



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

JUL 05 2012

Brad Califf
Longbow, LLC
1701 Westwind Drive, Suite 126
Bakersfield, CA 93301

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1121574

Dear Mr. Califf:

Enclosed for your review and comment is the District's analysis of Longbow, LLC's application for an Authority to Construct for an increase in CO emissions limit for steam generator S-4080-27, at Sections 28 and 32, T12N, R18W in Longbow's heavy oil production stationary source in the central Kern County fields.

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

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

Sincerely,

David Warner
Director of Permit Services

DW: RUE/cm

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
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JUL 05 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-1121574

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Longbow, LLC's application for an Authority to Construct for an increase in CO emissions limit for steam generator S-4080-27, at Sections 28 and 32, T12N, R18W in Longbow's heavy oil production stationary source in the central Kern County fields.

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

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**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 Longbow, LLC for an increase in CO emissions limit for steam generator S-4080-27, at Sections 28 and 32, T12N, R18W in Longbow's heavy oil production stationary source in the central Kern County fields.

The analysis of the regulatory basis for this proposed action, Project #S-1121574, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Increase CO Limit for 27.5 MMBtu/hr steam generator

Facility Name: Longbow, LLC
Mailing Address: 1701 Westwind Drive, Suite 126,
Bakersfield, CA 93301
Contact Person: Brad Califf
Telephone: (661) 631-1717
Fax: (661) 631-1715
E-Mail:
Application #(s): S-4080-27-1
Project #: 1121574
Deemed Complete: May 25, 2012

Date: June 28, 2012
Engineer: Richard Edgehill
Lead Engineer: Dan Klevann

I. Proposal

On January 4, 2010, Longbow, LLC (Longbow) received an Authority to Construct ATC for 27.5 MMBtu/hr steam generator with a Gideon ultra-low NOx burner (ATC S-4080-27-0). Longbow has stated that the unit is unable to meet the NOx emissions limit of 7 ppmv NOx @3% O₂ with CO emissions limited to 100 ppmv @3% O₂, the current ATC S-4080-27-0 limit, and has requested to increase the CO emissions limit to 200 ppmv @ 3% O₂. As the unit has already been installed under a previously issued ATC, this application will be a modification of an existing unit. However, CO emissions from the steam generator will be considered as new emissions as public notice would have been originally required at the emissions level.

BACT and offsets are not required. Public notice is required.

Disposition of Outstanding ATCs

ATC S-4080-27-0 will be implemented concurrently with the proposed ATC and serves as the base document. The ATC is included in **Attachment I**.

The facility is a major source for VOCs but does not have a Title V PTO. Rule 2530 is applicable.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2530	Federally Enforceable Potential to Emit (6/10/10)
Rule 4001	New Source Performance Standards (4/14/99)
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 4304	Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)
Rule 4305	Boilers, Steam Generators and Process Heaters – Phase II (8/21/03)
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase III (3/17/05)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
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 steam generator is authorized to operate in Sections 28 and 32, T12N, R18W in Longbow's heavy oil central stationary source. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Longbow operates equipment for the production of crude oil and natural gas. In thermally enhanced oil recovery (TEOR), natural gas is combusted in steam generators to produce steam for injection into heavy crude oil bearing strata via injection wells to reduce the viscosity of the crude oil, thereby facilitating thermally enhanced oil production.

The steam generator (S-4080-27) is currently permitted as a Rule 4320 Compliant Dormant Emissions unit (DEU) to be used to produce steam for Thermally Enhanced Oil Recovery (TEOR) operation (ATC S-4080-20-0).

V. Equipment Listing

Pre-Project Equipment Description:

ATC S-4080-27-0: 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH GIDEON ULTRA LOW NOX BURNER MODEL MGW-25R1 AND FGR (OR DISTRICT APPROVED EQUIVALENT) - REVISED 3/29/12

Proposed Modification:

ATC S-4080-27-1: MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH GIDEON ULTRA LOW NOX BURNER MODEL MGW-25R1 AND FGR (OR DISTRICT APPROVED EQUIVALENT): INCREASE CO LIMIT TO 200 PPMV @ 3% O2

Post Project Equipment Description:

PTO S-4080-27-1: 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH GIDEON ULTRA LOW NOX BURNER MODEL MGW-25R1 AND FGR

VI. Emission Control Technology Evaluation

No changes to the existing NOx control equipment are proposed.

