



JUN 25 2012

Mr. Rod Villanueva
Pacific Gas & Electric Company
P.O. Box 7640
San Francisco, CA 94120

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-608
Project # N-1120252**

Dear Mr. Villanueva:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is to replace the existing 6.75 MMBtu/hr natural gas-fired thermal oxidizer with a 11.44 MMBtu/hr natural gas-fired thermal oxidizer.

After addressing any EPA comments made during the 45-day comment period, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW:WMS/st

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
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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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

JUN 25 2012

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St.
San Francisco, CA 94105

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-608
Project # N-1120252**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Pacific Gas & Electric Company located at McDonald Island in Holt, which has been issued a Title V permit. Pacific Gas & Electric Company is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. This project is to replace the existing 6.75 MMBtu/hr natural gas-fired thermal oxidizer with a 11.44 MMBtu/hr natural gas-fired thermal oxidizer.

Enclosed is the engineering evaluation of this application and proposed Authorities to Construct # N-608-25-5 and N-608-26-5 with Certificates of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

JUN 25 2012

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-608
Project # N-1120252**

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is to replace the existing 6.75 MMBtu/hr natural gas-fired thermal oxidizer with a 11.44 MMBtu/hr natural gas-fired thermal oxidizer.

Enclosed is the engineering evaluation of this application and proposed Authorities to Construct # N-608-25-5 and N-608-26-5 with Certificates of Conformity. After demonstrating compliance with the Authorities to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW:WMS/st

Enclosures

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**NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Pacific Gas & Electric Company for its natural gas processing facility located at McDonald Island in Holt, California. This project is to replace the existing 6.75 MMBtu/hr natural gas-fired thermal oxidizer with a 11.44 MMBtu/hr natural gas-fired thermal oxidizer.

The District's analysis of the legal and factual basis for this proposed action, project #N-1120252, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356-8718.

San Joaquin Valley Air Pollution Control District Authority to Construct

Natural Gas Processing - RTO Replacement

Facility Name: Pacific Gas & Electric Company Revised Date: June 22, 2012
Mailing Address: PO Box 7640 Engineer: Wai-Man So
San Francisco, CA 94120 Lead Engineer: Nick Peirce
Contact Person: Rod Villanueva (Sr. Environmental Engineer)
Telephone: (925) 415 – 6336
Fax: (925) 415 – 6849
Email: rsv2@pge.com
Application #(s): N-608-25-5 and -26-5
Project #: N-1120252
Deemed Complete: May 8, 2012

I. PROPOSAL

Pacific Gas & Electric Company (hereafter PG&E) is requesting Authorities to Construct (ATC) to replace the existing 6.75 MMBtu/hr thermal oxidizer (TO) with a new 11.44 MMBtu/hr thermal oxidizer, which will continue to serve both natural gas dehydration systems, under permit units N-608-25 and N-608-26.

The operating schedule of the existing 6.5 MMBtu/hr TO is 8,760 hours per year. PG&E is proposing to keep the TO operating schedule of 8,760 hours per year unchanged for the new unit, and also keep the natural gas dehydration systems throughputs unchanged.

PG&E possesses a Title V permit. The proposed project is a Significant Modification to the Title V permit, as this project triggers a Federal Major Modification under Rule 2201. The applicant has requested to issue the ATCs with a Certificate of Conformity (COC), which is EPA's 45-day review of the project prior to the issuance of the final ATCs. This project will be published in the local newspaper, Stockton Record, for public review and comment. The public comment period will last 30-days from the date of publication. Both COC and public notice will run concurrently.

II. APPLICABLE RULES

District Rule 2201 New and Modified Stationary Source Review (04/21/11)
District Rule 2520 Federally Mandated Operating Permits (06/21/01)
District Rule 4101 Visible Emissions (02/17/05)
District Rule 4102 Public Nuisance (12/17/92)
District Rule 4408 Glycol Dehydration Systems (12/19/02)
CH & SC 41700 Public Nuisance

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 facility is located at McDonald Island in Holt, California. The District has verified that this facility is not located within 1,000 feet of the outer boundary of any K-12 school. Therefore, the school noticing requirements of California Health and Safety Code, Section 42301.6 do not apply.

IV. PROCESS DESCRIPTION

The replacement of the emission control device, thermal oxidizer results no changes the operating processes. See detail process description in engineering evaluation N-1040480.

V. EQUIPMENT LISTING

Pre-Project Equipment Description:

N-608-25-4

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-26) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-26) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#3)

N-608-26-4

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-25) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-25) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#4)

Post-Project Equipment Description:

N-608-25-5

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-26) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 11.44 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-26) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#3)

N-608-26-5

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-25) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 11.44 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-25) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#4)

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

VOC emissions from the natural gas dehydration system will be controlled by the new thermal oxidizer with at least 97.5% control efficiency.

VII. EMISSIONS CALCULATIONS

A. Assumptions

Assumption will be stated as each is made.

B. Emission Factors (EF)

Pre-Project Emissions Factor (EF1) & Post-Project Emissions Factor (EF2)

N-608-25-5 and 26-5

The equipment consist of glycol reboilers with permit exempt natural gas fired burners (each less than 5 MMBtu/hr), and a shared thermal oxidizer. The emission factors below represent the thermal oxidizer, which will be the emission point for all of the permitted equipment.

