



JUL 12 2012

Elizabeth Crow
PSC Industrial Outsourcing, LP
5151 San Felipe, Suit 1600
ATTN: Satara Henry
Houston, TX 77095-3609

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1113862

Dear Ms. Crow:

Enclosed for your review and comment is the District's analysis of PSC Industrial Outsourcing, LP's application for an Authority to Construct for the installation of two petroleum tank/pipeline degassing operations each served by a 10 MMBtu/hr thermal oxidizer, at Various Locations, SJVAPCD.

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. Robert Gilles of Permit Services at (559) 230-5804.

Sincerely,

David Warner
Director of Permit Services

DW:RPG

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
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Southern Region
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Bakersfield, CA 93308-9725
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JUL 12 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: N-1113862

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of PSC Industrial Outsourcing, LP's application for an Authority to Construct for the installation of two petroleum tank/pipeline degassing operations each served by a 10 MMBtu/hr thermal oxidizer, at Various Locations, SJVAPCD.

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.

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Modesto Bee

**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 PSC Industrial Outsourcing, LP for the installation of two petroleum tank/pipeline degassing operations each served by a 10 MMBtu/hr thermal oxidizer, at Various Locations, SJVAPCD.

The analysis of the regulatory basis for this proposed action, Project #N-1113862, 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, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

III. Project Location

This equipment will be operated at Various Locations, SJVUAPCD. This equipment will not be operated within 1,000 feet of any K-12 school. A condition will be included on each permit to ensure compliance with this requirement; therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

- *The equipment shall not be located within 1,000 feet of any K-12 school. [CH&SC 42301.6]*

IV. Process Description

A thermal oxidizer will be utilized to incinerate vapors from petroleum tanks/pipelines. Prior to operation of the proposed units, tanks/pipelines will be drained of all liquid petroleum. A blower will be used to remove the vapors. The blower will introduce the vapors to the thermal oxidizer inlet for incineration. In order to ensure sufficient destruction of petroleum vapors, LPG (propane) will be used as auxiliary fuel to maintain a combustion chamber temperature of between 1250 °F and 1550 °F.

V. Equipment Listing

N-8662-1-0: TRANSPORTABLE TANK/VESSEL/PIPELINE DEGASSING OPERATION WITH A 10 MMBTU/HR THERMAL OXIDIZER (PSC EQUIPMENT # TO 3969-101)AND AN OPTIONAL INFLUENT CAUSTIC SULFUR SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS IN THE SJVAPCD

N-8662-2-0: TRANSPORTABLE TANK/VESSEL/PIPELINE DEGASSING OPERATION WITH A 10 MMBTU/HR THERMAL OXIDIZER (PSC EQUIPMENT # TO 3969-102) AND AN OPTIONAL INFLUENT CAUSTIC SULFUR SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS IN THE SJVAPCD

VI. Emission Control Technology Evaluation

VOC emissions will be controlled using a thermal oxidizer. During thermal oxidation, the temperature of the process stream is increased from ambient to approximately 1400°F with the assistance of a LPG-fueled burner. The combustion chamber will be maintained at a temperature of between 1250°F and 1550°F. The heated gases are turbulently mixed with oxygen and retained for a minimum of 0.5 seconds in the combustion chamber to ensure maximum VOC incineration. The thermal oxidizer will operate with a destruction efficiency of at least 99%.

VII. General Calculations

A. Assumptions

- VOCs and SOx are the only pollutants from the tank/pipeline degassing operations;
- Each unit includes a 6 MMBtu/hr burner and is capable of operating at a rate of 10 MMBtu/hr (i.e. 6 MMBtu/hr auxiliary fuel and 4 MMBtu/hr contaminated airstream);
- Each unit will be fired on LPG (propane) as an auxiliary fuel (per applicant);
- Control efficiency will be at least 99% (per applicant);
- The maximum operating schedule for unit N-8662-1-0 will be 24 hrs/day and 365 days/year; and
- The maximum operating schedule for unit N-8662-2-0 will be 20 hrs/day and 365 days/year.

Other assumptions will be stated as they are made.

B. Emission Factors

N-8662-1-0

Emission Factors – Permit Unit N-8662-1-0		
Pollutant	Emission Factor (EF)	Source
NOx	0.205 lb/MMBtu	Applicant
SOx (Auxiliary Fuel)	0.036 lb/MMBtu	Calculated below
PM ₁₀	0.0077 lb/MMBtu	AP-42 Section 1.5 (applicant)
CO	0.881 lb/MMBtu	Applicant
VOC	0.2 lb/hr	Applicant

The SOx emission factor in the table above is for the auxiliary burner only and is calculated as shown below.

$$PE_{SOx} = 5.2 \text{ lb/day (auxiliary burner only, per applicant)}$$

$$\text{Burner Rating} = 6 \text{ MMBtu/hr}$$

$$EF_{SOx \text{ (Auxiliary Fuel)}} = [(5.2 \text{ lb-SOx/day}) \div (24 \text{ hrs/day})] \div (6 \text{ MMBtu/hr})$$

$$= 0.036 \text{ lb-SOx/MMBtu}$$

N-8662-2-0

Emission Factors – Permit Unit N-8662-2-0		
Pollutant	Emission Factor (EF)	Source
NOx	0.205 lb/MMBtu	Applicant
SOx (Auxiliary Fuel)	0.043 lb/MMBtu	Calculated below
PM ₁₀	0.0077 lb/MMBtu	AP-42 Section 1.5 (applicant)
CO	0.881 lb/MMBtu	Applicant
VOC	0.2 lb/hr	Applicant

The SOx emission factor in the table above is for the auxiliary burner only and is calculated as shown below.

