



DEC 22 2011

R. Terence Budden
Compass Global Resources
PO Box 2858
Carmel, CA 93921

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1113331

Dear Mr. Budden:

Enclosed for your review and comment is the District's analysis of Compass Global Resources's application for an Authority to Construct for tuning and/or adjustment of the fuel-to-air ratio and an increase in the CO permitted emissions limit of a 25 MMBtu/hr natural gas/propane-fired steam generator for compliance with District Rule 4320, at the Coalinga Oil Field facility, Section 26, T20S, R14E within the heavy oil production stationary source in Fresno County CA.

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

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
Tel: 661-392-5500 FAX: 661-392-5585



DEC 22 2011

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

**Re: Notice of Preliminary Decision - Authority to Construct
Project Number: C-1113331**

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Compass Global Resources's application for an Authority to Construct for for tuning and/or adjustment of the fuel-to-air ratio and an increase in the CO permitted emissions limit of a 25 MMBtu/hr natural gas/propane-fired steam generator for compliance with District Rule 4320, at the Coalinga Oil Field facility, Section 26, T20S, R14E within the heavy oil production stationary source in Fresno County CA.

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

Enclosure

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
Tel: 661-392-5500 FAX: 661-392-5585

Fresno Bee

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Compass Global Resources for tuning and/or adjustment of the fuel-to-air ratio and an increase in the CO permitted emissions limit of a 25 MMBtu/hr natural gas/propane-fired steam generator for compliance with District Rule 4320, at the Coalinga Oil Field facility, Section 26, T20S, R14E within the heavy oil production stationary source in Fresno County CA.

The analysis of the regulatory basis for this proposed action, Project #C-1113331, 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 Modification to Oilfield Steam Generator

Facility Name: Compass Global Resources Date: August 17, 2009
Mailing Address: PO Box 2858 Engineer: Richard Edgehill
Carmel, CA 93921 Lead Engineer: Richard Karrs
Contact Person: R. Terence Budden and Nick Diercks (EnviroTech Consultants)
Telephone: (661) 871-9205 (RTB), (661) 377-0073#13 (ND)
Fax: (661)871-9205
E-Mail: t.blacklock@sbeglobal.net, ndiercks@ix.netcom.com
Application #(s): C-7821-2-2
Project #: 1113331
Deemed Complete: November 29, 2011

I. Proposal

Compass Global Resources (Compass) recently received an Authority to Construct (ATC C-7821-2-0, project 1092290) for a 25 MMBtu/hr natural/propane fired steam generator. A start-up source test conducted on July 7, 2010 showed that the unit was not in compliance with the Rule 4320 NO_x limit of 7 ppmv @ 3% O₂. To bring the unit into compliance applicant proposes to tune the existing burner and/or balance the fuel-to-air ratio. However, as this is expected to result in higher CO emissions, applicant also proposes to increase the CO emissions limit from 50 ppmv @ 3% O₂ to 400 ppmv @ 3% O₂.

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

Disposition of Outstanding ATCs

ATC C-7821-2-0 will be implemented concurrently with the proposed ATC, serves as the base document, and is included in **Attachment I**.

Facility C-7821 is not a major source for any pollutant and therefore Rule 2520 is not applicable.

II. Applicable Rules

District Rule 2201 New and Modified Stationary Source Review Rule (4/12/11)
District Rule 4001 New Source Performance Standards (4/14/99) Subpart Dc,
Standards of Performance for Small Industrial-Commercial

Institutional Steam Generating Units – **exempt** - there are no standards that apply to gas fired units, therefore subpart Dc does not apply.

- District Rule 4101 Visible Emissions (2/17/05)
- District Rule 4102 Nuisance (12/17/92)
- District Rule 4201 Particulate Matter Concentration (12/17/92)
- District Rule 4301 Fuel Burning Equipment (12/17/92)
- District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)
- District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (3/17/05)
- District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
- District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)--**not applicable** – facility is located west of Highway 5
- District 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 located at the Coalinga Oil Field facility Section 26, T20S, R14E within the heavy oil production stationary source in Fresno County CA. 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

Steam provided by unit C-7821-2 will be injected into 2 uncontrolled wells (C-7821-1) for enhancement of oil recovery.

