



JUL 24 2012

Bill Oliver
San Joaquin Facilities Management, Inc
5400 Rosedale Highway
Bakersfield, CA 93308

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1122378

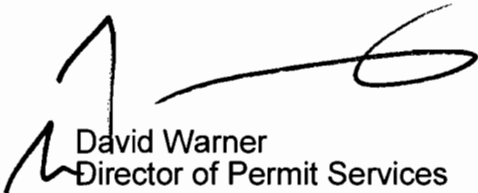
Dear Mr. Oliver:

Enclosed for your review and comment is the District's analysis of San Joaquin Facilities Management, Inc's application for an Authority to Construct for an increase in annual gas flow rate to a produced gas flare, at the Brandt lease SW Section 27, T29S, R26E within the light oil production stationary source in the central Kern County fields.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Richard Edgehill of Permit Services at (661) 392-5617.

Sincerely,



David Warner
Director of Permit Services

DW: RUE/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



JUL 24 2012

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

**Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1122378**

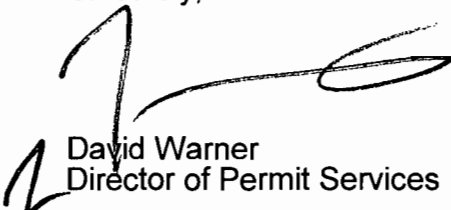
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JUL 24 2012

Gerardo C. Rios (AIR 3)
Chief, Permits Office
Air Division
U.S. E.P.A. - Region IX
75 Hawthorne Street
San Francisco, CA 94105

**Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1122378**

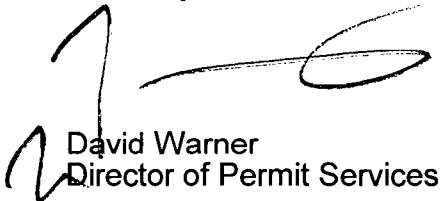
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Bakersfield Californian

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to San Joaquin Facilities Management, Inc for an increase in annual gas flow rate to a produced gas flare, at the Brandt lease SW Section 27, T29S, R26E within the light oil production stationary source in the central Kern County fields.

The analysis of the regulatory basis for this proposed action, Project #S-1122378, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.

San Joaquin Valley Air Pollution Control District Authority to Construct Application Review Increase Annual Flow Rate Limit of Process Flare

Facility Name: San Joaquin Facilities Management, Inc Date: July 11, 2012
Mailing Address: 5400 Rosedale Highway Engineer: Richard Edgehill
 Bakersfield, CA 93308 Lead Engineer: Allan Phillips
Contact Person: Bill Oliver (661) 631-8713
Application: S-2980-52-5
Project #: 1122378
Complete: June 28, 2012

I. Proposal

San Joaquin Facilities Management, Inc (SJFM) is requesting an Authority to Construct (ATC) for modification of a 10 MMBtu/hr produced gas flare to increase the annual flared gas flow rate from 875 Mscf/yr to 9,125 Mscf/yr. No change in the daily gas flow rate (daily heat input) is proposed. To mitigate the increase in annual VOCs emissions applicant has proposed to cancel permit unit S-2980-27.

The project is a Federal Major Modification. BACT and public notice are required. Offsets are not required.

Disposition of Outstanding ATCs

There are no outstanding ATCs for S-2980-52. PTO S-2980-52-4 is included in **Attachment I**.

II. Applicable Rules

District Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
District Rule 2530 Federally Enforceable Potential to Emit (12/18/08)
District Rule 4101 Visible Emissions (2/17/05)
District Rule 4102 Nuisance (12/17/92)
District Rule 4201 Particulate Matter Concentration (12/17/92)
District Rule 4311 Flares (06/15/2006)
District Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The equipment is located at the Brandt lease within the SW/4 of Section 27, Township 29S, Range 26E in SJFM's light oil central stationary source. 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 (please refer to Facility Diagram in Attachment II)

With this project, the operation of the emergency use limitation of the flare will be removed and the flare's yearly gas throughput will be limited to 875 Mscf.

SJFM operates a crude oil production facility for the processing and storage of crude oil produced at the Brandt Lease. On a daily basis, crude oil of less than 50 bbl/day, water of less than 50 bbl/day and gas of less than 100 MSCF are produced from two active wells at the Brandt Lease. The gas, water and crude are heated and separated in the small, gas-fired (0.5 MM Btu/hr) heater-treater associated with permit unit S-2980-47. The water goes to one of the two permit exempt wastewater tanks. The crude goes to the four 400 bbl storage tanks, S-2980-47, '-48, '-49, and '-50, before being trucked from the site. Some of the separated gas is burned in the heater-treater, with the remaining gas sold through a sales gas line, or combusted in flare S-2980-52.

Applicant has requested that the gas flow rate limit for flare S-2980-52 be increased from 875 Mscf/yr to 9,125 Mscf/yr.

V. Equipment Listing

Pre-Project Equipment Description:

S-2980-52-4: 10 MMBTU/HR PRODUCED GAS FLARE WITH PILOT - BRANDT LEASE 26X-27 SERVING SEPARATOR VESSEL LISTED ON PERMIT UNIT S-2980-47

Proposed Modification:

S-2980-52-5: MODIFICATION OF 10 MMBTU/HR PRODUCED GAS FLARE WITH PILOT - BRANDT LEASE 26X-27 SERVING SEPARATOR VESSEL LISTED ON PERMIT UNIT S-2980-47: INCREASE ANNUAL FLARED GAS FLOW FROM 875 MSCF/YR TO 9,125 MSCF/YR

Post Project Equipment Description:

S-2980-52-5: 10 MMBTU/HR PRODUCED GAS FLARE WITH PILOT - BRANDT LEASE 26X-27 SERVING SEPARATOR VESSEL LISTED ON PERMIT UNIT S-2980-47

VI. Emission Control Technology Evaluation

The flare is a commercial, engineered design that is expected to meet the FYI 83 emissions limits for NO_x of 0.068 lb/MMBtu, VOC 0.063 lb/MMBtu, PM₁₀ 0.008 lb/MMBtu, and CO of 0.37 lb/MMBtu. The sulfur content of the flared gas is restricted to 3 gr S/100scf by permit

condition. The flare includes a Coanda effect tip (applicant 7-3-12 email) and is equipped with an automatic flow sensing ignition system.

VII. General Calculations

A. Assumptions

Tank S-2980-27

Throughput: 50 bbl/day (permit limit)

Reid vapor pressure (rvp): 4.3 psia which is conservatively less than the RVP limit of 6.2 psia for crude oil stored and loaded into delivery trucks at the Brandt lease listed on PTO S-2980-47-5)

District spreadsheet input parameters in **Attachment III**.

