



JUL 12 2011

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

Re: **Proposed Authority to Construct / Certificate of Conformity (Minor Mod)**
District Facility # C-3115
Project # C-1103633

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for American Avenue Landfill, located at 18950 W American Ave in Kerman, CA, which has been issued a Title V permit. American Avenue Landfill is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The facility is proposing to remove an existing limit of 66 collection wells for the landfill gas collection system, to combine the landfill gas and landfill condensate flare consumption rates, and to correct the total landfill capacity in the permit equipment description.

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authority to Construct # S-3115-2-11 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures
cc: Jerry Sandhu, Permit Services

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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JUL 12 2011

John R. Thompson
American Avenue Landfill
2220 Tulare St, 6th Floor
Fresno, CA 93721

**Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)
District Facility # C-3115
Project # C-1103633**

Dear Mr. Thompson:

Enclosed for your review is the District's analysis of your application for Authority to Construct for the facility identified above. You have requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The facility is proposing to remove an existing limit of 66 collection wells for the landfill gas collection system, to combine the landfill gas and landfill condensate flare consumption rates, and to correct the total landfill capacity in the permit equipment description.

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility 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. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures

cc: Jerry Sandhu, Permit Services
Stephanie Young, P.E.

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**San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review
Landfill**

Facility Name:	American Avenue Landfill	Date:	April 27, 2011
Mailing Address:	2220 Tulare St, 6 th Floor Fresno, CA 93721-2106	Engineer:	Jerry Sandhu
Contact Person:	Stephanie Young, P.E. (consultant)	Lead Engineer:	Sheraz Gill
Telephone:	(916) 286-0452		
Application #:	C-3115-2-11		
Project #:	C-1103633		
Deemed Complete:	December 16, 2010		

I. Proposal

American Avenue Landfill (AAL) has applied for an Authority to Construct (ATC) to modify its municipal solid waste landfill permit. The operation consists of a landfill gas collection and control system, including collection wells and a 3,150 gallon condensate storage tank, controlled by a 51 MMBtu/hr enclosed ground flare.

The facility is proposing to remove the number of collection wells listed in the equipment description on the permit. The current Permit to Operate (PTO) limits the landfill to 66 collection wells onsite. The facility intends to expand the number of collection wells while maintaining the current emissions and throughput limits, and is therefore proposing to remove the specific number of wells from the permit equipment description.

Additionally, the facility is proposing a modification to the enclosed flare. Currently, landfill gas and landfill gas condensate are flared. The current Permit to Operate (see copy in Appendix A) limits the landfill gas consumption rate for the enclosed flare to 51 MMBtu/hr, which is the maximum capacity of the flare. The current PTO also limits the landfill gas condensate injected into the flare to 2 gallons per minute. The facility is proposing to increase the amount of condensate injected into the flare from 2 gallons/minute to 5 gallons/minute, based on the manufacturer's operation and maintenance manual for the enclosed flare. However, the permit will be modified such that the landfill gas consumption and condensate consumption will be combined and limited to the maximum rating of the flare, which is 51 MMBtu/hr. Therefore, potential to emit calculations will be based on the maximum capacity of the flare.

Finally, the facility is proposing to correct the landfill capacity indicated on the current permit to operate. The equipment description on the current permit lists the landfill capacity at 32.7 million cubic yards (367 acres), and condition number 20 on the current permit lists the landfill capacity at 44.4 million cubic meters. However, during the last permitting project for this unit (District project C-1062284), it was determined that the landfill capacity has always been 44.4

million cubic yards. This capacity is also consistent with the Solid Waste Facility Permit issued and enforced by the Local Enforcement Agency of the Fresno County Community Health System and the California Integrated Waste Management Board. The permit will be corrected to reflect the actual capacity of 44.4 million cubic yards. The correction will not affect the amount of soil used for covering or the amount of refuse received at the facility.

AAL received their Title V Permit on June 30, 2002. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, 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. AAL must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (12/18/08)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4002 National Emission Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4311 Flares (6/18/09)
Rule 4642 Solid Waste Disposal Site (4/16/98)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
40 CFR Part 62 GGG Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction Prior to May 30, 1991 and Have Not Been Modified or Reconstructed Since May 30, 1991
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

III. Project Location

The facility is located at 18950 W American Ave in Kerman, CA. The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Collection wells are installed to collect landfill gas anywhere within the site's permitted facility boundary. Wells are typically equipped with a sample port for monitoring and a control valve for adjusting flow volumes. The collection well components are constructed of PVC, high density polyethylene pipe, fiberglass, stainless steel, or other nonporous, corrosion resistant material such as carbon steel.

The location of any collection well depends on a variety of factors, which include but are not limited to, the configuration of the landfill; the type of waste within an area (e.g. organics such as yard waste, construction and demolition, municipal solid waste); the depth of waste; area climate; location of operations; and the collection of landfill gas whether from within the waste mass or outside of it.

Collection wells convey the landfill gas through lateral and header piping to an enclosed ground flare for destruction. The enclosed flare will destroy, by combustion, 98% of VOC in the extracted landfill gas.

The condensate injection system is an automated operation designed to dispose of condensate generated from landfill gas safely. Injection is achieved by forcing a liquid stream through a nozzle at high pressure, thereby creating a fine mist, which vaporizes in the combustion chamber. The condensate injection system includes continuous monitoring of flare operating conditions and liquid level devices to prevent equipment damage.

V. Equipment Listing

Pre-Project Equipment Description:

C-3115-2-10: 32.7 MILLION CUBIC YARD CAPACITY (367 ACRES) MUNICIPAL SOLID WASTE LANDFILL WITH A LANDFILL GAS COLLECTION AND CONTROL SYSTEM, INCLUDING 66 COLLECTION WELLS, PIPING, VACUUM PUMP/BLOWER, CONDENSATE TRAPS AND A 3,150 GALLON CONDENSATE STORAGE TANK, CONTROLLED BY AN ENCLOSED GROUND FLARE USING AN LPG PILOT

Proposed Modification:

C-3115-2-11: MODIFICATION OF 32.7 MILLION CUBIC YARD CAPACITY (367 ACRES) MUNICIPAL SOLID WASTE LANDFILL WITH A LANDFILL GAS COLLECTION AND CONTROL SYSTEM, INCLUDING 66 COLLECTION WELLS, PIPING, VACUUM PUMP/BLOWER, CONDENSATE TRAPS AND A 3,150 GALLON CONDENSATE STORAGE TANK, CONTROLLED BY AN ENCLOSED GROUND FLARE USING AN LPG PILOT: REMOVE 66 COLLECTION WELL LIMIT FROM EQUIPMENT DESCRIPTION, COMBINE LANDFILL GAS AND CONDENSATE FLARE CONSUMPTION, AND CORRECT LANDFILL CAPACITY FROM 32.7 MILLION CUBIC YARDS TO 44.4 MILLION CUBIC YARDS

Post-Project Equipment Description:

C-3115-2-11: 44.4 MILLION CUBIC YARD CAPACITY (367 ACRES) MUNICIPAL SOLID WASTE LANDFILL WITH A LANDFILL GAS COLLECTION AND CONTROL SYSTEM, INCLUDING COLLECTION WELLS, PIPING, VACUUM PUMP/BLOWER, CONDENSATE TRAPS AND A 3,150 GALLON CONDENSATE STORAGE TANK, CONTROLLED BY AN ENCLOSED GROUND FLARE USING AN LPG PILOT

VI. Emission Control Technology Evaluation

The following emission control technology discussion is from project C-1062284 and should still be valid since no modification to the control technology has been proposed.

Enclosed Flare:

According to EPA's OAQPS Control Cost Manual, gaseous fuels with a heating value of at least 300 Btu/scf do not require auxiliary fuel (generally natural gas). Auxiliary fuel is needed only to increase the Btu content of gases that have heating values of less than 300 Btu/scf. The net heating value of the landfill gas is proposed to meet the minimum of 300 Btu/scf; therefore, auxiliary fuel may not be required for complete combustion. Ongoing testing of the gas stream will verify Btu content.