The only modification under this project is to replace the natural gas-fired thermal oxidizer. Therefore, except VOC emission, other emission factors that based on natural gas combustion will not be changed as a result of this project.

The applicant is not proposing to change the process equipment or throughputs of the dehydration systems, so VOC emission factor will also not be changed. The post-project emission factors will be same as the pre-project emission factors listed in the table below:

Pollutant	Emission Factors	Source
NO _x	0.1 lb/MMBtu	Current Permit to Operate
SO _x	0.00285 lb/MMBtu	Current Permit to Operate
PM10	0.0076 lb/MMBtu	Current Permit to Operate
CO	0.084 lb/MMBtu	Current Permit to Operate
VOC	1.95 lb/hr	Current Permit to Operate

C. Potential to Emit (PE)

1. Daily and Annual PE

Pre-Project Potential Emissions (PE1)

N-608-25-4 and -26-4 (served by a 6.75 MMBtu/hr thermal oxidizer)

Pollutant	Project Potential to Emit (PE1)					
	EF (lb/MMBtu) Or (lb/hr)	Heat Input (MMBtu/hr)	Daily Operating Schedule (hr/day)	Annual Operating Schedule (hr/year)	Daily PE1 (lb/day)	Annual PE1 (lb/yr)
NO _x	0.1	6.75	24	8,760	16.2	5,913
SO _x	0.00285	6.75	24	8,760	0.5	169
PM ₁₀	0.0076	6.75	24	8,760	1.2	449
CO	0.084	6.75	24	8,760	13.6	4,967
VOC	1.95 (lb/hr)	--	24	8,760	46.8	17,082

Post-Project Potential Emissions (PE2)

N-608-25-5 and -26-5 (served by a 11.44 MMBtu/hr thermal oxidizer)

Pollutant	Project Potential to Emit (PE2)					
	EF (lb/MMBtu) Or (lb/hr)	Heat Input (MMBtu/hr)	Daily Operating Schedule (hr/day)	Annual Operating Schedule (hr/year)	Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO _x	0.1	11.44	24	8,760	27.5	10,021
SO _x	0.00285	11.44	24	8,760	0.8	286
PM ₁₀	0.0076	11.44	24	8,760	2.1	762
CO	0.084	11.44	24	8,760	23.1	8,418
VOC	1.95 (lb/hr)	--	24	8,760	46.8	17,082

The thermal oxidizer serves both permit units N-608-25 and -26, therefore, the emissions from the thermal oxidizer should be divided equally among these two permit units as follows:

Daily emissions for each permit unit = [Thermal Oxidizer Daily PE2 (lb/day) ÷ 2]
 Annual emissions for each permit unit = [Thermal Oxidizer Annual PE2 (lb/yr) ÷ 2]

The following emissions values for each permit unit will be entered into District's PAS database.

N-608-25-5

Pollutant	Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO _x	13.7	5,010
SO _x	0.4	143
PM ₁₀	1.0	381
CO	11.5	4,209
VOC	23.4	8,541

N-608-26-5

Pollutant	Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO _x	13.8	5,011
SO _x	0.4	143
PM ₁₀	1.1	381
CO	11.6	4,209
VOC	23.4	8,541

2. Quarterly Emission Changes (ΔPE)

The Quarterly Emissions Changes (QEC) is calculated for each pollutant, for each unit, as the difference between the quarterly PE2 and the quarterly baseline emissions (BE). The annual emissions are evenly distributed throughout each quarter using the following equation:

$$\text{QEC (lb/quarter)} = [\text{Annual PE2} - \text{Annual PE1}] \text{ (lb/year)} / 4 \text{ (quarter/year)}$$

The thermal oxidizer serves both permit units N-608-25 and -26, therefore, the emission increase should be divided equally among these two permit units as follows:

$$\text{Changes of emissions for each permit unit} = \{[\text{Annual PE2} - \text{Annual PE1}] \text{ (lb/yr)} \div 2\} \div 4$$

N-608-25-5:

Pollutant	Quarterly Emission Changes (QEC)			
	1 st Quarter (lb/quarter)	2 nd Quarter (lb/quarter)	3 rd Quarter (lb/quarter)	4 th Quarter (lb/quarter)
NO _x	513	513	514	514
SO _x	14	14	15	15
PM ₁₀	39	39	39	39
CO	431	431	431	432
VOC	0	0	0	0

N-608-26-5:

Pollutant	Quarterly Emission Changes (QEC)			
	1 st Quarter (lb/quarter)	2 nd Quarter (lb/quarter)	3 rd Quarter (lb/quarter)	4 th Quarter (lb/quarter)
NO _x	513	513	514	514
SO _x	14	14	15	16
PM ₁₀	39	39	39	40
CO	431	431	432	432
VOC	0	0	0	0

3. Adjusted increase in Permitted Emissions (AIPE)

AIPE is used to determine if Best Available Control Technology (BACT) is required for emission units that are being modified. AIPE shall be calculated with using the equations listed in this Rule Section 4.3 and 4.4 as follow:

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

Where,

AIPE = Adjusted Increase in Permitted Emissions, pounds per day

PE2 = the emissions units post project Potential to Emit, pounds per day

HAPE = the emissions unit's Historically Adjusted Potential to Emit, pounds per day

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

Where,

PE1 = the emissions unit's Potential to Emit prior to modification or relocation

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.

