San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JUL 21 2011

James Leal
Anatesco West
P.O. Box 20996
Bakersfield, CA 93390

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1112215

Dear Mr. Leal:

Enclosed for your review and comment is the District's analysis of Anatesco West's application for an Authority to Construct for four transportable well testing operations, authorized to operate at various unspecified locations throughout the 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. Kris Rickards of Permit Services at 661-392-5611.

Sincerely,

David Warner
Director of Permit Services

DW:KTR/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
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www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JUL 21 2011

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-1112215

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Anatesco West's application for an Authority to Construct for four transportable well testing operations, at various unspecified locations throughout the 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. Kris Rickards of Permit Services at 661-392-5611.

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Bakersfield Californian

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Anatesco West for four transportable well testing operations, at various unspecified locations throughout the SJVAPCD.

The analysis of the regulatory basis for this proposed action, Project #S-1112215, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Portable Well Test Flares

Facility Name:	Anatesco West	Date:	July 11, 2011
Mailing Address:	P.O. Box 20996	Engineer:	Kris Rickards
	Bakersfield, CA 93390	Lead Engineer:	Allan Phillips AP SUPR AQE
Contact Person:	James Leal		JUL 12 2011
Telephone:	661-589-5400	Wkd: 661-343-2842	
Fax:	661-589-5228		
E-Mail:	jimmy@proswelltesting.com		
Application #(s):	S-7045-7-0, '-8-0, '-9-0, and '-10-0		
Project #:	S-1112215		
Deemed Complete:	June 13, 2011		

I. Proposal

Anatesco West (hereafter referred to as AW) has requested Authority to Construct permits for four portable well testing operations including flares. The flares will be operated at various locations throughout the District. Though included under the same facility number (S-7045), each of the well test flares operated by AW is a separate stationary source and may not be operated at the same location as any other AW permit unit. Therefore, each flare will be considered a stationary source.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4311 Flares (6/18/09)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The equipment will be located at various unspecified locations within the District. The equipment will not be located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

After drilling petroleum production wells, the wells are tested to establish flow rates and pressure. The well test flares are equipped with an automatic ignition system and burn the gas produced during testing. AW rents flares for this purpose.

V. Equipment Listing

S-7045-7-0: WELL TESTING OPERATION WITH PORTABLE 1.0 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, TWO OR THREE-PHASE TEST SEPARATOR, AND GAS SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS

S-7045-8-0: WELL TESTING OPERATION WITH PORTABLE 1.0 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, TWO OR THREE-PHASE TEST SEPARATOR, AND GAS SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS

S-7045-9-0: WELL TESTING OPERATION WITH PORTABLE 1.0 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, TWO OR THREE-PHASE TEST SEPARATOR, AND GAS SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS

S-7045-10-0: WELL TESTING OPERATION WITH PORTABLE 1.0 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, TWO OR THREE-PHASE TEST SEPARATOR, AND GAS SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS

VI. Emission Control Technology Evaluation

AW operates multiple well testing operations for various oil production companies' exploration wells. AW does not participate in the production of oil or gas and is therefore not considered part of the oil and gas stationary source (based on the standard industrial classification code).

Flares typically operate at 99% control efficiency for VOC. The well test flares being authorized by this project are equipped with a shroud to reduce flame visibility, improve thermal destruction efficiency, and to prevent down drafts from extinguishing the flame.

Rule 1020, Section 3.46 excludes air pollution abatement operations from the definition of "source operation". The wells being tested by AW are considered the emissions units with the flare being designed to control the VOC and H_2S emissions from the well; therefore, the flare is considered an air pollution abatement operation and is not an emissions unit (the flare still

requires a permit per Rule 2010 §2.0). The testing operation may be subject to BACT but the flare (control device) selected as BACT is not.

The flares will operate with a continuous propane fueled pilot light. The flares are equipped with an air assist system which only needs to be used to eliminate smoking.