The enclosed flare is designed to maintain a temperature of 1,400 °F with a residence time of 0.6 seconds in the active flame zone sufficient for 98% control of VOC emissions.

VII. General Calculations

A. Assumptions

The following assumptions are from project C-1062284 and should still be valid since no modification affecting these has been proposed.

- The flare VOC control efficiency = 98% based on an expected exhaust gas temperature of 1,400 degrees K and a retention time in the active flame zone of 0.6 seconds.
- Enclosed flare maximum firing rate is 51 MMBtu/hr
- All VOCs are measured as methane
- Landfill area is 367 acres (current permit)
- Soil cover depth = 10 feet
- Soil density is 120 lbs/cubic foot

B. Emission Factors

The facility is not proposing to change any of the current emission factors. Therefore, the following emission factors will be used for pre-project and post-project emissions calculations.

Enclosed Flare:

The following emission factors for the landfill gas/condensate are listed on the current PTO, and were supplied by the applicant under District project C-1020253.

NO_x: 0.05 lb/MMBtu
SO_x: 0.0178 lb/MMBtu
PM₁₀: 0.034 lb/MMBtu
CO: 0.2 lb/MMBtu

VOC: 15.8 lb/day (98% VOC control)

PM10 Emissions from Earthmoving Activities – Intermediate and Final Covering

0.008 lb-PM₁₀/ton of soil (current PTO)

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Emissions from Flare

Pollutant	Daily PE1 - Flare			
	Emission Factors	Heat input	Hours per day	Total
NO_x	0.05 (lb-NO _x /MMBtu) x 51 (MMBtu/hr) x 24 (hr/day) =			61.2 (lb-NO_x/day)
SO_x	0.0178 (lb-SO _x /MMBtu) x 51 (MMBtu/hr) x 24 (hr/day) =			21.8 (lb-SO_x/day)
PM₁₀	0.034 (lb-PM ₁₀ /MMBtu) x 51 (MMBtu/hr) x 24 (hr/day) =			41.6 (lb-PM₁₀/day)
CO	0.2 (lb-CO/MMBtu) x 51 (MMBtu/hr) x 24 (hr/day) =			244.8 (lb-CO/day)
VOC	Per Daily Emissions Limit on PTO			15.8 (lb-VOC/day)

Pollutant	Annual PE1 - Flare			
	Emission Factors	Heat input	Hours per year	Total
NO_x	0.05 (lb-NO _x /MMBtu) x 51 (MMBtu/hr) x 8,760 (hr/yr) =			22,338 (lb-NO_x/yr)
SO_x	0.0178 (lb-SO _x /MMBtu) x 51 (MMBtu/hr) x 8,760 (hr/yr) =			7,952 (lb-SO_x/yr)
PM₁₀	0.034 (lb-PM ₁₀ /MMBtu) x 51 (MMBtu/hr) x 8,760 (hr/yr) =			15,190 (lb-PM₁₀/yr)
CO	0.2 (lb-CO/MMBtu) x 51 (MMBtu/hr) x 8,760 (hr/yr) =			89,352 (lb-CO/yr)
VOC	15.8 (lb/day) x 365 (day/yr)			= 5,767 (lb-VOC/yr)

Earthmoving – Soil Cover

The landfill is 367 acres, equivalent to 15,986,520 square feet since 1 acre = 43,560 square feet. With a soil depth of 10 feet, the volume of soil moved per year, assuming the entire landfill is covered, would be 159,865,200 cubic feet of soil (equivalent to 5,920,933 cubic yards). Assuming a soil density of 120 lbs/cubic foot (equivalent to 3,240 lbs/cubic yard):

5,920,933 cubic yards of soil x 3,240 lbs/cubic yard ÷ 2000 lb/ton = 9,591,911 tons of soil

Applying the calculated AP-42 emissions factor of 0.008 lb PM₁₀/ton:

0.008 lb-PM₁₀/ton x 9,591,911 tons = 76,735 lb-PM₁₀/yr

76,735 lb-PM₁₀/yr x 1 yr/ 365 day = 210.2 lb-PM₁₀/day

Pre-Project Potential to Emit (PE1)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	61.2	22,338
SO _x	21.8	7,952
PM ₁₀	251.8	91,925
CO	244.8	89,352
VOC	15.8	5,767

2. Post-Project Potential to Emit (PE2)

As previously stated, the facility is not proposing to change any emission factors for this operation.

Additionally, since emissions from the flare are already calculated based on the unit's maximum heat input rating of 51 MMBtu/hr, no increase in emissions is expected from the applicant's proposal. That is, the landfill gas/condensate consumption rate will not exceed 51 MMBtu/hr. Therefore, PE2 is equal to PE1.

Post-Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	61.2	22,338
SO _x	21.8	7,952
PM ₁₀	251.8	91,925
CO	244.8	89,352
VOC	15.8	5,767

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.

There are only two active permits at this site with no emission reduction credits. Detailed SSPE1 calculations for unit C-3115-3-0 are shown in Appendix B.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
C-3115-2-10	22,338	7,952	91,925	89,352	5,767
C-3115-3-0	474	0	7	33	12
Pre-Project SSPE (SSPE1)	22,812	7,952	91,932	89,385	5,779

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.

This project does not result in a change in emissions. Therefore, SSPE2 is equal to SSPE1.

Post-Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
C-3115-2-11	22,338	7,952	91,925	89,352	5,767
C-3115-3-0	474	0	7	33	12
Post-Project SSPE (SSPE2)	22,812	7,952	91,932	89,385	5,779

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)	22,812	7,952	91,932	89,385	5,779
Post Project SSPE (SSPE2)	22,812	7,952	91,932	89,385	5,779
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	No

As seen in the table above, this facility is an existing Major Source for NO_x emissions and will remain a Major Source for NO_x.

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

As shown in Section VII.C.5 above, the facility is a Major Source for NO_x emissions.

NO_x Emissions - Clean Emissions Unit, Located at a Major Source

Pursuant to Rule 2201, Section 3.12, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

For NO_x emissions, BACT Guideline 1.4.3 (updated January 8, 2001) lists achieved-in-practice BACT for landfill gas vapor collection systems as having a maximum emissions rate of 0.06 lb-NO_x/MMBtu. (See copy in Appendix C)

The current permit limits NO_x emissions for this unit to 0.05 lb-NO_x/MMBtu. Therefore, the unit meets that achieved-in-practice BACT requirement for NO_x emissions as applicable five years prior to the submission of the ATC application. Thus, baseline emissions are equal to PE1.

SO_x, PM₁₀, CO, and VOC Emissions – Unit Located at Non-Major Source

Facility emissions for all other criteria pollutants are below Major Source thresholds. Therefore, baseline emissions for SO_x, PM₁₀, CO, and VOC are equal to PE1.

Baseline Emissions [BE] (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
C-3115-2-11	22,338	7,952	91,925	89,352	5,767

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."

As discussed in Section VII.C.5 above, the facility is not a Major Source for SO_x, PM₁₀ and VOC emissions; therefore, the project does not constitute a SB 288 Major Modification for SO_x, PM₁₀ and VOC emissions.

The facility is an existing Major Source for NO_x; however, the project by itself would need to be a significant increase in order to trigger a Major Modification. The emissions unit within this project does not have a total potential to emit which is greater than Major Modification threshold (see table below). Therefore, the project cannot be a significant increase and the project does not constitute a SB 288 Major Modification.

SB 288 Major Modification Threshold (Existing Major Source)			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	22,338	50,000	No

8. Federal Major Modification

As discussed in Section VII.C.5 above, the facility is not a Major Source for SO_x, PM₁₀ and VOC emissions; therefore, the project does not constitute a Federal Major Modification for SO_x, PM₁₀ and VOC emissions. However, the facility is an existing Major Source for NO_x.