V. Equipment Listing

Pre-Project Equipment Description:

ATC C-7821-2-0: 25.0 MMBTU/HR HTD LTD. NATURAL GAS/PROPANE FIRED STEAM GENERATOR WITH GIDEON ULTRA-LOW NOX BURNER, INDUCED FGR, AND O2 CONTROLLER

Proposed Modification

ATC C-7821-2-1: MODIFICATION TO 25.0 MMBTU/HR HTD LTD. NATURAL GAS/PROPANE FIRED STEAM GENERATOR WITH GIDEON ULTRA-LOW NOX BURNER, INDUCED FGR, AND O2 CONTROLLER: TUNE AND/OR ADJUST FUEL-TO-AIR RATIO AND INCREASE CO EMISSION LIMIT

Post Project Equipment Description:

PTO C-7821-2-2: 25.0 MMBTU/HR HTD LTD. NATURAL GAS/PROPANE FIRED STEAM GENERATOR WITH GIDEON ULTRA-LOW NOX BURNER, INDUCED FGR, AND O2 CONTROLLER

VI. Emission Control Technology Evaluation

The steam generator as authorized by ATC C-7821-2-0 is equipped with an ultra low-NO_x burner and FGR. The existing burner will be tuned with adjustment of the fuel to air ratio, if necessary, to achieve Rule 4320 emissions limits of 7 ppmvd NO_x @ 3% O₂ and 400 ppmvd CO @ 3% O₂. The unit will be fired on propane and/or PUC-quality natural gas containing a sulfur content no greater than 1.0 grain-S/100 dscf.

VII. General Calculations

A. Assumptions

The maximum operating schedule is 24 hours per day

The steam generator is fired on liquefied petroleum gas (propane) and PUC-quality gas (as defined by Rule 4320) only.

Annual post-project potential to emit is calculated based on 8,760 hours of operation per year

LPG sulfur content 15 gr S/100 scf

LPG heating value: 91,500 Btu/gal

F-Factor for LPG: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60)

B. Emission Factors

Steam Generator C-7821-2			
Pollutant	Emission Factors		Source
NO _x	0.008 lb-NO _x /MMBtu	7 ppmvd NO _x (@ 3%O ₂)	ATC C-7821-2-0t
SO _x	0.0164 lb-SO _x /MMBtu		ATC C-7821-2-0
PM ₁₀	0.0076 lb-PM ₁₀ /MMBtu	7.6 lb/10 ⁶ scf	ATC C-7821-2-0
CO	0.037 lb-CO/MMBtu	50 ppmv CO (@ 3%O ₂)	ATC C-7821-2-0
	0.3 lb-CO/MMBtu	400 ppmv CO (@ 3%O ₂)	Proposed- Rule 4320 limit
VOC	0.0055 lb-VOC/MMBtu	5.5 lb/10 ⁶ scf	ATC C-7821-2-0

C. Calculations

1. Pre-Project Potential to Emit (PE1)

ATC C-7821-2-0

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO_x*	0.008	25	24	4.8
SO_x	0.01640	25	24	9.8
PM₁₀	0.0076	25	24	4.6
CO	0.037	25	24	22.2
VOC	0.0055	25	24	3.3

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO_x	0.008	25	8,760	1,752
SO_x	0.01640	25	8,760	3,592
PM₁₀	0.0076	25	8,760	1,664
CO	0.037	25	8,760	8,103
VOC	0.0055	25	8,760	1,205

2. Post Project Potential to Emit (PE2)

The PE2 for each pollutant is calculated with the following equation:

- $PE2 = EF \text{ (lb/MMBtu)} \times \text{Heat Input (MMBtu/hr)} \times \text{Op. Sched. (hr/day or hr/year)}$

Pollutant	Daily PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE2 (lb/day)
NO_x*	0.008	25	24	4.8
SO_x	0.01640	25	24	9.8
PM₁₀	0.0076	25	24	4.6
CO	0.300	25	24	180.0
VOC	0.0055	25	24	3.3

Pollutant	Annual PE2			
	EF2 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE2 (lb/year)
NO_x	0.008	25	8,760	1,752
SO_x	0.01640	25	8,760	3,592
PM₁₀	0.0076	25	8,760	1,664
CO	0.300	25	8,760	65,700
VOC	0.0055	25	8,760	1,205

Emissions Profiles are 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.

Pre Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
C-7821-1-0	0	0	0	0	4680
ATC C-7821-2-0	1752	3592	1664	8103	1205
C-7821-4-0	0	0	0	0	215
C-7821-5-0	0	0	0	0	47
Pre Project SSPE (SSPE1)	1752	3592	1664	8103	6147

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.

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
C-7821-1-0	0	0	0	0	4680
ATC C-7821-2-2	1752	3592	1664	65,700	1205
C-7821-4-0	0	0	0	0	215
C-7821-5-0	0	0	0	0	47
Post Project SSPE (SSPE2)	1752	3592	1664	65,700	6147

5. Major Source Determination

Pursuant to Section 3.24 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 3.24.2 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)	1752	3592	1664	8103	6147
Post Project SSPE (SSPE2)	1752	3592	1664	65,700	6147
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 facility is not an existing Major Source and also is not becoming a Major Source as a result of this project.