Then,

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

N-608-25-5 and -26-5:

Dehydration systems with permit exempt burners all served by a shared thermal oxidizer:

As discussed in section VII.B of this document, each dehydration system consists of permit exempt burner and non-exempt VOC emission from the natural gas dehydration process. VOC emissions from the dehydration systems will vent to the emission control device, a shared thermal oxidizer.

The AIPE of VOC for each permit unit, dehydration system is calculated as follows:

$$\text{AIPE}_{\text{VOC}} = 23.4 - [23.4 \times (1)] = 0.0 \text{ lb-VOC/day}$$

D. Facility Emissions

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

Pursuant to District Rule 2201, § 4.9, 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.

See detail SSPE1 calculations in Appendix III of this document.

Permit Number	Pollutants (lb/yr)				
	NO _x	SO _x	PM ₁₀	CO	VOC
N-608-1-5	2,315	1	9	95	147
N-608-2-5	2,315	1	9	95	147
N-608-3-5	2,315	1	9	95	147
N-608-4-5	2,315	1	9	95	147
N-608-7-4	5,913	169	449	4,967	17,082
N-608-24-3					
N-608-8-3	0	0	0	0	479
N-608-13-5	830	0	59	178	67
N-608-14-5	830	0	59	178	67
N-608-15-2	297	0	3	489	4
N-608-16-3	0	0	0	0	1
N-608-17-3	0	0	0	0	1
N-608-18-3	19,643	44	2,183	65,476	19,643
N-608-19-3	19,643	44	2,183	65,476	19,643
N-608-20-3	15,060	33	1,673	50,198	15,060
N-608-21-3	15,060	33	1,673	50,198	15,060
N-608-25-4	5,913	169	449	4,967	17,082
N-608-26-4					
N-608-27-1	1,711	269	489	11,611	2,958
N-608-28-1	1,711	269	489	11,611	2,958
N-608-29-1	1,711	269	489	11,611	2,958
N-608-30-1	0	0	0	0	160
N-608-31-1	0	0	0	0	160
PE without ERC	97,582	1,303	10,234	277,340	113,971
ERC N-126-3	0	0	0	60,300	0
ERC N-868-1	0	0	0	0	12,402
ERC N-868-2	7,314	0	0	0	0
SSPE1	104,896	1,303	10,234	337,640	126,373

2. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, § 4.10, 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.

Permit Number	Pollutants (lb/yr)				
	NO _x	SO _x	PM ₁₀	CO	VOC
N-608-1-5	2,315	1	9	95	147
N-608-2-5	2,315	1	9	95	147
N-608-3-5	2,315	1	9	95	147
N-608-4-5	2,315	1	9	95	147
N-608-7-4	5,913	169	449	4,967	17,082
N-608-24-3					
N-608-8-3	0	0	0	0	479
N-608-13-5	830	0	59	178	67
N-608-14-5	830	0	59	178	67
N-608-15-2	297	0	3	489	4
N-608-16-3	0	0	0	0	1
N-608-17-3	0	0	0	0	1
N-608-18-3	19,643	44	2,183	65,476	19,643
N-608-19-3	19,643	44	2,183	65,476	19,643
N-608-20-3	15,060	33	1,673	50,198	15,060
N-608-21-3	15,060	33	1,673	50,198	15,060
ATC N-608-25-5	10,021	286	762	8,418	17,082
ATC N-608-26-5					
N-608-27-1	1,711	269	489	11,611	2,958
N-608-28-1	1,711	269	489	11,611	2,958
N-608-29-1	1,711	269	489	11,611	2,958
N-608-30-1	0	0	0	0	160
N-608-31-1	0	0	0	0	160
PE without ERC	101,690	1,420	10,547	280,791	113,971
ERC N-126-3	0	0	0	60,300	0
ERC N-868-1	0	0	0	0	12,402
ERC N-868-2	7,314	0	0	0	0
SSPE2	109,004	1,420	10,547	341,091	126,373

3. Stationary Source Increase in Permitted Emissions (SSIPE)

SSIPE calculations are used to determine if the project triggers public notice pursuant to District Rule 2201, § 5.4.5. If SSIPE results greater than 20,000 lb/yr for any one pollutant

then project requires public notification. At this time, it is District Practice to define the SSIPE as the difference of SSPE2 to SSPE1, and calculated by the following equation:

$$\text{SSIPE (lb/yr)} = \text{SSPE2 (lb/yr)} - \text{SSPE1 (lb/yr)}$$

SSIPE	Pollutants (lb/yr)				
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	109,004	1,420	10,547	341,091	126,373
SSPE1	104,896	1,303	10,234	337,640	126,373
SSIPE	4,108	117	313	3,451	0

As shown above, SSIPE is not greater than 20,000 lb/yr for any one pollutant. Therefore, public notification and publication requirement are not required for this purpose.

4. Major Source Determination

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

SSIPE	Pollutants (lb/yr)				
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2 without ERC	101,690	1,420	10,547	280,791	113,971
Major Source Threshold Level	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	Yes	Yes

As shown above, this facility is a Major Source for NO_x, CO, and VOC emissions.