Flare S-2980-52

- Sulfur (as H₂S) content of the flared gas will not exceed 3 gr S/100 scf (permit limit)
- Higher heating value of the flared gas: 1315 Btu/scf (project 1090049 basis of current PAS emissions and consistent with gas analyses in **Attachment IV**).
- Emissions from combustion of pilot gas are neglected
- Flare permitted heat input: (105 mscf/day)(1.315 MMBtu/mscf)(day/24 hr)
= 5.7531 MMBtu/hr

Pre-Project

- Annual flared volume: 875 mscf/yr
- Annual heat input; 875 mscf/yr (x 1.315 MMBtu/Mscf) = 1,151 MMBtu/yr

Post-project

Annual flared volume: 9,125 mscf/yr

- Annual heat input: 9,125 mscf/yr (x 1.315 MMBtu/Mscf) = 11,999 MMBtu/yr

B. Emission Factors

S-2980-27

Tanks emissions were calculated using the District spreadsheet program "Fixed roof crude oil 26 API and greater." (**Attachment III**)

S-2980-52 Pre- and Post-Project (FYI-83)

Pollutant	Emission Factor (lb/MMscf)**	Emission Factor (lb/MMBtu)**
NOx	89.4	0.068
SOx*	8.2	0.006518
PM10	10.5	0.008
CO	486.6	0.37
VOC	82.8	0.063

*[3 gr S/100 scf][scf/0.001315 MMBtu][lb S/7000 grS][2 lb SO2/lb S] = 0.006518 lbSOx/MMBtu

**1,315 MMBtu/MMscf

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Tank S-2980-27 (to be canceled)

VOC emissions: 2.5 lb/day, 912 lb/yr (**Attachment III**)

S-2980-52 - flare

Flare Daily and Annual PE1						
Pollutant	Emission Factor (lb/MMBtu)	Higher heating value (Btu/scf)	Daily gas rate (scf/day)	Annual gas Rate (scf/year)	Daily Emissions (lb/day)	Yearly emissions (lb/yr)
NOx	0.068	1,315	105,000	875,000	9.4	78
SOx			105,000	875,000	0.9	8
PM10	0.008	1,315	105,000	875,000	1.1	9
CO	0.37	1,315	105,000	875,000	51.1	426
VOC	0.063	1,315	105,000	875,000	8.7	72

$$\begin{aligned}
 \text{SOx} &= 30,000 \text{ gr/MMscf} / 7,000 \text{ gr/lb} \times 2 \text{ lb-SO}_2/\text{lb-S} \times 0.105 \text{ MMscf/day} \\
 &= 0.9 \text{ lb-SOx/day} \\
 &= 30,000 \text{ gr/MMscf} / 7,000 \text{ gr/lb} \times 2 \text{ lb-SO}_2/\text{lb-S} \times 0.875 \text{ MMscf/yr} \\
 &= 7.5 \text{ lb-SOx/yr}
 \end{aligned}$$

2. Post-Project Potential to Emit (PE2)

Flare Daily and Annual PE2						
Pollutant	Emission Factor (lb/MMBtu)	Higher heating value (Btu/scf)	Daily gas rate (scf/day)	Annual gas Rate (scf/year)	Daily Emissions (lb/day)	Yearly emissions (lb/yr)
NOx	0.068	1,315	105,000	9,125,000	9.4	816
SOx			105,000	9,125,000	0.9	78
PM10	0.008	1,315	105,000	9,125,000	1.1	96
CO	0.37	1,315	105,000	9,125,000	51.1	4440
VOC	0.063	1,315	105,000	9,125,000	8.7	756

SOx = 30,000 gr/MMscf / 7,000 gr/lb x 2 lb-SO2/lb-S x 9.125 MMscf/yr
= 78 lb-SOx/yr

Greenhouse Gas Emissions (District Policy APR 2015)

Flare S-2980-52

11,999 MMBtu/yr – 1,151 MMBtu/yr = 10,848 MMBtu/yr increase

CO2 Emissions: 10,848 MMBtu/yr x 116.7 lb/MMBtu

= 1,265,962 lb-CO2e/year

÷ 2,000 lb/ton = 633 tons-CO2e/year

633 short tons-CO2e/year x 0.9072 metric tons/short ton

= **574 metric tons/yr > 230 tons-CO2e/year (significant increase)**

The emissions profiles are included in **Attachment V**.

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.

SSPE1 was calculated using the District SSPE Calculator and is listed below.

SSPE1 (lb/year)					
Permit Unit/ERC	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1* _{Permit Unit}	10,740	34	1,104	25,823	92,798
ERC S-1253-1	27	-	-	-	181
ERC S-1253-2	1993				
ERC S-1253-3				2963	
ERC S-1253-4			119		
ERC S-1509-1					53
ERC S-1509-2	169				
ERC S-1509-3				831	
ERC S-1509-4			34		
Total _{ERC}	2189		153	3794	234
SSPE1	12,929	34	1,257	29,617	93,032

*SSPE calculator

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.

Post-Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	12,929	34	1,257	29,617	93,032
Tank S-2980-27					-912
S-2980-52-4	-78	-8	-9	-426	-72
S-2980-52-5	816	78	96	4440	756
SSPE2	13,667	104	1344	33,631	92,804

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	PM₁₀	CO	VOC
Pre-Project SSPE (SSPE1)	12,929	34	1,257	29,607	93,032
Post Project SSPE (SSPE2)	13,667	104	1344	33,631	92,804
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	Yes

*including ERCs has no effect on conclusion that source is nonmajor

As seen in the table above, the facility is an existing Major Source for VOCs and is not becoming a Major Source for NO_x, SO_x, PM₁₀, or CO as a result of this project.

6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project, to calculate the QNEC and if applicable, to determine the amount of offsets required.

Pursuant to Section 3.7 of Rule 2201, 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 of District Rule 2201.

As shown in Section VII.C.5 above, the facility is Major Source for VOCs only. Therefore BE = PE1 for NO_x, SO_x, PM₁₀, and CO.

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.

The flare is a clean emission unit since it meets the current BACT requirement for VOCs which is Coanda effect burner when steam unavailable (**Attachment VI**).

BE_{VOC} = Annual PE1.

Baseline Emissions [BE] (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
S-2980-52	78	8	9	426	72

Tank S-2980-27

The tank is equipped with a P/V vent which satisfies the current BACT requirement for VOC (**Attachment VI**).

BE_{VOC} = Annual PE1.

7. SB 288 Major Modification

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

Since this facility is a major source for VOC, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required. Note that any emissions increases of 0.5 lb/day or less round to zero for NSR purposes.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	816	50,000	No
SO _x	78	80,000	No
PM ₁₀	96	30,000	No
VOC	756	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

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.

Since this facility is not a Major Source for NO_x, SO_x, and PM₁₀, this project does not constitute a Federal Major Modification for NO_x, SO_x, and PM₁₀.

VOC

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

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

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

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

The PAE is equal to the annual emission rate at which the unit is projected to emit in any one year, selected by the operator, within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity or potential to emit). If detailed PAE are not provided, the PAE is equal to the PE2 for each permit unit.

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

UBC is the portion of PAE that the emission units could have accommodated during the baseline period.

As worst case BAE is set to zero. PAE is assumed to be PE2 as it was not provided by applicant. UBC is assumed to equal PE1, the legal pre-project emissions limit.

