10 from earthmoving activities will remain the same as calculated in PE1. The applicant is not proposing to increase the amount of soil moved.

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Pre Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
N-1119-1-3	12,812	6,424	65,664	19,236	24,349
Pre Project SSPE (SSPE1)	12,812	6,424	65,664	19,236	24,349

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

SSPE2 is identical to SSPE1 as presented above.

5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.24.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site."

Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Pre-Project SSPE (SSPE1)	12,812	6,424	65,664	19,236	24,349
Post Project SSPE (SSPE2)	12,812	6,424	65,664	19,236	24,349
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source	No	No	No	No	Yes

As seen in the table above, the facility is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase	6	12	3	10	33	33	21,358
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	N	N	N	N	N	N	N

As shown above, the facility is not an existing major source for PSD for at least one pollutant. Therefore the facility is not an existing major source for PSD.

6. Baseline Emissions (BE)

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22

Since this facility is a non-Major Source, BE is equivalent to PE1 as calculated in Section VII.C.1.

BE – LFG-fired Flare

Pollutant	lb pollutant/yr
NOx	12,812
SOx	6,424
PM10	7,264
CO	19,236
VOC	6,393

BE for PM10 emissions from earthmoving activities is 58,400 lbs PM10/year.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

For existing emissions units, the increase in emissions is calculated as follows.

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions
UBC = Unused baseline capacity

If there is no increase in design capacity or potential to emit, the PAE is equal to the annual emission rate at which the unit is projected to emit in any one year, selected by the operator, within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity or potential to emit). If detailed PAE are not provided, the PAE is equal to the PE2 for each permit unit.

The BAE is calculated based on historical emissions and operating records for any 24 month period, selected by the operator, within the previous 10 year period (5 years for electric utility steam generating units). The BAE must be adjusted to exclude any non-compliant operation emissions and emissions that are no longer allowed due to lower applicable emission limits that were in effect when this application was deemed complete.

UBC: Since this project does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate, the UBC is the portion of PAE that the emission units could have accommodated during the baseline period.

The project's combined total emission increases are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since none of the Federal Major Modification Thresholds are being surpassed with this project, this project does not constitute a Federal Major Modification and no further analysis is required.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀
- Greenhouse gases (GHG): CO₂, N₂O, CH₄, HFCs, PFCs, and SF₆

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

I. Potential to Emit for New or Modified Emission Units vs PSD Major Source Thresholds

As a screening tool, the project potential to emit from all new and modified units is compared to the PSD major source threshold, and if total project potential to emit

from all new and modified units is below this threshold, no further analysis will be needed.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination: Potential to Emit (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	6	12	3	10	33	33	21,358
PSD Major Source threshold	250	250	250	250	250	250	100,000
New PSD Major Source?	N	N	N	N	N	N	N

As shown in the table above, the project potential to emit, by itself, does not exceed any of the PSD major source thresholds. Therefore Rule 2410 is not applicable and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix I.

VIII. COMPLIANCE

Rule 2010 – Permits Required

The provisions of this rule apply to any person who plans to or does operate, construct, alter, or replace any source operation, which may emit air contaminants or may reduce the emission of air contaminants.

Pursuant to Section 4.0, a written permit shall be obtained from the APCO. No Permit to Operate shall be granted either by the APCO or the Hearing Board for any source operation described in Section 3.0 constructed or installed without authorization as required by Section 3.0 until the information required is presented to the APCO and such source operation is altered, if necessary, and made to conform to the standards set forth in Rule 2070 (Standards for Granting Applications) and elsewhere in these rules and regulations.

Municipal Solid Waste landfills with more than 450,000 tons of waste in place are required to obtain a District permit to allow the District to implement and enforce the CARB landfill methane regulation.

Rule 2201 - New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As discussed in Section I above, there are no new emissions units associated with this project. Therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

For all modified emissions units associated with this project, perform the AIPE calculation for all pollutants emitted by the emissions units. Then cite which pollutants trigger BACT for which units.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification for NOX emissions. Therefore BACT is not triggered for any pollutant.

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	12,812	6,424	65,664	19,236	24,349
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	Yes	No	Yes

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for VOC and the SSPE2 is greater than the offset thresholds. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

$$\text{Offsets Required (lb/year)} = (\sum[\text{PE2} - \text{BE}] + \text{ICCE}) \times \text{DOR}, \text{ for all new or modified emissions units in the project,}$$

Where,

PE2 = Post Project Potential to Emit, (lb/year)

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

$$BE = HAE$$

As calculated in Section VII.C.6 above, the BE from this unit are equal to the PE1 since the unit is a Clean Emissions Unit.

PM10 Offsets Required

$$\text{Offsets Required (lb/year)} = ([PE2 - BE] + ICCE) \times DOR$$

$$\begin{aligned} PE2 \text{ (PM10)} &= 65,664 \text{ lb/year} \\ BE \text{ (PM10)} &= 65,664 \text{ lb/year} \\ ICCE &= 0 \text{ lb/year} \end{aligned}$$

Assuming an offset ratio of 1.5:1, the amount of PM10 ERCs that need to be withdrawn is:

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([65,664 - 65,664] + 0) \times 1.5 \\ &= 0 \times 1.5 \\ &= 0 \text{ lb PM10/year} \end{aligned}$$

VOC Offsets Required

$$\text{Offsets Required (lb/year)} = ([PE2 - BE] + ICCE) \times DOR$$

$$\begin{aligned} PE2 \text{ (VOC)} &= 24,349 \text{ lb/year} \\ BE \text{ (VOC)} &= 24,349 \text{ lb/year} \\ ICCE &= 0 \text{ lb/year} \end{aligned}$$

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([24,349 - 24,349] + 0) \times DOR \\ &= 0 \text{ lb VOC/year} \end{aligned}$$

As demonstrated in the calculations above, the amount of offsets is zero. Therefore, offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb/day.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	12,812	12,812	20,000 lb/year	No
SO _x	6,424	6,424	54,750 lb/year	No
PM ₁₀	65,664	65,664	29,200 lb/year	No
CO	19,236	19,236	200,000 lb/year	No
VOC	24,349	24,349	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	12,812	12,812	0	20,000 lb/year	No
SO _x	6,424	6,424	0	20,000 lb/year	No
PM ₁₀	65,664	65,664	0	20,000 lb/year	No
CO	19,236	19,236	0	20,000 lb/year	No
VOC	24,349	24,349	0	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

2. Public Notice Action

As discussed above, this project will not result in emissions, for any pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

The following conditions will serve as DELs for the landfill:

- Emission rates from the flare serving the LFG collection system shall not exceed any of the following limits: NO_x (as NO₂) – 0.06 lb/MMBtu; CO – 0.09 lb/MMBtu; PM₁₀ – 0.034 lb/MMBtu; or SO_x (as SO₂) – 0.03 lb/MMBtu. [District Rule 2201]
- VOC emissions (as hexane) from the flare serving the LFG collection system shall not exceed 66.7 lbs VOC/day and 24,349 lbs VOC/year. [District Rule 2201]
- PM₁₀ emissions from the application of soil for both cover and closure activities shall not exceed 160 lb PM₁₀/day and 14,600 lb PM₁₀ per quarter, calculated at least once per quarter. [District NSR Rule] Y
- PM₁₀ emissions from the application of soil for both cover and closure activities shall be calculated as follows: (EF) x A where (EF) is calculated as $(0.01/((M/2)^{1.4}))$. M represents the moisture content of the soil in percent, determined at least once monthly by heating a representative sample to dryness and comparing the pre and post-drying mass. A represents the tons of soil moved per quarter, determined by counting the number of soil-moving vehicles onsite and the maximum weight of soil carried by each vehicle. [District NSR Rule]