5. SB 288 Major Modification

SB 288 Major Modification calculation is to determine the following:

- a. Pursuant to District Rule 2201, section 4.1.3, if Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification; and
- b. Pursuant to District Rule 2201, section 5.4.1, if a public notification is triggered.

As shown in Appendix III of this document, this facility is an existing Major Source for NO_x, CO, and VOC emissions. However, as indicated in section VII.D.1 of this document, the combined potential to emit of the equipment currently under consideration will not exceed any of the Major Source thresholds listed on Table 3-5 of Rule 2201 by themselves. Therefore, the proposed project cannot trigger an SB 288 Major Source Modification.

6. Federal Major Modification

Federal Major Modification is to determine the following:

- a. Pursuant to Rule 2201, section 4.2.3.5, if a Rule-compliance project qualifies for District Rule 2201's Best Available Control Technology (BACT) and offset exemptions and
- b. Pursuant to Rule 2201, section 4.15.1, if an Alternate Siting analysis must be performed; and if the applicant must provide certification that all California stationary sources owned, operated, or controlled by the applicant that are subject to emission limits are in compliance with those limits or are on a schedule for compliance with all applicable emission limits and standards; and
- c. Pursuant to Rule 2201, section 5.4.1, if a public notification is triggered.

This facility is an existing Major Source for NO_x, CO, and VOC emissions, however, pursuant to Rule 2201, section 3.18.1.4, Table 3-1, there is no significance threshold established for CO. Therefore, only the emission increase (EI) for NO_x and VOC are calculated and compared with the Federal Major Modification Thresholds.

The District draft policy "Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB 288 Major Modifications and Federal Major Modifications (2/8/11)" is referenced to determine the emissions increase.

Case 2 in the draft policy states "If the proposed modification does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate, then the unused baseline capacity emissions can also be excluded from the emission increase (EI).

Although the heat input rating of the thermal oxidizer will increase, neither the rating nor the utilization rate of the process equipment, dehydration systems will increase. Therefore, the above referenced draft policy allows the unused baseline capacity emissions to be excluded from the EI, and is calculated as follows:

$$EI = PAE - BAE - UBC$$

Where,
PAE = Projected Actual Emissions,
BAE = Baseline Actual Emissions,
UBC = Unused Baseline Capacity
UBC = PE1 - BAE

As discussed above, the proposed modification will not increase the permitted utilization rate of the dehydration systems, and the PAE is equal to PE2. Thus,

$$\begin{aligned} EI &= PAE - BAE - UBC \\ &= PE2 - BAE - (PE1 - BAE) \\ &= PE2 - PE1 \end{aligned}$$

Federal Major Modification Calculation and Determination					
Pollutant	PE2 (lb/yr)	PE1 (lb/yr)	EI (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x	10,021	5,913	4,108	0	Yes
VOC	17,082	17,082	0	0	No

As shown in above table, the proposed project is considered a Federal Major Modification for NO_x emissions, but not for VOC emissions.

VIII. COMPLIANCE

District Rule 2201 New and Modified Stationary Source Review Rule

1. Best Available Control Technology (BACT)

Pursuant to District Rule 2201, § 4.1.2, BACT requirements are triggered in a pollutant-by-pollutant basis for modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 lb/day, unless the unit is otherwise exempt per section 4.2. Section 4.2.1 provides an exemption from BACT requirements for CO emissions if the facility is located in a CO attainment area and the SSPE_{2CO} is less than 200,000 lb/yr. As well, BACT may be triggered if the modification is an SB 288 Major Modification or Federal Major Modification per section 4.1.3.

N-608-25-5 and -26-5:

Dehydration systems with permit exempt burners all served by a shared thermal oxidizer:

As shown in section VII.C.3 of this document, the AIPE of VOC emissions from each dehydration systems is equal to zero. In addition, as discussed in section VII.D.6 of this document, this permitting action is not considered a Federal Major Modification for VOC emissions. Therefore, BACT is not required for VOC emissions.

Shared Thermal Oxidizer (Natural gas combustion):

As discussed in section VII.D.6 of this document, this permitting action triggers a Federal Major Modification for NO_x. However, the thermal oxidizer is not an emission unit, so BACT is not applicable to this unit.

2. Offsets

Offsets are examined on a pollutant-by-pollutant basis, and are triggered for any pollutant with a SSPE2 equal to or greater than the values listed in § 4.5.3, table 4-1.

The replacement of the 6.5 MMBtu/hr thermal oxidizer with a 11.44 MMBtu/hr thermal oxidizer results increase of natural gas combustion emissions.