PAE = PE2 = 756 lb VOC/yr
BAE = 0 (worst case)
UBC = 72 lb VOC/yr – legal pre-project emissions limits

$$\begin{aligned} \text{Emissions increase} &= 756 - 72 \\ &= 684 \text{ lb/yr} \end{aligned}$$

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
VOC*	684	0	Yes

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

Step 2

The second step includes comparing the total of all related emissions increases and decreases at the facility occurring within the past five years (including those projects not related to the subject project) to determine if the project results in a significant net emission increase and thus a Federal Major Modification. In this calculation, all creditable emission decreases and increases are counted.

Applicant has not included the required historical operating data for every emissions change over the past 5 years and does not object to processing the project as a Federal Major Modification. Therefore the project will be processed as a Federal Major Modification for VOC.

9. 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 - BE, where:

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

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

BE = Baseline Emissions (per Rule 2201) for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, the QNEC is calculated and listed in the table below.

S-2980-52

	PE2 (lb/yr)	BE (lb/yr)	QNEC (lb/qtr)
NOx	816	78	185
SOx	78	8	18
PM10	96	9	22
CO	4440	426	1004
VOC	756	72	171

VIII. 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 a Major Modification.

*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

$$\text{AIPE} = \text{PE}_2 - \text{HAPE}$$

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)

$$\text{HAPE} = \text{PE}_1 \times (\text{EF}_2/\text{EF}_1)$$

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

$$\text{AIPE} = \text{PE}_2 - (\text{PE}_1 * (\text{EF}_2 / \text{EF}_1))$$

There is no change in emissions factors or daily emissions from the flare. However, District policy APR-1350-1 states that BACT is triggered if AIPE exceeds 2.0 lb/day on any given day. Note that pre-project permit conditions allow 8.3 days of operation per year (1151 MMBtu/yr/(5.7531 MMBtu/hr x 24 hr/day)) and post-project permit conditions allows 86.9 days of operation per year (11,999 MMBtu/yr/(5.7531 MMBtu/hr x 24 hr/day)). Therefore, on "any given day" daily emissions could increase from 0 lb/day (i.e. on a day when the flare couldn't operate under pre-project annual restriction) to PE₂ which exceeds 2 lb/day for NO_x, CO, and VOC. BACT is triggered for NO_x and VOC. However BACT is not triggered for CO since the SSPE₂ for CO is not greater than 200,000 lbs/year, as demonstrated in Section VII.C.5 above.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project constitutes a Federal Major Modification for VOCs. Therefore BACT is triggered for Federal Major Modification purposes.

2. BACT Guidance

BACT Guideline 1.4.2, applies to waste gas flare – Incinerating Produced Gas (See **Attachment VI**)

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District’s NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see **Attachment VII**), BACT has been satisfied with the following:

NOx, VOC: Coanda effect burner

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)	13,667	104	1344	33,631	92,804
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	No	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is not greater than the offset thresholds for NOx, SOx, PM10, and CO; therefore offset calculations are not necessary and offsets will not be required for these air contaminants.

VOC:

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

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 = PE1 for:

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

otherwise,

BE = HAE

Flare '-52

PE2 (VOC) = 756 lb/year

BE = PE1 (VOC) = 72 lb/year

Tank '-27

PE2 (VOC) = 0

BE = PE1 (VOC) = 912 lb/year

ICCE = 0 lb/year

Offsets Required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$
= $756 - 72 - 912$
= -228 lb/yr

Offsets will not be required for the project.

C. Public Notification

1. Applicability

Public noticing is required for:

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

d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

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

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

As demonstrated in VII.C.7, this project is a Federal Major Modification. Therefore, public noticing for SB 288 or Federal Major Modification purposes is required.

b. PE > 100 lb/day

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

c. Offset Threshold

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

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	12,929	13,667	20,000 lb/year	No
SO _x	34	104	54,750 lb/year	No
PM ₁₀	1,257	1,344	29,200 lb/year	No
CO	29,607	33,631	200,000 lb/year	No
VOC	93,032	92,804	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	12,929	13,667	738	20,000 lb/year	No
SO _x	34	104	70	20,000 lb/year	No
PM ₁₀	1,257	1,344	87	20,000 lb/year	No
CO	29,607	33,631	4024	20,000 lb/year	No
VOC	93,032	92,804	-228	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, public noticing is required for this project for Federal Major Modification purposes. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

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

Proposed Rule 2201 (DEL) Conditions:

Revised Condition

Maximum heat input to flare shall not exceed 138 MMBtu/day nor 11,999 MMBtu/yr. [District Rule 2201] N

Current Conditions

Emission rates from this unit shall not exceed any of the following limits: NO_x - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; or PM₁₀ - 0.008 lb/MMBtu. [District Rule 2201] N

Emissions from the flare shall not exceed any of the following: 1.1 lb-PM₁₀/day, 0.9 lb-sulfur compounds (as SO₂)/day, 9.4 lb-NO_x (as NO₂)/day, 8.7 lb-VOC/day, or 51.1 lb-CO/day. [District Rule 2201] N

The sulfur content of the gas being flared shall not exceed 3.0 gr S/100scf. [District Rules 2201 and 4801] N

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

The following monitoring conditions will be included on the ATC:

To show compliance with emission limits, the gas being flared shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks (or a smaller number of times as approved by the District compliance division) for the gas being flared, then the compliance testing frequency shall be semi-annually. If a semi-annual sulfur content test fails to show compliance, weekly testing shall resume. [District Rule 2201] N

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offsets, public notification and daily emission limit requirements of Rule 2201. The following condition(s) will appear on the ATC:

The permittee shall maintain daily and annual records of the higher heat input (MMBtu/day, MMBtu/yr) and annual records of the sulfur content (as ppmv H₂S) of flared gas. [District Rule 2201] N

All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District inspection upon request. [District Rules 1070, 2201, and 4409] N

4. Reporting

There are no reporting requirements for Rule 2201.

F. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The Technical Services Division of the SJVAPCD conducted the required analysis. Refer to **Attachment VIII** of this document for the AAQA summary sheet.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Values are in µg/m³

Steam Generator	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass ¹	X	X	X	Pass
SO _x	Pass ²	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ³	Pass ³
PM _{2.5}	X	X	X	Pass ³	Pass ³

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures. The criteria pollutant 1-hour value passed using TIER I NO₂ NAAQS modeling

²The project was compared to the 1-hour SO₂ National Ambient Air Quality Standard that became effective on August 23, 2010 using the District's approved procedures.

³The maximum predicted concentration for emissions of these criteria pollutants from the proposed unit are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

As shown, the calculated results indicate that this project is not expected to cause or make worse a violation of an air quality standard.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed above, the project is a Federal Major Modification, therefore this requirement is applicable. Included in **Attachment IX** is SJFM's Statewide Compliance Certification document.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to modify a flare. Since the project is at the current facility location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2530 Federally Enforceable Potential to Emit

The purpose of this rule is to restrict the emissions of a stationary source so that the source may elect to be exempt from the requirements of Rule 2520. Pursuant to Rule 2530, this facility has elected exemption from the requirements of Rule 2520 by ensuring actual emissions from the stationary source in every 12-month periods to not exceed the following: ½ the major source thresholds for NO_x, VOCs, CO, and PM₁₀; 50 tons per year SO₂; 5 tons per year of a single HAP; 12.5 tons per year of any combination of HAPs; 50 percent of any lesser threshold for a single HAP as the EPA may establish by rule; and 50 percent of the major source threshold for any other regulated air pollutant not listed in Rule 2530.