VII. General Calculations

A. Assumptions

- The maximum operating schedule is 24 hours per day
- The unit is fired solely on PUC quality natural gas
- Annual pre-project potential to emit is calculated based on 8,760 hours of operation per year
- Maximum post-project potential to emit is calculated based on 27.5 MMBTU/hr heat input (applicant's proposal)
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)

B. Emission Factors

Pollutant	Project Emission Factors (EFs)		Source
NO _x	0.0085 lb-NO _x /MMBtu	7 ppmvd NO _x (@ 3%O ₂)	ATC S-4080-27-0
SO _x	0.00285 lb-SO _x /MMBtu		"
PM ₁₀	0.0076 lb-PM ₁₀ /MMBtu		"
CO	0.148 lb-CO/MMBtu	200 ppmvd CO (@ 3%O ₂)	proposed
VOC	0.0055 lb-VOC/MMBtu	13 ppmvd VOC (@ 3%O ₂)	ATC S-4080-27-0

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The potential to emit for the operation is calculated as follows, and summarized in the table below:

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO_x	0.009	27.5	24	5.6
SO_x	0.00285	27.5	24	1.9
PM₁₀	0.0076	27.5	24	5.0
CO	0.000	27.5	24	0.0
VOC	0.0055	27.5	24	3.6

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO_x	0.009	27.5	8,760	2,048
SO_x	0.00285	27.5	8,760	687
PM₁₀	0.0076	27.5	8,760	1,831
CO	0.000	27.5	8,760	0
VOC	0.0055	27.5	8,760	1,325

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	0.009	27.5	24	5.6
SO_x	0.00285	27.5	24	1.9
PM₁₀	0.0076	27.5	24	5.0
CO	0.148	27.5	24	97.7
VOC	0.0055	27.5	24	3.6

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO_x	0.009	27.5	8,760	2,048
SO_x	0.00285	27.5	8,760	687
PM₁₀	0.0076	27.5	8,760	1,831
CO	0.148	27.5	8,760	35,653
VOC	0.0055	27.5	8,760	1,325

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

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

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site. The facility has no ERCs.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-4080-11-0	0	0	0	0	4,858
S-4080-12-0	0	0	0	0	19,052
S-4080-13-0	0	0	0	0	1201
S-4080-14-1	0	0	0	0	296
S-4080-15-0	0	0	0	0	19,052
S-4080-16-0	0	0	0	0	2223
S-4080-17-0	0	0	0	0	3163
S-4080-18-0	0	0	0	0	3163
ATC S-4080-20-0	0	0	0	0	584
ATC S-4080-22-0	599	47	126	1398	92
ATC S-4080-27-0	2048	687	1831	0	1325
S-4080-28-0	0	0	0	0	402
S-4080-29-0	0	0	0	0	724
ATC S-4080-30-0	0	0	0	0	183
ATC S-4080-31-0	0	0	0	0	741
Pre-Project SSPE (SSPE1)	2,647	734	1,957	1398	57,059

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

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site. The facility has no ERCs.

Post-Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-4080-11-0	0	0	0	0	4,858
S-4080-12-0	0	0	0	0	19,052
S-4080-13-0	0	0	0	0	1201
S-4080-14-1	0	0	0	0	296
S-4080-15-0	0	0	0	0	19,052
S-4080-16-0	0	0	0	0	2223
S-4080-17-0	0	0	0	0	3163
S-4080-18-0	0	0	0	0	3163
ATC S-4080-20-0	0	0	0	0	584
ATC S-4080-22-0	599	47	126	1398	92
ATC S-4080-27-1	2048	687	1831	35,653	1325
S-4080-28-0	0	0	0	0	402
S-4080-29-0	0	0	0	0	724
ATC S-4080-30-0	0	0	0	0	183
ATC S-4080-31-0	0	0	0	0	741
Post-Project SSPE (SSPE2)	2647	734	1957	37,051	57,059

5. Major Source Determination

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

Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	2,647	734	1,957	1398	57,059
SSPE2	2,647	734	1,957	37,051	57,059
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	Yes

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. The source is not a major source for NO_x, SO_x, PM₁₀, or CO.

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

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

otherwise,

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

As shown in Section VII.C.5 above, the facility is not a Major Source for NO_x, SO_x, PM₁₀ or CO. Therefore BE=PE1 for these pollutants.

VOC

Clean Emissions Unit, Located at a Major Source

Pursuant to Rule 2201, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

This emissions unit combusts gaseous fuel and therefore meets the requirement of BACT Guideline 1.2.1 3rd Quarter 2008.

VOC: Gaseous fuel

Therefore BE = PE1 for VOCs.

BE (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
S-4080-27	2048	687	1831	0	1325

7. SB 288 Major Modification

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

Since this facility is not a major source for NO_x, SO_x, and VOCs, this project does not constitute an SB 288 major modification for these air contaminants.