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA. SB 288 Major Modifications are not Federal Major Modifications if they meet the criteria of the "Less-Than-Significant Emissions Increase" exclusion.

A Less-Than-Significant Emissions Increase exclusion is for an emissions increase for the project, or a Net Emissions Increase for the project (as defined in 40 CFR 51.165 (a)(2)(ii)(B) through (D), and (F)), that is not significant for a given regulated NSR pollutant, and therefore is not a Federal Major Modification for that pollutant.

- To determine the post-project projected actual emissions from existing units, the provisions of 40 CFR 51.165 (a)(1)(xxviii) shall be used.
- To determine the pre-project baseline actual emissions, the provisions of 40 CFR 51.165 (a)(1)(xxxv)(A) through (D) shall be used.
- If the project is determined not to be a Federal Major Modification pursuant to the provisions of 40 CFR 51.165 (a)(2)(ii)(B), but there is a reasonable possibility that the project may result in a significant emissions increase, the owner or operator shall comply with all of the provisions of 40 CFR 51.165 (a)(6) and (a)(7).
- Emissions increases calculated pursuant to this section are significant if they exceed the significance thresholds specified in the table below.

Pollutant	Threshold (lb/year)
VOC	0
NOx	0
PM10	30,000
SOx	80,000

The Net Emissions Increases (NEIs) for purposes of determination of a “Less-Than-Significant Emissions Increase” exclusion will be calculated below to determine if this project qualifies for such an exclusion.

Net Emissions Increase for Existing Units (NEI)

Per 40 CFR 51.165 (a)(1)(xxviii) and 40 CFR 51.165 (a)(2)(ii)(C) for all existing units,

$$NEI = PAE - BAE$$

where,

BAE = Baseline Actual Emissions which are the actual emissions created by the project during the baseline period. The BAE are calculated pursuant to 40 CFR 51.165 (a)(1)(xxxv)(A) through (D).

PAE = Projected Actual Emissions which are the post-project projected actual emissions of the existing units in this project pursuant to 40 CFR 51.165 (a)(1)(xxviii).

For no increase in design capacity, PAE is the annual emissions 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 units with an increase in design capacity or potential to emit).

The proposed modification, to combine the landfill gas and condensate throughput into the flare, 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. Therefore the unused baseline capacity emissions (portion of PAE that unit could have accommodated) can also be excluded from the project Net Emissions Increase (NEI) calculation as follows:

$$NEI = PAE - BAE - \text{unused baseline capacity emissions}$$

The District has determined that the unit could have emitted PAE during the baseline period (when it emitted BAE) and therefore the unused baseline emissions are equal to PAE – BAE and NEI = 0. Therefore the project is not a Federal Major Modification.

9. 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 D.

VI. Compliance

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 for the following*:

- 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 SB288 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

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)

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

HAPE = Historically Adjusted Potential to Emit, (lb/day)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

Where,

PE1 = The emissions unit's Potential to Emit prior to modification or relocation, (lb/day)

EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1

EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

$$\text{AIPE} = \text{PE2} - (\text{PE1} * (\text{EF2} / \text{EF1}))$$

As previously discussed in Sections VII.B and VII.C, EF2 is equal to EF1 and PE2 is equal to PE1. Therefore, the AIPE is equal to zero and BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does not constitute a SB 288 and/or Federal Major Modification for NO_x emissions; therefore BACT is not triggered for any pollutant.

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post-Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Determination (lb/year)					
	NO_x	SO_x	PM₁₀	CO	VOC
Post Project SSPE (SSPE2)	24,235	8,014	91,919	89,485	5,814
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	No	Yes	No	No

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for NO_x and PM₁₀ only; therefore offset calculations will be required for this project.

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for NO_x is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, 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 = 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)

There is only one emissions unit associated with this project and there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

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

PE2 (NO_x) = 22,338 lb/year

BE (NO_x) = 22,338 lb/year

ICCE = 0 lb/year

PE2 (PM₁₀) = 91,925 lb/year

BE (PM₁₀) = 91,925 lb/year

ICCE = 0 lb/year

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

NO_x Offsets Required (lb/year) = $([0 - 0] + 0) \times 1.5$
= 0×1.5
= 0 lb-NO_x/year

PM₁₀ Offsets Required (lb/year) = $([0 - 0] + 0) \times 1.5$
= 0×1.5
= 0 lb-PM₁₀/year

Therefore, the quantity of offsets required is zero.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB288 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 SB288 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 Potential to Emit 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 Potential to Emit Purposes.

c. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	22,812	22,812	20,000 lb/year	No
SO _x	7,952	7,952	54,750 lb/year	No
PM ₁₀	91,932	91,932	29,200 lb/year	No
CO	89,385	89,385	200,000 lb/year	No
VOC	5,779	5,779	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 Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post

Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. SSIPE = SSPE2 – SSPE1. The values for SSPE1 and SSPE2 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	22,812	22,812	0	20,000 lb/year	No
SO _x	7,952	7,952	0	20,000 lb/year	No
PM ₁₀	91,932	91,932	0	20,000 lb/year	No
CO	89,385	89,385	0	20,000 lb/year	No
VOC	5,779	5,779	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 criteria 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)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, 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.

Proposed Rule 2201 (DEL) Conditions:

- VOC emissions from this landfill operation controlled with an enclosed flare shall not exceed 15.8 lb/day. [District Rule 2201]
- The combined landfill gas and landfill condensate consumption rate for the enclosed flare shall not exceed 51 MMBtu per hour. [District Rule 2201]
- The enclosed flare shall either reduce VOC by 98 weight percent or reduce the outlet VOC concentration to less than 20 parts per million by volume, dry basis as methane at 3 percent oxygen. [District Rule 2201 and 4102; 40 CFR 60.752(b)(2)(iii)((B))]
- Emissions from the enclosed flare shall not exceed any of the following limits: 0.05 lb-NO_x/MMBtu, 0.2 lb-CO/MMBtu, or 0.034 lb-PM₁₀/MMBtu. [District Rule 2201]

- Emissions from the enclosed flare shall not exceed 0.0178 lb-SO_x/MMBtu (46.9 ppmv of H₂S in fuel). [District Rule 2201]
- Landfill design capacity shall not exceed 2,200 ton/day average, 3,600 ton/day peak or 1,300,000 ton/yr of refuse received, and 4.6 million cubic meters, or 367 acres, of solid waste. [District Rule 2201 and 40 CFR 60.575(a)(2)(ii)]
- Landfill condensate can be injected into the enclosed flare. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

The following source testing requirements on the current permit will be carried over to the proposed ATC:

- Source testing for NO_x shall be conducted using EPA Test Method 7 or CARB Method 20.
- Source testing for CO shall be conducted using EPA Test Method 10 or 10B, CARB Methods 1-5 with 10 or CARB Test Method 100.
- Gas combusted in the flare shall be tested for H₂S content on a quarterly basis using draeger tubes. If compliance is shown for two consecutive quarters, the testing frequency may be changed to annual. Quarterly testing shall resume if any annual test shows noncompliance.
- VOC emissions shall be measured by USEPA Test Method 18, 25, 25A, or 25C.

2. Monitoring

The following monitoring requirements on the current permit will be carried over to the proposed ATC:

- The facility shall maintain in proper operating condition a gas flow meter with a continuous recording device that measures the amount of landfill gas consumed per day.
- The combined landfill gas and landfill condensate consumption rate for the enclosed flare shall not exceed 51 MMBtu per hour.
- Landfill design capacity shall not exceed 44.4 million cubic yards, or 367 acres, of solid waste. Annual amount of refuse received shall not exceed 1,300,000 ton/year.
- The enclosed flare shall be equipped with a temperature indicator and recorder which measures and records the operating temperature. The temperature indicator and recorder must operate continuously.