6. Baseline Emissions (BE)

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

Pursuant to Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

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

Therefore Baseline Emissions (BE) are equal to the Pre-Project Potential to Emit (PE1).

C-7821-2-2:

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

Baseline Emissions [BE] (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
C-7821-2-2	1752	3592	1664	8103	1205

7. SB 288 Major Modification

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB288 major modification.

8. Federal Major Modification

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM₁₀ (140,000 lb/year), it is not a major source for PM_{2.5} (200,000 lb/year).

9. Quarterly Net Emissions Change (QNEC)

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

Quarterly NEC [QNEC]			
	PE2 (lb/yr)	$\frac{BE-PE1}{(lb/qtr)}$	QNEC (lb/qtr)
NO _x	1752	1752	0
SO _x	3592	3592	0
PM ₁₀	1664	1664	0
CO	65,700	8103	14,399
VOC	1205	1205	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 exempted pursuant to Section 4.2, BACT shall be required for the following actions*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or

- d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

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

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

As 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

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

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)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

Where,

PE1 = The emissions unit's Potential to Emit 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

$$\text{AIPE} = \text{PE2} - (\text{PE1} \times \text{EF2} / \text{EF1})$$

NO_x, SO_x, PM₁₀, and VOC

EF2 = EF1, PE2 = PE1

AIPE = 0 for NO_x, SO_x, PM₁₀, and VOC

CO

EF2 = 0.3/0.037 (1) x EF1

AIPE = 180.0 – (22.2 (1))

= 157.8 lb/day

As demonstrated above, the AIPE is greater than 2.0 lb/day for CO, however the SSPE for C-7821 is not greater than 200,000 lb CO/yr; therefore BACT is not triggered. As demonstrated above, the AIPE is not greater than 2.0 lb/day for NO_x, SO_x, PM₁₀, CO and VOC and therefore BACT is not triggered.

d. SB 288 and Federal Major Modification

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

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Post Project SSPE (SSPE2)	1752	3592	1664	65,700	6147
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

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. The project is a Federal Major Modification and therefore BACT is triggered.

b. PE > 100 lb/day

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project; therefore public noticing is not required for this project for Potential to Emit Purposes.

c. Offset Threshold

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	1752	1752	20,000 lb/year	No
SO _x	3592	3592	54,750 lb/year	No
PM ₁₀	1664	1664	29,200 lb/year	No
CO	8103	65,700	200,000 lb/year	No
VOC	6147	6147	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 [SSIFE] – Public Notice					
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	SSIFE (lb/year)	SSIFE Public Notice Threshold	Public Notice Required?
NO _x	1752	1752	0	20,000 lb/year	No
SO _x	3592	3592	0	20,000 lb/year	No
PM ₁₀	1664	1664	0	20,000 lb/year	No
CO	8103	65,700	57,597	20,000 lb/year	Yes
VOC	6147	6147	0	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, public noticing is required for this project as the SSIFE for CO emissions is 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.

The unit shall only be fired on PUC-quality natural gas or propane. [District Rule 2201] N

Sulfur content of PUC-quality natural gas shall not exceed 1.0 gr S/100scf. [District Rule 2201] N

Sulfur content of propane shall not exceed 15 grain per 100 scf. [District Rule 2201] N

When fired on natural gas or produced gas, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 400 ppmvd CO @ 3% O₂ or 0.3 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] N

When fired on propane, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0166 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 400 ppmvd CO @ 3% O₂ or 0.3 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] N

E. Compliance Assurance

1. Source Testing

Source testing within 60 days of start-up will be required. Additionally, District Rules 4305, 4306, and 4320 require NO_x and CO emission testing not less than once every 12 months. Gaseous fuel-fired units demonstrating compliance on two consecutive compliance source tests may defer the following source test for up to thirty-six months.

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 shall 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.

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 District Rule 4305. Monitoring for Rule 4305 also satisfies the monitoring requirements for Rule 2201. No additional monitoring is required

3. Recordkeeping

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

Permittee shall keep records of monthly fuel use (natural gas and propane) for steam generator. [District Rules 2201] N

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

The permittee shall maintain records of the date and time of NO_x, CO, and O₂ measurements, the measured NO₂ and CO concentrations corrected to 3% O₂, and the O₂ concentration. The records must also include a description of any corrective action taken to maintain the emissions within the acceptable range. These records shall be maintained, retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 4305]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Pre-approved Alternate Monitoring Plan "A" (Periodic Monitoring NOX, CO, and O2 Emissions Concentrations) requires reporting deviations as stated in the following condition:

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] N

Compliance is expected.