Since this facility is a major source for (VOCs), the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
VOC	1,325	50,000	No

8. Federal Major Modification

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

NO_x, SO_x, and PM₁₀

Since this facility is not a major source for NO_x, SO_x, and PM₁₀, this project does not constitute a Federal Major Modification for these air contaminants.

VOC

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

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

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

If there is no increase in design capacity or potential to emit for VOC, the PAE is equal to the annual emission rate at which the unit is projected to emit in any one year, selected by the operator, within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity or potential to emit). If detailed PAE are not provided, the PAE is equal to the PE2 for each permit unit.

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

UBC: Since this project does not result in an increase in design capacity or potential to emit for VOC, and it does not impact the ability of the emission unit to operate at a higher utilization rate, the UBC is the portion of PAE that the emission units could have accommodated during the baseline period.

As worst case BAE is set to zero. PAE is assumed to be PE2 as it was not provided by applicant. UBC is assumed to equal PE2 as there is no increase in design capacity.

Therefore the emissions increase for VOC is equal to zero and the project is not a Federal Major Modification for VOC.

9. Quarterly Net Emissions Change (QNEC)

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

S-4080-27 (steam generator)

QNEC			
Pollutant	PE2 (lb/yr)	PE1 (lb/yr)	QNEC (lb/qtr)
NO _x	2,048	2,048	0
SO _x	687	687	0
PM10	1,831	1,831	0
CO	35,653	0	8,913
VOC	1,325	1,325	0

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following 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 SB 288 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 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

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

NO_x, SO_x, PM₁₀, VOC

$$\text{PE}_2 = \text{PE}_1, \text{EF}_2 = \text{EF}_1 \text{ therefore } \text{AIPE} = 0$$

CO

The facility SSPE is less than 200,000 lb CO/yr. Therefore BACT is not triggered for CO.

d. SB 288/Federal Major Modification

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

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	2647	734	1957	37,051	57,059
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	No	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOC only. Therefore offset calculations will be required for this project.

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

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,

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

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

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

- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = HAE

Note that for VOCs, BE = PE1 = PE2 and ICCE = 0. Therefore offsets are not required.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

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

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

As demonstrated in VII.C.7, this project does not constitute an 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. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb/day.

c. Offset Threshold

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

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	2,647	2,647	20,000 lb/year	No
SO _x	734	734	54,750 lb/year	No
PM ₁₀	1,957	1,957	29,200 lb/year	No
CO	0	37,051	200,000 lb/year	No
VOC	57,059	57,059	20,000 lb/year	No

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	2,647	2,647	0	20,000 lb/year	No
SO _x	734	734	0	20,000 lb/year	No
PM ₁₀	1,957	1,957	0	20,000 lb/year	No
CO	37,051	0	37,051	20,000 lb/year	Yes
VOC	57,059	57,059	0	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, public noticing is required for this project for a CO emissions increase 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)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in

or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

The DELs for the unit is based on the use of natural gas as a fuel and will be stated in the form of emission factors as shown:

- Emissions shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.0085 lb-NO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 200 ppmvd CO @ 3% O₂ or 0.148 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4320]
- The unit shall only be fired on PUC-quality natural gas with a sulfur content not exceeding 1.0 gr S/100 scf, [District Rules 2201 and 4320]
- This steam generator is not authorized to incinerate casing gas. [District Rules 2201 and 4320]

E. Compliance Assurance

1. Source Testing

Startup source testing for NO_x and CO emissions will be required. Additionally, Rules 4305, 4306, and 4320 require NO_x and CO emission testing not less than once every 12 months and once every 36 months if two consecutive annual source tests demonstrate compliance.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

District Rules 4305, 4306, and 4320 require the owner of any unit equipped with NO_x reduction technology to either install and maintain continuous emissions monitoring equipment for NO_x, CO, and oxygen, as identified in Rule 1080 (Stack Monitoring), or install and maintain APCO-approved alternate monitoring plan. Since the unit is equipped with a low NO_x burner and FGR, this requirement applies.

The applicant proposed to utilize pre-approve alternate monitoring plan "A" (Periodic Monitoring NO_x, CO, and O₂ Emissions Concentrations) to meet the requirements of these rules. This monitoring also satisfies the monitoring requirements for Rule 2201. No additional monitoring is required.

3. Recordkeeping

The applicant will also be required to keep records of all of the parameters that are required by the Rule 4305, 4306, and 4320 alternate monitoring requirements.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

The project requires public notice for CO emissions Therefore, an AAQA is required for the purpose of determining whether the increase in CO emissions will cause or make worse a violation of an air quality standard. The District’s Technical Services Division conducted the required analysis and the results (**Attachment III**) from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

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

*Results were taken from the attached PSD spreadsheet.