VII. General Calculations

A. Assumptions

- The maximum quantity of gas combusted in flares is 0.0417 MMscf/hr, 1.0 MMscf/day, and 288 MMscf/yr (proposed)
- Heating value of flared gas is 1,000 Btu/scf (APR 1720)
- The flared natural gas will have a H_2S content less than 5 gr/100 scf, measured as sulfur (proposed)
- Products of combustion from pilot flame will be subsumed by products of combustion from incineration of produced gas
- The three-phase separator associated with each flare is a portable oil and gas well test separator which does not require a separate permit but is associated with the flare permit unit (Rule 2020 §6.14)
- Fugitive emissions are not considered as they are negligible when compared to products of combustion from the flare
- Pilot gas combustion emissions are negligible when compared to maximum flared gas potential

B. Emission Factors

Flare Emission Factors		
	lb/MMBtu	Source
NO_X	0.068	FYI 83 (AP 42 Sec 13.5)
*SO_X	0.0143	Mass Balance Equation
PM_{10}	0.008	FYI 83 (AP 42 Sec 13.5), Applicant Proposed
CO	0.37	FYI 83 (AP 42 Sec 13.5)
VOC	0.063	FYI 83 (AP 42 Sec 13.5)

$$* \frac{5\,gr \cdot S}{100\,dscf}\left(\frac{dscf}{1{,}000\,Btu}\right)\frac{10^6\,Btu}{MMBtu}\left(\frac{1\,lb}{7{,}000\,gr}\right)\frac{64\,lb \cdot SO_2}{32\,lb \cdot S} = 0.0143\frac{lb \cdot SO_2}{MMBtu}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

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

2. Post Project Potential to Emit (PE2)

The potential to emit for each flare is calculated as follows, and summarized in the table below (all units have identical daily and annual emissions):

$PE2_{day}$ = 1.0 (MMscf/day) * 1,000 (MMBtu/MMscf) * EF (lb/MMBtu)
$PE2_{year}$ = 288 (MMscf/yr) * 1,000 (MMBtu/MMscf) * EF (lb/MMBtu)

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	68.0	19,584
SO_X	14.3	4,118
PM_{10}	8.0	2,304
CO	370.0	106,560
VOC	63.0	18,144

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

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

Since each well testing operation is considered a new stationary source, there are no valid ATCs, PTOs, or ERCs at the Stationary Source; therefore, the SSPE1 will be equal to zero.

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

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

Since each flare is considered its own stationary source, the SSPE2 calculated below contains only the emissions for each unit.

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
Each Flare	19,584	4,118	2,304	106,560	18,144
Post Project SSPE (SSPE2)	19,584	4,118	2,304	106,560	18,144

5. Major Source Determination

Pursuant to Section 3.23 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.23.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site."

Major Source Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Pre-Project SSPE (SSPE1)	0	0	0	0	0
Post Project SSPE (SSPE2)	19,584	4,118	2,304	106,560	18,144
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No

As seen in the table above, the flare by itself is not an existing Major Source and also is not becoming a Major Source 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.

As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant. Therefore Baseline Emissions (BE) are equal to the Pre-Project Potential to Emit (PE1).

As calculated in Section VII.C.1 above, PE1 is equal to zero for all pollutants and all units.

7. SB 288 Major Modification

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

As discussed in Section VII.C.5 above, the facility is not a Major Source for NO_X, SO_X, PM_{10}, CO, or VOC emissions; therefore, the project does not constitute a SB 288 Major Modification for NO_X, SO_X, PM_{10}, CO, or VOC emissions.

8. Federal Major Modification

As discussed in Section VII.C.5 above, the facility is not a Major Source for NO_X, SO_X, PM_{10}, CO, or VOC emissions; therefore, the project does not constitute a Federal Major Modification for NO_X, SO_X, PM_{10}, CO, or VOC emissions.

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 exempted pursuant to Section 4.2, BACT shall be required for the following actions:*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

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

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

As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install four well test flares with a PE greater than 2 lb/day for NO_X, SO_X, PM_{10}, CO, and VOC.

As discussed in Section VI above, the flares are VOC control devices (not emissions units) and are therefore exempt from BACT (District Rule 1020 §3.46).

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

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

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

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

d. SB 288/Federal Major Modification

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

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Post Project SSPE (SSPE2)	19,584	4,118	2,304	106,560	18,144
Offset Threshold	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 thresholds for all the pollutants; 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 SB288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications

As demonstrated in VII.C.7, this project does not constitute a SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not required.

b. PE > 100 lb/day

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO_X	68.0	100 lb/day	No
SO_X	14.3	100 lb/day	No
PM_{10}	8.0	100 lb/day	No
CO	370.0	100 lb/day	Yes
VOC	63.0	100 lb/day	No

Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

The following table compares the SSPE1 with the SSPE2 (typical of all flares in this project) in order to determine if any offset thresholds have been surpassed with this project.