F. Ambient Air Quality Analysis

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

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

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 permit condition is listed on the permit as follows:

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]

Therefore, compliance with District Rule 4101 requirements is expected.

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. 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 is an increase in CO only which results in no increase in health risk, therefore a health risk assessment is not necessary or required.

District 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 steam generator will be fired on natural gas or LPG only and therefore compliance is expected.

District Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO₂, NO₂, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter.

District Rule 4301 Limits			
Pollutant	NO₂	Total PM	SO₂
ATCs #C-7821-2-2	0.2	0.19	0.41
Rule Limit (lb/hr)	140	10	200

The above table indicates compliance with the maximum lb/hr emissions in this rule; therefore, continued compliance is expected.

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

The unit is natural gas-fired with a maximum heat input of 25.0 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 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy requirements of District Rule 4305.

Conclusion

Therefore, compliance with District Rule 4305 requirements is expected and no further discussion is required.

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

The unit will be in compliance with all of the requirements of Rule 4320 upon startup. As Rule 4320 is as stringent as Rule 4306, compliance is expected.

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

Conditions were included on the ATC C-7821-2-0 (base document) in order to ensure compliance with each section of this rule, see **Attachment I**. For this project, the CO limit in the DEL conditions for propane and natural gas will be increased to the rule compliance limit of 400 ppmv @ 3% O₂. The following recordkeeping condition not included on ATC C-7821-2-0 was added to the proposed ATC:

Permittee shall determine sulfur content of combusted natural gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] N

Therefore, compliance with District Rule 4320 requirements is expected.

District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1

This rule applies to boilers, steam generators, and process heaters at NO_x Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. If applicable, the emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4306. Therefore, compliance with this rule is expected.

Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

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

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

With:

N = moles SO₂

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

P (Standard Pressure) = 14.7 psi

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

$$\frac{0.0164 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 11.3 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 11.3 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

California Health & Safety Code 42301.6 (School Notice)

This facility is not located within 1,000 feet of a school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

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; 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) are 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. Issue Authority to Construct C-7821-2-2 subject to the permit conditions on the attached draft Authorities to Construct in **Attachment IV**.

X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-7821-2	3020-02 H	25 MMBtu/hr	\$1030.00

ATTACHMENTS

Attachment I: ATC C-7821-2-0
Attachment II: Emissions Profile
Attachment III: AAQA
Attachment IV: Draft ATC

ATTACHMENT I
ATC C-7821-2-0



AUTHORITY TO CONSTRUCT

PERMIT NO: C-7821-2-0

ISSUANCE DATE: 08/17/2009

LEGAL OWNER OR OPERATOR: COMPASS GLOBAL RESOURCES

MAILING ADDRESS: P.O. BOX 2858
CARMEL, CA 93921

LOCATION: COALINGA OIL FIELD
FRESNO COUNTY

SECTION: SE 26 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:

25.0 MMBTU/HR HTD LTD. NATURAL GAS/PROPANE FIRED STEAM GENERATOR WITH GIDEON ULTRA-LOW NOX BURNER, INDUCED FGR, AND O2 CONTROLLER

CONDITIONS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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. 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]
5. 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 2010]
6. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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

C-7821-2-0: Dec 4 2011 10:13AM -- EDGEHILR : Joint Inspection NOT Required

7. 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]
8. The unit shall only be fired on PUC-quality natural gas or propane. [District Rule 2201]
9. Sulfur content of PUC-quality natural gas shall not exceed 1.0 gr S/100scf. [District Rule 2201]
10. Sulfur content of propane shall not exceed 15 grain per 100 scf. [District Rule 2201]
11. When fired on natural gas or produced gas, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
12. When fired on propane, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0166 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
13. 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 4305, 4306, and 4320]
14. 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 4305, 4306, and 4320]
15. 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]
16. 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 4305, 4306, and 4320]
17. 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]
18. Source testing to measure NO_x and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320]
19. 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 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

20. When the unit changes fuel source, the unit shall undergo source testing to measure NOx and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rules 2201, 4305, 4306, and 4320]
21. Permittee shall keep records of monthly fuel use (natural gas and propane) for steam generator. [District Rules 2201]
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
23. 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]
24. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
25. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
26. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
27. 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]
28. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
29. 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, 4305, 4306, and 4320]