As shown, the increase in CO emissions is not expected to cause or make worse a violation of an air quality standard.

Rule 2530 Federally Enforceable Potential to Emit

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

The ATC includes the following condition:

The permittee shall not emit more than 12.5 tons of VOC facility wide based on a 12-month summary of actual emissions. [District Rule 2530] N

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction).

The subject steam generator has a rating of 27.5 MMBtu/hr and is gas-fired. Subpart Dc has no standards for gas-fired steam generators. Therefore the subject steam generator is not an affected facility and subpart Dc does not apply.

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). A condition will be placed on the ATC to ensure compliance with the opacity limit.

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

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations provided the equipment is well maintained. Therefore, compliance with this rule is expected.

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.

As demonstrated above, there are no increases in HAP emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. The unit is authorized to combust only natural gas. As long as the unit is operated properly, compliance is expected.

Rule 4301 Fuel Burning Equipment

Rule 4301 limits air contaminant emissions from fuel burning equipment as defined in the rule. Section 3.1 defines fuel burning equipment 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”.

Section 5.0 gives the requirements of the rule.

A person shall not discharge into the atmosphere combustion contaminants exceeding in concentration at the point of discharge, 0.1 grain per cubic foot of gas calculated to 12% of carbon dioxide at dry standard conditions.

A person shall not build, erect, install or expand any non-mobile fuel burning equipment unit unless the discharge into the atmosphere of contaminants will not and does not exceed any one or more of the following rates:

- 200 pound per hour of sulfur compounds, calculated as sulfur dioxide (SO₂)
- 140 pounds per hour of nitrogen oxides, calculated as nitrogen dioxide (NO₂)
- Ten pounds per hour of combustion contaminants as defined in Rule 1020 and derived from the fuel.

District Rule 4301 Limits			
Unit	NO₂	Total PM	SO₂
S-4080-27 (lb/hr)	0.0085 x 25 = 0.21	0.0076 x 25 = 0.19	0.00285 x 25 = 0.071
Rule Limit (lb/hr)	140	10	200

The particulate emissions from the steam generators will not exceed 0.1 gr/dscf at 12% CO₂ or 10 lb/hr. Further, the emissions of SO_x and NO_x will not exceed 200 lb/hr or 140 lb/hr, respectively.

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

Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters

Pursuant to District Rules 4305 and 4306, Section 6.3.1, the steam generator is not required to tune since it follows a District approved Alternate Monitoring scheme where the applicable emission limits are periodically monitored. Therefore, the unit is not subject to this rule.

District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2

The unit is natural gas-fired with a maximum heat input of 20.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

In addition, the unit is also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4305.

District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3

The unit is natural gas-fired with a maximum heat input of 20.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4306, the unit is subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4306 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4306.

Rule 4320 – Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr

Section 5.0 Requirements

Section 5.1 of the rule requires compliance with the NO_x and CO emissions limits listed in Table 1 of Section 5.2 or payment of an annual emissions fee to the District as specified in Section 5.3 and compliance with the control requirements specified in Section 5.4; or as stated in Section 5.1.3, comply with the applicable Low-use Unit requirements of Section 5.5.

Section 5.2 NO_x and CO Emission Limits

C. Oilfield Steam Generators

Rule 4320 Emissions Limits				
Category	Operated on gaseous fuel		Operated on liquid fuel	
	NO _x Limit	CO Limit	NO _x Limit	CO Limit
1. Units with a total rated heat input >20.0 MMBtu/hr	Standard Schedule 7 ppmv or 0.008 lb/MMBtu; or	400 ppmv @ 3% O ₂	40 ppmv or 0.052 lb/MMBtu	400 ppmv @ 3% O ₂
	Staged Enhanced Schedule Initial limit: 9 ppmv @ 3% O ₂ , 0.011 lb/MMBtu			
	Final limit: 5 ppmv @ 3% O ₂ , 0.0062 lb/MMBtu			

- the proposed NO_x emission factor is 7 ppmvd @ 3% O₂ (0.008 lb/MMBtu), and

- the proposed CO emission factor is no greater than 200 ppmvd @ 3% O₂ (0.148 lb/MMBtu).

Therefore, compliance with Section 5.1 of District Rule 4320 is expected.

A permit condition listing the emissions limits will be listed on permit as shown in the DEL section above.

Section 5.3 Annual Fee Calculation

Applicant has proposed to meet the emissions limits requirements of Section 5.1 and therefore this section is not applicable.