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO_X	0	19,584	20,000 lb/year	No
SO_X	0	4,118	54,750 lb/year	No
PM_{10}	0	2,304	29,200 lb/year	No
CO	0	106,560	200,000 lb/year	No
VOC	0	18,144	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. SSIPE = SSPE2 – SSPE1. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	19,584	0	19,584	20,000 lb/year	No
SO_x	4,118	0	4,118	20,000 lb/year	No
PM_{10}	2,304	0	2,304	20,000 lb/year	No
CO	106,560	0	106,560	20,000 lb/year	Yes
VOC	18,144	0	18,144	20,000 lb/year	No

As demonstrated above, the SSIPE for CO was 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 CO emissions both in excess of 100 lb/day and 20,000 lb/yr. 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)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

- Emission rates shall not exceed any of the following: 0.008 lb-PM10/MMBtu, 0.068 lb-NOx/MMBtu (as NO2), 0.063 lb-VOC/MMBtu, or 0.37 lb-CO/MMBtu. [District Rules 2201 and 4201]
- Sulfur compound concentration of gas flared shall not exceed 5 gr/100 scf. [District Rules 2201 and 4801]
- Daily and annual amounts of gas flared shall not exceed 1.0 MMscf/day and 288 MMscf/yr. [District Rulse 2201 and 4102]
- Flare shall only be used to combust gas released during well testing. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

Monitoring of visible emissions will be required to ensure the flare complies with the particulate matter limit. The following condition will be listed on the ATCs:

- Permittee shall inspect the flare in operation for visible emissions no less frequently than once every two weeks. If visible emissions are observed, corrective action shall be taken. If visible emissions persist, an EPA Method 9 test shall be performed within 72 hours. [District Rule 2201]

3. Recordkeeping

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

- Permittee shall maintain accurate daily records indicating flare location, flared gas sulfur content at each location, and daily and annual rates of gas flared; and such records shall be made readily available for District inspection upon request for a minimum of 5 years. [District Rule 2201]
- Permittee shall document compliance with well gas sulfur compound concentration limit by performing sulfur content analysis of well gas upon startup at each new location of operation of flare. [District Rule 2201]

4. Reporting

The facility is required to report the location at which the flares are operating. The following condition will be placed on the ATCs to show compliance with this section.

- Permittee shall notify the District Compliance Division of each location at which the operation 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]

F. Ambient Air Quality Analysis

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

The proposed location is in an attainment area for NO_X, SO_X, PM_{10}, and CO . As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_X, SO_X, PM_{10}, and CO.

Criteria Pollutant Modeling Results

Flare	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[2]	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[1]	Pass[1]
$PM_{2.5}$	X	X	X	Pass[3]	Pass[3]

[1]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).
[2]The 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.
[3]For this case as per District procedure, minor $PM_{2.5}$ sources are modeled only for primary $PM_{2.5}$ concentrations, and these concentrations are compared to the 24-hour SIL of 1.2 ug/m^3 and the annual SIL of 0.3 ug/m^3.

As shown, the calculated contribution of these flares will not exceed the EPA significance level. This project is not expected to cause or make worse a violation of an air quality standard.

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 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to produced gas fired flares.

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

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

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

As the flare is equipped with air-assist and fired solely on produced gas, smokeless operation is expected and visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. The following condition will be listed on the ATCs to ensure compliance with this rule:

- 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]

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. The following condition will be listed on the ATCs to ensure compliance:

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

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 one. According to the Technical Services Memo for this project (**Appendix B**), the total facility prioritization score including this project was greater than one. Therefore, a health risk assessment was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-7045-7	2.83 per million	Yes
S-7045-8	2.83 per million	Yes
S-7045-9	2.83 per million	Yes
S-7045-10	2.83 per million	Yes

Discussion of T-BACT

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

For this project T-BACT is triggered for VOC. T-BACT is satisfied with BACT for VOC (see Appendix C), which is an elevated flare with a propane fueled pilot; therefore, compliance with the District's Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix B of this report, the emissions increases for this project was determined to be less than significant.