- The enclosed flare control device shall be operated within the parameter ranges established during the initial or most recent performance test.
- In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour
- Except during periods of startup, shutdown, and malfunction, the enclosed flare average combustion temperature, for all 3-hour periods of operation, shall not drop more than 28 °C below the average combustion temperature, during the most recent performance test at which compliance with 60.752(b)(2)(iii)(B)(2) was determined. Duration of startup, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for control devices where free venting of landfill gas occurs.
- The owner or operator shall measure the gauge pressure in the gas collection header at each individual interior well on a monthly basis as provided in 60.755(a)(3). If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.
- The owner or operator shall monitor each interior well monthly for temperature and oxygen as provided in 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.
- The gas collection system shall be monitored monthly at the interior wellheads, and corrective action shall be taken to ensure the system is 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.

Intermediate and final soil cover emissions were not previously expressed on the facility's operating permit, but will be as a result of this project. These emissions are considered part of the facility's baseline emissions.

- Annual amount of soil used for covering shall not exceed 5,920,933 cubic yards of soil, and PM10 emissions shall not exceed 0.008 lb PM10/ton of soil (using a soil

density of 3,240 lbs/cubic yard of soil). Permittee shall keep annual records of the amount of soil used for covering.

3. Recordkeeping

The following recordkeeping requirements on the current permit will be carried over to the proposed ATC:

- The facility shall maintain in proper operating condition a gas flow meter with a continuous recording device that measures the amount of landfill gas consumed per day.
- The enclosed flare shall be equipped with a temperature indicator and recorder which measures and records the operating temperature. The temperature indicator and recorder must operate continuously.
- Permittee shall maintain continuous records of flare combustion temperature, and volumetric gas flow rate. Records of the net heating value of landfill gas being combusted shall also be tested and recorded.
- The operator shall record quarterly the surface emission tests including test time, weather conditions, precipitation records, areas sampled, calibration records, and test results. Corrective action shall be taken if required in accordance to 40 CFR 60.755(c).
- The operator shall record quarterly the surface emission tests including test time, weather conditions, precipitation records, areas sampled, calibration records, and test results. Corrective action shall be taken if required in accordance to 40 CFR 60.755(c).
- All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request.

4. Reporting

The following reporting requirements on the current permit will be carried over to the proposed ATC:

- Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel.
- The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days after testing.
- The operator shall record emission control device source tests including VOC destruction/treatment efficiency and emissions of CO, NO_x, PM₁₀, VOC, and SO_x, in pounds per MMBtu heat input.

Soil Cover

Soil cover emissions were not previously expressed on the facility's operating permit, but will be as a result of this project. These emissions are considered part of the facility's baseline emissions. For recordkeeping purposes the amount and density of soil will be converted to the following:

$$159,865,200 \text{ cu.ft} \times 1 \text{ cu.yd./} 27 \text{ cu.ft.} = 5,920,933$$

$$120 \text{ lb/cu.ft.} \times 27 \text{ cu.ft./} \text{ cu.yd.} = 3,240 \text{ lb/cu.yd.}$$

- Annual amount of soil used for covering shall not exceed 5,920,933 cubic yards of soil, and PM10 emissions shall not exceed 0.008 lb PM10/ton of soil (using a soil density of 3,240 lbs/cubic yard of soil). Permittee shall keep annual records of the amount of soil used for covering.

Rule 2520 Federally Mandated Operating Permits

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 pursuant to Section 3.20 of this rule:

In accordance with Rule 2520, 3.20, 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 operate under the ATC upon submittal of the Title V administrative amendment application.

Rule 4001 New Source Performance Standards

As clarified in EPA's Municipal Solid Waste Landfills, Volume 1: Summary of the Requirements for the New Source Performance Standards and Emission Guidelines for Municipal Solid Waste Landfills, existing (construction, modification, or reconstruction commenced prior to May 30, 1991) landfills are subject to Subpart Cc which must be implemented through either a State Plan or a Federal Plan. Per the Federal Register (Vol. 64, No. 184 / Thursday, September 23, 1999 / Rules and Regulations 51447), the permit unit is subject to the Federal Plan (40 CFR 62 Subpart GGG) because the San Joaquin Valley Unified Air Pollution Control District has not submitted its portion to the California State Plan.

40 CFR 62 Subpart GGG

Per 40 CFR 62.14350(a), this subpart applies to "designated" landfills not covered by an EPA approved and currently effective State Plan. Since this facility is not covered by the California State Plan as explained above and satisfies the "designated" definition in 40 CFR 62.14352(a), this subpart is applicable.

The requirements of Subpart GGG reference those in Subpart WWW for standards, procedures, test methods, monitoring, and reporting and recordkeeping. This permit unit is currently complying with the requirements of Subpart WWW as demonstrated in previous evaluations for this permit unit. The modifications proposed in this project will not affect compliance with Subpart WWW. However, the applicant has proposed alternatives to specific sections to Subpart WWW. Only the sections for which the applicant is proposing changes will be discussed below:

Section 62.14354(b) states the owner or operator of a designated facility with a gas collection and control system used to comply with Section 62.14353(b) must comply with the operational standards in 40 CFR 60.753; the test procedures in 40 CFR 60.754(b) and (d); the compliance provisions in 40 CFR 60.755; and the monitoring provisions in 40 CFR 60.756, unless alternative procedures have been approved.

Per Section 60.752(b)(2)(i)(B), the collection and control system design plan shall include any alternatives, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of Sections 60.753 through 60.758 proposed by the owner or operator.

In accordance with this provision, the facility is proposing the following alternatives:

40 CFR 60.752(b) and 60.755(b)

As previously stated, Section 60.752(b)(2)(i) states that the collection and control system design plan shall include any alternatives to the provisions of Sections 60.753 through 60.758 proposed by the owner or operator.

The facility is proposing to expand the number of collection wells at the facility. As such, the proposal constitutes an alternative to the existing collection and control design plan, and the facility will be required to submit a new design plan for approval.

The following condition on the current PTO will be added to the ATC:

- For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, owner or operator must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 62 subpart GGG, these alternatives can be used to comply with 40 CFR 63 subpart AAAA, except that all affected sources must comply with the startup, shutdown, and malfunction (SSM) requirements in subpart A of 40 CFR 63 as specified in Table 1 of 40 CFR 63 subpart AAAA and all affected sources must submit compliance reports every 6 months as specified in 40 CFR 63.1980(a) and (b), including information on all deviations that occurred during the 6 month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average. [40 CFR 60.752(b)(2) and 63.1955(c)]

Additionally, Section 60.755(b) states for the purposes of compliance with Section 60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in Section 60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of (1) 5 years or more if active; or (2) 2 years or more if closed or at final grade.

The following condition will be added to the ATC:

- Each owner or operator shall place each well or design component as specified in the approved design plan as provided in 40 CFR 60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of: 1) 5 years or more if active or 2) 2 years or more if closed or at final grade. [40 CFR 60.755(b)]

40 CFR 60.753(c)

Section 60.753(c) states each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of Section 60.752(b)(2)(ii) of this subpart shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

The facility has stated that an option for controlling off-site migration may be the use of soil vapor extraction/air injection wells in native soils outside the perimeter of the waste mass.

These wells would be considered exterior to the waste mass, and would not cause fires or inhibit anaerobic decomposition by killing methanogens. The conditions on the current permit enforcing the requirements of this section do not differentiate between interior and exterior wells. As such, the facility requests that any exterior wells be exempt from the requirements specified in this section.

Therefore, in accordance with the language in Section 70.753(c), the conditions will be revised to state that only interior wells are subject to the applicable requirements.