Section 5.4 Particulate Matter Control Requirements

Section 5.4 of the rule requires one of four options for control of particulate matter: 1) combustion of PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases, 2) limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic, 3) install and properly operate an emission control system that reduces SO₂ emissions by at least 95% by weight; or limit exhaust SO₂ to less than or equal to 9 ppmv corrected to 3.0% O₂ or 4) refinery units, which require modification of refinery equipment to reduce sulfur emissions, shall be in compliance with the applicable requirement in Section 5.4.1 no later than July 1, 2013.

The steam generator has a sulfur emission limit of 0.00285 lb SO₂/MMBtu (1.0 gr S/100scf) and is authorized to combust natural/TEOR gas. Therefore the unit is in compliance with the SO_x/PM₁₀ requirements of Section 5.4.1.2 of the rule which states the following:

5.4.1.2 On and after the applicable NO_x Compliance Deadline specified in Section 5.2 Table 1, operators shall limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet

Compliance with the rule is expected.

Section 5.5 Low Use

The subject steam generator is not low use units and therefore the requirements of Section 5.5 do not apply.

Section 5.6, Startup and Shutdown Provisions

Applicable emissions limits are not required during startup and shutdown provided the duration of each start-up or each shutdown shall not exceed two hours, the emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown or operator has submitted an application for a Permit to Operate condition to allow more than two hours for each start-up or each shutdown provided

the operator meets all of the conditions specified in Sections 5.6.3.1 through 5.6.3.3. The ATC includes the following condition:

Duration of startup shall not exceed two hours each per occurrence. [District Rules 2201 and 4320] N

Longbow has not requested that special startup and shutdown emissions limits be added to the ATC.

Section 5.7, Monitoring Provisions

Section 5.7 requires either use of a APCO approved Continuous Emissions Monitoring System (CEMS) for NO_x, CO, and oxygen, or implementation of an APCO-approved Alternate Monitoring System consisting of:

- 5.7.1.1 Periodic NO_x and CO exhaust emission concentrations,
- 5.7.1.2 Periodic exhaust oxygen concentration,
- 5.7.1.3 Flow rate of reducing agent added to exhaust,
- 5.7.1.4 Catalyst inlet and exhaust temperature,
- 5.7.1.5 Catalyst inlet and exhaust oxygen concentration,
- 5.7.1.6 Periodic flue gas recirculation rate, or
- 5.7.1.7 Other operational characteristics.

In order to satisfy the requirements of District Rule 4320, the applicant has proposed to use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO_x, CO, and O₂ exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the permit in order to ensure compliance with the requirements of the proposed alternate monitoring plan:

- {4063} The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
- {4064} If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]
- {4065} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The

analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

5.7.6 Monitoring SOx Emissions

Section 5.7.6.1 Operators complying with Sections 5.4.1.1 or 5.4.1.2 shall provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit To Operate. Sulfur analysis shall be performed in accordance with the test methods in Section 6.2.

Section 5.7.6.2 Operators complying with Section 5.4.1.3 by installing and operating a control device with 95% SOx reduction shall propose the key system operating parameters and frequency of the monitoring and recording. The monitoring option proposed shall be submitted for approval by the APCO.

Section 5.7.6.3 Operators complying with Section 5.4.1.3 shall perform an annual source test unless a more frequent sampling and reporting period is included in the Permit to Operate. Source tests shall be performed in accordance with the test methods in Section 6.2.

Sulfur Monitoring

Only natural gas (not casing gas) is authorized for combustion. The following sulfur monitoring conditions will be included on the ATC:

Permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] N

If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4320] N

Section 5.8, Compliance Determination

Section 5.8.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MMBtu) emission limits or the concentration (ppmv) emission limits specified in Section 5.2. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling) as stated in the following ATC condition:

The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320] N

Section 5.8.2 requires that all emissions measurements be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel

flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0.

All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] N

Section 5.8.3 Continuous Emissions Monitoring System (CEMS) emissions measurements shall be averaged over a period of 15 consecutive minutes to demonstrate compliance with the applicable emission limits. Any 15-consecutive-minute block average CEMS measurement exceeding the applicable emission limits shall constitute a violation. The steam generator is not equipped with CEMs and therefore this section is not applicable.

Section 5.8.4 For emissions monitoring pursuant to Sections 5.7.1, and 6.3.1 using a portable NO_x analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five readings evenly spaced out over the 15-consecutive-minute period.

{2937} All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

Section 5.8.5 For emissions source testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation of this rule, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.