$$\begin{aligned} PE_{SOx} &= 5.2 \text{ lb/day (auxiliary burner only, per applicant)} \\ \text{Burner Rating} &= 6 \text{ MMBtu/hr} \end{aligned}$$

$$\begin{aligned} EF_{SOx \text{ (Auxiliary Fuel)}} &= [(5.2 \text{ lb-SOx/day}) \div (20 \text{ hrs/day})] \div (6 \text{ MMBtu/hr}) \\ &= 0.043 \text{ lb-SOx/MMBtu} \end{aligned}$$

C. Calculations

1. Pre Project Potential to Emit (PE1)

Since these are new emissions units, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

N-8662-1-0

The following information and equations are used to calculate daily and annual PE for this operation.

$$\begin{aligned} \text{Burner Rating} &= 10 \text{ MMBtu/hr} \\ \text{Daily Operation} &= 24 \text{ hours} \\ \text{Annual Operation} &= 365 \text{ days} \\ (\text{SOx Emissions})_{\text{Contaminated Airstream}} &= 2.0 \text{ lb/day (applicant)} \end{aligned}$$

NOx:

$$\begin{aligned} \text{Daily PE2} &= (EF, \text{ lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (24 \text{ hours/day}) \\ &= (0.205 \text{ lb-NOx/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (24 \text{ hrs/day}) \\ &= \mathbf{49.2 \text{ lb-NOx/day}} \end{aligned}$$

$$\begin{aligned} \text{Annual PE2} &= (EF, \text{ lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hours/year}) \\ &= (0.205 \text{ lb-NOx/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hrs/year}) \\ &= \mathbf{17,958 \text{ lb-NOx/year}} \end{aligned}$$

SOx:

$$\begin{aligned} (\text{Daily PE2})_{\text{Auxiliary Burner}} &= (EF, \text{ lb/MMBtu}) \times (6 \text{ MMBtu/hr}) \times (24 \text{ hrs/day}) \\ &= (0.036 \text{ lb-SOx/MMBtu}) \times (6 \text{ MMBtu/hr}) \times (24 \text{ hrs/day}) \\ &= 5.2 \text{ lb-SOx/day} \end{aligned}$$

$$\begin{aligned} (\text{Annual PE2})_{\text{Auxiliary Burner}} &= (\text{Daily PE2, lb-SOx/day}) \times (365 \text{ days/year}) \\ &= (5.2 \text{ lb-SOx/day}) \times (365 \text{ days/year}) \\ &= 1,898 \text{ lb-SOx/year} \end{aligned}$$

$$(\text{Daily PE2})_{\text{Contaminated Airstream}} = 2.0 \text{ lb/day (per applicant)}$$

$$\begin{aligned}
 (\text{Annual PE2})_{\text{Contaminated Airstream}} &= (\text{Daily PE2, lb/day}) \times (365 \text{ days/year}) \\
 &= (2.0 \text{ lb-SOx/day}) \times (365 \text{ days/year}) \\
 &= 730 \text{ lb-SOx/year}
 \end{aligned}$$

$$\begin{aligned}
 \text{Total Daily PE2} &= (\text{PE2}_{\text{Auxiliary Burner, lb-SOx/day}}) + (\text{PE2}_{\text{Contaminated Airstream, lb-SOx/day}}) \\
 &= (5.2 \text{ lb-SOx/day}) + (2.0 \text{ lb-SOx/day}) \\
 &= \mathbf{7.2 \text{ lb-SOx/day}}
 \end{aligned}$$

$$\begin{aligned}
 \text{Total Annual PE2} &= (\text{PE2}_{\text{Auxiliary Burner, lb-SOx/year}}) + (\text{PE2}_{\text{Contaminated Airstream, lb-SOx/year}}) \\
 &= (1,898 \text{ lb-SOx/year}) + (730 \text{ lb-SOx/year}) \\
 &= \mathbf{2,628 \text{ lb-SOx/year}}
 \end{aligned}$$

PM₁₀:

$$\begin{aligned}
 \text{Daily PE2} &= (\text{EF, lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (24 \text{ hours/day}) \\
 &= (0.0077 \text{ lb-PM}_{10}\text{/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (24 \text{ hrs/day}) \\
 &= \mathbf{1.8 \text{ lb-PM}_{10}\text{/day}}
 \end{aligned}$$

$$\begin{aligned}
 \text{Annual PE2} &= (\text{EF, lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hours/year}) \\
 &= (0.0077 \text{ lb-PM}_{10}\text{/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hrs/year}) \\
 &= \mathbf{675 \text{ lb-PM}_{10}\text{/year}}
 \end{aligned}$$

CO:

$$\begin{aligned}
 \text{Daily PE2} &= (\text{EF, lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (24 \text{ hours/day}) \\
 &= (0.881 \text{ lb-CO/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (24 \text{ hrs/day}) \\
 &= \mathbf{211.4 \text{ lb-CO/day}}
 \end{aligned}$$

$$\begin{aligned}
 \text{Annual PE2} &= (\text{EF, lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hours/year}) \\
 &= (0.881 \text{ lb-CO/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hrs/year}) \\
 &= \mathbf{77,176 \text{ lb-CO/year}}
 \end{aligned}$$

VOC:

$$\begin{aligned}
 \text{Daily PE2} &= (\text{EF, lb/hr}) \times (24 \text{ hours/day}) \\
 &= (0.2 \text{ lb-VOC/hr}) \times (24 \text{ hrs/day}) \\
 &= \mathbf{4.8 \text{ lb-VOC/day}}
 \end{aligned}$$

$$\begin{aligned}
 \text{Annual PE2} &= (\text{EF, lb/hr}) \times (8,760 \text{ hours/year}) \\
 &= (0.2 \text{ lb-VOC/hr}) \times (8,760 \text{ hrs/year}) \\
 &= \mathbf{1,752 \text{ lb-VOC/year}}
 \end{aligned}$$

The daily and annual PE2 values are summarized in the table below for this unit.