E. Compliance Assurance

1. Source Testing

Per District Policy APR-1705 Section II, source testing will be required for VOC emissions in order to determine if the proposed destruction efficiency of 98% is met. Additionally, annual source testing will be required since the production rate of LFG gas will vary significantly for a landfill operation over time. The following condition will be placed on the Authority to Construct permit:

- Source testing on the flare shall be performed to demonstrate compliance with the NO_x and CO limits, and the VOC destruction efficiency of 98% as required by this permit shall be conducted annually. [District NSR Rule] Y
- VOC emissions shall be measured by USEPA Test Method 18 or 25. [District Rule 1081]
- Source testing for NO_x shall be conducted using CARB Method 7 or Method 20. [District Rule 1081] Y
- Source testing for CO shall be conducted using EPA Method 10 or 10B, CARB Methods 1 through 5 with 10, or CARB Method 100. [District Rule 1081] Y

2. Monitoring

The following monitoring conditions, taken from FYI-92 (which references 40 CFR 60 Subparts Cc and WWW discussed below), will ensure that the assumptions made in this evaluation are valid:

- Gas collection system shall be operated in a manner which maximizes the amount of landfill gas extracted while preventing overdraw that can cause fires or damage the gas collection system. [District Rule 2201]
- During maintenance of the gas collection system or incineration device, emissions of landfill gas shall be minimized during shutdown. [District Rules 2020, 7.3 and 2201]
- Maintenance is defined as work performed on a gas collection system and/or control device in order to ensure continued compliance with District rules, regulations, and/or Permits to Operate, and to prevent its failure or malfunction. [District Rule 2201]
- The gas collection system shall be operated such that the concentration of total organic compounds (as CH₄) shall not exceed 1000 ppmv at any point along the gas transfer path of the gas collection system. [District Rule 2201]
- Landfill gas line from collection header shall be equipped with a gas flow rate measurement device. [District Rule 2201]
- The entire gas collection system shall be inspected for leaks with a portable analyzer in accordance with EPA Method 21 at least quarterly. After four successful inspections, the frequency shall be annually. If a leak is detected, quarterly inspections shall resume. A leak is defined as a measurement in excess of 1,000 ppm (measured as methane) above background when measured at a distance of one (1) centimeter from the potential source. Leaks shall be repaired within 15 calendar days after it is detected. [District Rule 2201]
- The permittee shall notify the APCO by telephone at least 24 hours before performing any maintenance work that requires the system to be shutdown. The notification shall include a description of work, the date work will be performed and the amount of time needed to complete the maintenance work. [District Rule 2201]
- Permittee shall maintain records of system inspections including: date, time and inspection results. [District Rule 1070, 4.0]

- Permittee shall maintain daily records of landfill gas flow rate to any control device(s). [District Rule 1070, 4.0]
- Permittee shall maintain records of maintenance related or other collection system and control device downtime, including individual well shutdown. [District Rule 1070, 4.0]
- Permittee shall maintain such records for a period of five years from the date of each entry and shall make such records readily available for District inspection upon request. [District Rule 1070, 4.0]

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition will appear on the permit to operate:

- Each month the heat content of the landfill gas combusted in the flare shall be measured, and the flare firing rate shall be calculated in MMBtu/hr and recorded. [District NSR Rule] Y
- The facility shall install and maintain in proper operating condition a gas flow meter with a continuous recording device which measures the flowrate of landfill gas consumed. [District NSR Rule] Y
- Permittee shall maintain records of system inspections including: date, time and inspection results. [District Rule 1070] Y
- Permittee shall maintain records of maintenance related or other collection system and control device downtime, including individual well shutdown. [District Rule 1070] Y
- All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Y

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2520 - Federally Mandated Operating Permits

MSW landfills, other than those subject to NSPS Subpart WWW or Cc are not required to obtain a Title V permit. NC has received their Title V Operating Permit. This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;

2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC). Therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment/minor modification application.

Rule 4101 - Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). As long as the flare is maintained and operated per the manufacturer's recommendations, no visible emissions are expected.

Rule 4102 - Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new

source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

There is no increase in emissions associated with this project, therefore there is no increase in risk. An HRA is not required.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

PM10 emissions from the flare itself are calculated to be 19.9 lb/day, or 0.014 lb/minute (based on 1440 minutes per day). The applicant is proposing a maximum flowrate of 800 dscf/minute.

$$0.014 \text{ lb PM10/minute} \times 7000 \text{ gr/lb} \div 800 \text{ dscf/minute} = 0.1 \text{ gr/dscf}$$

Compliance with this rule is expected.

Rule 4301 Fuel Burning Equipment

Per Section 4.1 of this rule, fuel burning equipment used primarily for the destruction of air contaminants will be exempt from the requirements of this rule. Since the LFG flare is used to incinerate VOC emissions from the landfill site, it is considered a control device. Rule 4301 does not apply.

Rule 4311 Flares

Section 4.2 of this rule exempts flares that are operated at municipal solid waste sites subject to the requirements of 40 CFR Subpart WWW from its requirements. This rule does not apply.

Rule 4642 Solid Waste Disposal Sites

The requirements of this rule only applies to areas that have been designated as closed by CCR Title 14. All of the disposal areas in this landfill are considered active. The facility has not submitted documentation to requesting any areas of the landfill to be closed, therefore per Section 4.1.1, this rule does not apply.

California Code of Regulations Title 17, Subchapter 10, Article 4, Subarticle 6, sections 95460 through 95476: Methane Emissions from Municipal Solid Waste Landfills

The purpose of this CARB regulation is to reduce methane emissions from municipal solid waste landfills pursuant to the California Global Warming Solutions Act of 2006. Facilities that have MSW landfills with greater than 450,000 tons waste-in-place are required to calculate the landfill gas heat input capacity per section 95471(b) of the regulation. The facility has submitted documentation of the waste-in-place as well as the landfill gas heat input capacity see appendix I. The current average heat input rate for landfill gas collected from this site is 9.84 MMBtu/hour.

Gas Collection and Control System:

The facility currently has a collection and control system permitted with the District (N-1119-1). The system controls the methane emissions from the surface of the landfill. The landfill is required to operate the gas collection system continuously pursuant to Section 95464(b)(1)(A), except during maintenance, repairs, and temporary shutdowns as allowed pursuant to Section 95454(e).

Landfill gas collection system wellheads must be operated under vacuum (Section 95464(c)). Monthly wellhead monitoring is required (Section 95469(c)) to demonstrate compliance with this requirement.

Any landfill gas collection system components downstream of the blower that are intended to be operated under positive pressure have a component leak limit of 500 ppmv, measured as methane (Section 95464(b)(1)(B)). Section 95469(b)(3) requires quarterly leak checks to demonstrate compliance with this limit.