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).

The flare is equipped with a Coanda effect burner and is expected to continue to operate without visible emissions as stated in the following ATC condition:

No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [District Rules 2201 and 4101] N

Continued compliance with the requirement of this rule is expected.

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. The project is not expected to affect the compliance status of the rule. Therefore, continued compliance with this rule is expected.

California Health & Safety Code 41700 – Health Risk Analysis

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.

A HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (**Attachment VIII**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-2980-52	1.7 per million	Yes

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is required for this project because the HRA indicates that the risk is above the District's thresholds for triggering T-BACT requirements.

For this project T-BACT is triggered for VOC (PAHs). T-BACT is satisfied with BACT for VOC (see **Attachment VII**), which is Coanda effect burner; therefore, compliance with the District's Risk Management Policy is expected.

Therefore, compliance with the requirements of this rule is expected.

Rule 4311 Flares

The current PTO and ATC include conditions ensuring compliance with the rule and operational standards of subpart CFR 40 Subpart 60.18. This project is not expected to affect the compliance status. Continuous compliance is expected.

Rule 4801 Sulfur Compounds

The rule limits sulfur compound emission (as SO_x) concentrations to no more than 2000 ppmv, measured at the point of discharge. The flare is currently operating in compliance with the rule. Continuous compliance is expected.

California Health & Safety Code 42301.6 (School Notice)

The applicant has stated and the District has confirmed that the equipment is not located within 1000 feet of a K-12 school. Therefore the equipment is not subject to public notice requirements listed in CH&SC, section 42301.6.

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; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project. Project specific impacts on global climate change were evaluated consistent with the adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District's engineering evaluation (this document – **Attachment X** demonstrates that the project includes Best Performance Standards (BPS) for each class and category of greenhouse gas emissions unit. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC S-2980-52-5 subject to the permit conditions on the attached draft ATC in S-2980-52-5 subject to the permit conditions on the attached draft Authority to Construct in **Attachment XI**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-2980-52-5	3020-02-H	10 MMBtu/hr	\$1030.00

ATTACHMENTS

- I: Current PTO S-2980-52-4
- II: Facility Diagram
- III: Tank Emissions Calculations
- IV: Gas Analyses
- V: Emissions Profiles
- VI: BACT Guideline
- VII: BACT Analysis
- VIII: AAQA/HRA
- IX: Statewide Compliance Certification Statement
- X: Best Performance Standards for Flare
- XI: Draft ATC

ATTACHMENT I
Current PTO S-2980-52-4

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2980-52-4

EXPIRATION DATE: 04/30/2014

SECTION: SW27 TOWNSHIP: 29S RANGE: 26E

EQUIPMENT DESCRIPTION:

10 MMBTU/HR PRODUCED GAS FLARE WITH PILOT - BRANDT LEASE 26X-27 SERVING SEPARATOR VESSEL LISTED ON PERMIT UNIT S-2980-47

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The permittee shall maintain records of operation. Records shall include the date, the number of hours of operation. Such records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 4311, 6.2.3]
3. The flare shall be designed for smokeless operation, with no visible emissions in excess of 5% opacity. [District Rule 2201, 4.1 and 40 CFR 60.18(c)(1)]
4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
5. The flare shall be equipped with an operational gas flow meter. [District Rule 2201]
6. No more than 105 Mscf of gas per day or 875 Mscf of gas per year shall be flared. [District Rule 2201]
7. Emission rates from this unit shall not exceed any of the following limits: NO_x - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; or PM₁₀ - 0.008 lb/MMBtu. [District Rule 2201]
8. Emissions from the flare shall not exceed any of the following: 1.1 lb-PM₁₀/day, 0.9 lb-sulfur compounds (as SO₂)/day, 9.4 lb-NO_x (as NO₂)/day, 8.7 lb-VOC/day, or 51.1 lb-CO/day. [District Rule 2201]
9. The flare shall be inspected during operation for visible emissions, using EPA Method 22. If visible emissions are observed, corrective action shall be taken. If visible emissions cannot be eliminated, an EPA Method 9 test shall be conducted within 72 hours. [District Rule 2201 and 40 CFR 60.18(f)(1)]
10. The sulfur content of the gas being flared shall not exceed exceed 3.0 gr S/100scf. [District Rules 2201 and 4801]
11. To show compliance with emission limits, the gas being flared shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks (or a smaller number of times as approved by the District compliance division) for the gas being flared, then the compliance testing frequency shall be semi-annually. If a semi-annual sulfur content test fails to show compliance, weekly testing shall resume. [District Rule 2201]
12. The sulfur content of the gas being flared shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201]
13. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2201]
14. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2 and 40CFR 60.18(c)(2)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

15. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3 and 40CFR 60.18(f)(2)]
16. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4 and 40CFR 60.18(f)(2)]
17. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5]
18. The permittee shall maintain accurate daily records of visible emission checks. [District Rule 2201]
19. Permittee shall maintain accurate daily records of volume of gas flared. [District Rule 2201]
20. All records, including required monitoring data and support information, shall be maintained and retained for a period of 5 years and made available for inspection at any time. [District Rules 1070 and 4311, 6.2]
21. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1]
22. A non-assisted flare shall have a diameter of 3 inches or greater, have a minimum hydrogen content of 8.0% by volume, and be designed for and operated with an exit velocity less than 122 ft/sec and less than the velocity V_{max} , as determined by the equation specified in paragraph 40 CFR 60.18 (c)(3)(i)(A). [40 CFR 60.18 (c)(3)(i)(a)]
23. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18 (f)(4)]
24. Non-assisted flares shall be operated with an exit velocity less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)]
25. Non-assisted flares may be operated with an exit velocity equal to or greater than 60 ft/sec, but less than 400 ft/sec, if the net heating value of the gas being combusted is greater than 1,000 Btu/scf. [40 CFR 60.18 (c)(4)(ii)]
26. Non-assisted flares may be operated with an exit velocity less than the velocity V_{max} , as determined by the methods specified in 40 CFR 60.18 (f)(5), and less than 400 ft/sec. [40 CFR 60.18 (c)(4)(iii)]
27. The net heating value of the gas being combusted the flare shall be calculated pursuant to 40 CFR 60.18(f)(3) or by using EPA Method 18, ASTM D1946, and ASTM D2382 if published values are not available or cannot be calculated. [40 CFR 60.18 (f)(3)]