PE2 – Permit Unit N-8662-1-0		
Pollutant	PE2 (lb/day)	PE2 (lb/year)
NOx	49.2	17,958
Total SOx	7.2	2,628
PM ₁₀	1.8	675
CO	211.4	77,176
VOC	4.8	1,752

N-8662-2-0

The following information and equations are used to calculate daily and annual PE for this operation.

Burner Rating = 10 MMBtu/hr
 Daily Operation = 20 hours
 Annual Operation = 365 days
 (SOx Emissions)_{Contaminated Airstream} = 2.0 lb/day (applicant)

NOx:

Daily PE2 = (EF, lb/MMBtu) x (10 MMBtu/hr) x (20 hours/day)
 = (0.205 lb-NOx/MMBtu) x (10 MMBtu/hr) x (20 hrs/day)
 = **41.0 lb-NOx/day**

Annual PE2 = (EF, lb/MMBtu) x (10 MMBtu/hr) x (8,760 hours/year)
 = (0.205 lb-NOx/MMBtu) x (10 MMBtu/hr) x (8,760 hrs/year)
 = **17,958 lb-NOx/year**

SOx:

(Daily PE2)_{Auxiliary Burner} = (EF, lb/MMBtu) x (6 MMBtu/hr) x (20 hrs/day)
 = (0.043 lb-SOx/MMBtu) x (6 MMBtu/hr) x (20 hrs/day)
 = 5.2 lb-SOx/day

(Annual PE2)_{Auxiliary Burner} = (Daily PE2, lb-SOx/day) x (365 days/year)
 = (5.2 lb-SOx/day) x (365 days/year)
 = 1,898 lb-SOx/year

(Daily PE2)_{Contaminated Airstream} = 2.0 lb/day (per applicant)

(Annual PE2)_{Contaminated Airstream} = (Daily PE2, lb/day) x (365 days/year)
 = (2.0 lb-SOx/day) x (365 days/year)
 = 730 lb-SOx/year

Total Daily PE2 = (PE2_{Auxiliary Burner}, lb-SOx/day) + (PE2_{Contaminated Airstream}, lb-SOx/day)

$$= (5.2 \text{ lb-SOx/day}) + (2.0 \text{ lb-SOx/day})$$

$$= \mathbf{7.2 \text{ lb-SOx/day}}$$

Total Annual PE2

$$= (\text{PE2}_{\text{Auxiliary Burner}} \text{ lb-SOx/year}) + (\text{PE2}_{\text{Contaminated Airstream}} \text{ lb-SOx/year})$$

$$= (1,898 \text{ lb-SOx/year}) + (730 \text{ lb-SOx/year})$$

$$= \mathbf{2,628 \text{ lb-SOx/year}}$$

PM₁₀:

Daily PE2

$$= (\text{EF, lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (20 \text{ hours/day})$$

$$= (0.0077 \text{ lb-PM}_{10}\text{/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (20 \text{ hrs/day})$$

$$= \mathbf{1.5 \text{ lb-PM}_{10}\text{/day}}$$

Annual PE2

$$= (\text{EF, lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hours/year})$$

$$= (0.0077 \text{ lb-PM}_{10}\text{/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hrs/year})$$

$$= \mathbf{675 \text{ lb-PM}_{10}\text{/year}}$$

CO:

Daily PE2

$$= (\text{EF, lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (20 \text{ hours/day})$$

$$= (0.881 \text{ lb-CO/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (20 \text{ hrs/day})$$

$$= \mathbf{176.2 \text{ lb-CO/day}}$$

Annual PE2

$$= (\text{EF, lb/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hours/year})$$

$$= (0.881 \text{ lb-CO/MMBtu}) \times (10 \text{ MMBtu/hr}) \times (8,760 \text{ hrs/year})$$

$$= \mathbf{77,176 \text{ lb-CO/year}}$$

VOC:

Daily PE2

$$= (\text{EF, lb/hr}) \times (20 \text{ hours/day})$$

$$= (0.2 \text{ lb-VOC/hr}) \times (20 \text{ hrs/day})$$

$$= \mathbf{4.0 \text{ lb-VOC/day}}$$

Annual PE2

$$= (\text{EF, lb/hr}) \times (8,760 \text{ hours/year})$$

$$= (0.2 \text{ lb-VOC/hr}) \times (8,760 \text{ hrs/year})$$

$$= \mathbf{1,752 \text{ lb-VOC/year}}$$

The daily and annual PE2 values are summarized in the table below for this unit.

PE2 – Permit Unit N-8662-2-0		
Pollutant	PE2 (lb/day)	PE2 (lb/year)
NO _x	41.0	17,958
Total SO _x	7.2	2,628
PM ₁₀	1.5	675
CO	176.2	77,176
VOC	4.0	1,752

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

Pursuant to District Rule 2201, the 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 (AER) that have occurred at the source, and which have not been used on-site.

Since each degassing operation is new and will be limited by permit condition to not operate in conjunction or simultaneously with any other equipment at the same stationary source, there are no valid ATCs, PTOs, or ERCs at the Stationary Source; therefore, the SSPE1 is equal to zero.

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

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

Since each degassing operation will be permitted to not operate in conjunction or simultaneously with any other equipment, each operation will be treated as separate stationary sources.

SSPE2 (lb/year) – N-8662-1-0					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
N-8662-1-0	17,958	2,628	675	77,176	1,752
SSPE2	17,958	2,622	701	77,176	1,752

SSPE2 (lb/year) – N-8662-2-0					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
N-8662-2-0	17,958	2,628	675	77,176	1,752
SSPE2	17,958	2,622	701	77,176	1,752

5. Major Source Determination

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. However, for the purposes of determining major source status, the SSPE2 shall not include the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.”

Major Source Determination (lb/year) – N-8662-1-0					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	0	0	0	0	0
SSPE2	17,958	2,628	675	77,176	1,752
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No

Major Source Determination (lb/year) – N-8662-2-0					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	0	0	0	0	0
SSPE2	17,958	2,628	675	77,176	1,752
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No

As seen in the tables above, neither operation will be a Major Source.