The gas must be sent to a control device or devices that meet the requirements of section 95464. CCL has installed an enclosed ground flare. The enclosed flare must meet the requirements in Section 95464(b)(2), including compliance with a methane destruction efficiency of at least 99% by weight. Compliance with this limit is demonstrated by annual source testing. The flare must also be operated within the temperature range established during the initial source test and this temperature and landfill gas flow rate must be monitored continuously per Section 95469(b)(1).

Surface methane emissions:

Section 95465 contains the two landfill surface emission standards: the instantaneous surface emission limit is 500 ppmv as methane; the integrated surface emission limit is 25 ppmv as methane for each grid. Section 95469(a) requires quarterly surface monitoring to demonstrate compliance with these standards.

Records:

According to Section 95470 the landfill is required to keep records of the following:

(A) All gas collection system downtime exceeding five calendar days, including individual well shutdown and disconnection times, and the reason for the downtime.

(B) All gas control system downtime in excess of one hour, the reason for the downtime, and the length of time the gas control system was

shutdown.

(C) Expected gas generation flow rate calculated pursuant to section 95471(e).

(D) Records of all instantaneous surface readings of 200 ppmv or greater; all exceedances of the limits in sections 95464(b)(1)(B) or 95465, including the location of the leak (or affected grid), leak concentration in ppmv, date and time of measurement, the action taken to repair the leak, date of repair, any required re-monitoring and the re-monitored concentration in ppmv, and wind speed during surface sampling; and the installation date and location of each well installed as part of a gas collection system expansion.

(E) Records of any positive wellhead gauge pressure measurements, the date of the measurements, the well identification number, and the corrective action taken.

(F) Annual solid waste acceptance rate and the current amount of waste-in-place.

(G) Records of the nature, location, amount, and date of deposition of non-degradable waste for any landfill areas excluded from the collection system.

(H) Results of any source tests conducted pursuant to section 95464(b)(4).

(I) Records describing the mitigation measures taken to prevent the release of methane or other emissions into the atmosphere:

1. When solid waste was brought to the surface during the installation or preparation of wells, piping, or other equipment;
2. During repairs or the temporary shutdown of gas collection system components; or,
3. When solid waste was excavated and moved.

(J) Records of any construction activities pursuant to section 95466. The records must contain the following information:

1. A description of the actions being taken, the areas of the MSW landfill that will be affected by these actions, the reason the actions are required, and any landfill gas collection system components that will be affected by these actions.
2. Construction start and finish dates, projected equipment installation dates, and projected shut down times for

individual gas collection system components.

3. A description of the mitigation measures taken to minimize methane emissions and other potential air quality impacts.

(K) Records of the equipment operating parameters specified to be monitored under sections 95469(b)(1) and 95469(b)(2) as well as records for periods of operation during which the parameter boundaries established during the most recent source test are exceeded. The records must include the following information:

1. For enclosed flares, all 3-hour periods of operation during which the average temperature difference was more than 28 degrees Celsius (or 50 degrees Fahrenheit) below the average combustion temperature during the most recent source test at which compliance with sections 95464(b)(2) and 95464(b)(3)(A) was determined.

Reporting:

According to Section 95470(b) the landfill must submit the following reports as required. Closure notification, Equipment removal report, Annual report, Waste-in-place report, and Landfill gas heat input capacity report. Any reports must be accompanied by a certification of truth, accuracy, and completeness signed by a responsible official.

This landfill is expected to comply with these new requirements.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best

Available Control Technology (BACT) requirements. Furthermore, the District has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. RECOMMENDATION

Issue permit N-1119-1-9 subject to the permit conditions on the attached draft ATC. (Appendix III)

X. BILLING INFORMATION

Permit Number	Fee Schedule	Fee Description	Fee
N-1119-1-9	3020-12-U	185 Acres	\$4,135

XI. APPENDICES

- Appendix I: Facility Waste-in-place report/ Landfill gas heat input
- Appendix II: Current PTO
- Appendix III: Draft Authority to Construct
- Appendix IV: Compliance Certification

APPENDIX I
**Facility Waste-in-place report/
Landfill gas heat input report**



THOMAS R. FLINN
DIRECTOR



P. O. BOX 1810 - 1810 E. HAZELTON AVENUE
STOCKTON, CALIFORNIA 95201-3018
(209) 468-3000 FAX (209) 468-2999
www.sjgov.org/pubworks

THOMAS M. GAU
CHIEF DEPUTY DIRECTOR

MICHAEL SELLING
DEPUTY DIRECTOR

STEVEN WINKLER
DEPUTY DIRECTOR

ROGER JANES
BUSINESS ADMINISTRATOR

October 15, 2010

Duplicate

Mr. Renaldo Crooks
California Air Resources Board
1001 "I" Street, 6th Floor
Sacramento, California 95814

SUBJECT: HEAT INPUT CAPACITY REPORTS
SAN JOAQUIN COUNTY-OWNED LANDFILLS

Dear Mr. Crooks

Attached, please find the Heat Input Capacity Report for the prepared by SCS Engineers for the four San-Joaquin County-Owned landfills, as follows:

- Corral Hollow Landfill (Solid Waste Information System [SWIS] #: 39-AA-0005)
- Foothill Landfill (SWIS #: 39-AA-0004)
- Harney Lane Landfill (SWIS #: 39-AA-0003) ✓
- North County Landfill (SWIS #: 39-AA-0022)

Foothill, Harney Lane, and North County Landfills have landfill gas (LFG) heat input capacities greater than 3.0 MMBTU/hr. At these sites, we will either comply with §95464 through §95476 or demonstrate that it is exempt from those sections through surface emissions monitoring or other means.

Corral Hollow Landfill has a LFG heat input capacity less than 3.0 MMBTU/hr. This site is closed, and the heat input will continue to decrease since the site no longer accepts wastes. Therefore, in accordance with §95471(b)(1), no additional reporting or monitoring is required for this landfill under §95464 through §95476 or any other portions of the rule.

If I have misunderstood any of the regulations, or if you have any questions, please call me at (209) 468-8504.

In accordance with Article 4, Subarticle 6, Section 95470(b)(6), I hereby certify that the information and data submitted in and with this application are true, accurate and complete, based on information and belief formed after reasonable inquiry.