For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] N

All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] N

Section 6.1 Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO and EPA upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

A permit condition will be listed on the permit as follows:

All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4320] N

Section 6.1.1 requires that a unit operated under the exemption of Section 4.2 shall monitor and record, for each unit, the cumulative annual hours of operation. The unit is not Section 4.2 exempt and therefore these records are not required.

Section 6.1.2 requires the operator of any unit that is subject to the requirements of Section 5.5 shall record the amount of fuel use at least on a monthly basis for each unit. On and after the applicable compliance schedule specified in Section 7.0, in the event that such unit exceeds the applicable annual heat input limit specified in Section 5.5, the unit shall be brought into full compliance with this rule as specified in Section 5.2 Table 1. The unit is not low use and therefore these records are not necessary.

Section 6.1.3 The operator of any unit subject to Section 5.5.1 or Section 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics of the unit have been performed. The ATC includes the following condition:

{4066} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]

Section 6.1.4 The operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown. The ATC includes the following condition:

Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours for a period of five years and make such records readily available for District inspection upon request. . [District Rules 2201 and 4320] N

Section 6.1.5 The operator of any unit firing on liquid fuel during a PUC-quality natural gas curtailment period pursuant to Section 5.4.2 shall record the sulfur content of the fuel, amount of fuel used, and duration of the natural gas curtailment period. The unit is not authorized to combust liquid fuel. Therefore this section is not applicable.

Section 6.2, Test Methods

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed:

Pollutant	Units	Test Method Required
NO _x	ppmv	EPA Method 7E or ARB Method 100
NO _x	lb/MMBtu	EPA Method 19
CO	ppmv	EPA Method 10 or ARB Method 100
Stack Gas O ₂	%	EPA Method 3 or 3A, or ARB Method 100
Stack Gas Velocities	ft/min	EPA Method 2
Stack Gas Moisture Content	%	EPA Method 4
Oxides of sulfur		EPA Method 6C, EPA Method 8, or ARB Method 100
Total Sulfur as Hydrogen Sulfide (H ₂ S) Content		EPA Method 11 or EPA Method 15, as appropriate.
Sulfur Content of Liquid Fuel		ASTM D 6920-03 or ASTM D 5453-99

The following test method condition is included on the ATCs:

The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, SO_x (lb/MMBtu) - EPA Method 6, 6B or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 1081, 2201 and 4320] N

Section 6.2.8.2. The SO_x emission control system efficiency shall be determined using the following:

$$\% \text{ Control Efficiency} = [(C_{\text{SO}_2, \text{inlet}} - C_{\text{SO}_2, \text{outlet}}) / C_{\text{SO}_2, \text{inlet}}] \times 100$$

where:

C_{SO₂, inlet} = concentration of SO_x (expressed as SO₂) at the inlet side of the SO_x emission control system, in lb/dscf

$C_{\text{SO}_2, \text{outlet}}$ = concentration of SO_x (expressed as SO₂) at the outlet side of the SO_x emission control system, in lb/dscf

The units are not equipped with a SO₂ scrubber. Therefore this section is not applicable.

Section 6.3 Compliance Testing

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.2 not less than once every 12 months (no more than 30 days before or after the required annual source test date). Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months.

Section 6.3.1.1 Units that demonstrate compliance on two consecutive 12-month source tests may defer the following 12-month source test for up to 36 months (no more than 30 days before or after the required 36-month source test date). During the 36-month source testing interval, the operator shall tune the unit in accordance with the provisions of Section 5.5.1, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer to ensure compliance with the applicable emission limits specified in Section 5.2.

Section 6.3.1.2 Tune-ups required by Sections 5.5.1 and 6.3.1 do not need to be performed for units that operate and maintain an APCO approved CEMS or an APCO approved Alternate Monitoring System where the applicable emission limits are periodically monitored. Applicant has proposed to monitor the emissions of NO_x and CO Alternate Monitoring Scheme "A" and therefore tuning is not required.

Section 6.3.1.3 If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits specified in Section 5.2, the source testing frequency shall revert to at least once every 12 months.

The following conditions are included on the ATC:

{4344} Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306 and 4320] N

After the initial source test for Rule 4320, the permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070] N

After the initial source test for Rule 4320, when designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 2080] N

After the initial source test for Rule 4320, when designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, and monitoring requirements. [District Rules 2201 and 4320] N

Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201 and 4320] N

The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320] N

{109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] N

Sections 6.3.2.1 through 6.3.2.7 address the requirements of group testing which is not applicable for this project.

Section 6.4, Emission Control Plan (ECP)

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4320.