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 District Rule 2201, 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 = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

As shown in Section VII.C.5 above, neither facility is a Major Source for any pollutant.

Therefore BE = PE1.

N-8662-1-0 and N-8662-2-0

Since each unit is a new emissions unit, BE = PE1 = 0 for all pollutants.

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 neither facility is a major source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

8. Federal Major Modification

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

Since neither facility is a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since neither facility is a major source for PM₁₀ (140,000 lb/year), neither is a major source for PM_{2.5} (200,000 lb/year).

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 Attachment I.

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. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions¹:

- 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

¹ 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.

d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

a. New emissions units – PE > 2.0 lb/day

Since BACT can be required only for emissions units and not emission control devices, BACT can be required only for the tank/pipeline contents. Those contents will consist solely of the VOC and sulfur compounds in the contaminated airstreams. BACT cannot be required for the combustion contaminants from the auxiliary fuel burned by either thermal oxidizer. Since each of the proposed units is new, BACT can only be triggered for PE > 2.0 lb/day. The following table summarizes BACT applicability for this project.

BACT Applicability – Units N-8662-1-0 and ‘-2-0			
Pollutant	PE2 (lb/day)	BACT Threshold Level	BACT Triggered?
VOC (contaminated airstream)	4.8	2.0	Yes
SOx (contaminated airstream)	2.0	2.0	No

As seen in the table above, BACT is triggered only for VOC emissions from the contaminated airstream (tank or pipeline degassing) for PE > 2.0 lb/day.

b. Relocation of emissions units – PE > 2.0 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 for relocation purposes.

c. Modification of emissions units – AIPE > 2.0 lb/day

As discussed in Section I above, there are no modified emissions units associated with this project; therefore, BACT is not triggered for modified emissions units purposes.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project constitutes neither an SB 288 nor a Federal Major Modification; therefore, BACT is not triggered for major modification purposes.

2. BACT Guideline

BACT Guideline 7.1.9 is applicable to the proposed tank degassing operations.

See Appendix B for BACT Guideline 7.1.9.

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 Appendix B), BACT has been satisfied with the following:

VOC: 98% or greater control efficiency with: 1. Thermal Oxidizer; 2. Catalytic Oxidizer; or 3. Carbon Adsorption System (Technologically Feasible)

The applicant has proposed to control VOC emissions from the tank/pipeline degassing operations by utilizing thermal oxidizers capable of achieving 99% control efficiency for VOC emissions; therefore, the requirements in BACT Guideline 7.1.9 are satisfied for these operations. The following condition will be included on each permit.

- *Thermal oxidizer control efficiency for VOCs shall not be less than 99%. [District Rule 2201] N*

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year) – Permit Units N-8662-1 and N-8662-2					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	17,958	2,628	675	77,176	1,752
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	No	No	No	No	No

2. Quantity of Offsets Required

As seen above, the SSPE2 is not greater than the offset threshold for any pollutant; therefore, offset calculations are not necessary and offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSPE 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. As shown in Section VII.C.5 above, the SSPE2 is not greater than the Major Source threshold for any pollutant with either operation. Therefore, public noticing is not required for this project for new Major Source purposes.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant; therefore, public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

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

Offset Thresholds – Permit Units N-8662-1 and N-8662-2				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	0	17,958	20,000 lb/year	No
SO _x	0	2,628	54,750 lb/year	No
PM ₁₀	0	675	29,200 lb/year	No
CO	0	77,176	200,000 lb/year	No
VOC	0	1,752	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 – Permit Units N-8662-1 and '-2					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	17,958	0	17,958	20,000 lb/year	No
SO _x	2,622	0	2,628	20,000 lb/year	No
PM ₁₀	701	0	675	20,000 lb/year	No
CO	77,176	0	77,176	20,000 lb/year	Yes
VOC	1,752	0	1,752	20,000 lb/year	No

As demonstrated above, the SSIPE for CO is greater than 20,000 lb/year; therefore, public noticing for SSIPE purposes is required.

2. Public Notice Action

As discussed above, public noticing is required for this project for SSIPE > 20,000 lb/year purposes CO emissions. 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.

N-8662-1-0

- *Combustion emissions from the thermal oxidizer shall not exceed 0.205 lb-NO_x/MMBtu, 0.0077 lb-PM₁₀/MMBtu, 0.881 lb-CO/MMBtu, or 0.2 lb-VOC/hr. [District Rule 2201] N*
- *SO_x emissions from combustion from the thermal oxidizer shall exceed 5.2 pounds in any one day. [District Rule 2201] N*
- *SO_x emissions from the degassing operation shall not exceed 2.0 pounds in any one day. [District Rule 2201] N*

- *This unit must not be located and operated at an existing facility or operation such that it becomes part of an existing stationary source as defined by District Rule 2201 and shall not operate at the same site in conjunction or simultaneously with any other equipment permitted owned or operated by permittee. [District Rule 2201] N*
- *This unit shall be fired exclusively on LPG fuel. [District Rule 2201] N*

N-8662-2-0

- *Combustion emissions from the thermal oxidizer shall not exceed 0.205 lb-NO_x/MMBtu, 0.0077 lb-PM₁₀/MMBtu, 0.881 lb-CO/MMBtu, or 0.2 lb-VOC/hr. [District Rule 2201] N*
- *SO_x emissions from combustion from the thermal oxidizer shall not exceed 5.2 pounds in any one day. [District Rule 2201] N*
- *SO_x emissions from the degassing operation shall not exceed 2.0 pounds in any one day. [District Rule 2201] N*
- *The operation of this unit may not exceed 20 hours in any rolling 24 hour period. [District Rule 2201] N*
- *This unit must not be located and operated at an existing facility or operation such that it becomes part of an existing stationary source as defined by District Rule 2201 and shall not operate at the same site in conjunction or simultaneously with any other equipment permitted owned or operated by permittee. [District Rule 2201] N*
- *This unit shall be fired exclusively on LPG fuel. [District Rule 2201] N*

E. Compliance Assurance

1. Source Testing

For these operations, source testing for VOCs will be required upon initial startup and annually thereafter. The following conditions will be included on each ATC.