Sincerely,

Michael Carroll

W. MICHAEL CARROLL, PE
Senior Civil Engineer

Attachment

WMC:sc
N:\1Foothill\AQMD-Title\RCrooks01-HeatInputCapRept.doc

LA 11105A, 21126, 31102G, 63102B,

SCS ENGINEERS

October 15, 2010
File No. 07206050.10

Mr. Michael Carroll PE
Solid Waste Division/Public Works Department
PO Box 1810
Stockton, CA94501

**Subject: Landfill Gas Heat Input Capacity Reports for San Joaquin County Landfills,
2009**

Dear Mr. Carroll:

SCS Engineers (SCS) submits these Landfill Gas (LFG) Heat Input Capacity (HIC) Reports (HIC Reports) to San Joaquin County (County), as required by California Code of Regulations (CCR) Title 17 §95463(b) for the following County Landfills:

- Corral Hollow Landfill (Solid Waste Information System [SWIS] #: 39-AA-0005)
- Foothill Landfill (SWIS #: 39-AA-0004)
- Harney Lane Landfill (SWIS #: 39-AA-0003)
- North County Landfill (SWIS #: 39-AA-0022)

In summary, based on 2009 site-specific data for Corral Hollow, Harney Lane, North County, and Foothill Landfills, the LFG HIC is greater than 3.0 million British Thermal Units per hour (MMBTU/hr) for Foothill, Harney Lane and North County Landfills. Therefore, in accordance with §95463(b)(1)(B), these three sites are required to either comply with §95464 through §95476, which includes the gas collection and control system (GCCS) installation, compliance, testing, and monitoring, recordkeeping, and reporting requirements of the California Air Resources Board (CARB) Final Regulation Order for "Methane Emissions from Municipal Solid Waste Landfills" (effective June 17, 2010), or demonstrate that it is exempt from those sections through surface emission monitoring (SEM) or other means.

Based on 2009 site-specific data for Corral Hollow Landfill, the LFG HIC is less than 3.0 MMBTU/hr. Therefore, in accordance with §95463(b)(1)(B), Corral Hollow Landfill is not required to comply with §95464 through §95476 of CARB's Final Regulation Order.

SITE INFORMATION

The four sites are municipal solid waste (MSW) landfills, which accepted waste after January 1, 1977, accepted degradable waste, and currently contain more than 450,000 tons of waste-in-place. Therefore, the sites are subject to Article 4, Subarticle 6, §95460 through §95476 and must submit a LFG HIC Report.

Critical Site information that is required for the HIC Report for each site is shown in **Tables 1-4.**

Table 1 – Site Information for Corral Hollow Landfill

Site Name	Corral Hollow Landfill
Operator	County of San Joaquin Public Works Department
Owner	County of San Joaquin Public Works Department
Solid Waste Information System (SWIS) Identification Number	39-AA-0005
Status	Closed
Collection System	Closed with combustion device

Table 2 – Site Information for Foothill Landfill

Site Name	Foothill Landfill
Operator	Foothill Sanitary Landfill, Inc.
Landfill Owner	County of San Joaquin Public Works Department
Solid Waste Information System (SWIS) Identification Number	39-AA-0004
Status	Active
Collection System	Active with combustion device

Table 3 – Site Information for Harney Lane Landfill

Site Name	Harney Lane Landfill
Operator	County of San Joaquin Public Works Department
Landfill Owner	County of San Joaquin Public Works Department
Solid Waste Information System (SWIS) Identification Number	39-AA-0003
Status	Closed
Collection System	Closed with combustion device

Table 4 – Site Information for North County Landfill

Site Name	North County Landfill
Operator	County of San Joaquin Public Works Department
Landfill Owner	County of San Joaquin Public Works Department
Solid Waste Information System (SWIS) Identification Number	39-AA-0022
Status	Active
Collection System	Active with combustion device

HEAT INPUT CAPACITY DETERMINATION

The heat input capacity for Corral Hollow, Harney Lane, North County, and Foothill Landfills were determined using site-specific data, in accordance to §95471(b)(1). CARB stated that using site-specific LFG collection and composition at sites with combustion devices would be acceptable as site-specific data under §95471(b)(1) as stated in its “Landfill Methane Early Action Measure Questions and Answers.” LFG heat capacity was calculated by multiplying the 2009 measured LFG flow rate in standard cubic feet per minute (scfm) multiplied by the 2009 measured methane concentration, then further multiplied by the gross heating value for methane provided in §95471(b)(2). **Tables 5, 6, 7, and 8** show the measured values and resulting LFG HIC for Corral Hollow, Harney Lane, North County, and Foothill Landfills. The HIC calculations for Corral Hollow, Harney Lane, North County, and Foothill Landfills are attached in Appendix A, B, C, and D, respectively.

Table 5- Measured Data and Calculated LFG Heat Input Capacity for Corral Hollow

Measured 2009 LFG Flow (scfm)	Measured 2009 Methane Concentration (%)	LFG Heat Input Capacity (MMBTU/hr)
120.4	26.2	1.86

Table 6- Measured Data and Calculated LFG Heat Input Capacity for Harney Lane

Measured 2009 LFG Flow (scfm)	Measured 2009 Methane Concentration (%)	LFG Heat Input Capacity (MMBTU/hr)
335.9	28.2	5.57

Table 7- Measured Data and Calculated LFG Heat Input Capacity for North County

Measured 2009 LFG Flow (scfm)	Measured 2009 Methane Concentration (%)	LFG Heat Input Capacity (MMBTU/hr)
321.6	50.4	9.84

Table 8- Measured Data and Calculated LFG Heat Input Capacity for Foothill

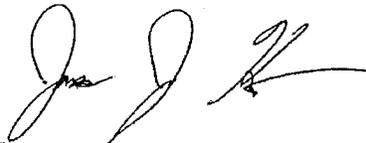
Measured 2009 LFG Flow (scfm)	Measured 2009 Methane Concentration (%)	LFG Heat Input Capacity (MMBTU/hr)
958.5	50.7	29.51

CONCLUSION

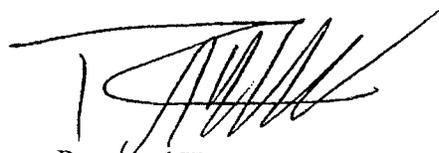
As discussed above, Foothill, Harney Lane and North County Landfills have LFG heat input capacities greater than 3.0 MMBTU/hr. The three sites will either comply with §95464 through §95476 or demonstrate that it is exempt from those sections through SEM or other means.

Corral Hollow Landfill has a LFG HIC less than 3.0 MMBTU/hr, and the heat input will continue to decrease in future years since the site no longer accept wastes. Further, since this site is closed, in accordance with §95471(b)(1), no additional reporting or monitoring is required under §95464 through §95476 or any other portions of the rule.

Sincerely,



James J. Kim
Staff Scientist
SCS ENGINEERS



Raymond H. Huff, R.E.A.
Vice President
SCS ENGINEERS

Enclosures (2)
Landfill Gas Heat Input Capacity Calculations

NORTH COUNTY LANDFILL
 SAN JOAQUIN COUNTY, CALIFORNIA
 LANDFILL GAS HEAT INPUT CALCULATIONS - 2009

Measured 2009 LFG Flow (scfm) ¹	Measured LFG Methane Content (%) ¹	Heat Input Capacity (MMBTU/hr) ²
321.6	50.4	9.8

¹ Data provided by SCS Field Services, BFS Spreadsheet

² Based on gross heating value of methane. Assumes 100% uptime.

