



AUG 29 2012

James Leal
PROS Incorporated
3400 Patton Way
Bakersfield, CA 93308

**Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1123148**

Dear Mr. Leal:

Enclosed for your review and comment is the District's analysis of PROS Incorporated's application for an Authority to Construct for modification to a portable well testing operation by increasing the flared gas flow rate from 0.27 MMscf/day to 10 MMscf/day and from 54 MMscf/yr to 288 MMscf/yr, at various unspecified locations, SJVAPCD.

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

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

Sincerely,

David Warner
Director of Permit Services

DW:RUE/st

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
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AUG 29 2012

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

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1123148

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of PROS Incorporated's application for an Authority to Construct for modification to a portable well testing operation by increasing the flared gas flow rate from 0.27 MMscf/day to 10 MMscf/day and from 54 MMscf/yr to 288 MMscf/yr, at various unspecified locations, SJVAPCD.

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

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Bakersfield Californian
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 PROS Incorporated for modification to a portable well testing operation by increasing the flared gas flow rate from 0.27 MMscf/day to 10 MMscf/day and from 54 MMscf/yr to 288 MMscf/yr, at various unspecified locations, SJVAPCD.

The analysis of the regulatory basis for this proposed action, Project #S-1123148, 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 Flare

Facility Name: PROS, Inc. Date: August 20, 2012
Mailing Address: P.O. Box 20996 Engineer: Richard Edgehill
Bakersfield, CA 93390 Lead Engineer: Richard Karrs
Contact Person: James Leal Mike Cline
Telephone: 661-589-5400/Wkd: 661-343-2842 Wkd: 661-201-3446
Fax: 661-589-5228
E-Mail: jimmy@proswelltesting.com
Application #(s): S-7045-15-1
Project #: S-1123148
Deemed Complete: August 14, 2012

I. Proposal

PROS, Inc. (PROS) has requested an Authority to Construct permit to increase the flared gas flow rate of well testing operation S-7045-15, including air-assist flare with electronic igniter, propane fueled pilot, and gas/liquid separators, from 0.27 MMscf/day to 10 MMscf/day and from 54 MMscf/yr to 288 MMScf/yr. The equipment will continue to be authorized to operate at various unspecified locations, SJVAPCD.

Please note that, consistent with existing well test operations permitted under facility S-7045, the proposed well testing operation S-7045-15 is considered as a separate stationary source.

The project requires BACT and public notice. Offsets are not required.

Current PTO S-7045-15-0 is included in **Attachment I**.

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 is current authorized to operate at various unspecified locations within the District. However, the equipment is restricted by permit condition not to 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 flare is equipped with a propane pilot, automatic ignition system, and will combust gas produced during well testing. The flare will also be used to combust excess gas vented during drilling mud recirculation (mitigate gas kicks).

V. Equipment Listing

Pre-Project Equipment Description:

S-7045-15-0: WELL TESTING / DRILLING OPERATIONS (MITIGATE GAS KICKS DURING DRILLING) WITH PORTABLE 0.27 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, WITH GAS /LIQUID SEPARATOR(S) OPERATED AT VARIOUS UNSPECIFIED LOCATIONS SJVAPCD

Proposed Modification:

S-7045-15-1: MODIFICATION OF WELL TESTING / DRILLING OPERATIONS (MITIGATE GAS KICKS DURING DRILLING) WITH PORTABLE 0.27 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, WITH GAS /LIQUID SEPARATOR(S) OPERATED AT VARIOUS UNSPECIFIED LOCATIONS SJVAPCD: INCREASE FLOW RATE FROM 0.27 MMSCF/DAY TO 10 MMSCF/DAY AND 54 MMSCF/YR TO 288 MMSCF/YR

Post Project Equipment Description:

S-7045-15-1: WELL TESTING / DRILLING OPERATIONS (MITIGATE GAS KICKS DURING DRILLING) WITH PORTABLE 10 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, WITH GAS /LIQUID SEPARATOR(S) OPERATED AT VARIOUS UNSPECIFIED LOCATIONS SJVAPCD

VI. Emission Control Technology Evaluation

Emissions from the flare include oxides of nitrogen (NO_x), carbon monoxide (CO), oxides of sulfur (SO_x), volatile organic compounds (VOCs), and particulate emissions less than 10

micron (PM10). The flare is equipped with a shroud to improve thermal destruction efficiency and minimize flame visibility and downdrafts causing flameout. The flare is also equipped with optional air assist to minimize visible emissions and a propane pilot with automatic flow sensing

Sulfur emissions from the flare are expected not to exceed 5.0 gr S/100 scf. Therefore sulfur scrubbing is not required.