The SSPE2 values are calculated in section VII.C.2 of this document, and are compared with the offset thresholds as follows:

Emissions Offsets Determination			
Pollutant	SSPE2 (lb/yr)	Thresholds (lb/yr)	Offsets Triggered?
NO _x	109,004	20,000	Yes
SO _x	1,420	54,750	No
PM10	10,547	29,200	No
CO	341,091	200,000	Yes
VOC	126,373	20,000	Yes

As shown above, offsets are triggered for NO_x, CO, and VOC. Therefore, offset calculations are required, and pursuant to § 4.7.1, emission offset is calculated as the sum of differences between the PE2 and the BE of all the new and modified emissions units, plus all increases in Cargo Carrier emissions. The emissions offset are calculated as follow:

$$\text{Emission offset} = \Sigma (\text{PE2} - \text{BE}) \times \text{DOR} + \text{ICCE}$$

Where, PE2 is post project potential to emit
 BE is baseline emissions
 DOR is the distance offset ratio determined under Rule 2201, § 4.8
 ICCE is Increase in Cargo Carrier emissions

There are no increases in Cargo Carrier emissions as result of this project, and the proposed project constitutes a Federal Major Modification, which result DOR = 1.5. Then,

$$\text{Emission offset} = \Sigma (\text{PE2} - \text{BE}) \times 1.5 + 0$$

The dehydration systems modified under this project are considered Clean Emission Units, since they meet the achieved-in-practice BACT, which served by the existing thermal oxidizer with a minimum control efficiency of 97.5% for VOC. Therefore, BE_{VOC} is equal to PE1_{VOC} for each unit.

$$\text{Emission offset} = \Sigma (\text{PE2} - \text{PE1}) \times 1.5$$

As shown in section VII.D.3 of this document, the SSPE for NO_x, CO, and VOC are 4,108 lb-NO_x/yr, 3,451 lb-CO/yr, and 0 lb-VOC/yr respectively.

As demonstrated in section VIII.6 of this document below, the proposed project will not cause or contribute to a violation of Ambient Air Quality Standards, pursuant to § 4.6.1 of District Rule 2201, emission offsets for CO is not required. Therefore, emission offset is required only for NO_x emissions. Thus,

$$\text{Emission offset required} = 4,108 \times 1.5 \text{ lb- NO}_x/\text{yr} = 6,162 \text{ lb-NO}_x/\text{yr}$$

The quarterly NO_x emissions increase from this project:

Project Increase	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
NO _x	1,027	1,027	1,027	1,027

As shown above, offset are required for this project. The applicant has proposed to utilize ERC certificate N-868-2 to offset the increase of NO_x emissions in this project. The available credit on this certificate is listed in the table below:

ERC N-868-2	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
NO _x	556	3,428	2,975	355

This project constitutes a Federal Major Modification, which requires offset ratio of 1.5 to 1, therefore, the required quarterly offset for this project are:

Total Offset	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
NO _x	1,540	1,540	1,541	1,541

Pursuant to District Rule 2201, § 4.13.8, the actual emission reduction generated from April through November may be used to offset emissions increases during any period of the year.

Since the available credit on the 1st and 4th quarters of the ERC certificate N-868-2 are not sufficient to offset the emissions increase from the 1st and 4th quarters for this project. Emission credit of 983 lb-NO_x and 1,187 lb- NO_x will be taken from the 2nd and 3rd quarters of this certificate to mitigate the remaining emissions increase from the 1st and 4th quarters. The amount of credit of this ERC certificate after offset is summarized in the table below:

ERC N-868-2:

NO _x	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
Available Offset	556	3,428	2,975	355
Total emissions to be mitigated	1,540	1,540	1,541	1,541
Remaining emissions to be mitigated	-984	0	0	-1,186
Q2 and Q3 Available Offset	0	1,889	1,433	0
Q2 and Q3 excesses applied to Q1 and Q4	+984	-984	-1,186	+1,186
Remaining Offset	0	905	247	0

Therefore, the ERC certificate N-868-2 has sufficient credits to fully offset the increase of NO_x emissions in this project.

To ensure the emission credits from ERC Certificate N-868-2 utilize for offset the increase of NO_x emissions in this project, the following conditions will be listed on each ATC:

- *ERC certificate N-868-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]*
- *Prior to operating equipment under Authorities to Construct N-608-25-5 and N-608-26-5, permittee shall surrender NO_x emission reduction credits for the following quantity of emissions: 1st quarter – 1,027 lb, 2nd quarter - 1,027 lb, 3rd quarter - 1,027 lb, and 4th quarter - 1,027 lb. Offsets shall be provided at an offset ratio 1.5 to 1. [District Rule 2201]*

3. Public Notification

District Rule 2201, § 5.4, requires a public notification for the affected pollutants from the following types of projects:

- New Major Sources
- Federal Major Modifications and SB 288 Major Modifications
- New emission units with a PE >100 lb/day of any one pollutant
- Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis
- New stationary sources with SSPE2 exceeding Offset thresholds
- Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant

The proposed project triggers Federal Major Modification under Rule 2201. Therefore, a 30-day public notice is required for this project.

4. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by § 3.15 to restrict a unit's maximum daily emissions. Therefore, the following conditions will be listed on each permit:

- *The VOC control efficiency of the thermal oxidizer shall not be less than 97.5%. [District Rule 2201]*
- *NO_x emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.1 lb/MMBtu. [District Rule 2201]*
- *CO emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.084 lb/MMBtu. [District Rule 2201]*

- *PM10 emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.0076 lb/MMBtu. [District Rule 2201]*
- *SO_x emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.00285 lb/MMBtu. [District Rule 2201]*
- *The combined VOC emissions from dehydration units N-608-25 and N-608-26, including the combustion contaminants from the thermal oxidizer, shall not exceed 1.95 lb/hr. [District Rule 2201]*

5. Compliance Assurance

Source Testing

Pursuant to District Policy APR 1705, Section II, source testing is recommended that initial and annual source testing shall be conducted for units served by thermal incinerator that is used to controlling VOC emissions. Therefore, source testing to verify the proposed control efficiency for the new thermal oxidizer will be required during the initial start-up and annually thereafter.

