



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

DEC 22 2010

Timothy Alburger  
Seneca Western Minerals  
P.O. Box 9279  
Bakersfield, CA 93389-9279

**Re: Notice of Preliminary Decision - Authority to Construct**  
**Project Number: S-1103508**

Dear Mr. Alburger:

Enclosed for your review and comment is the District's analysis of Seneca Western Minerals's application for an Authority to Construct for reducing waste gas flow from a 16.5 MM Btu/hr flare to no more than 4.9 MM Btu/hr for a flare minimization plan exemption from Rule 4311, at Seneca's heavy oil western stationary source.

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 Rinaldi of Permit Services at (661) 392-5614.

Sincerely,

David Warner  
Director of Permit Services

DW: RCR/cm

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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**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  
[www.valleyair.org](http://www.valleyair.org)

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



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

DEC 22 2010

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-1103508**

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Seneca Western Minerals's application for an Authority to Construct for reducing waste gas flow from a 16.5 MM Btu/hr flare to no more than 4.9 MM Btu/hr for a flare minimization plan exemption from Rule 4311, at Seneca's heavy oil western stationary source.

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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Sincerely,

David Warner  
Director of Permit Services

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# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

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-1103508**

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of Seneca Western Minerals's application for an Authority to Construct for reducing waste gas flow from a 16.5 MM Btu/hr flare to no more than 4.9 MM Btu/hr for a flare minimization plan exemption from Rule 4311, at Seneca's heavy oil western stationary source.

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 Rinaldi of Permit Services at (661) 392-5614.

Sincerely,

David Warner  
Director of Permit Services

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Enclosure

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34946 Flyover Court  
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Tel: (661) 392-5500 FAX: (661) 392-5585

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 Seneca Western Minerals for reducing waste gas flow from a 16.5 MM Btu/hr flare to no more than 4.9 MM Btu/hr for a flare minimization plan exemption from Rule 4311, at Seneca's heavy oil western stationary source.

The analysis of the regulatory basis for this proposed action, Project #S-1103508, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](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.**



#### IV. Process Description

The flare is authorized to burn natural gas and TEOR (produced) gas.

Seneca Resources plans to limit the flow to the flare to no more than 4.9 MMBtu/hr by utilizing existing orifice flow meters and installing upstream flow-control valves. Monthly, a third-party will sample and analyze the gas to determine the gross Btu value. The Btu value will be used to calculate the maximum allowed flow rate to flow 4.9 MMBtu/hr. The calculated flow rate will be programmed into the PCL for controlling the flow-control valve (FCV). The FCV will open and divert gas from the flare back to the suction of the compressor system, thereby preventing the maximum allowable rate from being exceeded. See Attachment II for a schematic of the process.

The following conditions were placed on the ATC permit to ensure that the applicant limits the flow to the flare so that the rating does not exceed 4.9 MMBtu/hr.

3. Capacity of flare shall not exceed 4.9 MM Btu/hr. [District Rules 2201 and 4311] Y
4. Except for the pilot, the gas inlet to flare shall be equipped with recording flow rate meter. [District Rules 2201 and 4311] Y
5. Operator shall demonstrate the heat input capacity of the flare daily by calculation, using the metered volume of the gas delivered to the flare and the most current measured heating value of the gas stream. Except for the pilot, heating value for the gas stream shall be determined at least once every six months by sample analysis. [District Rule 2201 and 4311] Y

## V. Equipment Listing

### Pre-Project Equipment Description:

**S-3755-10-4:** 16.5 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE

### Proposed Modification:

**S-3755-10-4:** MODIFICATION OF 16.5 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE: REDUCE WASTE GAS FLOW TO NO MORE THAN 4.9 MM BTU/HR FOR FLARE MINIMIZATION PLAN EXEMPTION FROM RULE 4311

### Post Project Equipment Description:

**S-3755-10-6:** 16.5 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE WITH REDUCED WASTE GAS FLOW TO NO MORE THAN 4.9 MM BTU/HR.

## VI. Emission Control Technology Evaluation

According to EPA's OAQPS Control Cost Manual, gaseous fuels with a heating value of at least 300 Btu/scf do not require auxiliary fuel (generally natural gas). Auxiliary fuel is needed only to increase the Btu content of gases which have heating values of less than 300 Btu/scf. According to gas analysis submitted with a prior project net heating value of process gas is in 650 Btu/scf. The flare has been authorized to use auxiliary fuel in the event of low Btu process gas, so that the net heating value of the gas mixture is over 300 Btu/scf for complete combustion.