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

**ATTACHMENT II
Facility Diagram**

SAN JOAQUIN FACILITIES MANAGEMENT

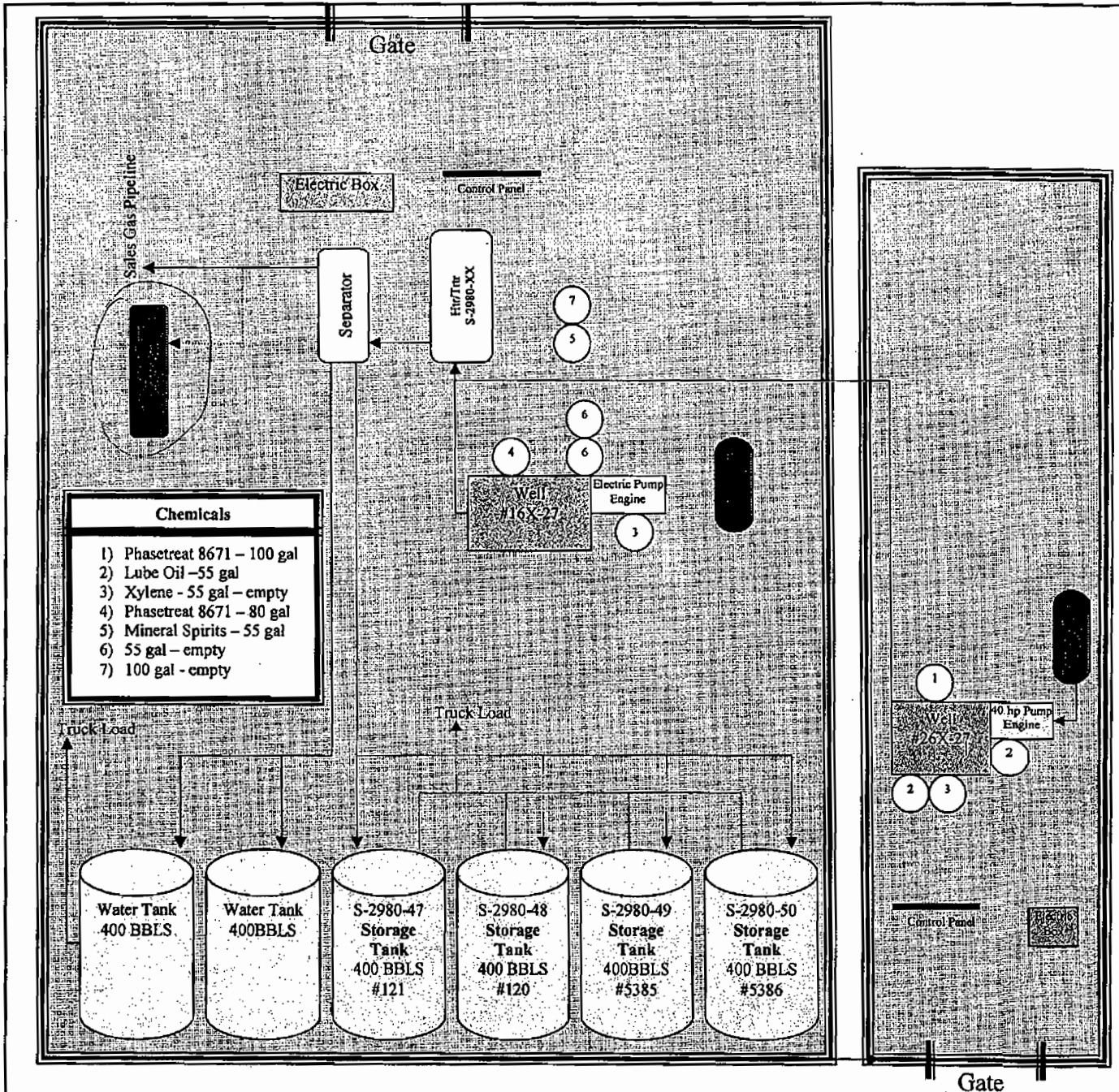


BUSINESS NAME: Brandt Lease
SCALE: NONE

Facility Diagram S-2980

Opus One Road

Heath Road



Chateau Montelena Drive

ATTACHMENT III
Tank Emissions Calculations

****FOR REFERENCE** PAINT TABLE**

PAINT COLOR	SHADE/TYPE	PAINT FACTORS PAINT CONDITION	
		GOOD	POOR
ALUMINUM	SPECULAR	0.39	0.49
ALUMINUM	DIFFUSE	0.60	0.68
GRAY	LIGHT	0.54	0.63
GRAY	MEDIUM	0.68	0.74
RED	PRIMER	0.89	0.91
WHITE	-NONE-	0.17	0.34

LIQUID TYPE	CODE	
CRUDE OIL	0	CRUDE
MOTOR GASOLINE	1	MOTOR GAS
AVIATION GASOLINE	2	AV GAS
LIGHT NAPHTHA (RVP 9-14 PSIA)	3	LT NAPHTHA
NAPHTHA (RVP 2-8 PSIA)	4	NAPHTHA

METEOROLOGICAL DATA CODES	
AREA	CODE
BAKERSFIELD	0
FRESNO	1
STOCKTON	2

****PRESS [TAB] TO SKIP TO NEXT MODIFIABLE CELL****

GIVEN AND ASSUMED DATA	
USING THE CODES ABOVE, WHAT REGION PERMIT NUMBERS DO YOU WANT TO USE? (0, 1, OR 2)	1
USING THE CODES ABOVE, WHAT AREA METEOROLOGICAL DATA DO YOU WANT TO USE? (0, 1, 2, ...)	1
REID VAPOR PRESSURE (psia)	4.30
VAPOR MOLECULAR WEIGHT (Mv)	50.00
USING THE CODES ABOVE, WHAT TYPE OF ORGANIC LIQUID (0, 1, 2, ...)	0
VOC CONTROL EFFICIENCY	0.00
TANK SHELL DIAMETER (FEET)	9.20
TANK SHELL HEIGHT, Hs (FEET)	10.50
VENT VACUUM (ENTER "-" FOLLOWED BY A VALUE IN PSIG)	-0.03
VENT PRESSURE (POSITIVE psig)	0.03
TANK ID	
TANK USE	stock
SJVUAPCD PERMIT#	S-2880-27
CONE OR DOME ROOF (C/D)	C
MAXIMUM TOTAL DAILY THROUGHPUT (BBL/DAY)	50.00
MIN LIQUID HEIGHT (USE 0.0 FT FOR DEFAULT)	2.00
TANK ROOF PAINT CONDITION, GOOD OR POOR (G/P)	G
TANK ROOF PAINT COLOR, SEE ABOVE (A/G/R/W)	G
TANK ROOF PAINT SHADE, SEE ABOVE (S/D/L/M/P/N)	M
TANK SHELL PAINT CONDITION, GOOD OR POOR (G/P)	G
TANK SHELL PAINT COLOR, SEE ABOVE (A/G/R/W)	G
TANK SHELL PAINT SHADE, SEE ABOVE (S/D/L/M/P/N)	M