1012

scfm

hr

MMBTU/hr

Btu/scf (Gross heating value of methane)

standard cubic feet per minute

hour

million British Thermal Units/hr

APPENDIX II
Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-1119-1-4

EXPIRATION DATE: 11/30/2015

EQUIPMENT DESCRIPTION:

12.4 MILLION CUBIC METER CAPACITY (185 ACRES) MUNICIPAL SOLID WASTE LANDFILL WITH A LANDFILL GAS COLLECTION SYSTEM SERVED BY A 24.4 MMBTU/HR PEI MODEL FL-90-32-E ENCLOSED GROUND FLARE

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
3. All landfill gas collected shall be controlled by the flare. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The maximum number of vertical landfill gas collection wells shall not exceed 25 wells. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The flare shall operate smokeless at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
6. VOC emissions (as hexane) from the flare serving the LFG collection system shall not exceed 71.3 lbs VOC/day. [District NSR Rule] Federally Enforceable Through Title V Permit
7. VOC emissions (as hexane) from the flare serving the LFG collection system shall not exceed 26,025 lb VOC/year based on annual source testing. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The VOC destruction efficiency for the flare shall be at least 98% by weight or VOC emissions shall not exceed 20 ppmv @ 3% O₂ as hexane. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Effluent flowrate of the flare serving the LFG collection system shall not exceed 10,900 cfm as measured by annual source testing. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The flare shall maintain a temperature of at least 1,400 degrees F during operation. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Emissions from the flare shall not exceed any of the following emission limits: 0.06 lb NO_x/MMbtu, 0.03 lb SO_x/MMbtu, 0.09 lb CO/MMbtu, or 0.034 lb PM₁₀/MMbtu. [District NSR Rule] Federally Enforceable Through Title V Permit
12. The facility shall install and maintain in proper operating condition a gas flow meter with a continuous recording device which measures the flowrate of landfill gas consumed. [District NSR Rule and 40 CFR 60.756(b)(2)] Federally Enforceable Through Title V Permit
13. The flare shall be equipped with a temperature indicator and recorder that measures and records the operating temperature. The temperature indicator and recorder must operate continuously when landfill gas is being incinerated. [District NSR Rule and 40 CFR 60.756(b)(1)] Federally Enforceable Through Title V Permit
14. The enclosed flare shall be equipped with an LPG fired pilot. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

15. Source testing on the flare shall be performed to demonstrate compliance with the NO_x, SO_x, and CO limits, and the VOC destruction efficiency of 98% or emissions not greater than 20 ppmv @ 3% O₂ (as hexane) as required by this permit shall be conducted annually. [District NSR Rule and 40 CFR 60.752(b)(2)(iii)(B)] Federally Enforceable Through Title V Permit
16. Source testing for NO_x shall be conducted using CARB Method 7 or Method 20. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Source testing for SO_x shall be conducted using EPA Method 6, 6C, or 19. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Source testing for CO shall be conducted using EPA Method 10 or 10B, CARB Methods 1 through 5 with 10, or CARB Method 100. [District Rule 1081] Federally Enforceable Through Title V Permit
19. VOC emissions shall be measured by EPA Method 18 or 25. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Upon receiving an approved plan for closure, or partial closure, the operator shall modify this operating permit to comply with the requirements of District Rule 4642. [District Rule 4642, 3.2 and 4.1.1] Federally Enforceable Through Title V Permit
21. Gas collection system shall be operated in a manner which maximizes the amount of landfill gas extracted while preventing overdraw that can cause fires or damage the gas collection system. [District NSR Rule] Federally Enforceable Through Title V Permit
22. During maintenance of the gas collection system or incineration device, emissions of landfill gas shall be minimized during shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Maintenance is defined as work performed on a gas collection system and/or control device in order to ensure continued compliance with District rules, regulations, and/or Permits to Operate, and to prevent its failure or malfunction. [District NSR Rule] Federally Enforceable Through Title V Permit
24. The gas collection system shall be operated such that the concentration of total organic compounds (as hexane) shall not exceed 1,000 ppmv at any point along the gas transfer path of the gas collection system. [District NSR Rule] Federally Enforceable Through Title V Permit
25. The entire gas collection system shall be inspected for leaks with a portable analyzer in accordance with EPA Method 21 at least quarterly. After four successful inspections, the frequency shall be annually. If a leak is detected, quarterly inspections shall resume. [District NSR Rule] Federally Enforceable Through Title V Permit
26. A leak is defined as a measurement in excess of 1,000 ppm (measured as hexane) above background when measured at a distance of one (1) centimeter from the potential source. Leaks shall be repaired within 15 calendar days after it is detected. [District NSR Rule] Federally Enforceable Through Title V Permit
27. The permittee shall notify the APCO by telephone at least 24 hours before performing any maintenance work that requires the system to be shutdown. The notification shall include a description of work, the date work will be performed and the amount of time needed to complete the maintenance work. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Permittee shall maintain records of system inspections including: date, time and inspection results. [District Rule 1070] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of maintenance related or other collection system and control device downtime, including individual well shutdown. [District Rule 1070] Federally Enforceable Through Title V Permit
30. The operator shall record emission control device source tests (emissions of CO, NO_x, and VOC) in pounds per MMbtu heat input. Operator shall also record VOC destruction/treatment efficiency. [District Rule 1081] Federally Enforceable Through Title V Permit
31. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. For PSD purposes, the NMOC emission rate shall be estimated and compared to the PSD major source and significance levels in 40 CFR 51.166 or 52.21, using AP-42 or EPA-approved procedures. [40 CFR 60.754(c)] Federally Enforceable Through Title V Permit
33. The owner or operator shall operate the collection system with negative pressure at each wellhead, except in the case of a fire or increased well temperature or a decommissioned well. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. [40 CFR 60.753(b)] Federally Enforceable Through Title V Permit
34. The owner or operator shall operate each interior wellhead in the collection system with a landfill gas temperature of less than 55 degrees C and either a nitrogen level less than 20% or an oxygen level less than 5%. The owner or operator shall monitor each well monthly for compliance with the temperature and either nitrogen or oxygen level. If a well exceeds one of these operating parameters, the owner or operator must initiate corrective action within five calendar days. If the exceedance cannot be corrected within 15 days of the first measurement, then the owner or operator shall expand the gas collection system, repair or maintain the landfill cover, or take other long-term corrective action to correct the exceedance within 120 days of the initial exceedance or within an alternative time frame approved in writing by the District. [40 CFR 60.753(c) and 60.755(a)(5)] Federally Enforceable Through Title V Permit
35. The owner or operator shall operate the collection system so that the methane concentration is less than 500 ppmv above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage subject to District approval. Surface emissions testing shall be conducted in compliance with the requirements of 40 CFR 755.(c). [40 CFR 60.753(d) and 60.755(c)] Federally Enforceable Through Title V Permit
36. The owner or operator shall operate the system such that all collected gases are routed to the flare and that the flare is operated at all times when the collected gas is routed to it. In the event the collection system or flare is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to the venting of the gas to the atmosphere shall be closed within one hour. [40 CFR 60.753(e) and (f)] Federally Enforceable Through Title V Permit
37. Each owner or operator shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum design capacity, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. [40 CFR 60.758(a) and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. This operating permit may be cancelled with APCO approval when the landfill is closed, pursuant to the requirements of this permit, if the landfill is not otherwise subject to the requirements of either 40 CFR part 70 or part 71 and if either 1) it was never subject to the requirement for a control system under 40 CFR 60.752(b)(2); or 2) the owner or operator meets the conditions for control system removal specified in 40 CFR 60.752(b)(2)(v). [40 CFR 60.752(d)] Federally Enforceable Through Title V Permit
39. If the landfill is permanently closed, a closure notification shall be submitted to the APCO within 30 days of waste disposal cessation. A permanent closure must take place in accordance with 40 CFR 258.60. If a closure report has been submitted, no additional waste may be placed in the landfill without filing a notification of modification to the APCO, pursuant to 40 CFR 60.7(a)(4). [40 CFR 60.752(b)(1)(ii)(B) and 60.757(d)] Federally Enforceable Through Title V Permit
40. The owner or operator shall comply with the requirements of 40 CFR 63.1960 through 63.1985, and with the general provisions of 40 CFR part 63, as specified in table 1 of 40 CFR part 63, subpart AAAA. [40 CFR 63.1955(b) and 63.1980(b)] Federally Enforceable Through Title V Permit
41. The owner or operator shall develop and implement a written startup, shutdown and malfunction (SSM) plan according to the provisions of 40 CFR 63.6(e)(3). A copy of the SSM plan shall be maintained on site. Failure to write, implement or maintain a copy of the SSM plan is a deviation from the requirements of 40 CFR part 63, subpart AAAA. [40 CFR 63.1960] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