## VII. General Calculations

### A. Assumptions

- The potential to emit from the proposed flare is based on the consumption of pilot gas and waste gas for 24 hours per day, 365 days per year.
- Maximum amount of produced (TEOR) gas combusted in S-3755-10:  
 $300 \text{ mscf/day} \times 650 \text{ MM Btu/1000 mscf} \times \text{day}/24 \text{ hr} = 8.1 \text{ MMBtu/hr}$
- Waste gas incineration flow not to exceed 4.9 MM Btu/hr. (Applicant)  
 $4.9 \text{ MM Btu/hr} \times \text{MM scf}/650 \text{ MM BTU} = 0.0075 \text{ MMscf} \times 1000 \text{ M scf/ MMscf}$   
 $= 7.5 \text{ mscf/hr} \times 24 \text{ hr/day} = 180 \text{ mscf/day (post-project)}$
- Maximum H<sub>2</sub>S concentration in TEOR gas: 500 ppmv
- Higher heating value for produced (TEOR) gas: 650 Btu/scf (applicant)
- Limited to 42,924 MMBtu/yr (4.9 MMBtu/yr x 24 hr/day x 365 days/yr) (Applicant)

## B. Emission Factors

The PE2s for flare '-10, are based on use of EPA AP-42 Section 13.5 Industrial Flares (9/91) emissions factors as per District policy FYI-83. Note that, with the exception of NO<sub>x</sub>, the revised emissions factors are higher than the values used in the original permitting action. District policy APR 1110 states that when the revised generally accepted emission factors are higher than the factors used at the time of original permitting, the pre-project potential to emit will be increased accordingly. For this project the pre-project emissions of NO<sub>x</sub> from flare '-10 are also calculated using the EPA AP-42 Section 13.5 (9/91) emission factor. Emissions of SO<sub>x</sub> are calculated from the H<sub>2</sub>S concentration in the produced (TEOR) gas and authorized flow rate of produced (TEOR) gas (by mass balance).

**NO<sub>x</sub> (as NO<sub>2</sub>):** 0.068 lb/MMBtu  
**VOC:** 0.063 lb/MMBtu  
**CO:** 0.37 lb/MMBtu  
**PM<sub>10</sub>:** 0.008 lb/MMBtu  
**SO<sub>x</sub>:**  $(500 \text{ ft}^3/10^6 \text{ ft}^3)(1000 \text{ ft}^3/0.65 \text{ MM Btu})(64 \text{ lbs SO}_2/379 \text{ ft}^3)$   
 = 0.13 lb/MM Btu

## C. Calculations

### 1. Pre-Project Potential to Emit (PE1)

**NO<sub>x</sub>:** 0.068 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day = 13.2 lb/day  
**VOC:** 0.063 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day = 12.2 lb/day  
**CO:** 0.37 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day = 71.9 lb/day  
**PM<sub>10</sub>:** 0.008 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day = 1.6 lb/day  
**SO<sub>x</sub>:** 0.13 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day = 25.3 lb/day

**NO<sub>x</sub>:** 0.15 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day x 365 day/yr. = 4,825 lb/yr  
**VOC:** 0.0085 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day x 365 day/yr. = 4,470 lb/yr  
**CO:** 0.129 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day x 365 day/yr. = 26,254 lb/yr  
**PM<sub>10</sub>:** 0.0117 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day x 365 day/yr. = 568 lb/yr  
**SO<sub>x</sub>:** 0.13 lb/MMBtu x 8.1 MMBtu/hr x 24 hr/day x 365 day/yr. = 9224 lb/yr

### Pre-project from PTO S-3755-10-4

Pre-Project Potential to Emit (PE1)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO <sub>x</sub>	13.2	4,825
VOC	12.2	4,470
CO	71.9	26,254
PM <sub>10</sub>	1.6	568
SO <sub>x</sub>	25.3	9,224



**2. Post Project Potential to Emit (PE2)**

**NOx:** 0.068 lb/MMBtu x 4.9 MMBtu/hr x 24 hr/day = 8.0 lb/day  
**VOC:** 0.063 lb/MMBtu x 4.9 Btu/hr x 24 hr/day = 7.4 lb/day  
**CO:** 0.37 lb/MMBtu x 4.9 MMBtu/hr x 24 hr/day = 43.5 lb/day  
**PM10:** 0.008 lb/MMBtu x 4.9 MMBtu/hr x 24 hr/day = 0.9 lb/day  
**SOx:** 0.13 lb/MMBtu x 4.9 MMBtu/hr x 24 hr/day = 15.3 lb/day

**NOx:** 0.15 lb/MMBtu x 4.9 MMBtu/hr x 24 hr/day x 365 day/yr. = 2,919 lb/yr  
**VOC:** 0.0085 lb/MMBtu x 4.9 MMBtu/hr x 24 hr/day x 365 day/yr.= 2,704 lb/yr  
**CO:** 0.129 lb/MMBtu x 4.9 MMBtu/hr x 24 hr/day x 365 day/yr.= 15,882 lb/yr  
**PM10:** 0.0117 lb/MMBtu x 4.9 MMBtu/hr x 24 hr/day x 365 day/yr.= 343 lb/yr  
**SOx:** 0.13 lb/MMBtu x 4.9 MMBtu/hr x 24 hr/day x 365 day/yr.= 5,580 lb/yr

**Post Project for ATC S-3755-10-6**

<b>Post-Project Potential to Emit (PE2)</b>		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO <sub>x</sub>	8.0	2,919
VOC	7.4	2,704
CO	43.5	15,882
PM10	0.9	343
SO <sub>x</sub>	15.3	5,580

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

SSPE1 calculations are necessary to aid the following determinations:

- If the facility is becoming a new Major Source, or
- An offset threshold will be surpassed, or
- A Stationary Source Increase in Permitted Emissions (SSIPE) public notice is triggered

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.