VII. General Calculations

A. Assumptions

- The maximum quantity of gas combusted in each flare is 0.27 MMscf/day (11.25 MMBtu/hr), 54 MMscf/yr (pre-project) and 10 MMscf/day (416.67 MMBtu/hr), 288 MMscf/yr (post-project)
- Heating value of flared gas is 1,000 Btu/scf (proposed and APR 1720)
- The flared natural gas will have a H₂S content less than 5 gr/100 scf, measured as sulfur (proposed)
- Fugitive emissions are considered to be negligible compared to combustion VOC emissions from the flare.
- Pilot gas flow rate: 1,800 scf/hr (supplemental application form) assumed to be negligible when compared to emissions resulting from combustion of produced gas.

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)

$$* \frac{5 \text{ gr} \cdot \text{S}}{100 \text{ dscf}} \left(\frac{\text{dscf}}{1,000 \text{ Btu}} \right) \frac{10^6 \text{ Btu}}{\text{MMBtu}} \left(\frac{1 \text{ lb}}{7,000 \text{ gr}} \right) \frac{64 \text{ lb} \cdot \text{SO}_2}{32 \text{ lb} \cdot \text{S}} = 0.0143 \frac{\text{lb} \cdot \text{SO}_2}{\text{MMBtu}}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO_x	0.068	11.25	24	18.4
SO_x	0.01430	11.25	24	3.9
PM₁₀	0.0080	11.25	24	2.2
CO	0.370	11.25	24	99.9
VOC	0.0630	11.25	24	17.0

Pollutant	Annual PE1		
	EF1 (lb/MMBtu)	Heat Input (MMBtu/year)	Annual PE1 (lb/year)
NO_x	0.068	54,000	3,672
SO_x	0.01430	54,000	772
PM₁₀	0.0080	54,000	432
CO	0.370	54,000	19,980
VOC	0.0630	54,000	3,402

2. Post Project Potential to Emit (PE2)

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO _x	0.068	416.67	24	680.0
SO _x	0.01430	416.67	24	143.0
PM ₁₀	0.0080	416.67	24	80.0
CO	0.370	416.67	24	3,700.0
VOC	0.0630	416.67	24	630.0

Pollutant	Annual PE2		
	EF2 (lb/MMBtu)	Heat Input (MMBtu/year)	Annual PE2 (lb/year)
NO _x	0.068	288,000	19,584
SO _x	0.01430	288,000	4,118
PM ₁₀	0.0080	288,000	2,304
CO	0.370	288,000	106,560
VOC	0.0630	288,000	18,144

The emissions profile is included in **Attachment II**.

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

Pre Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
S-7045-15	3,672	772	432	19,980	3,402
Post Project SSPE (SSPE1)	3,672	772	432	19,980	3,402

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

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
S-7045-15-1	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)	3,672	772	432	19,980	3,402
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.

S-7045-15-0:

As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant.

Therefore BE=PE1.

As calculated in Section VII.C.1 above, PE1 is summarized in the following table:

BE (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
S-7045-15	3,672	772	432	19,980	3,402

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, PM₁₀, CO, or VOC emissions; therefore, the project does not constitute a SB 288 Major Modification for NO_x, SO_x, PM₁₀, 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, PM₁₀, CO, or VOC emissions; therefore, the project does not constitute a Federal Major Modification for NO_x, SO_x, PM₁₀, CO, or VOC emissions.

9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen.

$$\text{QNEC (lb/qtr)} = \text{PE2 (lb/qtr)} - \text{QBE (lb/qtr)}$$

Quarterly NEC for Units S-7045-15			
Pollutant	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
NO _x	19,584	3,672	3,978
SO _x	4,118	772	837
PM ₁₀	2,304	432	468
CO	106,560	19,980	21,645
VOC	18,144	3,402	3686

VIII. Compliance

Rule 2020 Exemptions

The proposed gas/liquid separator(s) is/are unvented pressure vessel(s) and therefore do not require separate permit(s) according to Section 6.14 of the rule which reads as follows:

6.14 Fugitive emissions sources and pressure vessels that are associated with an emissions unit for which a written permit is required shall be included as part of such emissions unit. A separate permit for the fugitive source or pressure vessel is not required.

Compliance is expected.

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.

Please note that Rule 1020, Section 3.46 excludes air pollution abatement operations from the definition of “source operation”. The proposed well testing operation is considered the emissions units with the flare the control device for VOC and H₂S emissions from the well; therefore only VOC emissions are subject to BACT.