The following conditions on the current PTO will be revised and added to the ATC:

- The owner or operator shall monitor each interior well monthly for temperature and oxygen as provided in 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [40 CFR 60.753(c), 60.755(a)(5), 60.756(a)(2) and (a)(3), and 62.14354(b)]
- The gas collection system shall be monitored monthly at the interior wellheads, and corrective action shall be taken to ensure the system is 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. [40 CFR 60.753(c), 60.755(a)(3) and (a)(5), and 62.14354(b)]

40 CFR 60.753(b) and 60.755(a)(3)

Section 60.753(b) states each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of Section 70.752(b)(2)(ii) of this subpart shall operate the collection system with negative pressure at each wellhead except under the following conditions:

- a) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in Section 60.757(f)(1);
- b) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;
- c) A decommissioned well. A well may experience a static positive pressure shut down to accommodate for declining flows. All design changes shall be approved by the Administrator;

The facility has stated that an option for controlling off-site migration may be the use of soil vapor extraction/air injection wells in native soils outside the perimeter of the waste mass. These wells would be considered exterior to the waste mass, and may need to operate under

negative or zero pressure to control migration. As such, the facility requests that any exterior wells be exempt from the requirements specified in this section.

The following condition will be added to the ATC:

- The owner or operator shall operate the collection system with negative pressure at each interior wellhead except under the following conditions: 1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire; 2) Use of a geomembrane or synthetic cover; or 3) A decommissioned well. [40 CFR 60.753(b) and 62.14354(b)]

Section 60.755(a)(3) states for the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with §60.752(b)(2)(ii)(A)(3), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under §60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

As previously discussed, the facility has requested that the permit conditions clarify that the requirements of this section apply only to interior wells.

In addition to the previously revised conditions listed above, the following condition on the current PTO will be revised and carried over to the ATC:

- The owner or operator shall measure the gauge pressure in the gas collection header at each individual interior well on a monthly basis as provided in 60.755(a)(3). If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [40 CFR 60.755(a)(3), 60.756(a)(1), and 62.14354(b)]

40 CFR 60.755(a)

Sections 60.755(a)(3) and (a)(5) list monitoring requirements and corrective measurement requirements in cases of an exceedance. The timeframes for which corrective action must be taken are listed. Both sections require correction action to be initiated within 5 calendar days of an exceedance, with up to 120 days allowed to correct the exceedance. Both sections also state that an alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

The applicable permit conditions on the current permit do not contain language allowing for an alternative timeline to be proposed. The facility has requested that the current permit conditions be revised to reflect the language written in Section 60.755.

The following conditions on the current PTO will be revised and added to the ATC:

- The owner or operator shall measure the gauge pressure in the gas collection header at each individual interior well on a monthly basis as provided in 60.755(a)(3). If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [40 CFR 60.755(a)(3), 60.756(a)(1), and 62.14354(b)]
- The owner or operator shall monitor each interior well monthly for temperature and oxygen as provided in 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [40 CFR 60.753(c), 60.755(a)(5), 60.756(a)(2) and (a)(3), and 62.14354(b)]

40 CFR 60.755(e)

Section 60.755(e) states the provisions of this subpart apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

The facility has stated that EPA presented proposed rule amendments to this subpart (dated September 8, 2006) which included proposed changes to the duration of start-up, shutdown, and malfunction events, due to some malfunctions that cannot be corrected within the timeframes currently allowed in this section. In anticipation of EPA's changes, the facility has proposed alternate language to satisfy this section. The facility has proposed the following condition:

The provisions of the subpart apply at all times, except during periods of startup, shutdown, and malfunction and periods of routine maintenance of the landfill gas collection, control, or treatment systems. The provisions of §60.11(d) continue to apply during periods of startup, shutdown, malfunction, and routine maintenance of the landfill gas collection, control, or treatment systems. Routine maintenance

activities must be completed and malfunctions must be corrected as soon as practicable after their occurrence in order to minimize emissions.

Since the proposed rule amendments by EPA have not yet been adopted for this subpart, and because the condition proposed by the facility includes provisions for relaxed compliance during routine maintenance, the proposed changes to this section have not been granted, and no changes have been made to any permit conditions referencing this section.

40 CFR 60 Subpart WWW

Per 40 CFR 60.750(a), this subpart is only applicable to landfills that commenced construction, reconstruction or modification on or after May 30, 1991. Per project C-3115, 1001040, this facility has been in existence since 1986. There are no records indicating modifications (as defined in 40 CFR 60.750 which requires vertical or horizontal expansion resulting in a capacity increase) since initial permitting. Therefore, it can reasonably be assumed that this facility is not subject to this subpart.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to landfill operations.

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). 40 CFR Part 60 requires 5% opacity or less. Compliance with this rule is expected as long as the equipment is properly maintained and operated.

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.

As demonstrated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is 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 are permitted at 0.034 lb/MMBtu. Per project # C-1020253, the flowrate is 1,700 dscf/min. The grain loading is calculated as follows:

$$\begin{aligned} &= (0.034 \text{ lb/MMBtu}) * (51 \text{ MMBtu/hr}) * (1 \text{ hr} / 60 \text{ min}) * (1 \text{ min} / 1,700 \text{ dscf}) * (7000 \text{ gr/lb}) \\ &= 0.1 \text{ gr/dscf} \end{aligned}$$

This does not exceed the threshold of 0.1 gr/dscf; therefore, 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

This rule is applicable to operations involving the use of flares. The purpose is to limit the emissions of VOC, NO_x, and SO_x from the operation of flares.

Section 4.2 states that flares that are subject to the requirements of 40 CFR 60 Subpart WWW (Standards of Performance for Municipal Waste Landfills), or Subpart Cc (Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills) are exempt from this rule. Therefore, the flare in this operation is exempt from this rule.

Rule 4642 Solid Waste Disposal Sites

This rule applies to any solid waste disposal site which has a gas collection system and/or control device in operation, or undergoing maintenance or repair. The purpose of this rule is to reduce VOC emissions from solid waste disposal sites.

Section 4.1 states that the requirements of this rule shall not apply to active disposal areas in a landfill, or any solid waste disposal site which is subject to the requirements of 40 CFR 60 Subpart WWW (Standards of Performance for Municipal Waste Landfills) or Subpart Cc (Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills). Therefore, the operation is exempt from this rule.

Rule 4801 Sulfur Compounds

This rule states that a person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

According to project # C-1020253, based on the calculated SO_x emission factor of 0.9074 lb/hr (= 21.8 lb-SO_x/day ÷ 24 hr/day) and an exhaust flowrate of 1,700 ft³/min for the flare, the sulfur concentration is expected to be as follows:

$$\begin{aligned}\text{SO}_2 \text{ concentration} &= (0.9074 \text{ lb-SO}_2/\text{hr}) \cdot (1 \text{ hr} / 60 \text{ min}) \cdot (1 \text{ min} / 1700 \text{ ft}^3) \cdot (379.5 \text{ ft}^3/\text{lb-mol}) \cdot (1 \\ &\quad \text{lb-mol} / 64 \text{ lb-SO}_2) \\ &= 53 \times 10^{-6} = 53 \text{ ppmv} \ll 2,000 \text{ ppmv}\end{aligned}$$

No change in the SO_x emission factor or exhaust flowrate is expected from this project. Therefore compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

The facility is located at 18950 W American Ave in Kerman, CA. The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (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 San Joaquin Valley Unified Air Pollution Control District (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.
- 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 units are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District conducted a Risk Management Review and concludes that potential health impacts are less than significant.¹

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

¹ Since there is no change in emissions or operating parameters associated with this project, the previous Risk Management Review (RMR) for this unit performed under District project C-1062284 is still valid. That RMR concluded that the potential health impacts are less than significant. A copy of the RMR is included as Appendix E.

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.

VII. Recommendation

Issue Authority to Construct C-3115-2-11 subject to the permit conditions on the attached draft Authority to Construct in Appendix F.