The Pre-Project Stationary Source Potential to Emit (SSPE1) is summarized below (see Appendix V for details).

<b>Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)</b>					
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
Pre-Project SSPE (SSPE1)	108,664	482,619	94,835	299,028	135,988

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

SSPE2 calculations are necessary to aid the following determinations:

- If the facility is becoming a new Major Source,
- An offset threshold will be surpassed, or
- An SSIPE public notice is triggered

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.

The Post Project Stationary Source Potential to Emit (SSPE2) is summarized below (see Appendix V for details).

<b>Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)</b>					
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
Post Project SSPE (SSPE2)	106,758	478,975	94,610	288,656	134,222

### 5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a major source is a stationary source with a Post-Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the Major Source threshold values (excluding ERCs banked onsite that have not been used onsite).

Major Source Determination (lb/year)					
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
Pre-Project SSPE (SSPE1)	108,664	482,619	94,835	299,028	135,988
Post Project SSPE (SSPE2)	106,758	478,975	94,610	288,656	134,222
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	Yes	No	Yes	Yes

This source is an existing Major Source for NO<sub>x</sub>, SO<sub>x</sub>, CO, and VOC only and will remain so. No change in Major Source status is proposed or expected 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 District 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.

This flare is part of a vapor recovery system that meets the BACT requirements. Therefore baseline emissions will be equal to pre-project emissions.

## 7. SB 288 Major Modification

This facility is an existing major source for NO<sub>x</sub>, SO<sub>x</sub>, CO & VOC.

District Rule 2201 references the definition of major modification provided in 40 CFR 51.165 (v)(A) in effect on December 19, 2002, where major modification means 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.

Significant is defined under Part 51.165(x) as a net emissions increase in the potential of a source to emit any affected pollutant equal to or exceeding any applicable thresholds. For existing major sources in the San Joaquin Valley Air Basin, which is non-attainment for Ozone and PM<sub>10</sub>, a major modification occurs if the Net Emissions Increases (NEI) is equal to or greater than one or more of the following threshold values when calculated on actual to PE basis:

<b>Major Modification Thresholds (Existing Major Source)</b>			
Pollutant	Project PE (lb/year)	Threshold (lb/year)	Major Modification?
NO <sub>x</sub>	<50,000	50,000	No <sup>2</sup>
SO <sub>x</sub>	>80,000	80,000	Yes <sup>1</sup>
PM <sub>10</sub>	>30,000	30,000	No <sup>2</sup>
VOC	<50,000	50,000	No <sup>2</sup>

Therefore, this project is a SB 288 major modification and public notice is required.

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<sup>1</sup> Seneca's stationary source project for Rule 4311 compliance for the Heavy Oil Western Source for facilities S-1114 and S-3755, includes two flares. Considering that flares typically have utilization rates below their permitted capacities, it is presumed that a major modification threshold for SO<sub>x</sub> will be crossed. Based on this presumption, the applicant stipulates that a SB 288 modification has occurred.

<sup>2</sup> Not a major source for PM<sub>10</sub>, NO<sub>x</sub> & VOC

## 8. Federal Major Modification

Pursuant to Rule 2201 Section 3.17 to determine if a project is a Federal major modification, the calculation procedure in 40 CFR 51.165(a)(2)(ii) shall be used.

This calculation procedure states that if the sum of the differences between the projected actual emissions and the baseline actual emissions (for existing emission units) or the sum of the potentials to emit (for new emission units) is significant, i.e. greater than the values listed in Rule 2201 Table 3-1, the project is a Federal major modification.

This project is decreasing the design capacity of an existing flare. The projected actual emissions (PAE) are equal to the 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). This projection is made by the operator and must be based on all relevant information, e.g. expected business activity.

For emission units (other than electric utility steam generating units) the baseline actual emissions (BAE) are calculated based on any 24 month period selected by the operator within the previous 10 year period. These emissions must not include any non-compliant operation.

In calculating the emission increase (PAE – BAE), the portion of the emissions after the project that the unit could have actually emitted (during the same period used to determine BAE) that are unrelated to the particular project and emissions due to increased product demand are excluded.

For rule compliance projects, the difference between the PAE and the BAE (excluding emissions that the unit could have emitted during the baseline period) for pollutants targeted by the subject rule will be a negative value.

Pursuant to the District's "Implementation of Rule 2201 for SB288 Major Modifications and Federal Major Modifications" – Case 2

Emission Increase = PAE – BAE – unused baseline capacity

Emissions are directly proportional to equipment rating therefore equipment rating will be used to demonstrate that the Emissions Increase will be less than zero.