42. The owner or operator shall keep records and reports as specified in 40 CFR part 60 subpart WWW, except that the owner or operator shall submit the annual report described in 40 CFR 60.757(f) every 6 months. [40 CFR 63.1980(a)] Federally Enforceable Through Title V Permit
43. Each month the heat content of the landfill gas combusted in the flare shall be measured, and the flare firing rate shall be calculated in MMBtu/hr and recorded. [District NSR Rule] Federally Enforceable Through Title V Permit
44. All equipment or systems installed or used to achieve compliance with the terms and conditions of this Permit to Operate shall be maintained in good working order and be operated as efficiently as possible to minimize air pollution emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
45. PM10 emissions from the application of soil for both cover and closure activities shall not exceed 160.0 lb PM10/day. [District NSR Rule] Federally Enforceable Through Title V Permit
46. PM10 emissions from the application of soil for both cover and closure activities shall not exceed and 14,600 lb PM10 per quarter, calculated at least once per quarter. [District NSR Rule] Federally Enforceable Through Title V Permit
47. PM10 emissions from the application of soil for both cover and closure activities shall be calculated as follows: $(EF) \times A$ where (EF) is calculated as $(0.0133 / ((M/2)^{1.4}))$. M represents the moisture content of the soil in percent, determined at least once monthly by heating a representative sample to dryness and comparing the pre and post-drying mass. A represents the tons of soil moved per quarter, determined by counting the number of soil-moving vehicles onsite and the maximum weight of soil carried by each vehicle. [District NSR Rule] Federally Enforceable Through Title V Permit
48. A log of daily waste acceptance quantities and characteristics shall be kept on the premises and shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
49. All roadways, haul roads, active landfill soil cover work areas, weather paved access roads, and the paved public dumping area traveled by vehicles shall be kept clean and adequately moistened with water to continuously prevent fugitive emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
50. The average daily waste acceptance quantity shall not exceed 1,022 tons (averaged over any month). [District NSR Rule] Federally Enforceable Through Title V Permit
51. The permittee shall provide, properly install, and maintain in good working order continuous monitoring and recording systems to measure methane gas migration as a result of landfill gas generation if required by any regulatory agency. [District NSR Rule] Federally Enforceable Through Title V Permit
52. If a continuous methane monitoring and recording system is required by any other regulatory agency, then the permittee must obtain District approval prior to installation. [District NSR Rule] Federally Enforceable Through Title V Permit
53. The CalRecycle Enforcement Division is to be notified if underground migration of methane exceed 4 percent. [District NSR Rule] Federally Enforceable Through Title V Permit
54. Soil with VOC content of 50 ppm by weight or greater shall not be used as daily cover. [District Rule 4651] Federally Enforceable Through Title V Permit
55. Daily records of the weight of materials received - including waste material (tons) and soil cover (cubic yards converted to tons) - and daily records of all soil organic content test results and certifications for loads contaminated with VOCs, shall be maintained, kept on site for a period of five years, and made available to District staff upon request. [District Rule 4651] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

APPENDIX III
Draft Authority to Construct

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-1119-1-9

LEGAL OWNER OR OPERATOR: NORTH COUNTY SANITARY LANDFILL
MAILING ADDRESS: P O BOX 1810
STOCKTON, CA 95201

LOCATION: 17720 EAST HARNEY LANE
LODI, CA 95240

SECTION: 21 TOWNSHIP: 3N RANGE: 8E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 12.4 MILLION CUBIC METER CAPACITY (185 ACRES) MUNICIPAL SOLID WASTE LANDFILL WITH A LANDFILL GAS COLLECTION SYSTEM SERVED BY A 24.4 MMBTU/HR PEI MODEL FL-90-32-E ENCLOSED GROUND FLARE: ADD REQUIREMENTS FOR METHANE CONTROL PER CARB REGULATION

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District NSR Rule] Federally Enforceable Through Title V Permit
5. All landfill gas collected shall be controlled by the flare. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The flare shall operate smokeless at all times. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

N-1119-1-9 : Aug 20 2013 1:32PM - KLEVANNND : Joint Inspection NOT Required

7. VOC emissions (as hexane) from the flare serving the LFG collection system shall not exceed 71.3 lbs VOC/day. [District NSR Rule] Federally Enforceable Through Title V Permit
8. VOC emissions (as hexane) from the flare serving the LFG collection system shall not exceed 26,025 lb VOC/year based on annual source testing. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The VOC destruction efficiency for the flare shall be at least 98% by weight or VOC emissions shall not exceed 20 ppmv @ 3% O₂ as hexane. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Methane destruction efficiency for the flare shall be at least 99% by weight. [17 CCR 95464]
11. Effluent flowrate of the flare serving the LFG collection system shall not exceed 10,900 cfm as measured by annual source testing. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emissions from the flare shall not exceed any of the following emission limits: 0.06 lb NO_x/MMbtu, 0.03 lb SO_x/MMbtu, 0.09 lb CO/MMbtu, or 0.034 lb PM₁₀/MMbtu. [District NSR Rule] Federally Enforceable Through Title V Permit
13. The facility shall install and maintain in proper operating condition a gas flow meter with a recording device which measures the flowrate of landfill gas consumed and is recorded at least every 15 minutes. [District NSR Rule and 40 CFR 60.756(b)(2)] Federally Enforceable Through Title V Permit
14. The flare shall be equipped with a temperature indicator and recorder that measures and records the operating temperature. The temperature indicator and recorder must operate continuously when landfill gas is being incinerated. [District NSR Rule, 40 CFR 60.756(b)(1) and 17 CCR 95464] Federally Enforceable Through Title V Permit
15. The enclosed flare shall be equipped with an LPG fired pilot. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Source testing on the flare shall be performed to demonstrate compliance with the NO_x, SO_x, and CO limits, and the VOC destruction efficiency of 98% or emissions not greater than 20 ppmv @ 3% O₂ (as hexane) as required by this permit shall be conducted annually. [District NSR Rule and 40 CFR 60.752(b)(2)(iii)(B)] Federally Enforceable Through Title V Permit
17. Source testing for NO_x shall be conducted using CARB Method 7 or Method 20. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing for SO_x shall be conducted using EPA Method 6, 6C, or 19. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Source testing for CO shall be conducted using EPA Method 10 or 10B, CARB Methods 1 through 5 with 10, or CARB Method 100. [District Rule 1081] Federally Enforceable Through Title V Permit
20. VOC emissions shall be measured by EPA Method 18 or 25. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Upon receiving an approved plan for closure, or partial closure, the operator shall modify this operating permit to comply with the requirements of District Rule 4642. [District Rule 4642, 3.2 and 4.1.1] Federally Enforceable Through Title V Permit
22. Gas collection system shall be operated in a manner which maximizes the amount of landfill gas extracted while preventing overdraw that can cause fires or damage the gas collection system. [District NSR Rule] Federally Enforceable Through Title V Permit
23. During maintenance of the gas collection system or incineration device, emissions of landfill gas shall be minimized during shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit
24. Maintenance is defined as work performed on a gas collection system and/or control device in order to ensure continued compliance with District rules, regulations, and/or Permits to Operate, and to prevent its failure or malfunction. [District NSR Rule] Federally Enforceable Through Title V Permit
25. The gas collection system shall be operated such that the concentration of total organic compounds (as hexane) shall not exceed 1,000 ppmv at any point along the gas transfer path of the gas collection system that is under pressure. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