MODIFIABLE DATA	
----	---
----	---
----	Y
----	-N/R-
----	3.0
CONE ROOF	---
GIVEN ROOF HEIGHT OR SLOPE (H/S)	S
----	0.94
TANK CONE ROOF SLOPE, Sr (DEFAULT=0.0625) (F/FT)	0.0825
----	---
----	1.00
DO YOU WANT TO ENTER A MAX LIQUID HEIGHT? (Y/N)	N
----	---
DEFAULT MAX LIQUID HEIGHT (SHELL HT - 2.0 FT)	8.50
DO YOU WANT TO ENTER AN AVERAGE LIQUID HEIGHT? (Y/N)	Y
----	---
ENTER AVERAGE LIQUID HEIGHT (FT)	8.0
IS TANK CONSTANT LEVEL? (Y/N)	N
----	---
ARE THE CONTENTS OF THE TANK HEATED? (Y/N)	N
----	---

output

TANK ID	TANK USE	SJVUAPCD PERMIT #	TANK TYPE H OR V	SHELL DIMENSIONS		CAPACITY (BBL)	ROOF TYPE (C/D)	VENT PSIG	
				D (FT)	Hs (FT)			VAC.	PRESS.
3	stock	S-2980-27	VERTICAL	9.2	10.5	124.3	CONE	-0.03	0.03

TANK ROOF		PAINT FACTOR	LIQUID DATA				CONSTANT LEVEL?	VAPOR MOL. WT.	VOC CNTRL %EFF (w/w)
COND.	COLOR		TYPE	HI=H(lx)	Kp	RVP			
GOOD	GRAY	0.68	CRUDE	8.5	0.75	4.30	NO	50.00	0.0

****UNCONTROLLED EMISSIONS****

CALENDAR		SURFACE T(la) F	CALC TVP @ T(la)	RATE (BBL/MON)	TURNOVER PER MON.	FAC-(Kn)	VOC (LBM/MONTH)			TOTAL (LBM/QTR)
QUARTER	MONTH						Ls	Lw	TOTAL (Lt)	
FIRST	JANUARY	60.88	2.38	1550	20.14	0.293	7.87	40.58	48.46	165.42
	FEBRUARY	65.13	2.59	1400	18.19	0.293	11.18	39.93	51.11	
	MARCH	71.56	2.94	1550	20.14	0.293	15.69	50.17	65.86	
SECOND	APRIL	74.79	3.13	1500	19.49	0.293	25.38	51.68	77.06	273.38
	MAY	80.34	3.48	1550	20.14	0.293	34.85	59.34	94.20	
	JUNE	84.63	3.77	1500	19.49	0.293	39.91	62.22	102.13	
THIRD	JULY	86.88	3.93	1550	20.14	0.293	43.82	67.01	110.83	299.13
	AUGUST	84.72	3.78	1550	20.14	0.293	38.37	64.39	102.76	
	SEPTEMBER	79.91	3.45	1500	19.49	0.293	28.57	56.97	85.54	
FOURTH	OCTOBER	73.21	3.04	1550	20.14	0.293	20.36	51.79	72.16	173.61
	NOVEMBER	65.32	2.60	1500	19.49	0.293	11.12	42.94	54.06	
	DECEMBER	60.32	2.35	1550	20.14	0.293	7.27	40.12	47.39	

****CONTROLLED EMISSIONS (BASED ON MONTHLY CALCULATIONS)****

CALENDAR		SURFACE T(la) F	CALC TVP @ T(la)	RATE (BBL/QTR)	TURNOVER PER QTR.	FAC-(Kn)	VOC (LBM/QTR)		
QUARTER	MONTH						Ls	Lw	TOTAL (Lt)
FIRST	JAN-MAR	65.86	2.64	4500	58	0.293	35	131	165
SECOND	APR-JUN	79.92	3.46	4550	59	0.293	100	173	273
THIRD	JUL-SEP	83.84	3.72	4600	60	0.293	111	188	299
FOURTH	OCT-DEC	66.28	2.67	4600	60	0.293	39	135	174
QUARTERLY AVERAGE		73.97	3.12	4563			71	157	228
DAILY AVERAGE (LB/DAY, BASED ON MONTHLY CALCULATIONS)							0.8	1.7	2.5
ANNUAL EMISSIONS (LB/YEAR, BASED ON MONTHLY CALCULATIONS)							284	627	912

Tank Emission Calculation Spreadsheet, version 01/23/03

ATTACHMENT IV
Gas Analyses



ZALCO LABORATORIES, INC.
 4309 Armour Avenue, Bakersfield, CA 93308 (661) 395-0539 FAX (661) 395-3069 www.zalcolabs.com
 2186 Eastman Avenue, Suite 103, Ventura, CA 93003 (805) 477-0114 Fax (805) 477-0125

RECEIVED
 JUN 27 2012
 SJV APCD
 Southern Region

Enviro Technologies Consultants, Inc.
 5400 Rosedale Hwy
 Bakersfield CA 93308

Laboratory No: 1206230-01
 Date Received: 06/20/12
 Date Analyzed: 06/23/12

Attention: Mike Walsh

Sample Description: BRANDT LEASE (SJF415)
 Sampled: 06/20/2012 @ 09:38 AM by Mike Walsh

Chromatographic Analysis ASTM D1924, ASTM D1595, ASTM D1595

Constituent:	Result	Units
Total Sulfur	0.24	grs S/100 SCF
Hydrogen Sulfide	3.9	ppm

Chromatographic Analysis ASTM D1924, ASTM D1595, ASTM D1595, ASTM D1595, ASTM D1595

Constituent:	Mole %	Weight %	GPM	GPM	
				Fractions	CHONS%
Oxygen	0.349	0.466	(Gallons per		Carbon, C
Nitrogen	1.305	1.524	1000.000		76.22
			cubic feet)		Hydrogen, H
Carbon Dioxide	0.623	1.143			20.96
Carbon Monoxide	0.000	0.000			Oxygen, O
Hydrogen Sulfide	0.000	0.000			1.30
Methane	71.882	48.088			Nitrogen, N
Ethane	8.678	10.881		(C3...C3) = 2.714	1.52
Propane	9.870	18.150	2.714		Sulfur, S
IsoButane	1.368	3.317	0.447	(C3...C4) = 4.235	0.00
n-Butane	3.406	8.256	1.073		
IsoPentane	0.826	2.486	0.302	(C3...C5) = 4.778	
n-Pentane	0.668	2.009	0.241	(C3...C6+) = 5.218	
Hexanes	1.024	3.679	0.440		
Totals:	100.00	100.00	5.218	16.944	100.00

Flammable Gases:	97.723
Gas Properties calculated @ STP: degrees F.	60
Measurement Base Pressure @ STP: psia	14.696
	H/C Ratio: 0.27

Gas State	Dry		Wet
	Btu / Cu. Ft	Btu / lb	Btu / Cu. Ft
Gross, Ideal Gas	1392.07	22028.92	1367.85
Net, Ideal Gas	1266.66	20044.33	1244.62
Gross, Real Gas	1398.72		1374.39
Net, Real Gas	1272.71		1250.57