Let:

PAE = 4.9 MMBtu/hr (new flare rating per applicant)

BAE = 0.0 (worst case scenario for generating an increase)

unused baseline capacity = 16.5 MMBtu/hr – 4.9 MMBtu/hr = 11.6 MMBtu/hr

Therefore:

Emission Increase = 4.9 – 0.0 – 11.6 = 0

The emissions increase is zero therefore this project is not a Federal major modification.

## VIII. Compliance

### Rule 2201 New and Modified Stationary Source Review Rule

#### A. Best Available Control Technology (BACT)

##### 1. BACT Applicability

- 4.2.3 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from Best Available Control Technology for all air pollutants, provided all of the following conditions are met:
- 4.2.3.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;
  - 4.2.3.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;
  - 4.2.3.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and
  - 4.2.3.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO<sub>x</sub>, or 25 tons per year of VOC, or 15 tons per year of SO<sub>x</sub>, or 15 tons per year of PM-10, or 50 tons per year of CO.
  - 4.2.3.5 The project shall not constitute a federal major modification.

Lowering the rating of the flare to enjoy an exemption from Rule 4311 will meet the criteria for the BACT exemption outlined in subsection 4.2.3. Therefore BACT is not required.

## **B. Offsets**

### **1. Offset Applicability**

4.6.8 For existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders, as approved by the APCO, shall be exempt from offset requirements for all air pollutants provided all of the following conditions are met:

4.6.8.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;

4.6.8.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;

4.6.8.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and

4.6.8.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO<sub>x</sub>, or 25 tons per year of VOC, or 15 tons per year of SO<sub>x</sub>, or 15 tons per year of PM-10, or 50 tons per year of CO.

Lowering the rating of the flare to enjoy an exemption from Rule 4311 will meet the criteria for the Offsets exemptions outlined in subsection 4.6.8. Therefore offsets are not required.



## C. Public Notification

### 1. Applicability

Public noticing is required for:

- a. Any new Major Source, Federal Major Modification and SB288 major modifications
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. New stationary source with SSPE greater than the emissions offset threshold
- e. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

#### **a. New Major Source, Federal Major Modification or SB288 Major Modification**

As explained above, this project is a SB 288 major modification and public notice is required.

#### **b. PE > 100 lb/day**

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. 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**

As detailed above, this project is exempt from offsets.

#### **d. New stationary source with SSPE greater than the emissions offset threshold**

This facility is not a new stationary source.

#### **e. SSIPE > 20,000 lb/year**

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e.  $SSIPE = SSPE2 - SSPE1$ .  $PE2 - PE1$  is less than zero as the existing flare is being derated. Therefore the SSIPE will also be less than zero, the SSIPEs for all pollutants are less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

## 2. Public Notice Action

As explained above, this project is a SB 288 major modification and public notice is required.

### D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.17 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.17.1 and 3.17.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

#### **Existing Rule 2201 (DEL) Conditions:**

- Capacity of flare shall not exceed 4.9 MM Btu/hr. [District Rules 2201 and 4311] Y
- Sulfur content of produced (TEOR) gas combusted shall not exceed 500 ppmv. [District Rules 2201 and 4801] N
- Emissions from this permit unit shall not exceed any of the following: PM10: 0.008 lb/MMBtu; NOx (as NO2): 0.068 lb/MMBtu; VOC: 0.063 lb/MMscf; or CO: 0.37 lb/MMBtu. [District Rule 2201] N

## **E. Compliance Assurance**

### **1. Source Testing and Monitoring**

Existing PTO S-3755-10-4 has the existing source test condition.

- Permittee shall determine sulfur content of gas flared weekly using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans or Draeger tube analysis. Sulfur content of produced (TEOR) gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days. [District Rules 1081 and 2201] N

### **2. Recordkeeping**

Existing PTO S-3755-10-4 has the existing recordkeeping condition.

- Permittee shall determine sulfur content of gas flared weekly using ASTM method D3246 or double GC for H<sub>2</sub>S and mercaptans or Draeger tube analysis. Sulfur content of produced (TEOR) gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days. [District Rules 1081 and 2201] N
- 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] N

### **3. Reporting**

There are no new reporting requirements.

**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 currently in compliance with this rule. Therefore, continued compliance with this rule is expected.

**Rule 4102 Nuisance**

The modification proposed in this project is not expected to affect compliance with the rule. Continued compliance with this Rule is expected.

**California H&S Code, Section 41700**

The District's Risk Management Policy requires an evaluation of the risk associated with increases in hazardous air pollutants. Pursuant to the definition of Section V.A. of this policy, a hazardous pollutant is "...a substance included in lists prepared by the California Air Resources Board pursuant to Section 44321 of the California Health and Safety Code that have OEHHA approved health risk values and all pollutants listed in section 112(b) of the Federal Clean Air Act..."

No increase in emissions from the stationary source has been proposed; therefore, a health risk evaluation is not required.

**Rule 4201 Particulate Matter Concentration**

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. There is a decrease in PM10 emissions expected from the project. Continued compliance is expected.