- *Permittee shall notify the District Compliance Division to arrange a start-up inspection at the initial location of the unit. [District Rule 1070] N*
- *Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]*
- *{Modified 109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 3 days prior to any compliance source test. [District Rule 1081] N*

- *{Modified 3714} Source testing to measure NO_x and CO emissions from this unit when fired on propane shall be conducted within 60 days of initial start-up. [District Rule 2201] N*
- *{1414} Laboratory samples shall be taken at the initial inspection, under the supervision of the APCD Inspector. Samples shall be taken from both the influent and the effluent gas stream sampling ports. [District Rule 1081]*
- *{Modified 1416} Measurements to determine the influent and the effluent gas flow rates shall be taken at the initial inspection and at least once every 12 months thereafter. Flow rate calculations shall be submitted to the District along with the laboratory sample analysis results. [District Rule 1081] N*
- *{1417} Initial compliance with VOC emission rate and control efficiency requirements shall be demonstrated by the results of the laboratory sample analysis. The results shall be submitted to the District within 60 days of the test. [District Rule 1081]*

2. Monitoring

Applicant has stated that measurement of exhaust flow rate on a daily basis is not feasible and has therefore requested that flow rate of combined inlet gases (dilution air, tank vapor, and auxiliary fuel) be used to estimate exhaust gas effluent flow rate. The following conditions will be included on the permit.

- *Compliance with the VOC emission rate shall be demonstrated by sampling both the control device influent & effluent gas streams with a FID, PID or other District-approved VOC detection device, measuring flow rate of combined inlet gas including tank vapor, auxiliary fuel, and dilution air on a daily basis. [District Rule 2201] N*
- *Compliance with SO_x daily emissions rate shall be demonstrated by daily sampling of the influent gas stream H₂S concentration (ppmv) with a Draeger tube or District-approved H₂S detection device and daily monitoring of the influent vapor flow rate (scfm) and the hours per day equipment is operated. [District Rule 2201] N*
- *The thermal oxidizer shall be equipped with an operational temperature gauge to indicate the temperature of the combustion chamber. A continuously recording device shall be utilized to indicate the combustion chamber temperature during operation. [District Rule 2201] N*
- *Sampling ports adequate for extraction of grab samples, measurement of gas flow rate, use of a District-approved FID, PID or other VOC detection device and use of Draeger tube or District approved H₂S detection device shall be provided for both the influent and effluent gas streams. [District Rule 1081] N*

3. Recordkeeping

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

- *Permittee shall maintain accurate records of all VOC and H2S concentration test results, the quantities and heating values of LPG combusted, the thermal oxidizer influent and effluent flow rates, the total number of hours of operation on each day the unit operates and the date and location of operation. [District Rule 1070] N*

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall 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 District's Technical Services Division conducted the required analysis. Refer to Appendix C of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_x, CO, and SO_x. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_x, CO, or SO_x.

The proposed location is in a non-attainment area for PM₁₀ and PM_{2.5}. The increase in the ambient PM₁₀ and PM_{2.5} concentrations due to the proposed equipment is shown on the table titled Calculated Contribution. The levels of significance, from 40 CFR Part 51.165 (b)(2), are shown on the table titled Significance Levels.

Significance Levels					
Pollutant	Significance Levels (µg/m ³) - 40 CFR Part 51.165 (b)(2)				
	Annual Avg.	24 hr Avg.	8 hr Avg.	3 hr Avg.	1 hr Avg.
PM ₁₀	1.0	5	N/A	N/A	N/A
PM _{2.5}	0.3	1.2	N/A	N/A	N/A

Calculated Contribution – Unit N-8662-1-0					
Pollutant	Calculated Contributions (µg/m ³)				
	Annual Avg.	24 hr Avg.	8 hr Avg.	3 hr Avg.	1 hr Avg.
PM ₁₀	0.2850	2.224	N/A	N/A	N/A
PM _{2.5}	0.29	1.18	N/A	N/A	N/A

Calculated Contribution – Unit N-8662-2-0					
Pollutant	Calculated Contributions ($\mu\text{g}/\text{m}^3$)				
	Annual Avg.	24 hr Avg.	8 hr Avg.	3 hr Avg.	1 hr Avg.
PM ₁₀	0.1609	1.478	N/A	N/A	N/A
PM _{2.5}	0.19	0.8	N/A	N/A	N/A

As shown, the calculated contribution of PM₁₀ and PM_{2.5} will not exceed the EPA significance levels. This project is not expected to cause or make worse a violation of an air quality standard. The following conditions will be included on the permits as shown below.

N-8662-1-0

- *This unit shall not operate within 70 meters of a project boundary [District Rule 2201] N*
- *This unit must not be located and operated at an existing facility or operation such that it becomes part of an existing stationary source as defined by District Rule 2201 and shall not operate at the same site in conjunction or simultaneously with any other equipment permitted owned or operated by permittee. [District Rule 2201] N*

N-8662-2-0

- *The operation of this unit may not exceed 20 hours in any rolling 24 hour period. [District Rule 2201] N*
- *This unit must not be located and operated at an existing facility or operation such that it becomes part of an existing stationary source as defined by District Rule 2201 and shall not operate at the same site in conjunction or simultaneously with any other equipment permitted owned or operated by permittee. [District Rule 2201] N*

Rule 2520 Federally Mandated Operating Permits

Since this facility's potential emissions do not exceed any major source thresholds of Rule 2201, this facility is not a major source, and Rule 2520 does not apply.