Monitoring

The new thermal oxidizer is required to be equipped with a continuous temperature monitoring device to indicate the combustion chamber temperature.

Record Keeping

Recordkeeping is required to demonstrate compliance with the offsets, public notification and daily emission limit requirements of Rule 2201. Therefore, the following conditions will be listed on each permit:

- *Permittee shall maintain monthly records of the amount of gas dehydrated by dehydration units N-608-25 and -26. [District Rule 2201 and 4408]*
- *Permittee shall maintain the following records: APCD permit number; location, size of glycol dehydrator reboiler (MMBTU/hr), and type of glycol used; description of any installed VOC control system; flow diagram of the dehydrator and any VOC controls; maintenance records of the VOC control system; reports of source tests; all records necessary to document inputs to and outputs of the GRI-GLYCalc software, if used. [District Rules 2201 and 4408]*
- *All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4408]*

Reporting

Source testing reports are required to submit within 60 days after conducting the tests.

6. Ambient Air Quality Analysis

Per Section 4.14 of Rule 2201, ambient air quality analysis (AAQA) shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse the violation of an Ambient Air Quality Standard (AAQS). An AAQA is required to be performed for all New Source Review (NSR) public notice projects.

As previously discussed in Section VIII.3 of this document, this project requires that a public notice be performed before issuance of the ATCs for this project. Therefore, the District's Technical Services Division conducted the required analysis. See Appendix IV of this document for the AAQA summary sheet.

Criteria Pollutant Modeling Results in ($\mu\text{g}/\text{m}^3$):

NG Thermal Oxidizer	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	N/A	Pass	N/A	N/A
NO _x	Pass ¹	N/A	N/A	N/A	Pass
SO _x	Pass	Pass	N/A	Pass	Pass
PM ₁₀	N/A	N/A	N/A	Pass ²	Pass ²
PM _{2.5}	N/A	N/A	N/A	Pass ²	Pass ²

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

7. Additional Requirements for new Major Source and Federal Major Modifications

Per Section 4.15 of Rule 2201, "Alternative Siting" and "Compliance Certification" is required for any project which constitutes a new Major Source or a Federal Major Modification.

Per section 4.15.1, Alternative Siting Analysis:

The current project occurs at an existing facility. The proposed replacement of the emission control device, thermal oxidizer result no increase of the production throughput of the facility.

Since the current project involves only replacement of the emission control device, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures and facilities on a much greater scale, and would therefore result in a much greater impact.

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

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

Per section 4.15.2, Compliance Certification:

A source undergoing a Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards.

This project constitutes a Federal Major Modification. Therefore, compliance certification is required, and a copy of compliance certification from the facility is included in Appendix V of this document.

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

District Rule 2520 Federally Mandated Operating Permits

PG&E possesses a Title V permit. The proposed project is considered a Significant Modification to the Title V permit. Therefore, the following conditions will be listed on each permit:

- *{1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule]*
- *{1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]*

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permit (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix V of this document)

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change except when allowed by the operational flexibility provisions of section 6.4 of this rule.

PG&E is expected to notify the District by filing the appropriate application forms prior to commencing operation.

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

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that 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 dark or darker than Ringelmann 1 or equivalent to 20% opacity. Therefore, the following conditions will be listed on each permit:

- *{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]*

Compliance with the requirements of this Rule is expected.

District 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, the following conditions will be listed on each permit:

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

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905-1 (March 2, 2001) - 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. The health risk assessment results are as follow:

RMR Summary			
Categories	NG Thermal Oxidizer (for units 25-5 & 26-5)	Project Totals	Facility Totals
Prioritization Score	0.00	0.00	7.35
Acute Hazard Index	1.99E-06	1.99E-06	6.00E-01
Chronic Hazard Index	4.49E-07	4.49E-07	4.49E-07
Maximum Individual Cancer Risk	1.27E-09	1.27E-09	3.50
T-BACT Required?	No		
Special Permit Conditions?	No		

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). See detail Appendix IV of this document for the RMR Summary.

Compliance with the requirements of this Rule is expected.

District Rule 4694 Glycol Dehydration Systems

The purpose of this rule is to limit VOC emissions from glycol dehydration systems.

Section 5.1 requires the operator of a glycol dehydration system shall vent the VOC emissions from the dehydration system to an emissions control device achieve.

The dehydration systems are currently vented to the thermal oxidizer with 97.5% VOC control efficiency, and the new thermal oxidizer will provide at least same level of control of the VOC emissions. In addition, initial and ongoing source testing will be required to ensure compliance with this requirement.

Section 6.1.1 requires the operator of a glycol dehydration system to maintain monthly records of the amount of gas dehydrated.

Section 6.1.2 requires the operator of a glycol dehydration system to maintain information specified in § 6.1.2.1 thru 6.1.2.7.

Therefore, the following conditions will be listed on each permit:

- *Permittee shall maintain monthly records of the amount of gas dehydrated by dehydration units N-608-25 and -26. [District Rule 2201 and 4408]*
- *Permittee shall maintain the following records: APCD permit number; location, size of glycol dehydrator reboiler (MMBTU/hr), and type of glycol used; description of any installed VOC control system; flow diagram of the dehydrator and any VOC controls; maintenance records of the VOC control system; reports of source tests; all records necessary to document inputs to and outputs of the GRI-GLYCalc software, if used. [District Rules 2201 and 4408]*

Continuous compliance with the requirements of this Rule is expected.