## **Rule 4311 Flares**

Rule 4311 applies to all operations involving the use of flares. The purpose of the Rule is to limit VOCs, NOx and SOx emissions from the operation of flares.

Section 5.1 states that flares that are permitted to operate only during an emergency are not subject to the requirements of Sections 5.6 and 5.7.

This is not an emergency flare, therefore the flare is subject to sections 5.6. and 5.7.

Section 5.2 states that the flame shall be present at all times when combustible gases are vented through the flare. The following is an existing condition on the PTO and continued compliance is expected:

8. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] N

Section 5.3 states that the flare 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. The following is an existing condition on the PTO and continued compliance is expected:

5. Flare shall be equipped with continuous pilot fired solely on propane or natural gas consisting primarily of methane containing no more than 0.75 grains of total sulfur per 100 standard cubic feet of gas and no more than 5% by weight hydrocarbons heavier than butane. [District Rules 2201 and 4311] N

Section 5.4 states that 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 alternative equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. The following is an existing condition on the PTO and continued compliance is expected:

6. 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] Y

Section 5.5 states that flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. The following condition will be added to the ATC and compliance is expected:

13. 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] N

Section 5.6 states that open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. The requirements of this section shall not apply to Coanda effect flares.

The applicant stated that the flare operates with a gas pressure of greater than 5 psig. Continued compliance with Section 5.6 is expected.

Section 5.7 states that ground-level enclosed flares meet the defined emission standards.

The flare is not a ground-level enclosed flare and are not subject to the defined emission standards. Continued compliance with Section 5.7 is expected.

Section 5.8 states that Effective on and after July 1, 2011, flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Section 6.5, and all commitments listed in that plan have been met. Subsection 6.5.1 states that by July 1, 2010, the operator of a petroleum refinery flare or any flare that has a flaring capacity of greater than or equal to 5.0 MMBtu per hour shall submit a flare minimization plan (FMP) to the APCO for approval.

This project is reducing the flaring capacity to 4.9 MMBtu/hr. and it is now not required for the Seneca to include permit unit S-1114-73 in the flare minimization plan. Compliance with Section 5.8 is expected.

Section 5.9 sites Petroleum Refinery SO<sub>2</sub> Performance Targets. The flares do not serve a petroleum refinery.

Section 5.10 states that Effective on and after July 1, 2011, the operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate.

The flare is not subject to 5.8 and is therefore not subject to section 5.10.

Section 5.11 states that effective on and after July 1, 2011, the operator of a petroleum refinery or a flare with a flaring capacity equal to or greater than 50 MMBtu/hr shall monitor the flare pursuant to Sections 6.6, 6.7, 6.8, 6.9, and 6.10.

The flare is not part of petroleum refinery nor is the flaring capacity greater than 50 MMBtu/hr.

The flare complies with all applicable sections of Rule 4311 including recordkeeping and administrative requirements.

**Rule 4801 Sulfur Compounds**

The project authorizes an increase in H<sub>2</sub>S concentration of the produced (TEOR) gas combusted by the flare and steam generator. The post project emissions factor when converted to SO<sub>2</sub> exhaust concentration is

$$10^6 \times 1.25 \text{ lb SO}_2/\text{MMBtu} / [(8578 \text{ dscf/MMBtu}^*)(64 \text{ lb SO}_2/\text{lbmol})(\text{lbmol}/379 \text{ dscf})] = 900 \text{ ppmv @ 0\% O}_2 < 2000 \text{ ppmv}$$

Compliance is expected.

$$* \text{Corrected } F - \text{factor} = \left( \frac{8,710 \text{ dscf}}{\text{MMBtu}} \right) \times \left( \frac{60^\circ F + 459.6}{68^\circ F + 459.6} \right) = 8,578 \frac{\text{dscf}}{\text{MMBtu}} \text{ at } 60^\circ F$$

**California H&S Code, Section 42301.6**

The equipment covered by this application is located more than 1,000 feet from any school; therefore, this project is not subject to the notification requirements of this section.

**IX. Recommendation**

Compliance with all applicable rules and regulations is expected. Issue Authorities to Construct S-1114-73-5 subject to the permit conditions on the attached draft Authorities to Construct in **Attachment III**.