Rule 4101 Visible Emissions

Rule 4101 states that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

As long as the equipment is properly maintained and operated, neither emission unit is expected to discharge into the atmosphere any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) hour which is as dark or darker in shade as that designated as No. 1 on the Ringelmann Chart or

equivalent to 20% opacity. The following condition will be included on each permit to ensure compliance with this requirement. Compliance with this rule is expected.

- *{15} 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 or 20% opacity. [District Rule 4101] N*

Rule 4102 Nuisance

Rule 4102 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. The following condition will be included on both permits to ensure compliance with this requirement.

- *{98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] N*

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.

An 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 (Appendix C), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District’s Risk Management Policy is expected.

Rule 4201 Particulate Matter Concentration

The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard. 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.

F-Factor for LPG: 8,578 dscf/MMBtu at 60 °F
PM₁₀ Emission Factor: 0.0077 lb-PM₁₀/MMBtu
Fraction of PM as PM₁₀: 100%

$$\text{Grain Loading (GL)} = \left(\frac{0.0077 \text{ lb-PM}}{\text{MMBtu}} \right) \times \left(\frac{7,000 \text{ grain}}{\text{lb-PM}} \right) \times \left(\frac{\text{MMBtu}}{8,578 \text{ ft}^3} \right)$$

$$GL = 0.0063 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$$

The following condition will be listed on each permit to ensure compliance with this requirement. Compliance with this rule is expected

- {14} *Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]*

Rule 4301 Fuel Burning Equipment

The purpose of this rule is to limit the emissions of air contaminants from fuel burning equipment. This rule limits the concentration of combustion contaminants and specifies maximum emission rates for sulfur dioxide, nitrogen oxide and combustion contaminant emissions.

The provisions of this rule shall apply to any fuel burning equipment except air pollution control equipment which is exempted according to Section 4.0.

Since the equipment proposed with this project will be used to control emissions of VOC, it is considered air pollution control equipment and is exempt from the requirements of this rule. No further discussion is required.

Rule 4801 Sulfur Compounds

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.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows.

$$\text{Volume SO}_2 = \frac{n RT}{P}$$

With:

N = moles SO₂

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

R (Universal Gas Constant) = $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$

EPA F-Factor for Natural Gas = 8,578 dscf/MMBtu at 60 °F

LPG Combustion:

N-8662-1-0

$$\frac{0.0036 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 2.49 \frac{\text{parts}}{\text{million}}$$

Sulfur Concentration = 2.49 ppmv < 2,000 ppmv (or 0.2%)

N-8662-2-0

$$\frac{0.0043 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 2.97 \frac{\text{parts}}{\text{million}}$$

Sulfur Concentration = 2.97 ppmv < 2,000 ppmv (or 0.2%)

As shown above, compliance with this rule is expected for both units.

California Health & Safety Code 42301.6 (School Notice)

This equipment will be permitted to operate at various, unspecified locations in the SJVAPCD. The following condition will be included on each permit to ensure that neither unit is operated within 1,000 feet of a K-12 school.

- *The equipment shall not be located within 1,000 feet of any K-12 school. [CH&SC 42301.6]*

Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

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

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

District CEQA Findings

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity consists of issuing a permit for a piece of transportable equipment to be used at various locations within the District. The District makes the following findings regarding this activity: 1) Issuance of the permit does not have a significant environmental impact. 2) Assessment of potential environmental effects resulting from the use of the transportable equipment on a development project

is the responsibility of the Lead Agency approving the specific project, and will be determined on a project specific basis. The District has determined that no additional findings are required.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC #s N-8662-1-0 and N-8662-2-0 subject to the permit conditions on the attached draft ATCs in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-8662-1-0	3020-02-G	10 MMBtu/hr	\$815.00
N-8662-2-0	3020-02-G	10 MMBtu/hr	\$815.00

Appendixes

- A: Draft ATCs
- B: BACT Guideline and BACT Analysis
- C: HRA Summary and AAQA

Attachments

- I: Quarterly Net Emissions Change (QNEC) Calculation

APPENDIX A
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-8662-1-0

LEGAL OWNER OR OPERATOR: PSC INDUSTRIAL OUTSOURCING LP

MAILING ADDRESS: 5151 SAN FELIPE STE 1600
HOUSTON, TX 77095-3609

LOCATION: VARIOUS LOCATIONS
SJVUAPCD, CA

EQUIPMENT DESCRIPTION:

TRANSPORTABLE TANK/VESSEL/PIPELINE DEGASSING OPERATION WITH A 10 MMBTU/HR THERMAL OXIDIZER (PSC EQUIPMENT # TO 3969-101) AND AN OPTIONAL INFLUENT CAUSTIC SULFUR SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS IN THE SJVAPCD

CONDITIONS

1. This unit must not be located and operated at an existing facility or operation such that it becomes part of an existing stationary source as defined by District Rule 2201 and shall not operate at the same site in conjunction or simultaneously with any other equipment permitted, owned or operated by the permittee [District Rule 2201]
2. Permittee shall notify the District Compliance Division to arrange a start-up inspection at the initial location of the unit. [District Rule 2201]
3. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. {15} 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 or 20% opacity. [District Rule 4101]
6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. This unit shall be fired exclusively on LPG fuel. [District Rule 2201]
8. This unit shall not operate within 70 meters of a property boundary. [District Rule 2201]
9. The equipment shall not be located within 1,000 feet of any K-12 school [CH&SC 42301.6]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services