The proposed unit will be in compliance with the emissions limits listed in Table 1, Section 5.1 of this rule and with periodic monitoring and source testing requirements. Therefore, this current application for the new proposed unit satisfies the requirements of the Emission Control Plan, as listed in Section 6.4 of District Rule 4320. No further discussion is required.

Section 7.0, Compliance Schedule

Section 7.0 indicates that an operator with multiple units at a stationary source shall comply with this rule in accordance with the schedule specified in Table 1, Section 5.2 of District Rule 4320.

The unit will be in compliance with the emissions limits listed in Table 1, Section 5.2 of this rule, and periodic monitoring and source testing as required by District Rule 4320. Therefore, requirements of the compliance schedule, as listed in Section 7.1 of District Rule 4306, are satisfied. No further discussion is required.

Conclusion

Conditions are included on the ATCs in order to ensure compliance with each section of this rule, see attached draft permit(s). Therefore, compliance with District Rule 4320 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

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

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

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) is exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District conducted a Risk Management Review and concludes that potential health impacts are less than significant.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Pending a successful Public Noticing period, issue ATC S-4080-27-1 subject to the permit conditions on the attached draft ATC in **Attachment IV**.

X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-4080-27-1	3020-02-H	27.5 MMBtu/hr	\$ 1030

Attachments

- I: ATC S-4080-27-0
- II: Emissions Profile
- III: AAQA Modeling
- III: Draft ATC

Longbow, LLC
S-4080, 1121574

Attachment I
ATC S-4080-27-0



AUTHORITY TO CONSTRUCT

PERMIT NO: S-4080-27-0

ISSUANCE DATE: 01/04/2010

LEGAL OWNER OR OPERATOR: LONGBOW, LLC.
MAILING ADDRESS: 1701 WESTWIND DRIVE, SUITE 126
BAKERSFIELD, CA 93301

LOCATION: HEAVY OIL CENTRAL
SE S 35, T27S, R27E

EQUIPMENT DESCRIPTION:

27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH GIDEON ULTRA LOW NOX BURNER MODEL MGW-25R1 AND FGR (OR DISTRICT APPROVED EQUIVALENT) - REVISED 3/29/12

CONDITIONS

1. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201]
2. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201]
3. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]
4. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201]
5. After the initial source test for Rule 4320, the permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]
6. After the initial source test for Rule 4320, when designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 2080]

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-4080-27-0 : Jun 2 2012 11:47AM - EDGEHILR : Joint Inspection NOT Required

7. After the initial source test for Rule 4320, when designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, and monitoring requirements. [District Rules 2201 and 4320]
8. Source testing shall be conducted within 60 days of startup. [District Rules 2201 and 4320]
9. Permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rule 4623]
10. The permittee shall not emit more than 12.5 tons of VOC facility wide based on a 12-month summary of actual emissions. [District Rule 2530, 6.1]
11. Steam generator shall operate only in Sections 28 and 32, T12N, R18W. [District Rule 4102]
12. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
13. No air contaminant shall be released into the atmosphere that causes a public nuisance. [District Rule 4102]
14. 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]
15. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
16. The unit shall only be fired on PUC-quality natural gas with a sulfur content not exceeding 1.0 gr S/100 scf, [District Rules 2201 and 4320]
17. This steam generator is not authorized to incinerate casing gas. [District Rules 2201 and 4320]
18. Permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
19. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4320]
20. Duration of startup shall not exceed two hours each per occurrence. [District Rules 2201 and 4320]
21. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours for a period of five years and make such records readily available for District inspection upon request. . [District Rules 2201 and 4320]
22. Emissions shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂, 0.0076 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4320]
23. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201 and 4320]
24. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201 and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4320]
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 2201 and 4320]
27. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201 and 4320]
28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320]
29. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
30. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, SO_x (lb/MMBtu) - EPA Method 6, 6B or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15, fuel h_{hv} (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 1081, 2201 and 4320]
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201 and 4320]
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
33. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201 and 4320]
34. The permittee shall maintain a record of the 12-month summary of actual emissions from permitted operations. This record shall be kept on site and made available to the District upon request. [District Rule 2530, 6.1]
35. Records of the equipment make, model, maximum design process rate and/or capacity, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters shall be maintained onsite for a period of five years. [District Rule 2530, 6.1]
36. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4320]
37. Authority to Construct S-4080-11-1 shall be implemented prior to or concurrently with this permit. [District Rule 2201]
38. Authority to Construct S-4080-21 shall be cancelled upon implementation of this permit. [District Rule 2201]