**X. Billing Information**

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1114-73	3020-02-F	4.9 MMBtu/hr	\$607.00

**Attachment I**  
**Current PTOs**



# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3755-10-4

EXPIRATION DATE: 04/30/2011

SECTION: NW18 TOWNSHIP: 11N RANGE: 23W

## EQUIPMENT DESCRIPTION:

16.5 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE

## PERMIT UNIT REQUIREMENTS

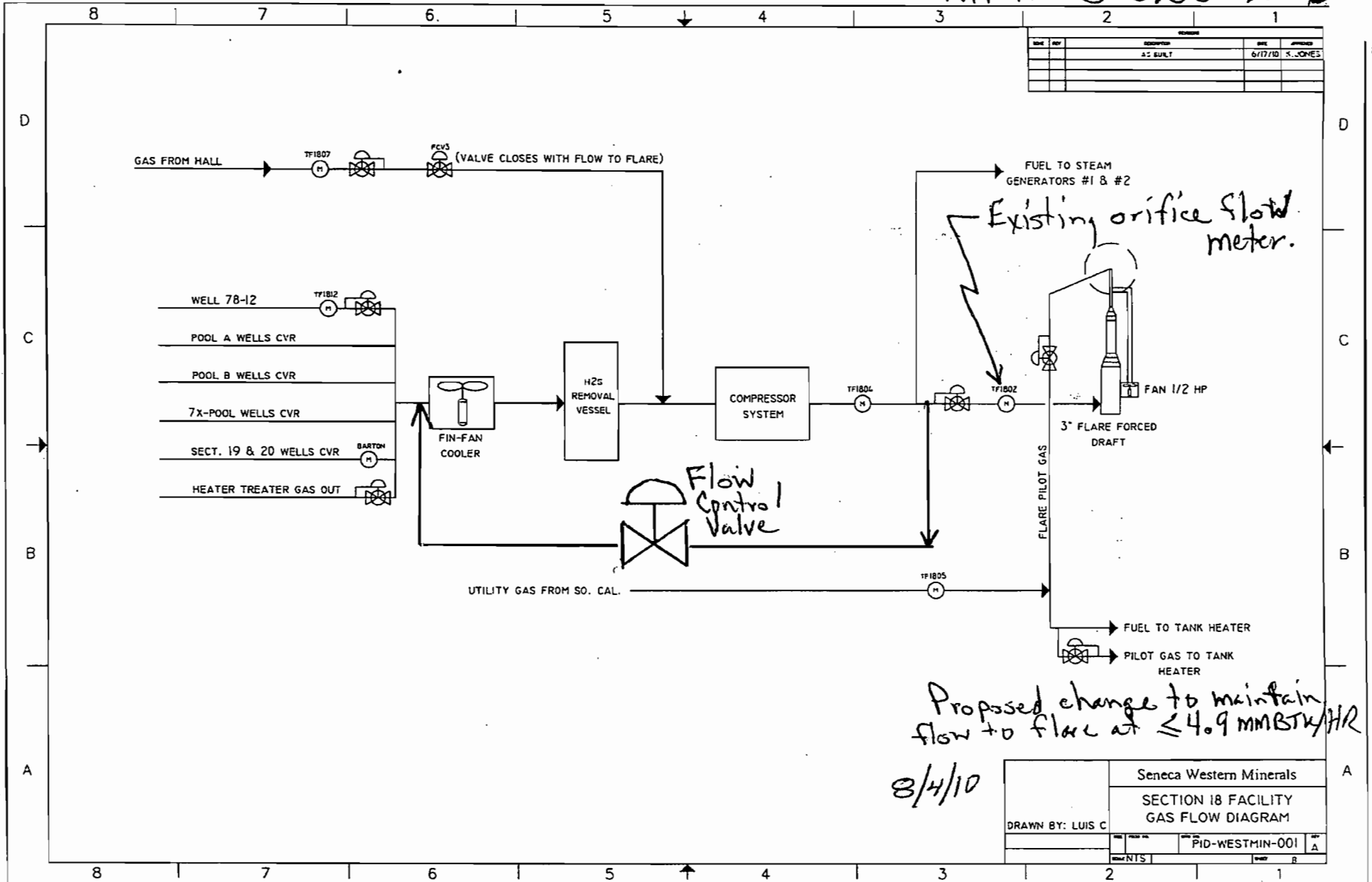
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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [District Rule 2201]
3. Air-assist blower shall be maintained and operated for smokeless combustion. [District Rules 2201 and 4101]
4. Flare shall be equipped with produced operational gas volume flow meter. [District Rule 2201]
5. Flare shall be equipped with continuous pilot fired solely on propane or natural gas consisting primarily of methane containing no more than 0.75 grains of total sulfur per 100 standard cubic feet of gas and no more than 5% by weight hydrocarbons heavier than butane. [District Rules 2201 and 4311]
6. 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]
7. Pilot gas flow rate to flare shall not exceed 100 scf per hour. [District Rule 2201]
8. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311]
9. Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6]
10. Combined produced (TEOR) gas flow rate to flare '-10 and steam generator '-11 shall not exceed 300 mscf/day. [District Rule 2201]
11. Sulfur content of produced (TEOR) gas combusted shall not exceed 500 ppmv. [District Rules 2201 and 4801]
12. Emissions from this permit unit shall not exceed any of the following: PM10: 7.6 lb/MMscf; NOx (as NO2): 100 lb/MMscf; VOC: 5.5 lb/MMscf; or CO: 84 lb/MMscf. [District Rule 2201]
13. Permittee shall determine sulfur content of gas flared weekly using ASTM method D3246 or double GC for H2S and mercaptans or Draeger tube analysis. Sulfur content of produced (TEOR) gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days. [District Rules 1081 and 2201]
14. Weekly records of the produced (TEOR) gas sulfur content and daily records of produced (TEOR) gas flow rate shall be maintained. [District Rule 2201]
15. 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]
16. This facility and facility S-1114 are both in the same stationary source.