The following conditions will ensure ongoing compliance with the HRA:

- Daily and annual amounts of gas flared shall not exceed 1.0 MMscf/day and 288 MMscf/yr. [District Rulse 2201 and 4102]
- Flare can not operate within 1,500 feet from any receptor (residential or offsite work site). [District Rule 4102]
- Flare shall not be operated within 4,000 feet of another flare or combustion equipment operated by Anatesco West. [District Rule 4102]

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.

Emissions from the flare are the result of burning gaseous fuel only. Particulate emissions greater than 0.1 gr/dscf are not expected. The following condition will be listed on the ATCs to ensure compliance with this rule:

- Emission rates shall not exceed any of the following: 0.008 lb-PM10/MMBtu, 0.068 lb-NOx/MMBtu (as NO2), 0.063 lb-VOC/MMBtu, or 0.37 lb-CO/MMBtu. [District Rules 2201 and 4201]

Rule 4301 Fuel Burning Equipment

The purpose of this rule is to limit the emission of air contaminants from fuel burning equipment. Fuel burning equipment is defined in the rule as "any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer."

The purpose of the flare is not to produce heat or power by indirect heat transfer; therefore, Rule 4301 does not apply.

Rule 4311 Flares

The purpose of this Rule is to limit the emissions of volatile organic compounds (VOC), oxides of nitrogen (NOx), and sulfur oxides (SOx) from the operation of flares.

Pursuant to Section 4.3, except for the recordkeeping requirements in Section 6.1.4 the requirements of this rule shall not apply to any stationary source that has the potential to emit, for all processes, less than ten (10.0) tons per year of VOC and less than ten (10.0) tons per year of NOx.

According to the SSPE2, this facility produces less than 10 tons each of NO_x and VOC, therefore only the recordkeeping requirements of Section 6.14 are applicable to this flare.

Section 6.1.4 requires that operators claiming an exemption pursuant to Section 4.3 shall record annual throughput, material usage, or other information necessary to demonstrate an exemption under that section.

To utilize this exemption, the facility-wide emissions of NO_x and VOC shall each remain below 10 tons. Since this evaluation has demonstrated that this facility's emissions are currently below the exemption's emissions limits (SSPE2 calculated previously), no actual record-keeping will be required to show compliance with this rule.

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO_2) shall not exceed 0.2% by volume. Using the ideal gas equation, the proposed flare sulfur compound emissions are calculated as follows (using limits of 5 gr-S/100 dscf and 1,000 Btu/dscf):

$$\frac{5\,gr\cdot S}{100\,dscf}\left(\frac{1\,lb}{7{,}000\,gr}\right)\frac{lb\cdot mole}{32\,lb\cdot S}\left(\frac{379.5\,dscf}{lb\cdot mole}\right)\frac{dscf}{1{,}000\ Btu}\left(\frac{10^6\ Btu}{MMBtu}\right)\frac{MMBtu}{8{,}578\,dscf}=9.9\frac{parts}{million}$$

Since 9.9 ppmv is ≤ 2,000 ppmv, this flare is expected to comply with Rule 4801. Therefore, the following condition will be listed on the ATC to ensure compliance:

- Sulfur compound concentration of gas flared shall not exceed 5 gr/100 scf. [District Rules 2201 and 4801]

California Health & Safety Code 42301.6 (School Notice)

This transportable equipment will not be allowed to operate within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required. The following condition will be listed on the permits to ensure compliance:

- The equipment shall not be located within 1000 ft. of any K-12 school. [CH&SC 42301.6]

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001.