ATTACHMENT II Emissions Profile

Permit #: C-7821-2-2	Last Updated
Facility: COMPASS GLOBAL RESOURCES	12/04/2011 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):	1752.0	3592.0	1664.0	65700.0	1205.0
Daily Emis. Limit (lb/Day)	4.8	9.8	4.6	180.0	3.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	14399.0	0.0
Q2:	0.0	0.0	0.0	14399.0	0.0
Q3:	0.0	0.0	0.0	14399.0	0.0
Q4:	0.0	0.0	0.0	14400.0	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

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Richard Edgehill, AQE – Permit Services
 From: Joe Aguayo, AQS – Technical Services
 Date: December 13, 2011
 Facility Name: Compass Global Resources
 Location: Coalinga Oil Field
 Fresno County
 Application #(s): C-7821-2-2
 Project #: C-1113331

A. RMR SUMMARY

RMR Summary			
Categories	Type of Unit (Unit 2-2)	Project Totals	Facility Totals
Prioritization Score	<1.0	<1.0	>1.0
Acute Hazard Index	0.00	0.00	0.15
Chronic Hazard Index	0.00	0.00	0.03
Maximum Individual Cancer Risk (10^{-6})	0.9	0.9	1.4
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 # 2-2

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on December 5, 2011, to perform an Ambient Air Quality Analysis and a Risk Management Review for a proposed modification to a 25 MMBtu/hr natural gas/propane-fired steam generator. The modification consisted of: tuning the existing burner and/or balance the fuel-to-air ration to come into compliance with Rule 4320 NOx limits.

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 emission factors for external combustion of natural gas were input into the HEARTs database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2005-2009 from Fresno 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 2-2			
Source Type	Point	Location Type	Rural
Stack Height (m)	3.7	Closest Receptor (m)	305
Stack Diameter. (m)	0.5	Type of Receptor	Residential
Stack Exit Velocity (m/s)	10.4	Max Hours per Year	8760
Stack Exit Temp. (°K)	644	Fuel Type	NG
Burner Rating (MMBtu/hr)	25		

Technical Services also performed modeling for CO. Since there was only an increase in CO with respect to the existing project no other criteria pollutants were modeled. The emission rate used for criteria pollutant modeling was 7.5 lb/hr CO. The engineer supplied the maximum fuel rate for the steam generator 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

*Results were taken from the attached PSD spreadsheet.

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

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

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

IV. Attachments

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

ATTACHMENT IV
Draft ATC C-7821-2-2

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-7821-2-2

LEGAL OWNER OR OPERATOR: COMPASS GLOBAL RESOURCES
MAILING ADDRESS: P.O. BOX 2858
CARMEL, CA 93921

LOCATION: COALINGA OIL FIELD
FRESNO COUNTY

SECTION: SE 26 **TOWNSHIP:** 20S **RANGE:** 14E

EQUIPMENT DESCRIPTION:

MODIFICATION TO 25.0 MMBTU/HR HTD LTD. NATURAL GAS/PROPANE FIRED STEAM GENERATOR WITH GIDEON ULTRA-LOW NOX BURNER, INDUCED FGR, AND O2 CONTROLLER: TUNE AND/OR ADJUST FUEL-TO-AIR RATIO AND INCREASE CO EMISSION LIMIT

CONDITIONS

1. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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. The unit shall only be fired on PUC-quality natural gas or propane. [District Rule 2201]
5. Sulfur content of PUC-quality natural gas shall not exceed 1.0 gr S/100scf. [District Rule 2201]
6. Sulfur content of propane shall not exceed 15 grain per 100 scf. [District Rule 2201]
7. When fired on natural gas or produced gas, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.0076 lb-PM10/MMBtu, 400 ppmvd CO @ 3% O2 or 0.3 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
8. When fired on propane, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.0166 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 400 ppmvd CO @ 3% O2 or 0.3 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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

C-7821-2-2 : Dec 19 2011 9:56AM - EDGEHILR : Joint Inspection NOT Required

9. 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 4305, 4306, and 4320]
10. 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 4305, 4306, and 4320]
11. 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]
12. 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 4305, 4306, and 4320]
13. 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]
14. Source testing to measure NO_x and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320]
15. 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 4305, 4306, and 4320]
16. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rules 2201, 4305, 4306, and 4320]
17. Permittee shall keep records of monthly fuel use (natural gas and propane) for steam generator. [District Rules 2201]
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
19. {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]
20. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
22. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
23. 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]
24. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
25. Permittee shall determine sulfur content of combusted natural gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]
26. 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, 4305, 4306, and 4320]
27. ATC shall be implemented concurrently with ATC C-7821-2-0. [District Rule 2201]

DRAFT