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

**Attachment II**  
**Process Flow Diagrams**

Permit # S-3755-10-6



DATE	REV	DESCRIPTION	DATE	APPROVED
		AS BUILT	6/17/10	K. JONES

Existing orifice flow meter.

Flow Control Valve

Proposed change to maintain flow to flare at  $\leq 4.9$  MMBSW/HR

8/4/10

Seneca Western Minerals	
SECTION 18 FACILITY	
GAS FLOW DIAGRAM	
DRAWN BY: LUIS C	PID-WESTMIN-001
NTS	A

**Attachment III  
Draft ATCs**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: S-3755-10-6

LEGAL OWNER OR OPERATOR: SENECA WESTERN MINERALS CORP.

MAILING ADDRESS: 2131 MARS COURT  
BAKERSFIELD, CA 93308

LOCATION: HEAVY OIL WESTERN

SECTION: NW18 TOWNSHIP: 11N RANGE: 23W

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 16.5 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE: LIMIT HEAT INPUT CAPACITY TO 4.9 MM BTU/HR FOR FLARE MINIMIZATION PLAN EXEMPTION FROM RULE 4311

**CONDITIONS**

1. Capacity of flare shall not exceed 4.9 MM Btu/hr. [District Rules 2201 and 4311]
2. Except for the pilot, the gas inlet to flare shall be equipped with recording flow rate meter. [District Rules 2201 and 4311]
3. Operator shall demonstrate the heat input capacity of the flare daily by calculation, using the metered volume of the gas delivered to the flare and the most current measured heating value of the gas stream. Except for the pilot, heating value for the gas stream shall be determined at least once every six months by sample analysis. [District Rule 2201 and 4311]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. 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 Rule 2201]
6. Air-assist blower shall be maintained and operated for smokeless combustion. [District Rules 2201 and 4101]
7. Flare shall be equipped with continuous pilot fired solely on propane or natural gas consisting primarily of methane containing no more than 0.75 grains of total sulfur per 100 standard cubic feet of gas and no more than 5% by weight hydrocarbons heavier than butane. [District Rules 2201 and 4311]

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**

G-3755-10-6 : Dec 1 2010 4:52PM - RINALDIR : Joint Inspection Required with RINALDIR

8. 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]
9. 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]
10. Pilot gas flow rate to flare shall not exceed 100 scf per hour. [District Rule 2201]
11. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311]
12. Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6]
13. Sulfur content of produced (TEOR) gas combusted shall not exceed 500 ppmv. [District Rules 2201 and 4801]
14. Emissions from this permit unit shall not exceed any of the following: PM10: 0.008 lb/MMBtu; NOx (as NO2): 0.068 lb/MMBtu; VOC: 0.063 lb/MMscf; or CO: 0.37 lb/MMBtu. [District Rule 2201]
15. Weekly records of the produced (TEOR) gas sulfur content and daily records of produced (TEOR) gas flow rate shall be maintained. [District Rule 2201]
16. Permittee shall determine sulfur content of gas flared weekly using ASTM method D3246 or double GC for H2S and mercaptans or Draeger tube analysis. Sulfur content of produced (TEOR) gas shall be measured within one day of restarting unit if the unit has not been in use for more than 7 days. [District Rules 1081 and 2201]
17. 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]
18. This facility and facility S-1114 are both in the same stationary source.