VIII. Billing Information

Per Rule 3020, Schedule 12, annual permit fees are calculated as follows:

- 99 acres @ \$2,356
- \$99 for each 5 acres above 99 acres

$$\begin{aligned} \text{Fees} &= \$2,356 + (\$99) * (367 \text{ acres} - 99 \text{ acres})/5 \\ &= \$2,356 + \$5,306 \end{aligned}$$

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-3115-2-11	3020-12-U	367 Acre Landfill	\$7,662

Appendixes

- A: Current PTO
- B: SSPE1 Calculations
- C: BACT Guideline 1.4.3
- D: QNEC
- E: RMR Project C-1062284
- F: Draft ATC
- G: Emissions Profile

APPENDIX A
Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3115-2-10

EXPIRATION DATE: 07/31/2015

EQUIPMENT DESCRIPTION:

32.7 MILLION CUBIC YARD CAPACITY (367 ACRES) MUNICIPAL SOLID WASTE LANDFILL WITH A LANDFILL GAS COLLECTION AND CONTROL SYSTEM, INCLUDING 66 COLLECTION WELLS, PIPING, VACUUM PUMP/BLOWER, CONDENSATE TRAPS AND A 3,150 GALLON CONDENSATE STORAGE TANK, CONTROLLED BY AN ENCLOSED GROUND FLARE USING AN LPG PILOT

PERMIT UNIT REQUIREMENTS

1. Annual amount of soil used for covering shall not exceed 5,920,933 cubic yards of soil, and PM10 emissions shall not exceed 0.008 lb PM10/ton of soil (using a soil density of 3,240 lbs/cubic yard of soil). Permittee shall keep annual records of the amount of soil used for covering. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR Part 60.752(b)(2)(iii)(B)(2) and (b)(2)(iv)] Federally Enforceable Through Title V Permit
3. All equipment shall be constructed, calibrated, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201, 40 CFR 60.755(d) and 756(b)] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged from the flare into the atmosphere for a period or periods aggregating more than five minutes in any two hours which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [40 CFR 60.18(c)(1)] Federally Enforceable Through Title V Permit
5. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301] Federally Enforceable Through Title V Permit
6. The landfill gas consumption rate for the enclosed flare shall not exceed 51 MMBtu per hour. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The facility shall maintain in proper operating condition a gas flow meter with a continuous recording device which measures the amount of landfill gas consumed per day. [District Rule 2201 and 40 CFR Part 60.754(b)(1)] Federally Enforceable Through Title V Permit
8. Landfill gas condensate can be injected into the enclosed flare. The landfill gas condensate injection flow rate shall be recorded daily when the injector is operating, and shall not exceed 2 gallons per minute. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The enclosed flare shall be equipped with automatic dampers, an automatic shutdown device, and a flame arrester. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The enclosed flare shall be equipped with a temperature indicator and recorder which measures and records the operating temperature. The temperature indicator and recorder must operate continuously. [40 CFR 60.756(b)(1)] Federally Enforceable Through Title V Permit
11. The enclosed flare control device shall be operated within the parameter ranges established during the initial or most recent performance test. [40 CFR 60.752(b)(iii)(B)(2)] 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.

12. Except during periods of startup, shutdown, and malfunction, the enclosed flare average combustion temperature, for all 3-hour periods of operation, shall not drop more than 28 degrees C below the average combustion temperature, during the most recent performance test at which compliance with 60.752(b)(2)(iii)(B)(2) was determined. Duration of startup, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for control devices where free venting of landfill gas occurs. [40 CFR 60.758(c)(1)(i) and 40 CFR 60.755(e)] Federally Enforceable Through Title V Permit
13. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour. [40 CFR 60.753(e)] Federally Enforceable Through Title V Permit
14. VOC emissions from this landfill operation controlled with an enclosed flare shall not exceed 15.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The enclosed flare shall either reduce VOC by 98 weight percent or reduce the outlet VOC concentration to less than 20 parts per million by volume, dry basis as methane at 3 percent oxygen. [District Rules 2201 and 4102; 40 CFR 60.752(b)(2)(iii)(B)] Federally Enforceable Through Title V Permit
16. Emissions from the enclosed flare shall not exceed any of the following limits: 0.05 lb-NO_x/MMBtu, 0.2 lb-CO/MMBtu, or 0.034 lb-PM₁₀/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Emissions from the enclosed flare shall not exceed 0.0178 lb-SO_x/MMBtu (46.9 ppmv of H₂S in fuel). [District Rule 2201] Federally Enforceable Through Title V Permit
18. Landfill design capacity shall not exceed 44.4 million cubic meters, or 367 acres, of solid waste. Annual amount of refuse received shall not exceed 1,300,000 ton/year. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The enclosed flare shall be equipped with an LPG fired pilot. [40 CFR 60.18(c)(2) and (f)(2)] Federally Enforceable Through Title V Permit
20. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days after testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing to demonstrate compliance with VOC, NO_x, and CO emission limits and VOC control efficiency requirements shall be conducted annually. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Source testing for NO_x shall be conducted using CARB Test Method CARB Method 7E or CARB Method 100. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing for CO shall be conducted using EPA Test Method 10 or 10B, CARB Methods 1-5 with 10 or CARB Test Method 100. [District Rule 1081] Federally Enforceable Through Title V Permit
25. Gas combusted in the flare shall be tested for H₂S content on a quarterly basis using draeger tubes. If compliance is shown for two consecutive quarters, the testing frequency may be changed to annual. Quarterly testing shall resume if any annual test shows noncompliance. [District Rule 1081] Federally Enforceable Through Title V Permit
26. VOC emissions shall be measured by USEPA Test Method 18, 25, 25A, or 25C. [District Rule 1081 and 40 CFR 60.754(d)] Federally Enforceable Through Title V Permit
27. Measure the gauge pressure in the gas collection header at each individual well on a monthly basis as provided in 60.755(a)(3). If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days. [40 CFR 60.755(a)(3) and 60.756(a)(1)] Federally Enforceable Through Title V Permit
28. The owner or operator shall monitor each well monthly for temperature and oxygen as provided in 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. [40 CFR 60.753(c), 60.755(a)(5) and 60.756(a)(2) and (a)(3)] 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.

29. The gas collection system shall be monitored monthly at the wellheads and corrective action taken to ensure it is 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. [40 CFR 60.753(c) and 60.755(a)(3), (a)(5)] Federally Enforceable Through Title V Permit
30. The operator shall record quarterly the surface emission tests including test time, weather conditions, precipitation records, areas sampled, calibration records, and test results. Corrective action shall be taken if required in accordance to 40 CFR 60.755(c). [District Rule 2201, 40 CFR 60.755(c) and 40 CFR 60.756(f)] Federally Enforceable Through Title V Permit
31. Permittee shall maintain continuous records of flare combustion temperature, and volumetric gas flow rate. Records of the net heating value of landfill gas being combusted shall also be tested and recorded. [District Rule 2201 and 40 CFR 60.756(b), 60.758(b)(2)(i), (c)(2) and (b)(2)(i)] Federally Enforceable Through Title V Permit
32. Permittee shall keep, for the life of the collection system, an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector. [40 CFR 60.758(d) and 60.34(c)] Federally Enforceable Through Title V Permit
33. The operator shall record emission control device source tests including VOC destruction/treatment efficiency and emissions of CO, NO_x, PM₁₀, VOC, and SO_x, in pounds per MMBtu heat input. [District Rule 1081] Federally Enforceable Through Title V Permit
34. The operator shall monitor and record the oxygen content in the flare main header, maintenance-related and other control system downtimes and individual well shutdowns. Exceedances defined under 60.758(c) shall be reported once every 180 days. [District Rule 4102 and 40 CFR 60.757(f), (g)(4) and 60.758(c) and (e)] Federally Enforceable Through Title V Permit
35. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR 60.758(a) and (b)] Federally Enforceable Through Title V Permit
36. This operating permit may be cancelled upon District approval when the landfill is closed, is not otherwise subject to the requirements of 40 CFR part 70 or part 71, and if the landfill meets the conditions for control system removal specified in 40 CFR 60.752(b)(2)(v). [40 CFR 62.14352(f)] Federally Enforceable Through Title V Permit
37. 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 62.14355(a)] Federally Enforceable Through Title V Permit
38. Each owner or operator, required by 40 CFR Part 62 subpart GGG to install a collection and control system, shall comply with the requirements in 40 CFR 63.1960 through 63.1985 and with the general provisions specified in table 1 of 40 CFR 63 subpart AAAA. [40 CFR 63.1955(b)] Federally Enforceable Through Title V Permit
39. For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, owner or operator must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 62 subpart GGG, these alternatives can be used to comply with 40 CFR 63 subpart AAAA, except that all affected sources must comply with the startup, shutdown, and malfunction (SSM) requirements in subpart A of 40 CFR 63 as specified in Table 1 of 40 CFR 63 subpart AAAA and all affected sources must submit compliance reports every 6 months as specified in 40 CFR 63.1980(a) and (b), including information on all deviations that occurred during the 6 month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average. [40 CFR 63.1955(c)] Federally Enforceable Through Title V Permit