Attachment II
Emissions Profile

Permit #: S-4080-27-1	Last Updated
Facility: LONGBOW, LLC.	06/16/2012 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):	2048.0	687.0	1831.0	35653.0	1325.0
Daily Emis. Limit (lb/Day)	5.6	1.9	5.0	97.7	3.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	8913.0	0.0
Q2:	0.0	0.0	0.0	8913.0	0.0
Q3:	0.0	0.0	0.0	8913.0	0.0
Q4:	0.0	0.0	0.0	8914.0	0.0
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
AAQA Modeling**

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill– Permit Services
 From: Leland Villalvazo – Technical Services
 Date: June 25, 2012
 Facility Name: Longbow LLC
 Location: Heavy Oil Central
 Application #(s): S-4080-27-1
 Project #: S-1121574

A. RMR SUMMARY

RMR Summary				
Categories	Steam Gen (Unit 27-1)		Project Totals	Facility Totals
Prioritization Score	NA – CO Modeling Only		NA	0.08
Acute Hazard Index				
Chronic Hazard Index				
Maximum Individual Cancer Risk (10 ⁻⁶)				
T-BACT Required?	No			
Special Permit Conditions?	No			

Proposed Permit Conditions

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

Unit # 27-1

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on June 18, 2012, to perform an Ambient Air Quality Analysis for a 27.5 MMBTU/Hr Steam Generator to increase the CO emissions allowed by the current ATC from 100 ppmv to 200 ppmv.

II. Analysis

Technical Services performed modeling for criteria pollutant CO. The emission rates used for criteria pollutant modeling were 4.07 lb/hr CO.

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

III. Conclusion

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

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer

Attachment IV
Draft ATC S-4080-27-1

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-4080-27-1

LEGAL OWNER OR OPERATOR: LONGBOW, LLC.
MAILING ADDRESS: 1701 WESTWIND DRIVE, SUITE 126
BAKERSFIELD, CA 93301

LOCATION: HEAVY OIL CENTRAL
SE S 35, T27S, R27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 27.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH GIDEON ULTRA LOW NOX BURNER MODEL MGW-25R1 AND FGR: INCREASE CO LIMIT FROM 100 PPMV @ 3% O₂ TO 200 PPMV @ 3% O₂

CONDITIONS

1. After the initial source test for Rule 4320, the permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]
2. After the initial source test for Rule 4320, when designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 2080]
3. After the initial source test for Rule 4320, when designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, and monitoring requirements. [District Rules 2201 and 4320]
4. {4344} Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306 and 4320]
5. Permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting, or marketing of refined petroleum products. [District Rule 4623]
6. The permittee shall not emit more than 12.5 tons of VOC facility wide based on a 12-month summary of actual emissions. [District Rule 2530, 6.1]
7. Steam generator shall operate only in Sections 28 and 32, T12N, R18W. [District Rule 4102]
8. {1407} All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

S-4080-27-1: Jun 28 2012 7:41AM - EDGEHLR : Joint Inspection NOT Required

9. No air contaminant shall be released into the atmosphere that causes a public nuisance. [District Rule 4102]
10. {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]
11. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
12. The unit shall only be fired on PUC-quality natural gas with a sulfur content not exceeding 1.0 gr S/100 scf, [District Rules 2201 and 4320]
13. This steam generator is not authorized to incinerate casing gas. [District Rules 2201 and 4320]
14. Permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
15. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4320]
16. Duration of startup shall not exceed two hours each per occurrence. [District Rules 2201 and 4320]
17. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours for a period of five years and make such records readily available for District inspection upon request. . [District Rules 2201 and 4320]
18. Emissions shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2, 0.0076 lb-PM10/MMBtu, 200 ppmvd CO @ 3% O2 or 0.148 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4320]
19. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
20. If either the NOX or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]
22. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]
23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 2201, 4305, 4306, and 4320]

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CONDITIONS CONTINUE ON NEXT PAGE

24. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201 and 4320]
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4320]
26. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
27. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, SO_x (lb/MMBtu) - EPA Method 6, 6B or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H₂S) - EPA Method 11 or 15, fuel hhw (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 1081, 2201 and 4320]
28. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201 and 4320]
30. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2201 and 4320]
31. The permittee shall maintain a record of the 12-month summary of actual emissions from permitted operations. This record shall be kept on site and made available to the District upon request. [District Rule 2530, 6.1]
32. Records of the equipment make, model, maximum design process rate and/or capacity, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters shall be maintained onsite for a period of five years. [District Rule 2530, 6.1]
33. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4320]
34. Authority to Construct S-4080-27-0 shall be implemented concurrently with this ATC. [District Rule 2201]

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