DRAFT

**Attachment IV**  
**SSPE1 & SSPE2 Calculation**

**SSPE1**

Permit Unit			NOx	SOx	PM10	CO	VOC	Note	
S	1114	9	15	3,195	88	438	7,325	263	
S	1114	10	24	9,198	165,485	36,434	15,841	1,533	
S	1114	15	15	2,013	110	552	9,230	331	
S	1114	16	18	9,855	1,560	4,161	16,973	3,011	
S	1114	18	15	3,195	88	438	7,326	263	
S	1114	19	15	8,322	0	438	7,373	256	
S	1114	20	12	9,855	1,560	2,738	20,258	1,643	
S	1114	28	3	0	0	0	0	2,107	*
S	1114	29	3	0	0	0	0	1,211	*
S	1114	36	3	0	0	0	0	809	*
S	1114	54	6	0	0	0	0	219	
S	1114	58	5	0	0	0	0	219	
S	1114	59	5	0	0	0	0	219	
S	1114	60	5	0	0	0	0	219	
S	1114	66	16	0	0	0	0	90,212	
S	1114	72	4	0	0	0	0	511	
S	1114	73	4	10,540	193,750	3,131	57,350	3,255	
S	1114	74	9	19,710	177,390	19,710	11,498	1,643	
S	1114	78	3	0	0	0	0	0	
S	1114	79	2	0	0	0	0	0	
S	1114	80	2	0	0	0	0	0	
S	1114	81	2	0	0	0	0	0	
S	1114	82	2	0	0	0	0	0	
S	1114	83	7	1,971	73	806	19,601	548	
S	1114	84	8	1,971	73	806	19,601	548	
S	1114	85	2	0	0	0	0	0	
S	1114	86	2	0	0	0	0	0	
S	1114	87	2	0	0	0	0	0	
S	1114	91	2	3,504	105	266	2,943	193	*
S	1114	100	2	0	0	0	0	1,060	
S	1114	101	2	0	0	0	0	223	
S	1114	103	4	2,077	110	248	20,247	858	
S	1114	104	2	0	0	0	0	0	
S	1114	105	2	0	0	0	0	0	
S	1114	106	1	0	0	0	0	194	
S	1114	107	1	11,556	88,163	20,393	21,073	3,739	
S	1114	109	0	0	0	0	0	548	
S	1114	110	0	0	0	0	0	548	
S	1114	112	0	0	0	0	0	100	
S	3755	6	1	0	0	0	0	0	
S	3755	7	0	0	0	0	0	1,570	
S	3755	8	0	0	0	0	0	1,570	
S	3755	9	0	0	0	0	0	1,570	
S	3755	10	4	4,825	9,224	568	26,254	4,470	
S	3755	11	3	3,154	0	2,044	19,929	1,497	
S	3755	12	10	0	0	0	0	6,680	
S	3755	16	0	0	0	0	0	943	
S	3755	19	1	3,723	11,388	1,664	16,206	1,205	
<b>Total</b>			<b>108,664</b>	<b>482,619</b>	<b>94,835</b>	<b>299,028</b>	<b>135,988</b>		

\*These values were taken from Project S-1032306

\*\*Total Sulfur includes SLC from units S-1114-10, '-74, and '-107 of 264,490 lb/yr



### SSPE2

Permit Unit			NOx	SOx	PM10	CO	VOC	Note	
S	1114	9	15	3,195	88	438	7,325	263	
S	1114	10	24	9,198	165,485	36,434	15,841	1,533	
S	1114	15	15	2,013	110	552	9,230	331	
S	1114	16	18	9,855	1,560	4,161	16,973	3,011	
S	1114	18	15	3,195	88	438	7,326	263	
S	1114	19	15	8,322	0	438	7,373	256	
S	1114	20	12	9,855	1,560	2,738	20,258	1,643	
S	1114	28	3	0	0	0	0	2,107	*
S	1114	29	3	0	0	0	0	1,211	*
S	1114	36	3	0	0	0	0	809	*
S	1114	54	6	0	0	0	0	219	
S	1114	58	5	0	0	0	0	219	
S	1114	59	5	0	0	0	0	219	
S	1114	60	5	0	0	0	0	219	
S	1114	66	16	0	0	0	0	90,212	
S	1114	72	4	0	0	0	0	511	
S	1114	73	4	10,540	193,750	3,131	57,350	3,255	
S	1114	74	9	19,710	177,390	19,710	11,498	1,643	
S	1114	78	3	0	0	0	0	0	
S	1114	79	2	0	0	0	0	0	
S	1114	80	2	0	0	0	0	0	
S	1114	81	2	0	0	0	0	0	
S	1114	82	2	0	0	0	0	0	
S	1114	83	7	1,971	73	806	19,601	548	
S	1114	84	8	1,971	73	806	19,601	548	
S	1114	85	2	0	0	0	0	0	
S	1114	86	2	0	0	0	0	0	
S	1114	87	2	0	0	0	0	0	
S	1114	91	2	3,504	105	266	2,943	193	*
S	1114	100	2	0	0	0	0	1,060	
S	1114	101	2	0	0	0	0	223	
S	1114	103	4	2,077	110	248	20,247	858	
S	1114	104	2	0	0	0	0	0	
S	1114	105	2	0	0	0	0	0	
S	1114	106	1	0	0	0	0	194	
S	1114	107	1	11,556	88,163	20,393	21,073	3,739	
S	1114	109	0	0	0	0	0	548	
S	1114	110	0	0	0	0	0	548	
S	1114	112	0	0	0	0	0	100	
S	3755	6	1	0	0	0	0	0	
S	3755	7	0	0	0	0	0	1,570	
S	3755	8	0	0	0	0	0	1,570	
S	3755	9	0	0	0	0	0	1,570	
S	3755	10	6	2,919	5,580	343	15,882	2,704	
S	3755	11	3	3,154	0	2,044	19,929	1,497	
S	3755	12	10	0	0	0	0	6,680	
S	3755	16	0	0	0	0	0	943	
S	3755	19	1	3,723	11,388	1,664	16,206	1,205	
<b>Total</b>			<b>106,758</b>	<b>478,975</b>	<b>94,610</b>	<b>288,656</b>	<b>134,222</b>		

\*These values were taken from Project S-1032306

\*\*Total Sulfur includes SLC from units S-1114-10, '-74, and '-107 of 264,490 lb/yr