The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- 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 is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authorities to Construct S-7045-7-0, '-8-0, '-9-0, and '-10-0 subject to the permit conditions on the attached draft Authorities to Construct in **Appendix A**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-7045-7-0	3020-02-H	41.7 MMBtu/hr	$1,030.00
S-7045-8-0	3020-02-H	41.7 MMBtu/hr	$1,030.00
S-7045-9-0	3020-02-H	41.7 MMBtu/hr	$1,030.00
S-7045-10-0	3020-02-H	41.7 MMBtu/hr	$1,030.00

Appendices

A: Draft ATCs
B: HRA/AAQA Summary
C: BACT Guideline

APPENDIX A

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-7045-7-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: ANATESCO WEST
MAILING ADDRESS: 3400 PATTON WAY
BAKERSFIELD, CA 93308

LOCATION: VARIOUS LOCATIONS, SJVUAPCD

EQUIPMENT DESCRIPTION:
WELL TESTING OPERATION WITH PORTABLE 1.0 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, TWO OR THREE-PHASE TEST SEPARATOR, AND GAS SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS

CONDITIONS

1. The equipment shall not be located within 1000 ft. of any K-12 school. [CH&SC 42301.6]
2. Flare shall only be used to combust gas released during well testing. [District Rule 2201]
3. {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]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Permittee shall notify the District Compliance Division of each location at which the operation 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]
6. Flare shall not be operated in well testing operations at any location in conjunction with any other flare or combustion equipment operated by Anatesco West. [District Rule 2201]
7. Flare shall not be operated within 4,000 feet of another flare or combustion equipment operated by Anatesco West. [District Rule 4102]
8. This permit shall not authorize the utilization of any IC engine, or other combustion device requiring a separate permit, for powering the air assist to the flare. [District Rule 2201]
9. The 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. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-7045-7-0 : Jul 18 2011 2:03PM – MONTOYAC : Joint Inspection NOT Required

10. Flare shall be equipped with air assist which shall be utilized when needed to maintain visible emissions below Ringlemann 1/4 and 5% opacity. [District Rule 2201]
11. Flare shall be equipped with operational automatic re-ignition provisions. [District Rule 2201]
12. Gas line to flare shall be equipped with operational, volumetric flow rate indicator. [District Rule 2201]
13. Daily and annual amounts of gas flared shall not exceed 1.0 MMscf/day and 288 MMscf/yr. [District Rules 2201 and 4102]
14. Flare can not operate within 1,500 feet from any receptor (residential or offsite work site). [District Rule 4102]
15. No other portable flare listed under S-7045 may be operated at the same location. [District Rule 4102]
16. Visible emissions shall not exhibit Ringelmann 1/4 or greater or equivalent 5% opacity or greater for more than three minutes in any one hour. [District Rule 2201]
17. Sulfur compound concentration of gas flared shall not exceed 5 gr/100 scf. [District Rules 2201 and 4801]
18. Emission rates shall not exceed any of the following: 0.008 lb-PM10/MMBtu, 0.068 lb-NOx/MMBtu (as NO2), 0.063 lb-VOC/MMBtu, or 0.37 lb-CO/MMBtu. [District Rules 2201 and 4201]
19. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2201]
20. Permittee shall inspect the flare in operation for visible emissions no less frequently than once every two weeks. If visible emissions are observed, corrective action shall be taken. If visible emissions persist, an EPA Method 9 test shall be performed within 72 hours. [District Rule 2201]
21. Permittee shall document compliance with well gas sulfur compound concentration limit by performing sulfur content analysis of well gas upon startup at each new location of operation of flare. [District Rule 2201]
22. The following test methods shall be used for well gas sulfur content: ASTM D3246 or double GC for H2S and mercaptan. [District Rule 1081]
23. Permittee shall maintain accurate daily records indicating flare location, flared gas sulfur content at each location, and daily and annual rates of gas flared; and such records shall be made readily available for District inspection upon request for a minimum of 5 years. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-7045-8-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: ANATESCO WEST
MAILING ADDRESS: 3400 PATTON WAY
BAKERSFIELD, CA 93308

LOCATION: VARIOUS LOCATIONS, SJVUAPCD

EQUIPMENT DESCRIPTION:
WELL TESTING OPERATION WITH PORTABLE 1.0 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, TWO OR THREE-PHASE TEST SEPARATOR, AND GAS SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS