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

APPENDIX B
SSPE1 Calculations

The following table summarizes the pre-project emissions at the facility.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
C-3115-2-10	22,338	7,952	91,925	89,352	5,767
C-3115-3-0	474	0	7	33	12
Pre-Project SSPE (SSPE1)	22,812	7,952	91,932	89,385	5,779

C-3155-2-10: Emissions for this permit unit were calculated in Section VII.C.1 of the application review.

C-3155-3-0: This permit is for a 755 bhp IC engine. The current PTO limits the engine to 50 hours of operation per year. The current PTO also lists emission factors for NO_x, PM₁₀, CO, and VOC, and requires diesel fuel containing not more than 0.0015% sulfur by weight. Applying the emission factors and operating schedule from the current PTO, the annual emissions are calculated as follows:

Annual Emissions					
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Annual Hours of Operation (hrs/yr)	Conversion (g/lb)	PE Total (lb/yr)
NO _x	5.7	755	50	453.6	474
SO _x	0.0051	755	50	453.6	0
PM ₁₀	0.08	755	50	453.6	7
CO	0.4	755	50	453.6	33
VOC	0.14	755	50	453.6	12

APPENDIX C
BACT Guideline 1.4.3

Per » B A C T » Bact Guideline.asp?category Level1=1&category Level2=4&category Level3=3&last Update=1 » 8 :

INSTRUCTIONS: click on "Details" for Permit Specific BACT Determinations.

[Back](#) [Details Page](#)

**Best Available Control Technology (BACT) Guideline 1.4.3
Last Update: 1/8/2001**

Landfill Gas Vapor Collection System

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
NOx	0.06 lb-NOx/MMBtu	0.05 lb/MMBtu	
PM10	Air assist fan	Steam injection	
SOx		Wet Scrubber with 98% control efficiency	
VOC	Flare with a control efficiency of (= or >) 98% or a controlled VOC (measured as methane) of (= or <) 20 ppmv @ 3% O2		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This Is a Summary Page for this Class of Source - Permlt Specific BACT Determinations on Details Page.

APPENDIX D
QNEC

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

$QNEC = PE2 - PE1$, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.

PE2 = Post-Project Potential to Emit for each emissions unit, lb/qtr.

PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.1 and VII.C.2 in the evaluation above, quarterly PE2 and quarterly BE can be calculated as follows:

$PE2_{quarterly} = PE2_{annual} \div 4 \text{ quarters/year}$

$PE1_{quarterly} = PE1_{annual} \div 4 \text{ quarters/year}$

The results of the QNEC calculations are shown in the following table.

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	NEC (lb/qtr)
NO_x	5,585	5,585	0
SO_x	1,988	1,988	0
PM₁₀	22,981	22,981	0
CO	22,338	22,338	0
VOC	1,442	1,442	0

APPENDIX E
RMR Project C-1062284

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Chay Thao – Permit Services
 From: Cheryl Lawler – Technical Services
 Date: April 23, 2007
 Facility Name: American Avenue Landfill
 Location: 18950 W. American Avenue, Kerman
 Application #(s): C-3115-2-8
 Project #: C-1062284

A. RMR SUMMARY

RMR Summary			
Categories	Condensate Injected Landfill Gas Flare (Unit 2-8)	Project Totals	Facility Totals
Prioritization Score	1.71	1.71	>1.0
Acute Hazard Index	0.00	0.00	0.00
Chronic Hazard Index	0.00	0.00	0.00
Maximum Individual Cancer Risk	6.07E-06	6.07E-06	6.74E-06
T-BACT Required?	Yes - VOCs		
Special Permit Conditions?	No		

B. RMR REPORT

I. Project Description

Technical Services received a request on April 23, 2007, to perform a Risk Management Review to increase the amount of condensate injected into a landfill gas flare.

II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the prioritization score was greater than one, a refined health risk assessment was required and performed. VOC emission rates were calculated using emission source test estimates for landfill gas/condensate speciation provided by the facility and processing engineer. AERMOD was used, with flare parameters outlined below, and meteorological data from Fresno to determine maximum dispersion factors at the nearest residential and business receptors. These dispersion factors were input into the HARP model to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 2-8			
Source Type	Flare	Closes Receptor (m)	640.05
Flare Height (m)	12.19	Project Location Type	Urban
Flare Diameter (m)	2.74	Stack Gas Velocity (m/s)	0.14
Stack Gas Temp. (K)	811		

III. Conclusion

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with the project is **6.07E-06**, which is greater than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the project is approved **with Toxic Best Available Control Technology (T-BACT)**.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

APPENDIX F
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-3115-2-11

LEGAL OWNER OR OPERATOR: AMERICAN AVENUE LANDFILL
MAILING ADDRESS: 2220 TULARE ST, 6TH FLOOR
ATTN: RESOURCES MANAGER
FRESNO, CA 93721

LOCATION: 18950 W AMERICAN AVE
KERMAN, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 32.7 MILLION CUBIC YARD CAPACITY (367 ACRES) MUNICIPAL SOLID WASTE LANDFILL WITH A LANDFILL GAS COLLECTION AND CONTROL SYSTEM, INCLUDING 66 COLLECTION WELLS, PIPING, VACUUM PUMP/BLOWER, CONDENSATE TRAPS AND A 3,150 GALLON CONDENSATE STORAGE TANK, CONTROLLED BY AN ENCLOSED GROUND FLARE USING AN LPG PILOT: REMOVE 66 COLLECTION WELL LIMIT FROM EQUIPMENT DESCRIPTION, COMBINE LANDFILL GAS AND CONDENSATE FLARE CONSUMPTION, AND CORRECT LANDFILL CAPACITY FROM 32.7 MILLION CUBIC YARDS TO 44.4 MILLION CUBIC YARDS

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 NSR Rule] 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. Annual amount of soil used for covering shall not exceed 5,920,933 cubic yards of soil, and PM10 emissions shall not exceed 0.008 lb PM10/ton of soil (using a soil density of 3,240 lbs/cubic yard of soil). Permittee shall keep annual records of the amount of soil used for covering. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR Part 60.752(b)(2)(iii)(B)(2) and (b)(2)(iv), and 62.14353(b)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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

DRAFT

DAVID WARNER, Director of Permit Services
C-3115-2-11: Jul 8 2011 9:51AM - SANDHUG : Joint Inspection NOT Required