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

As discussed in Section I above, there are no new emissions units associated with this project. Therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

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

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

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

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

Where,

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

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

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

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

Where,

PE₁ = The emissions unit’s PE prior to modification or relocation, (lb/day)

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

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

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

$$\text{PE}_2 = 630 \text{ lb/day}, \text{PE}_1 = 17 \text{ lb/day}, \text{EF}_2 = \text{EF}_1$$

$$\begin{aligned} \text{AIPE} &= 630 - (17.0 * (0.063/0.063)) \\ &= 613 \text{ lb/day} \end{aligned}$$

As demonstrated above, the AIPE is greater than 2.0 lb/day for VOC emissions. Therefore BACT is triggered for modification purposes.

d. SB 288/Federal Major Modification

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

2. BACT Guideline

BACT Guideline 1.4.7, applies to waste gas flares used for oilfield well drilling and testing [Waste Gas Flare – Oilfield Well Drilling and Testing Operation, < 50 MMscf/day]. (See **Attachment III**)

3. Top-Down BACT Analysis

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

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

- NO_x: Not applicable
- SO_x: Not applicable
- PM₁₀: Not applicable
- VOC: Elevated flare with automatic (flow sensing) ignition system

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year)					
	NO_x	SO_x	PM₁₀	CO	VOC
Post Project SSPE (SSPE2)	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, the facility is not new and 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

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emission unit; therefore public noticing for PE > 100 lb/day purposes is not 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	3,672	19,584	20,000 lb/year	No
SO _x	772	4,118	54,750 lb/year	No
PM ₁₀	432	2,304	29,200 lb/year	No
CO	19,980	106,560	200,000 lb/year	No
VOC	3,402	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	3,672	15,912	20,000 lb/year	No
SO _x	4,118	772	3,346	20,000 lb/year	No
PM ₁₀	2,304	432	1,872	20,000 lb/year	No
CO	106,560	19,980	86,580	20,000 lb/year	Yes
VOC	18,144	3,402	14,742	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 an increase in CO emissions in excess of 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 10 MMscf/day or 288 MMscf/yr. [District Rules 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 ATC:

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 Rules 2201 and 4311]

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 flare is 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 (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to **Attachment V** of this document for the AAQA summary sheet.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

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

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part

As shown, the calculated contribution of PM₁₀ 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.

According to the Technical Services Memo for this project (**Attachment V**), 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-7045-15	1.4×10^{-6}	Yes

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

For this project T-BACT is triggered for PM₁₀ and VOC. T-BACT is satisfied with BACT for PM₁₀ and VOC for a waste gas flare incinerating produced gas (BACT Guideline 1.4.2, **Attachment IV**). The requirement is air-assisted which has been proposed; therefore, compliance with the District's Risk Management Policy is expected.

The following conditions are required to ensure compliance with the HRA:

Unit S-7045-15 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] N

Flare shall not operate within 1,500 feet of a business or residential receptor or the facility boundary. [District Rule 2201]

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-NO_x/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 (NO_x), and sulfur oxides (SO_x) 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 NO_x.

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 6.14 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) compliance with this exemption is expected. The following condition will ensure compliance:

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 Rules 2201 and 4311]

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO₂) 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):

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

Since 9.9 ppmv is \leq 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.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project consists of issuing a permit for a piece of transportable equipment to be used at various locations within the District. The District makes the following findings regarding this project: 1) Issuance of the permit does not have a significant environmental impact. 2) Assessment of potential environmental effects resulting from the use of the transportable equipment on a development project is the responsibility of the Lead Agency approving the specific project, and will be determined on a project specific basis. The District has determined that no additional findings are required.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC S-7045-15-1 subject to the permit conditions on the attached draft ATC in **Attachment VI**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-7045-15-1	3020-02-H	416.67 MMBtu/hr	\$1030.00

Attachments

- I: PTO S-7045-15-0
- II: Emissions Profile
- III: BACT Guideline
- IV: BACT Analysis
- V: HRA/AAQA
- VI: Draft ATC

ATTACHMENT I

PTO S-7045-15-0

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7045-15-0

EXPIRATION DATE: 03/31/2013

EQUIPMENT DESCRIPTION:

WELL TESTING / DRILLING OPERATIONS (MITIGATE GAS KICKS DURING DRILLING) WITH PORTABLE 0.27 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, WITH GAS /LIQUID SEPARATOR(S) OPERATED AT VARIOUS UNSPECIFIED LOCATIONS SJVAPCD