CONDITIONS

1. The equipment shall not be located within 1000 ft. of any K-12 school. [CH&SC 42301.6]
2. Flare shall only be used to combust gas released during well testing. [District Rule 2201]
3. {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]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Permittee shall notify the District Compliance Division of each location at which the operation 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]
6. Flare shall not be operated in well testing operations at any location in conjunction with any other flare or combustion equipment operated by Anatesco West. [District Rule 2201]
7. Flare shall not be operated within 4,000 feet of another flare or combustion equipment operated by Anatesco West. [District Rule 4102]
8. This permit shall not authorize the utilization of any IC engine, or other combustion device requiring a separate permit, for powering the air assist to the flare. [District Rule 2201]
9. The 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. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-7045-8-0 : Jul 18 2011 2:06PM – MONTOYAC : Joint Inspection NOT Required

10. Flare shall be equipped with air assist which shall be utilized when needed to maintain visible emissions below Ringlemann 1/4 and 5% opacity. [District Rule 2201]
11. Flare shall be equipped with operational automatic re-ignition provisions. [District Rule 2201]
12. Gas line to flare shall be equipped with operational, volumetric flow rate indicator. [District Rule 2201]
13. Daily and annual amounts of gas flared shall not exceed 1.0 MMscf/day and 288 MMscf/yr. [District Rules 2201 and 4102]
14. Flare can not operate within 1,500 feet from any receptor (residential or offsite work site). [District Rule 4102]
15. No other portable flare listed under S-7045 may be operated at the same location. [District Rule 4102]
16. Visible emissions shall not exhibit Ringelmann 1/4 or greater or equivalent 5% opacity or greater for more than three minutes in any one hour. [District Rule 2201]
17. Sulfur compound concentration of gas flared shall not exceed 5 gr/100 scf. [District Rules 2201 and 4801]
18. Emission rates shall not exceed any of the following: 0.008 lb-PM10/MMBtu, 0.068 lb-NOx/MMBtu (as NO2), 0.063 lb-VOC/MMBtu, or 0.37 lb-CO/MMBtu. [District Rules 2201 and 4201]
19. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2201]
20. Permittee shall inspect the flare in operation for visible emissions no less frequently than once every two weeks. If visible emissions are observed, corrective action shall be taken. If visible emissions persist, an EPA Method 9 test shall be performed within 72 hours. [District Rule 2201]
21. Permittee shall document compliance with well gas sulfur compound concentration limit by performing sulfur content analysis of well gas upon startup at each new location of operation of flare. [District Rule 2201]
22. The following test methods shall be used for well gas sulfur content: ASTM D3246 or double GC for H2S and mercaptan. [District Rule 1081]
23. Permittee shall maintain accurate daily records indicating flare location, flared gas sulfur content at each location, and daily and annual rates of gas flared; and such records shall be made readily available for District inspection upon request for a minimum of 5 years. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-7045-9-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: ANATESCO WEST
MAILING ADDRESS: 3400 PATTON WAY
BAKERSFIELD, CA 93308

LOCATION: VARIOUS LOCATIONS, SJVUAPCD

EQUIPMENT DESCRIPTION:
WELL TESTING OPERATION WITH PORTABLE 1.0 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, TWO OR THREE-PHASE TEST SEPARATOR, AND GAS SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-7045-9-0 : Jul 18 2011 2:07PM – MONTOYAC : Joint Inspection NOT Required

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-7045-10-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: ANATESCO WEST
MAILING ADDRESS: 3400 PATTON WAY
BAKERSFIELD, CA 93308

LOCATION: VARIOUS LOCATIONS, SJVUAPCD

EQUIPMENT DESCRIPTION:
WELL TESTING OPERATION WITH PORTABLE 1.0 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, TWO OR THREE-PHASE TEST SEPARATOR, AND GAS SCRUBBER OPERATED AT VARIOUS UNSPECIFIED LOCATIONS

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-7045-10-0 : Jul 18 2011 2:09PM – MONTOYAC : Joint Inspection NOT Required

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11. Flare shall be equipped with operational automatic re-ignition provisions. [District Rule 2201]
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APPENDIX B

HRA/AAQA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Kris Rickards – Permit Services
From:	Ester Davila – Technical Services
Date:	07-11-2011
Facility Name:	Anatesco West
Location:	Various Unspecified Locations
Application #(s):	S-7045-7-0 thru 10-0
Project #:	S-1112215