Relative Gas Density, [Air=1] Ideal:	0.8280	"F" Factor, DSCF/MMBtu @ 60F	8608.2	9460.5
Specific Gravity, [Air=1] Real gas:	0.8315	"F" Factor, DSCF/MMBtu @ 68F	8739.3	9604.6
Real Gas Density, Lb/Cu.Ft.:	0.0635	"F" Factor, DSCF/MMBtu @ 70F	8772.5	9641.1
Specific Volume, Cu.Ft./Lb.:	15.7491	"FC" Factor, DSCF CO2/MMBtu @ 60F	1094.0	1202.4
Relative Liquid Density @ 60F/60F:	0.3801	"FC" Factor, DSCF CO2/MMBtu @ 68F	1110.7	1220.7
Compressibility, z:	0.9952			
Fuel kg per kg-mole Molecular wt avg	23.981			

ATTACHMENT V
Emissions Profile

Permit #: S-2980-52-5	Last Updated
Facility: SAN JOAQUIN FACILITIES MGMT	07/08/2012 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	816.0	78.0	96.0	4440.0	756.0
Daily Emis. Limit (lb/Day)	9.4	0.9	1.1	51.1	8.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	184.0	17.0	21.0	1003.0	171.0
Q2:	184.0	17.0	22.0	1003.0	171.0
Q3:	185.0	18.0	22.0	1004.0	171.0
Q4:	185.0	18.0	22.0	1004.0	171.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

**ATTACHMENT VI
BACT Guidelines**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 7.3.1*

Last Update 10/1/2002

**Petroleum and Petrochemical Production - Fixed Roof Organic
Liquid Storage or Processing Tank, < 5,000 bbl Tank capacity ****

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	PV-vent set to within 10% of maximum allowable pressure	99% control (Waste gas incinerated in steam generator, heater treater, or other fired equipment and inspection and maintenance program; transfer of noncondensable vapors to gas pipeline; reinjection to formation (if appropriate wells are available); or equal).	

** Converted from Determinations 7.1.11 (10/01/02).

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 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**

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

Best Available Control Technology (BACT) Guideline 1.4.2*

Last Update 12/31/1998

Waste Gas Flare - Incinerating Produced Gas

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
NOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
PM10	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.		
SOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.	Precombustion SOx scrubbing system (non-emergency flares only.)	
VOC	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		

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 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**

ATTACHMENT VII BACT Analysis

BACT Guideline 1.4.2, applies to Waste Gas Flare – Incinerating Produced Gas

Top Down BACT Analysis for NOx and VOC emissions:

Step 1 - Identify All Control Technologies

Steam assisted or air-assisted or Coanda effect burner, when steam unavailable
(Achieved in Practice)

Step 2 - Eliminate Technologically Infeasible Options

None eliminated.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Steam assisted or air-assisted or Coanda effect burner, when steam unavailable
(Achieved in Practice)

Step 4 - Cost Effectiveness Analysis

Applicant has proposed the one remaining option from Step 1, air-assisted when steam unavailable. Therefore, a cost analysis is not required.

Step 5 - Select BACT

The flare is equipped with a Coanda Effect burner and steam is unavailable (applicant email July 3, 2012). Therefore BACT is satisfied.

**ATTACHMENT VIII
HRA/AAQA Model**

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Dolores Gough, AQE – Permit Services
 From: Trevor Joy, AQS – Technical Services
 Date: July 16, 2012
 Facility Name: San Joaquin Facilities Mgt
 Location: Light Oil Central
 Application #(s): S-2980-52-5
 Project #: 1122378

A. RMR SUMMARY

Categories	Unit 52-5 Flare	Project Totals	Facility Totals
Prioritization Score	0.6	0.6	>1
Acute Hazard Index	0.00	0.00	0.00
Chronic Hazard Index	0.00	0.00	0.00
Maximum Individual Cancer Risk (10 ⁻⁶)	1.7	1.7	2.5
T-BACT Required?	Yes		
Special Permit Conditions?	Yes		

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 52

{1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] N

Flare usage shall not exceed 9.125 MMScf/yr [District Rule 2201] N

B. RMR REPORT

I. Project Description

Technical Services received a revised request on July 12, 2012 to perform an Ambient Air Quality Analysis and a Risk Management Review for the proposed modification to unit 52 – the increased yearly flare usage.

II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Emissions were calculated using the "Flare" spreadsheet. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for the facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined analysis was required and performed. AERMOD was used, with the parameters outlined below and concatenated meteorological data for Bakersfield 2005 to 2009 to determine the maximum dispersion factor 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 Parameter Unit 52			
Closest Receptor - Business (m)	305	Closest Receptor – Resident (m)	61
Increase in Waste Gas Usage (MMScf/hr)	0.0	Increase in Waste Gas Usage (MMScf/yr)	8.25
Effective Release Height (m)	7.4	Gas Exit Temperature (K)	1273
Stack Calculated Inside Diameter (m)	0.37	Gas Exit Velocity (m/s)	20

Technical Services also performed modeling for criteria pollutants CO, NO_x, SO_x and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were

	NO _x	Sox	CO	PM10	PM2.5
Lbs/hr	0.02	0	0.1	0	0
Lbs/yr	738	70	4014	87	87

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*
Values are in µg/m³

Steam Generator	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass	Pass
PM2.5	X	X	X	Pass	Pass

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures. The criteria pollutant 1-hour value passed using TIER I NO₂ NAAQS modeling

²The project was compared to the 1-hour SO₂ National Ambient Air Quality Standard that became effective on August 23, 2010 using the District's approved procedures.

³The maximum predicted concentration for emissions of these criteria pollutants from the proposed unit are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The acute and chronic indices are below 1.0; and the cancer risk is greater than 1 in a million, but less than 10 in a million. **In accordance with the District's Risk Management Policy, the project is approved with Toxic Best Available Control Technology (T-BACT) for VOCs.**

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for this proposed unit.

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

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.

Attachments:

- A. RMR request from the project engineer
- B. Prioritization score with toxic emissions summary
- C. HEARTS – Facility Summary
- D. AAQA spreadsheet

ATTACHMENT IX
Statewide Compliance Statement



**SAN JOAQUIN FACILITIES
MANAGEMENT, INC.**

June 20, 2012

RECEIVED
JUN 22 2012
SJVAPCD
Southern Region

Mr. Leonard Scandura
Manager of Permit Services
San Joaquin Valley Unified APCD
34946 Flyover Court
Bakersfield, CA 93308

**Subject: ATC S-2980-52-4 10 MMBTU/HR Flare; Throughput Increase
Compliance Certification**

Dear Mr. Scandura:

I hereby certify that all major Stationary Sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California, which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards.

Alternative siting analysis is required for any project, which constitutes a New Major Source or a Federal Major Modification.

The current project occurs at an existing facility. The applicant proposes modifications to continue operations that will provide production capacity to existing activity at the site.

The project will provide continued production capacity to be used at the same location, the existing site will result in the least possible impact from the project.

A handwritten signature in black ink, appearing to read 'Bill Oliver', with a long horizontal flourish extending to the right.