California Health & Safety Code 42301.6 (School Notice)

As discussed in section III of this document, the California Health and Safety Code 42301.6 requirement does not apply to this project.

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:

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are not triggered 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 NSR Public Noticing period, issue Authorities to Construct N-608-25-5 and N-608-26-5 subject to the permit conditions listed on the attached draft Authorities to Construct in Appendix I.

X. BILLING INFORMATION

Annual Permit Fees				
Permit Number	Previous Fee Schedule	New Fee Schedule	Fee Description ³	Annual Fee
N-608-25-5	3020-02-F	3020-02-G (5.0 or Greater but Less Than 15.0 MMBtu/hr)	5.72 MMBtu/hr	\$ 815
N-608-26-5	3020-02-F	3020-02-G (5.0 or Greater but Less Than 15.0 MMBtu/hr)	5.72 MMBtu/hr	\$ 815

APPENDICES

- Appendix I: Draft Authorities to Construct (ATC)*
- Appendix II: Existing Permits to Operate (PTO)*
- Appendix III: SSPE Calculations*
- Appendix IV: Ambient Air Quality Analysis (AAQA) & Risk Management Review (RMR)*
- Appendix V: Compliance Certification*

³ Permit units N-608-25 and -26 shares a 11.44 MMBtu/hr thermal oxidizer. According to District Policy APR-1025, the equipment rating for shared equipment, which is used to determine annual permit fees, should be divided equally among the equipment it serves.

Appendix I

Draft Authorities to Construct (ATC)

N-608-25-5 & N-608-26-5

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-608-25-5

LEGAL OWNER OR OPERATOR: PACIFIC GAS & ELECTRIC CO.
MAILING ADDRESS: ATTN: AIR QUALITY PERMITS
P O BOX 7640
SAN FRANCISCO, CA 94120

LOCATION: MCDONALD ISLAND COMPRESSOR STATION
HOLT, CA 95234

EQUIPMENT DESCRIPTION:

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-26) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-26) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#3). MODIFICATION TO REPLACE THE THERMAL OXIDIZER. THE POST PROJECT EQUIPMENT DESCRIPTION BECOMES: NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-26) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 11.44 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-26) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#3).

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under Authorities to Construct N-608-25-5 and N-608-26-5, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter - 1,027 lb, 2nd quarter - 1,027 lb, 3rd quarter - 1,027 lb, and 4th quarter - 1,027 lb. Offsets shall be provided at an offset ratio 1.5 to 1. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 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

N-608-25-5 : Jun 22 2012 10:12AM - SOW : Joint Inspection NOT Required

4. ERC certificate N-868-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. {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]
7. The thermal oxidizer shall be fired solely on PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The thermal oxidizer shall be equipped with an operational temperature indicator at the combustion chamber. The temperature shall be monitored and recorded continuously. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The thermal oxidizer shall be heated to at least 1400 degrees Fahrenheit prior to any contaminated air steam entering the oxidizer, and shall operate at a minimum temperature of 1400 degrees Fahrenheit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The thermal oxidizer shall operate at all times when dehydration is taking place. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Only glycol shall be used as the dehydration medium. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The VOC control efficiency of the thermal oxidizer shall not be less than 97.5%. [District Rules 2201 and 4408] Federally Enforceable Through Title V Permit
13. NOx emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.1 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. CO emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
15. PM10 emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.0076 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. SOx emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The combined VOC emissions from dehydration units N-608-25 and N-608-26, including the combustion contaminants from the thermal oxidizer, shall not exceed 1.95 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to determine the thermal oxidizer VOC control efficiency and the combined VOC emissions from units N-608-25 and -26 shall be conducted within 60 days of initial start-up and annually thereafter. [District Rules 1081, 2201, and 4408] Federally Enforceable Through Title V Permit
19. 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] Federally Enforceable Through Title V Permit
20. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
21. VOC emissions shall be measured by EPA Method 25, 25A, 25B, or 18. [District Rules 1081 and 4408] Federally Enforceable Through Title V Permit
22. Permittee shall maintain monthly records of the amount of gas dehydrated by dehydration units N-608-25 and -26. [District Rules 2201 and 4408] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Permittee shall maintain the following records: APCD permit number; location, size of glycol dehydrator reboiler (MMBTU/hr), and type of glycol used; description of any installed VOC control system; flow diagram of the dehydrator and any VOC controls; maintenance records of the VOC control system; reports of source tests; all records necessary to document inputs to and outputs of the GRI-GLYCalc software, if used. [District Rules 2201 and 4408] Federally Enforceable Through Title V Permit
24. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rules 2201 and 4408] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-608-26-5

LEGAL OWNER OR OPERATOR: PACIFIC GAS & ELECTRIC CO.
MAILING ADDRESS: ATTN: AIR QUALITY PERMITS
P O BOX 7640
SAN FRANCISCO, CA 94120

LOCATION: MCDONALD ISLAND COMPRESSOR STATION
HOLT, CA 95234

EQUIPMENT DESCRIPTION:

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-25) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-25) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#4). MODIFICATION TO REPLACE THE THERMAL OXIDIZER. THE POST PROJECT EQUIPMENT DESCRIPTION BECOMES: NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-25) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 11.44 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-25) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#4).