PERMIT UNIT REQUIREMENTS

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. 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. 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 PROs Inc. [District Rule 2201]
7. Unit S-7045-15-0 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]
8. When unit S-7045-15-0 is the only permitted unit at this facility operating, it may not operate within 2,200 feet of a business or residential receptor. [District Rule 2201]
9. When unit S-7045-15-0 is operating simultaneously with any other unit(s) permitted under this facility, it may not operate within 4,300 feet of those other operational units or a business or residential receptor. [District Rule 2201]
10. 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]
11. Flare shall be equipped with air assist which shall be utilized when needed to maintain visible emissions below Ringelmann 1/4 and 5% opacity. [District Rule 2201]
12. Flare shall be equipped with operational automatic re-ignition provisions. [District Rule 2201]
13. Gas line to flare shall be equipped with operational, volumetric flow rate indicator. [District Rule 2201]
14. Daily and annual amounts of gas flared shall not exceed 0.27 MMscf/day nor 54 MMscf/yr. [District Rules 2201 and 4102]
15. 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]
16. Sulfur compound concentration (as H₂S) of gas flared shall not exceed 5 gr H₂S/100 scf (79.6 ppmv H₂S). [District Rules 2201 and 4801]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

17. Emission rates shall not exceed any of the following: 0.008 lb-PM10/MMBtu, 0.068 lb-NO_x/MMBtu (as NO₂), 0.063 lb-VOC/MMBtu, or 0.37 lb-CO/MMBtu. [District Rules 2201 and 4201]
18. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2201]
19. 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]
20. 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]
21. The following test methods shall be used for well gas sulfur content: ASTM D3246 or double GC for H₂S and mercaptan. [District Rule 1081]
22. 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 Rules 2201 and 4311]

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

ATTACHMENT II

Emissions Profile

Permit #: S-7045-15-1	Last Updated
Facility: PROS INC	08/18/2012 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	19584.0	4118.0	2304.0	106560.0	18144.0
Daily Emis. Limit (lb/Day)	680.0	143.0	80.0	3700.0	630.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	3978.0	836.0	468.0	21645.0	3685.0
Q2:	3978.0	836.0	468.0	21645.0	3685.0
Q3:	3978.0	837.0	468.0	21645.0	3686.0
Q4:	3978.0	837.0	468.0	21645.0	3686.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

ATTACHMENT III

BACT Guideline

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 1.4.2*

Last Update 12/31/1998

Waste Gas Flare - Incinerating Produced Gas

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

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

***This is a Summary Page for this Class of Source**

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 a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

ATTACHMENT IV

BACT Analysis

Top Down BACT Analysis for NO_x, SO_x and PM₁₀

The SJVUAPCD BACT Clearinghouse Guideline 1.4.7, 1st quarter 2006, does not identify technologically feasible or achieved in practice BACT for NO_x, SO_x and PM₁₀ emissions from Waste Gas Flares – Oilfield well drilling and testing operation < 50 MMscf/day.

“Emission unit “ is defined in Section 3.15 of Rule 2201 an “an identifiable operation or piece of process equipment such as a source operation which emits, may emit, or result in the emissions of any affected pollutant directly or as fugitive emissions.”

The gas must be disposed of after flow measurement to prevent safety hazard from the release of volatile organic compounds (VOC) and H₂S. The flare is expected to control VOC emissions by at least 99% over uncontrolled venting of the produced gas. H₂S in the produced gas is expected to be entirely converted to SO_x. In this case, the oil production well that produces the gas is the emissions unit, and the flare is an emission control device.

Rule 1020, Section 3.46 excludes air pollution abatement operations from the definition of “source operation”. Since the well test flare is designed to control the VOC and H₂S emissions from the well, the flare is considered an air pollution abatement operation and is exempt from the definition of emissions unit. The well drilling and testing operation may be subject BACT, the control device selected as BACT is not. Therefore, BACT is not required for NO_x, SO_x and PM₁₀.

Top Down BACT Analysis for VOC

1. BACT Analysis for VOC Emissions:

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse Guideline 1.4.7, 1st quarter 2006, identifies technologically feasible and achieved in practice BACT for VOC emissions from Waste Gas Flares – Oilfield well drilling and testing operation < 50 MMscf/day, as follows:

1. Elevated Flare with propane fueled pilot light

b. Step 2 - Eliminate technologically infeasible options

There are no technologically feasible options.

c. Step 3 - Rank remaining options by control effectiveness

1. Elevated Flare with propane fueled pilot light

d. Step 4 - Cost effectiveness analysis

Because the applicant is proposing the control technology shown to be effective in step 3 above, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

VOC emissions control using Elevated Flare with propane fueled pilot light control method is selected as BACT.