5. All equipment shall be constructed, calibrated, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201 and 40 CFR 60.755(d), 60.756(b), and 62.14354(b)] Federally Enforceable Through Title V Permit
6. No air contaminant shall be discharged from the flare into the atmosphere for a period or periods aggregating more than five minutes in any two hours which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [40 CFR 60.18(c)(1)] Federally Enforceable Through Title V Permit
7. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301] Federally Enforceable Through Title V Permit
8. The combined landfill gas and landfill condensate consumption rate for the enclosed flare shall not exceed 51 MMBtu per hour. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The facility shall maintain in proper operating condition a gas flow meter with a continuous recording device which measures the amount of landfill gas consumed per day. [District Rule 2201 and 40 CFR Part 60.754(b)(1) and 62.14354(b)] Federally Enforceable Through Title V Permit
10. Landfill gas condensate can be injected into the enclosed flare. The landfill gas condensate injection flow rate shall be recorded daily when the injector is operating. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The enclosed flare shall be equipped with automatic dampers, an automatic shutdown device, and a flame arrester. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The enclosed flare shall be equipped with a temperature indicator and recorder which measures and records the operating temperature. The temperature indicator and recorder must operate continuously. [40 CFR 60.756(b)(1) and 62.14354(b)] Federally Enforceable Through Title V Permit
13. The enclosed flare control device shall be operated within the parameter ranges established during the initial or most recent performance test. [40 CFR 60.752(b)(2)(iii)(B)(2) and 60.14353(b)] Federally Enforceable Through Title V Permit
14. Except during periods of startup, shutdown, and malfunction, the enclosed flare average combustion temperature, for all 3-hour periods of operation, shall not drop more than 28 degrees C below the average combustion temperature, during the most recent performance test at which compliance with 60.752(b)(2)(iii)(B)(2) was determined. Duration of startup, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for control devices where free venting of landfill gas occurs. [40 CFR 60.758(c)(1)(i), 60.755(e), and 62.14354(b)] Federally Enforceable Through Title V Permit
15. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour. [40 CFR 60.753(e) and 62.14354(b)] Federally Enforceable Through Title V Permit
16. VOC emissions from this landfill operation controlled with an enclosed flare shall not exceed 15.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The enclosed flare shall either reduce VOC by 98 weight percent or reduce the outlet VOC concentration to less than 20 parts per million by volume, dry basis as methane at 3 percent oxygen. [District Rules 2201 and 4102, and 40 CFR 60.752(b)(2)(iii)(B) and 62.14353(b)] Federally Enforceable Through Title V Permit
18. Emissions from the enclosed flare shall not exceed any of the following limits: 0.05 lb-NO_x/MMBtu, 0.2 lb-CO/MMBtu, or 0.034 lb-PM₁₀/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Emissions from the enclosed flare shall not exceed 0.0178 lb-SO_x/MMBtu (46.9 ppmv of H₂S in fuel). [District Rule 2201] Federally Enforceable Through Title V Permit
20. Landfill design capacity shall not exceed 44.4 million cubic yards, or 367 acres, of solid waste. Annual amount of refuse received shall not exceed 1,300,000 ton/year. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The enclosed flare shall be equipped with an LPG fired pilot. [40 CFR 60.18(c)(2) and (f)(2)] Federally Enforceable Through Title V Permit

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22. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days after testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing to demonstrate compliance with VOC, NO_x, and CO emission limits and VOC control efficiency requirements shall be conducted annually. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Source testing for NO_x shall be conducted using EPA Test Method 7E or CARB Method 100. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Source testing for CO shall be conducted using EPA Test Method 10 or 10B, CARB Methods 1-5 with 10 or CARB Test Method 100. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Gas combusted in the flare shall be tested for H₂S content on a quarterly basis using draeger tubes. If compliance is shown for two consecutive quarters, the testing frequency may be changed to annual. Quarterly testing shall resume if any annual test shows noncompliance. [District Rule 1081] Federally Enforceable Through Title V Permit
28. VOC emissions shall be measured by USEPA Test Method 18, 25, 25A, or 25C. [District Rule 1081 and 40 CFR 60.754(d) and 62.14354(b)] Federally Enforceable Through Title V Permit
29. The owner or operator shall operate the collection system with negative pressure at each interior wellhead except under the following conditions: 1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire; 2) Use of a geomembrane or synthetic cover; or 3) A decommissioned well. [40 CFR 60.753(b) and 62.14354(b)] Federally Enforceable Through Title V Permit
30. The owner or operator shall measure the gauge pressure in the gas collection header at each individual interior well on a monthly basis as provided in 60.755(a)(3). If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [40 CFR 60.755(a)(3), 60.756(a)(1), and 62.14354(b)] Federally Enforceable Through Title V Permit
31. The owner or operator shall monitor each interior well monthly for temperature and oxygen as provided in 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. [40 CFR 60.753(c), 60.755(a)(5), 60.756(a)(2) and (a)(3), and 62.14354(b)] Federally Enforceable Through Title V Permit
32. The gas collection system shall be monitored monthly at the interior wellheads, and corrective action shall be taken to ensure the system is 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. [40 CFR 60.753(c), 60.755(a)(3) and (a)(5), and 62.14354(b)] Federally Enforceable Through Title V Permit
33. Each owner or operator shall place each well or design component as specified in the approved design plan as provided in 40 CFR 60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of: 1) 5 years or more if active or 2) 2 years or more if closed or at final grade. [40 CFR 60.755(b)] Federally Enforceable Through Title V Permit
34. The operator shall record quarterly the surface emission tests including test time, weather conditions, precipitation records, areas sampled, calibration records, and test results. Corrective action shall be taken if required in accordance to 40 CFR 60.755(c). [District Rule 2201, 40 CFR 60.755(c), 60.756(f), and 62.14354(b)] Federally Enforceable Through Title V Permit

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35. Permittee shall maintain continuous records of flare combustion temperature, and volumetric gas flow rate. Records of the net heating value of landfill gas being combusted shall also be tested and recorded. [District Rule 2201 and 40 CFR 60.756(b), 60.758(b)(2)(i), (c)(2) and (b)(2)(i), and 62.14354(b)] Federally Enforceable Through Title V Permit
36. Permittee shall keep, for the life of the collection system, an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector. [40 CFR 60.758(d) and 60.34(c)] Federally Enforceable Through Title V Permit
37. The operator shall record emission control device source tests including VOC destruction/treatment efficiency and emissions of CO, NO_x, PM₁₀, VOC, and SO_x, in pounds per MMBtu heat input. [District Rule 1081] Federally Enforceable Through Title V Permit
38. The operator shall monitor and record the oxygen content in the flare main header, maintenance-related and other control system downtimes and individual well shutdowns. Exceedances defined under 60.758(c) shall be reported once every 180 days. [District Rule 4102 and 40 CFR 60.757(f), (g)(4) and 60.758(c) and (e)] Federally Enforceable Through Title V Permit
39. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR 60.758(a) and (b)] Federally Enforceable Through Title V Permit
40. This operating permit may be cancelled upon District approval when the landfill is closed, is not otherwise subject to the requirements of 40 CFR part 70 or part 71, and if the landfill meets the conditions for control system removal specified in 40 CFR 60.752(b)(2)(v). [40 CFR 62.14352(f)] Federally Enforceable Through Title V Permit
41. 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 62.14355(a)] Federally Enforceable Through Title V Permit
42. Each owner or operator, required by 40 CFR Part 62 subpart GGG to install a collection and control system, shall comply with the requirements in 40 CFR 63.1960 through 63.1985 and with the general provisions specified in table 1 of 40 CFR 63 subpart AAAA. [40 CFR 63.1955(b)] Federally Enforceable Through Title V Permit
43. For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, owner or operator must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 62 subpart GGG, these alternatives can be used to comply with 40 CFR 63 subpart AAAA, except that all affected sources must comply with the startup, shutdown, and malfunction (SSM) requirements in subpart A of 40 CFR 63 as specified in Table 1 of 40 CFR 63 subpart AAAA and all affected sources must submit compliance reports every 6 months as specified in 40 CFR 63.1980(a) and (b), including information on all deviations that occurred during the 6 month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average. [40 CFR 63.1955(c)] Federally Enforceable Through Title V Permit

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APPENDIX G
Emissions Profile

Permit #: C-3115-2-11	Last Updated
Facility: AMERICAN AVENUE LANDFILL	06/09/2011 SANDHUG

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	22338.0	7952.0	91925.0	89352.0	5767.0
Daily Emis. Limit (lb/Day)	61.2	21.8	251.8	244.8	15.8
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					