A. RMR SUMMARY

RMR Summary					
Categories	**Type of Unit* 1.0MMscf/day**	**Type of Unit* 1.0MMscf/day**	**Type of Unit* 1.0MMscf/day**	**Type of Unit* 1.0MMscf/day**	**Facility Totals**
Prioritization Score	2.21	2.21	2.21	2.21	
Acute Hazard Index	0.03	0.03	0.03	0.03	
Chronic Hazard Index	0.01	0.01	0.01	0.01	
Maximum Individual Cancer Risk (10^{-6})	2.83	2.83	2.83	2.83	
T-BACT Required?	**Yes**	**Yes**	**Yes**	**Yes**	
Special Permit Conditions?	**Yes**	**Yes**	**Yes**	**Yes**	

*Each flare is considered its own facility therefore the risks will not be summed. No two flares will operate at the same time in the same location.

Proposed Permit Conditions

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

Units # 7-0 thru 10-0

1. The units will be limited to an annual fuel consumption of 288 MMSCF.
2. The units cannot operate within 1500 feet of any receptor (residential or offsite work site).
3. No other unit permitted from facility can operate within 4000 feet of these units.

T-BACT is required for these units because of toxic pollutants which are VOC. In accordance with District policy, BACT for these units will be considered to be T-BACT.

B. RMR REPORT

I. Project Description

Technical Services received a request on June 27, 2011, to perform an Ambient Air Quality Analysis and Risk Management Review for the proposed installation of three-1.0 MMscf/day, portable flares used during test well operations. Each flare is considered to be its own facility, therefore the risk and limits presented will not be summed.

II. Analysis

Technical Services performed a prioritization using the District's HEARTs database. Since the total facility prioritization score was greater than one, a refined health risk assessment was required. Emissions calculated using the District approved flare emission factors for waste gas were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and five-year concatenated meteorological data for 2005-2009 from Hanford to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the Hot Spots Analysis and Reporting Program (HARP) risk assessment module to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 7-0 to Unit 10-0			
Source Type	Flare	**Location Type**	Rural
Stack Height (m)	6.096*	**Closest Receptor (m)**	25
Stack Diameter. (m)	1.14*	**Type of Receptor**	Res. / Bus
Stack Exit Velocity (m/s)	19.99*	**Max Hours per Year**	8760
Stack Exit Temp. (°K)	1273*	**Fuel Type**	NG/Waste Gas
Burner Rating (MMBtu/hr)	N/A		

*Values used in the model were calculated based on guidance from EPA for flares.

Technical Services also performed modeling for criteria pollutants CO, NOx, SOx and PM_{10}; as well as a RMR. The emission rates used for criteria pollutant modeling are 2.83 lb/hr NOx, 0.60 lb/hr SOx, 0.33 lb/hr PM10, 0.33 lb/hr PM2.5, 15.42 lb/hr CO.

The results from the Criteria Pollutant Modeling are as follows (for each unit operating as individual facility):

Criteria Pollutant Modeling Results*

Flare	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[2]	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[1]	Pass[1]
$PM_{2.5}$	X	X	X	Pass[3]	Pass[3]

*Results were taken from the attached PSD spreadsheet.
[1]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).
[2]The 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.
[3]For this case as per District procedure, minor $PM_{2.5}$ sources are modeled only for primary $PM_{2.5}$ concentrations, and these concentrations are compared to the 24-hour SIL of 1.2 ug/m^3 and the annual SIL of 0.3 ug/m^3.

III. Conclusion

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

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

The emissions from each individual flare operating as its own facility will not cause or contribute significantly to a violation of the State and National AAQS as long as the conditions listed on page 1 of this report are included on each proposed units' Permit to Operate.

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

Attachments:

A. RMR Request
B. Additional Information
C. Toxic emissions summary
D. Prioritization score
E. HARP Reports
F. AAQA Summary & Limits

APPENDIX C

BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 1.4.7*

Last Update: 8/27/1999

Waste Gas Flare - Oilfield Well Drilling and Testing Operation, < 50 MMscf/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Elevated Flare with propane fueled pilot light		

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

***This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)**

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

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

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	68.0	19,584
SO_X	14.3	4,118
PM_{10}	8.0	2,304
CO	370.0	106,560
VOC	63.0	18,144

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	4,896	0	4,896
SO_X	1,030	0	1,030
PM_{10}	576	0	576
CO	26,640	0	26,640
VOC	4,536	0	4,536