N-8662-1-0 : Jul 10 2012 4:07PM - GILLESPIE : Joint Inspection NOT Required

10. Thermal oxidizer control efficiency for VOCs shall not be less than 99%. [District Rule 2201]
11. Combustion emissions from the thermal oxidizer shall not exceed any of the following limits: 0.205 lb-NO_x/MMBtu; 0.0077 lb-PM₁₀/MMBtu; 0.881 lb-CO/MMBtu; or 0.2 lb-VOC/hr. [District Rule 2201]
12. SO_x emissions from combustion from the thermal oxidizer shall not exceed 5.2 pounds in any one day. [District Rule 2201]
13. SO_x emissions from the degassing operation shall not exceed 2.0 pounds in any one day. [District Rule 2201]
14. The thermal oxidizer shall be equipped with an operational temperature gauge to indicate the temperature of the combustion chamber. A continuously recording device shall be utilized to indicate the combustion chamber temperature during operation. [District Rule 2201]
15. Sampling ports adequate for extraction of grab samples, measurement of gas flow rate, use of a District-approved FID, PID or other VOC detection device and use of Draeger tube or District approved H₂S detection device shall be provided for both the influent and effluent gas streams. [District Rule 1081]
16. Compliance with the VOC emission rate shall be demonstrated by sampling both the control device influent & effluent gas streams with a FID, PID or other District-approved VOC detection device, measuring the flowrate of the combined inlet gas including tank vapor, auxiliary fuel, and dilution air on a daily basis. [District Rule 2201]
17. Compliance with the SO_x emission rate shall be demonstrated by daily sampling of the influent gas stream H₂S concentration (ppmv) with a Draeger tube or District-approved H₂S detection device and daily monitoring of the influent vapor flow rate (scfm) and the hours per day equipment is operated. [District Rule 2201]
18. Source testing to measure NO_x and CO emissions from this unit when fired on LPG shall be conducted within 60 days of initial start-up. [District Rule 2201]
19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 3 days prior to any compliance source test. [District Rule 1081]
20. {1414} Laboratory samples shall be taken at the initial inspection, under the supervision of the APCD Inspector. Samples shall be taken from both the influent and the effluent gas stream sampling ports. [District Rule 1081]
21. Measurements to determine the influent and the effluent gas flow rates shall be taken at the initial inspection and at least once every 12 months thereafter. Flow rate calculations shall be submitted to the District along with the laboratory sample analysis results. [District Rule 1081]
22. {1417} Initial compliance with VOC emission rate and control efficiency requirements shall be demonstrated by the results of the laboratory sample analysis. The results shall be submitted to the District within 60 days of the test. [District Rule 1081]
23. Permittee shall maintain accurate records of all VOC and H₂S concentration test results, the quantities and heating values of LPG combusted, the thermal oxidizer influent and effluent flow rates, the total number of hours of operation on each day the unit operates and the date and location of operation. [District Rule 1070]
24. Records shall be maintained for a period of five years and shall be made available for District inspection upon request. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-8662-2-0

LEGAL OWNER OR OPERATOR: PSC INDUSTRIAL OUTSOURCING LP
MAILING ADDRESS: 5151 SAN FELIPE STE 1600
HOUSTON, TX 77095-3609

LOCATION: VARIOUS LOCATIONS
SJVUAPCD, CA

EQUIPMENT DESCRIPTION:

TRANSPORTABLE TANK/VESSEL/PIPELINE DEGASSING OPERATION WITH A 10 MMBTU/HR THERMAL OXIDIZER (PSC EQUIPMENT # TO 3969-102) AND AN OPTIONAL INFLUENT CAUSTIC SULFUR SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS IN THE SJVAPCD

CONDITIONS

1. This unit must not be located and operated at an existing facility or operation such that it becomes part of an existing stationary source as defined by District Rule 2201 and shall not operate at the same site in conjunction or simultaneously with any other equipment permitted, owned or operated by the permittee [District Rule 2201]
2. Permittee shall notify the District Compliance Division to arrange a start-up inspection at the initial location of the unit. [District Rule 2201]
3. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. {15} 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 or 20% opacity. [District Rule 4101]
6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. This unit shall be fired exclusively on LPG fuel. [District Rule 2201]
8. The operation of this unit shall not exceed 20 hours in any rolling 24-hour period. [District Rule 2201]
9. The equipment shall not be located within 1,000 feet of any K-12 school [CH&SC 42301.6]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director, APCO

DRAFT

DAVID WARNER, Director of Permit Services

N-8662-2-0: Jul 10 2012 4:07PM - GILLESB : Joint Inspection NOT Required

10. Thermal oxidizer control efficiency for VOCs shall not be less than 99%. [District Rule 2201]
11. Combustion emissions from the thermal oxidizer shall not exceed any of the following limits: 0.205 lb-NO_x/MMBtu; 0.0077 lb-PM₁₀/MMBtu; 0.881 lb-CO/MMBtu; or 0.2 lb-VOC/hr. [District Rule 2201]
12. SO_x emissions from combustion from the thermal oxidizer shall not exceed 5.2 pounds in any one day. [District Rule 2201]
13. SO_x emissions from the degassing operation shall not exceed 2.0 pounds in any one day. [District Rule 2201]
14. The thermal oxidizer shall be equipped with an operational temperature gauge to indicate the temperature of the combustion chamber. A continuously recording device shall be utilized to indicate the combustion chamber temperature during operation. [District Rule 2201]
15. Sampling ports adequate for extraction of grab samples, measurement of gas flow rate, use of a District-approved FID, PID or other VOC detection device and use of Draeger tube or District approved H₂S detection device shall be provided for both the influent and effluent gas streams. [District Rule 1081]
16. Compliance with the VOC emission rate shall be demonstrated by sampling both the control device influent & effluent gas streams with a FID, PID or other District-approved VOC detection device, measuring the flowrate of the combined inlet gas including tank vapor, auxiliary fuel, and dilution air on a daily basis. [District Rule 2201]
17. Compliance with the SO_x emission rate shall be demonstrated by daily sampling of the influent gas stream H₂S concentration (ppmv) with a Draeger tube or District-approved H₂S detection device and daily monitoring of the influent vapor flow rate (scfm) and the hours per day equipment is operated. [District Rule 2201]
18. Source testing to measure NO_x and CO emissions from this unit when fired on LPG shall be conducted within 60 days of initial start-up. [District Rule 2201]
19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 3 days prior to any compliance source test. [District Rule 1081]
20. {1414} Laboratory samples shall be taken at the initial inspection, under the supervision of the APCD Inspector. Samples shall be taken from both the influent and the effluent gas stream sampling ports. [District Rule 1081]
21. Measurements to determine the influent and the effluent gas flow rates shall be taken at the initial inspection and at least once every 12 months thereafter. Flow rate calculations shall be submitted to the District along with the laboratory sample analysis results. [District Rule 1081]
22. {1417} Initial compliance with VOC emission rate and control efficiency requirements shall be demonstrated by the results of the laboratory sample analysis. The results shall be submitted to the District within 60 days of the test. [District Rule 1081]
23. Permittee shall maintain accurate records of all VOC and H₂S concentration test results, the quantities and heating values of LPG combusted, the thermal oxidizer influent and effluent flow rates, the total number of hours of operation on each day the unit operates and the date and location of operation. [District Rule 1070]
24. Records shall be maintained for a period of five years and shall be made available for District inspection upon request. [District Rule 2201]