Bill Oliver
Operations Manager

ATTACHMENT X
Best Performance Standards for Flare S-2980-52

**Draft BPS Policy for VOC Control/Gas Disposal Oil and gas
Production, Processing, and Refining**

The flare is to be used only if disposal wells, a sales gas line, combustion sources creating useful work i.e. steam generator or permit exempt heater are not available. The flare must have a destruction efficiency > 98% and be steam assist or air assist if steam is unavailable, or Coanda effect and equipped with non-automatic or electronic or ballistic ignition. The draft policy follows.

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

Best Performance Standard (BPS) x.x.xx

Date: 08/02/2011

Class	VOC Control/Gas Disposal	
Category	Oil and Gas Production, Processing, and Refining	
Best Performance Standard (in order of recommendation)	1) -Incineration in existing engine, boiler, etc that creates useful work – provided that equipment is available and practically capable of incinerating vapors (see equipment specific BPS for standards and requirements for new fired equipment) and currently burning fossil fuel; or, -Transfer to Sales Gas Line – provided that access to sales gas line infrastructure is available; or, -Reinjection to Formation – provided that access to a disposal well is available.	
	The following options supersede the BPS requirements above if: a) equipment listed above is not available; or, b) gas cannot safely be transferred to equipment listed above; or, c) used to control emergency gas releases. 2) -Incineration in new Thermal Oxidizer – see equipment specific Thermal Oxidizer BPS for standards and requirements for new equipment; or, -Incineration in New Flare with >98% TOC destruction efficiency, steam assist, air assist when steam is not available, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition; or, -Incineration in Existing Thermal Oxidizer or Flare	
Percentage Achieved GHG Emission Reduction Relative to Baseline Emissions	Gas-Fired Equipment	100%
	Transfer to Sales Gas Line	100%
	Reinjection to Formation	100%
	New Thermal Oxidizer	100%
	New Flare	1.5%
	Existing Thermal Oxidizer or Flare	0%
District Project Number	S-1103964	
Evaluating Engineer	Kristopher Rickards	
Lead Engineer	Leonard Scandura, P.E.	
Public Notice: Start Date	May 31, 2011	
Public Notice: End Date	June 30, 2011	
Determination Effective Date	August 2, 2011	

ATTACHMENT XI
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-2980-52-5

LEGAL OWNER OR OPERATOR: SAN JOAQUIN FACILITIES MGMT
MAILING ADDRESS: 4520 CALIFORNIA AVENUE, SUITE 300
BAKERSFIELD, CA 93309

LOCATION: LIGHT OIL CENTRAL STATIONARY SOURCE
CA

SECTION: SW27 TOWNSHIP: 29S RANGE: 26E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 10 MMBTU/HR PRODUCED GAS FLARE WITH PILOT - BRANDT LEASE 26X-27 SERVING SEPARATOR VESSEL LISTED ON PERMIT UNIT S-2980-47: INCREASE ANNUAL FLARE GAS FLOWRATE

CONDITIONS

1. The flare is to be used only if disposal wells, a sales gas line, combustion sources creating useful work or permit exempt heater are not available. The flare shall have a destruction efficiency > 98% and be air assist and equipped with non automatic or electronic or ballistic ignition. [Public Resources Code 21000-21177: California Environmental Quality Act, District Rule 4102, and CH&SC 41700]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1]
4. The flare shall be designed for smokeless operation, with no visible emissions in excess of 5% opacity. [District Rule 2201, 4.1 and 40 CFR 60.18(c)(1)]
5. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
6. The flare shall be equipped with an operational gas flow meter. [District Rule 2201]
7. Maximum heat input to flare shall not exceed 138 MMBtu/day nor 11,999 MMBtu/yr. [District Rule 2201]
8. Emission rates from this unit shall not exceed any of the following limits: NOx - 0.068 lb/MMBtu; VOC - 0.063 lb/MMBtu; CO - 0.37 lb/MMBtu; or PM10 - 0.008 lb/MMBtu. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

S-2980-52-5: Jul 11 2012 9:48AM - EDGEHILL : Joint Inspection NOT Required

9. Emissions from the flare shall not exceed any of the following: 1.1 lb-PM10/day, 0.9 lb-sulfur compounds (as SO₂)/day, 9.4 lb-NO_x (as NO₂)/day, 8.7 lb-VOC/day, or 51.1 lb-CO/day. [District Rule 2201]
10. The flare shall be inspected during operation for visible emissions, using EPA Method 22. If visible emissions are observed, corrective action shall be taken. If visible emissions cannot be eliminated, an EPA Method 9 test shall be conducted within 72 hours. [District Rule 2201 and 40 CFR 60.18(f)(1)]
11. The sulfur content of the gas being flared shall not exceed exceed 3.0 gr S/100scf. [District Rules 2201 and 4801]
12. To show compliance with emission limits, the gas being flared shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks (or a smaller number of times as approved by the District compliance division) for the gas being flared, then the compliance testing frequency shall be semi-annually. If a semi-annual sulfur content test fails to show compliance, weekly testing shall resume. [District Rule 2201]
13. The sulfur content of the gas being flared shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201]
14. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2201]
15. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2 and 40CFR 60.18(c)(2)]
16. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3 and 40CFR 60.18(f)(2)]
17. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4 and 40CFR 60.18(f)(2)]
18. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5]
19. A non-assisted flare shall have a diameter of 3 inches or greater, have a minimum hydrogen content of 8.0% by volume, and be designed for and operated with an exit velocity less than 122 ft/sec and less than the velocity V_{max} , as determined by the equation specified in paragraph 40 CFR 60.18 (c)(3)(i)(A). [40 CFR 60.18 (c)(3)(i)(a)]
20. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18 (f)(4)]
21. Non-assisted flares shall be operated with an exit velocity less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)]
22. Non-assisted flares may be operated with an exit velocity equal to or greater than 60 ft/sec, but less than 400 ft/sec, if the net heating value of the gas being combusted is greater than 1,000 Btu/scf. [40 CFR 60.18 (c)(4)(ii)]
23. Non-assisted flares may be operated with an exit velocity less than the velocity V_{max} , as determined by the methods specified in 40 CFR 60.18 (f)(5), and less than 400 ft/sec. [40 CFR 60.18 (c)(4)(iii)]
24. The net heating value of the gas being combusted the flare shall be calculated pursuant to 40 CFR 60.18(f)(3) or by using EPA Method 18, ASTM D1946, and ASTM D2382 if published values are not available or cannot be calculated. [40 CFR 60.18 (f)(3)]
25. The permittee shall maintain accurate daily records of visible emission checks. [District Rule 2201]
26. The permittee shall maintain daily and annual records of the higher heat input (MMBtu/day, MMBtu/yr) and weekly and quarterly records of the sulfur content of flared gas. [District Rule 2201]
27. All records, including required monitoring data and support information, shall be maintained and retained for a period of 5 years and made available for inspection at any time. [District Rules 1070 and 4311, 6.2]
28. PTO S-2980-27-1 is cancelled upon implementation of this ATC. [District Rule 2201]