26. The entire gas collection system that operates under pressure shall be inspected for leaks with a portable analyzer in accordance with EPA Method 21 at least quarterly. After four successful inspections, the frequency shall be annually. If a leak is detected, quarterly inspections shall resume. [District NSR Rule] Federally Enforceable Through Title V Permit
27. A leak is defined as a measurement in excess of 1,000 ppm (measured as hexane) above background when measured at a distance of one (1) centimeter from the potential source. Leaks shall be repaired within 15 calendar days after it is detected. [District NSR Rule] Federally Enforceable Through Title V Permit
28. The permittee shall notify the APCO by telephone at least 24 hours before performing any maintenance work that requires the system to be shutdown. The notification shall include a description of work, the date work will be performed and the amount of time needed to complete the maintenance work. [District NSR Rule] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of system inspections including: date, time and inspection results. [District Rule 1070] Federally Enforceable Through Title V Permit
30. Permittee shall maintain records of maintenance related or other collection system and control device downtime, including individual well shutdown. [District Rule 1070] Federally Enforceable Through Title V Permit
31. The operator shall record emission control device source tests (emissions of CO, NO_x, and VOC) in pounds per MMbtu heat input. Operator shall also record VOC destruction/treatment efficiency. [District Rule 1081] Federally Enforceable Through Title V Permit
32. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
33. For PSD purposes, the NMOC emission rate shall be estimated and compared to the PSD major source and significance levels in 40 CFR 51.166 or 52.21, using AP-42 or EPA-approved procedures. [40 CFR 60.754(c)] Federally Enforceable Through Title V Permit
34. The owner or operator shall operate the collection system with negative pressure at each wellhead, except in the case of a fire or increased well temperature or a decommissioned well. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. [40 CFR 60.753(b)] Federally Enforceable Through Title V Permit
35. The owner or operator shall operate each interior wellhead in the collection system with a landfill gas temperature of less than 55 degrees C and either a nitrogen level less than 20% or an oxygen level less than 5%. The owner or operator shall monitor each well monthly for compliance with the temperature and either nitrogen or oxygen level. If a well exceeds one of these operating parameters, the owner or operator must initiate corrective action within five calendar days. If the exceedance cannot be corrected within 15 days of the first measurement, then the owner or operator shall expand the gas collection system, repair or maintain the landfill cover, or take other long-term corrective action to correct the exceedance within 120 days of the initial exceedance or within an alternative time frame approved in writing by the District. [40 CFR 60.753(c) and 60.755(a)(5)] Federally Enforceable Through Title V Permit
36. The owner or operator shall operate the collection system so that the methane concentration is less than 500 ppmv above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage subject to District approval. Surface emissions testing shall be conducted in compliance with the requirements of 40 CFR 755.(c). [40 CFR 60.753(d) and 60.755(c)] Federally Enforceable Through Title V Permit
37. The owner or operator shall operate the system such that all collected gases are routed to the flare and that the flare is operated at all times when the collected gas is routed to it. In the event the collection system or flare is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to the venting of the gas to the atmosphere shall be closed within one hour. [40 CFR 60.753(e) and (f)] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

38. Each owner or operator shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum design capacity, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. [40 CFR 60.758(a) and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. This operating permit may be cancelled with APCO approval when the landfill is closed, pursuant to the requirements of this permit, if the landfill is not otherwise subject to the requirements of either 40 CFR part 70 or part 71 and if either 1) it was never subject to the requirement for a control system under 40 CFR 60.752(b)(2); or 2) the owner or operator meets the conditions for control system removal specified in 40 CFR 60.752(b)(2)(v). [40 CFR 60.752(d)] Federally Enforceable Through Title V Permit
40. If the landfill is permanently closed, a closure notification shall be submitted to the APCO within 30 days of waste disposal cessation. A permanent closure must take place in accordance with 40 CFR 258.60. If a closure report has been submitted, no additional waste may be placed in the landfill without filing a notification of modification to the APCO, pursuant to 40 CFR 60.7(a)(4). [40 CFR 60.752(b)(1)(ii)(B) and 60.757(d)] Federally Enforceable Through Title V Permit
41. The owner or operator shall comply with the requirements of 40 CFR 63.1960 through 63.1985, and with the general provisions of 40 CFR part 63, as specified in table 1 of 40 CFR part 63, subpart AAAA. [40 CFR 63.1955(b) and 63.1980(b)] Federally Enforceable Through Title V Permit
42. The owner or operator shall develop and implement a written startup, shutdown and malfunction (SSM) plan according to the provisions of 40 CFR 63.6(e)(3). A copy of the SSM plan shall be maintained on site. Failure to write, implement or maintain a copy of the SSM plan is a deviation from the requirements of 40 CFR part 63, subpart AAAA. [40 CFR 63.1960] Federally Enforceable Through Title V Permit
43. The owner or operator shall keep records and reports as specified in 40 CFR part 60 subpart WWW, except that the owner or operator shall submit the annual report described in 40 CFR 60.757(f) every 6 months. [40 CFR 63.1980(a)] Federally Enforceable Through Title V Permit
44. Each month the heat content of the landfill gas combusted in the flare shall be measured, and the flare firing rate shall be calculated in MMBtu/hr and recorded. [District NSR Rule] Federally Enforceable Through Title V Permit
45. All equipment or systems installed or used to achieve compliance with the terms and conditions of this Permit to Operate shall be maintained in good working order and be operated as efficiently as possible to minimize air pollution emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
46. PM10 emissions from the application of soil for both cover and closure activities shall not exceed 160.0 lb PM10/day. [District NSR Rule] Federally Enforceable Through Title V Permit
47. PM10 emissions from the application of soil for both cover and closure activities shall not exceed and 14,600 lb PM10 per quarter, calculated at least once per quarter. [District NSR Rule] Federally Enforceable Through Title V Permit
48. PM10 emissions from the application of soil for both cover and closure activities shall be calculated as follows: $(EF) \times A$ where (EF) is calculated as $(0.0133 / ((M/2)^{1.4}))$. M represents the moisture content of the soil in percent, determined at least once monthly by heating a representative sample to dryness and comparing the pre and post-drying mass. A represents the tons of soil moved per quarter, determined by counting the number of soil-moving vehicles onsite and the maximum weight of soil carried by each vehicle. [District NSR Rule] Federally Enforceable Through Title V Permit
49. A log of daily waste acceptance quantities and characteristics shall be kept on the premises and shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
50. All roadways, haul roads, active landfill soil cover work areas, weather paved access roads, and the paved public dumping area traveled by vehicles shall be kept clean and adequately moistened with water to continuously prevent fugitive emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
51. The average daily waste acceptance quantity shall not exceed 1,022 tons (averaged over any month). [District NSR Rule] Federally Enforceable Through Title V Permit