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APPENDIX B
BACT Guideline and BACT Analysis

[Per » B A C T » Bact Guideline.asp?category_Level1=7&category_Level2=1&category_Level3=9&last Update=3 » 19 :](#)

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**Best Available Control Technology (BACT) Guideline 7.1.9
Last Update: 3/19/1999**

**Petroleum Production - Mobile Degassing Operation for Storage Tank with
low H2S content, using a Thermal Oxidizer as a control device**

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC		98% or greater control efficiency with 1. Thermal Oxidizer, 2. Catalytic Oxidizer, or 3. Carbon Adsorption System.	

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. For background information, see Permit Specific BACT Determinations on [Details Page](#).

Top-Down BACT Analysis for N-8662-1-0 and '-2-0

VOC Emissions

Step 1 - Identify All Possible Control Technologies

The SJVAPCD BACT Clearinghouse Guideline 7.1.9, 1st quarter 1999, identifies the achieved in practice and technologically feasible BACT control technologies for *Petroleum Production – Mobile Degassing Operation for Storage Tank with low H₂S content, using a Thermal Oxidizer as a control device*. This guideline is applicable to the proposed operations. The achieved in practice and technologically feasible control options are listed below.

1. 98% or greater control efficiency with: 1. Thermal Oxidizer; 2. Catalytic Oxidizer; or, 3. Carbon Adsorption System (Technologically Feasible)

Step 2 - Eliminate Technologically Infeasible Options

All of the options in step 1 are technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. 98% or greater control efficiency with: 1. Thermal Oxidizer; 2. Catalytic Oxidizer; or, 3. Carbon Adsorption System (Technologically Feasible)

Step 4 - Cost Effectiveness Analysis

The applicant has proposed to utilize thermal oxidizers capable of 99% or greater control efficiency to control VOC emissions from the proposed petroleum tank/pipeline degassing operations; therefore, the applicant's proposal meets the BACT requirements for this class and category of source. No cost effective analysis is necessary since the applicant's proposal meets BACT.

APPENDIX C
HRA Summary and AAQA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Robert Gilles– Permit Services
 From: Leland Villalvazo– Technical Services
 Date: May 11, 2012
 Facility Name: PSC Industrial
 Location: Various Locations within SJV
 Application #(s): N-8662-1-0, 2-0
 Project #: N-1113862

A. RMR SUMMARY

RMR Summary				
Categories	Oxidizer (Unit 1-0)	Oxidizer (Unit 2-0)	Project Totals	Facility Totals
Prioritization Score	0.124	0.124	0.25	0.25
Acute Hazard Index	NA	NA	NA	NA
Chronic Hazard Index	NA	NA	NA	NA
Maximum Individual Cancer Risk (10 ⁻⁶)	NA	NA	NA	NA
T-BACT Required?	No	No		
Special Permit Conditions?	No	No		

Proposed Permit Conditions

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

Unit # 1-0

1. The unit shall not operate within 70 meters of a project boundary.
2. The unit shall not operate in combination with any other unit at the same location.

Unit # 2-0

1. The unit shall not operate in combination with any other unit at the same location.
2. The unit shall not operate more than 20 hours in any rolling 24 hour period.

B. RMR REPORT

I. Project Description

Technical Services received a request on March 27, 2012, to perform an Ambient Air Quality Analysis and a Risk Management Review for two transportable degreasing operations. Each permit will include one 10 MMBTU/hr thermal oxidizer.

II. Analysis

Toxic emissions for this proposed unit were calculated using worst-case waste gas emission factors. 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 this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

Analysis Parameters Unit 1-0, 2-0			
Throughput (MMscf/yr)	87.6	Max Hours per Year	8760
Closest Receptor (m)	0		

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 8.81 lb/hr CO, 2.05 lb/hr NO_x, 0.3 lb/hr SO_x, and (0.08 lb/hr PM₁₀ and 0.06 lb/hr PM₁₀ respectively). The engineer supplied the maximum fuel rate used for this the analysis.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	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	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ²	Pass ²
PM _{2.5}	X	X	X	Pass ²	Pass ²

*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.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The prioritization score is less than 1.0. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

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.

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.

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

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Prioritization score
- E. Facility Summary

ATTACHMENT I
QNEC Calculations

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.

N-8662-1-0 and N-8662-2-0

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$\begin{aligned} \text{PE2}_{\text{quarterly}} &= \text{PE2}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 4,600 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 1,150 \text{ lb PM}_{10}/\text{qtr} \end{aligned}$$

$$\begin{aligned} \text{PE1}_{\text{quarterly}} &= \text{PE1}_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 4,600 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 1,150 \text{ lb PM}_{10}/\text{qtr} \end{aligned}$$

Quarterly NEC [QNEC]				
	PE2 (lb/year)	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	17,958	4,489.5	0	4,489.5
SO _x	2,628	657	0	657
PM ₁₀	675	168.75	0	168.75
CO	77,176	19,294	0	19,294
VOC	1,752	438	0	438