ATTACHMENT V

HRA/AAQA

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill – Permit Services
 From: Joe Aguayo – Technical Services
 Date: August 23, 2012
 Facility Name: Pros Inc.
 Location: Multiple Unspecified Locations
 Application #(s): S-7045-15-1
 Project #: S-1123148

A. RMR SUMMARY

RMR Summary			
Categories	417 MMBtu/hr Flare (Unit 15-1)	Project Totals	Facility Totals
Prioritization Score	>1.0	>1.0	>1.0
Acute Hazard Index	0.00	0.00	0.00
Chronic Hazard Index	0.05	0.05	0.05
Maximum Individual Cancer Risk (10 ⁻⁶)	1.4	1.4	1.4
T-BACT Required?	Yes		
Special Permit Conditions?	Yes		

¹ This unit is considered its own facility therefore the risk associated with this project will not be summed with other permitted units at this facility.

Proposed Permit Conditions

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

Unit # 15-1

1. Unit S-7045-15-1 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] N
2. When unit S-7045-15-1 is the only permitted unit at this facility operating, it may not operate within 1,500 feet of a business or residential receptor. [District Rule 2201]

B. RMR REPORT

I. Project Description

Technical Services received a request on August 14, 2012, to perform a Risk Management Review and an AAQA for a proposed modification of a well testing operation. The modification consists of increasing the throughput of the flare from 125 MMBtu/hr to 417 MMBtu/hr.

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's "Oilfield NG and WG Flare" spreadsheet were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2005-2009 from Bakersfield 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 15-1			
Source Type	Point	Location Type	Rural
Stack Height (m)	12.3	Closest Receptor (m)	457
Stack Diameter. (m) ¹	1.96	Type of Receptor	Residential
Stack Exit Velocity (m/s) ¹	20	Max Hours per Year	8760
Stack Exit Temp. (°K) ¹	1273	Fuel Type	Waste Gas
Flare Rating (MMBtu/hr)	417		

¹ Calculated using FYI 69.

Technical Services performed modeling for criteria pollutants CO, NOx, SOx and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were 154.17 lb/hr CO, 27.92 lb/hr NOx, 5.96 lb/hr SOx, and 3.33 lb/hr PM₁₀. The engineer supplied the maximum fuel rate for the IC engine used during the analysis.

The results from the Criteria Pollutant Modeling are as follows:



Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass	Pass
PM _{2.5}	X	X	X	Pass	Pass

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

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

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk associated with the project is 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 the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

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

IV. Attachments

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

ATTACHMENT VI

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-7045-15-1

LEGAL OWNER OR OPERATOR: PROS INC
MAILING ADDRESS: P O BOX 20996
BAKERSFIELD, CA 93390-0996

LOCATION: VARIOUS LOCATIONS, SJVUAPCD

EQUIPMENT DESCRIPTION:
MODIFICATION OF WELL TESTING / DRILLING OPERATIONS (MITIGATE GAS KICKS DURING DRILLING) WITH PORTABLE 0.27 MMSCF/DAY FLARE WITH OPTIONAL USE AIR-ASSIST, WITH GAS /LIQUID SEPARATOR(S) OPERATED AT VARIOUS UNSPECIFIED LOCATIONS SJVAPCD. INCREASE FLOW RATE FROM 0.27 MMSCF/DAY TO 10 MMSCF/DAY AND 54 MMSCF/YR TO 288 MMSCF/YR

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 PROs Inc. [District Rule 2201]
7. Unit S-7045-15 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]
8. Flare shall not operate within 1,500 feet of a business or residential receptor or the facility boundary. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
S-7045-15-1: Aug 27 2012 1:40PM - EDGIEHLR : Jdril Inspection NOT Required

9. 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]
10. Flare shall be equipped with air assist which shall be utilized when needed to maintain visible emissions below Ringelmann 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 10 MMscf/day nor 288 MMscf/yr. [District Rules 2201 and 4102]
14. 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]
15. Sulfur compound concentration (as H₂S) of gas flared shall not exceed 5 gr H₂S/100 scf (79.6 ppmv H₂S). [District Rules 2201 and 4801]
16. Emission rates shall not exceed any of the following: 0.008 lb-PM₁₀/MMBtu, 0.068 lb-NO_x/MMBtu (as NO₂), 0.063 lb-VOC/MMBtu, or 0.37 lb-CO/MMBtu. [District Rules 2201 and 4201]
17. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2201]
18. 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]
19. 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]
20. The following test methods shall be used for well gas sulfur content: ASTM D3246 or double GC for H₂S and mercaptan. [District Rule 1081]
21. 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 Rules 2201 and 4311]

DRAFT