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

52. The permittee shall provide, properly install, and maintain in good working order continuous monitoring and recording systems to measure methane gas migration as a result of landfill gas generation if required by any regulatory agency. [District NSR Rule] Federally Enforceable Through Title V Permit
53. If a continuous methane monitoring and recording system is required by any other regulatory agency, then the permittee must obtain District approval prior to installation. [District NSR Rule] Federally Enforceable Through Title V Permit
54. The CalRecycle Enforcement Division is to be notified if underground migration of methane exceed 4 percent. [District NSR Rule] Federally Enforceable Through Title V Permit
55. Soil with VOC content of 50 ppm by weight or greater shall not be used as daily cover. [District Rule 4651] Federally Enforceable Through Title V Permit
56. Daily records of the weight of materials received - including waste material (tons) and soil cover (cubic yards converted to tons) - and daily records of all soil organic content test results and certifications for loads contaminated with VOCs, shall be maintained, kept on site for a period of five years, and made available to District staff upon request. [District Rule 4651] Federally Enforceable Through Title V Permit
57. Landfill collection and control system must be operated such that methane emission from the landfill do not exceed instantaneous or integrated limit requirements. [17 CCR 95464]
58. Landfill gas collection system wellheads must be operated under vacuum. Monthly monitoring of wellheads is required. Landfill gas collection system wellheads may be operated under neutral or positive pressure when there is a fire or during other times as allowed in sections 95464(c), 95464(d), and 95464(e). [17 CCR 95464]
59. Landfill gas collection system components downstream of blower have a leak limit of 500 ppmv as methane. Components must be checked quarterly. [17 CCR 95464]
60. The flare must have automatic dampers, an automatic shutdown device, a flame arrester, and temperature sensors which record at least every 15 minutes. [17 CCR 95464]
61. The flare must operate within the parameter ranges established during the initial or most recent source test. [District Rule 2201 and 17 CCR 95464]
62. Landfill surface methane emissions shall not exceed instantaneous surface emission limit of 500 ppmv as methane or integrated surface emission limit of 25 ppmv as methane. [17 CCR 95464]
63. Instantaneous and integrated landfill surface emissions measurements shall be done quarterly. The landfill may monitor annually provided they comply with requirements of 17 CCR 95469 (a)(1). [17 CCR 95469]
64. Permittee shall keep records of all gas collection system downtime exceeding five days, including individual well shutdown and disconnection times and the reason for downtime. [17 CCR 95470]
65. Permittee shall keep records of all gas control system downtime in excess of one hour, the reason for the downtime and the length of time the gas control system was shutdown. [17 CCR 95470]
66. Permittee shall keep records of the expected gas generation flow rate calculated pursuant to section 95471(e). [17 CCR 95470]
67. Permittee shall keep records of all instantaneous surface readings of 200 ppmv or greater; all exceedances of the limits in sections 95464(b)(1)(B) or 95465, including the location of the leak (or affected grid), leak concentration in ppmv, date and time of measurement, the action taken to repair the leak, date of repair, any required re-monitoring and the re-monitored concentration in ppmv, and wind speed during surface sampling; and the installation date and location of each well installed as part of a gas collection system expansion. [17 CCR 95470]
68. Permittee shall keep records of any positive wellhead gauge pressure measurements, the date of the measurements, the well identification number, and the corrective action taken. [17 CCR 95470]
69. Permittee shall keep records of the annual solid waste acceptance rate and the current amount of waste-in-place. [17 CCR 95470]
70. Permittee shall keep records of the nature, location, amount, and date of deposition of non-degradable waste for any landfill areas excluded from the collection system. [17 CCR 95470]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

71. Permittee shall keep records of any source tests conducted pursuant to section 95464(b)(4). [17 CCR 95470]
72. Permittee shall keep records describing the mitigation measures taken to prevent the release of methane or other emissions into the atmosphere during the following activities: 1. When solid waste was brought to the surface during the installation or preparation of wells, piping, or other equipment; 2. During repairs or the temporary shutdown of gas collection system components; or, 3. When solid waste was excavated and moved. [17 CCR 95470]
73. Permittee shall keep records of any construction activities pursuant to section 95466. The records must contain the following information: 1. A description of the actions being taken, the areas of the MSW landfill that will be affected by these actions, the reason the actions are required, and any landfill gas collection system components that will be affected by these actions. 2. Construction start and finish dates, projected equipment installation dates, and projected shut down times for individual gas collection system components. 3. A description of the mitigation measures taken to minimize methane emissions and other potential air quality impacts. [17 CCR 95470]
74. Permittee shall keep records of the equipment operating parameters specified to be monitored under section 95469(b)(1) as well as records for periods of operation during which the parameter boundaries established during the most recent source test are exceeded. The records must include the following information: 1. For enclosed flares, all 3-hour periods of operation during which the average temperature difference was more than 28 degrees Celsius (or 50 degrees Fahrenheit) below the average combustion temperature during the most recent source test at which compliance with sections 95464(b)(2) was determined and a gas flow rate device which must record the flow to the control device at least every 15 minutes. [17 CCR 95470]
75. Permittee shall submit the following reports as required in section 95470(b): Closure notification, Equipment removal report and Annual report. All reports must be accompanied by a certification of truth, accuracy, and completeness signed by a responsible official. [17 CCR 95470]
76. Permittee may comply with the CARB regulation for landfill methane control measures by using approved alternative compliance options. The permittee shall obtain written District approval for the use of any alternative compliance options not approved by this permit. Changes to the approved alternate compliance options must be made and approved in writing. Documentation of approved alternative compliance options shall be available for inspection upon request. [17 CCR 95468]

DRAFT

APPENDIX IV
Compliance Certification

**San Joaquin Valley
Unified Air Pollution Control District**

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME:	FACILITY ID: N-1119-1-9
1. Type of Organization: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input checked="" type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: San Joaquin County	
3. Agent to the Owner: Solid Waste Division of the Public Works Department	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- WMC* Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- WMC* Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- WMC* Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- WMC* Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

W. Michael Carroll

Signature of Responsible Official

7/11/2013

Date

W. Michael Carroll, PE

Name of Responsible Official (please print)

Senior Civil Engineer, Public Works (Solid Waste Division)

Title of Responsible Official (please print)