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under Authorities to Construct N-608-25-5 and N-608-26-5, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter - 1,027 lb, 2nd quarter - 1,027 lb, 3rd quarter - 1,027 lb, and 4th quarter - 1,027 lb. Offsets shall be provided at an offset ratio 1.5 to 1. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 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

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DAVID WARNER, Director of Permit Services

N-608-26-5 : Jun 22 2012 10:13AM - SDV : Joint Inspection NOT Required

4. ERC certificate N-868-2 (or a certificate split from this certificate) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. {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]
7. The thermal oxidizer shall be fired solely on PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The thermal oxidizer shall be equipped with an operational temperature indicator at the combustion chamber. The temperature shall be monitored and recorded continuously. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The thermal oxidizer shall be heated to at least 1400 degrees Fahrenheit prior to any contaminated air steam entering the oxidizer, and shall operate at a minimum temperature of 1400 degrees Fahrenheit. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The thermal oxidizer shall operate at all times when dehydration is taking place. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Only glycol shall be used as the dehydration medium. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The VOC control efficiency of the thermal oxidizer shall not be less than 97.5%. [District Rules 2201 and 4408] Federally Enforceable Through Title V Permit
13. NOx emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.1 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. CO emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
15. PM10 emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.0076 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. SOx emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The combined VOC emissions from dehydration units N-608-25 and N-608-26, including the combustion contaminants from the thermal oxidizer, shall not exceed 1.95 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to determine the thermal oxidizer VOC control efficiency and the combined VOC emissions from units N-608-25 and -26 shall be conducted within 60 days of initial start-up and annually thereafter. [District Rules 1081, 2201, and 4408] Federally Enforceable Through Title V Permit
19. 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] Federally Enforceable Through Title V Permit
20. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
21. VOC emissions shall be measured by EPA Method 25, 25A, 25B, or 18. [District Rules 1081 and 4408] Federally Enforceable Through Title V Permit
22. Permittee shall maintain monthly records of the amount of gas dehydrated by dehydration units N-608-25 and -26. [District Rules 2201 and 4408] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Permittee shall maintain the following records: APCD permit number; location, size of glycol dehydrator reboiler (MMBTU/hr), and type of glycol used; description of any installed VOC control system; flow diagram of the dehydrator and any VOC controls; maintenance records of the VOC control system; reports of source tests; all records necessary to document inputs to and outputs of the GRI-GLYCalc software, if used. [District Rules 2201 and 4408] Federally Enforceable Through Title V Permit
24. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rules 2201 and 4408] Federally Enforceable Through Title V Permit

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Appendix II
Existing Permits to Operate (PTO)
N-608-25-4 & N-608-26-4

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-608-25-4

EXPIRATION DATE: 10/31/2015

EQUIPMENT DESCRIPTION:

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-26) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-26) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#3)

PERMIT UNIT REQUIREMENTS

1. The thermal oxidizer shall be fired solely on PUC quality natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The thermal oxidizer shall be equipped with an operational temperature indicator at the combustion chamber. The temperature shall be monitored and recorded continuously. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The thermal oxidizer shall be heated to at least 1400 degrees Fahrenheit prior to any contaminated air steam entering the oxidizer, and shall operate at a minimum temperature of 1400 degrees Fahrenheit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The thermal oxidizer shall operate at all times when dehydration is taking place. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Only glycol shall be used as the dehydration medium. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The VOC control efficiency of the thermal oxidizer shall not be less than 97.5%. [District NSR Rule and District Rule 4408, 5.1.3] Federally Enforceable Through Title V Permit
7. NOx emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.1 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
8. CO emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.084 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. PM10 emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.0076 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
10. SOx emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.00285 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
11. The combined VOC emissions from dehydration units N-608-25 and N-608-26, including the combustion contaminants from the thermal oxidizer, shall not exceed 1.95 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Source testing to determine the thermal oxidizer VOC control efficiency and the combined VOC emissions from units N-608-25 and -26 shall be conducted annually. [District Rules 1081, 7.2 and 4408, 5.1.3.2] Federally Enforceable Through Title V Permit
13. 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, 7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit
15. VOC emissions shall be measured by EPA Method 25, 25A, 25B, or 18. [District Rules 1081, 5.0 and 4408, 6.2.2.4] Federally Enforceable Through Title V Permit
16. Permittee shall maintain monthly records of the amount of gas dehydrated by dehydration units N-608-25 and -26. [District NSR Rule and District Rule 4408, 6.1.1] Federally Enforceable Through Title V Permit
17. Permittee shall maintain the following records: APCD permit number; location, size of glycol dehydrator reboiler (MMBTU/hr), and type of glycol used; description of any installed VOC control system; flow diagram of the dehydrator and any VOC controls; maintenance records of the VOC control system; reports of source tests; all records necessary to document inputs to and outputs of the GRI-GLYCalc software, if used. [District NSR Rule and District Rule 4408, 6.1.2] Federally Enforceable Through Title V Permit
18. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 4408, 6.1.4] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-608-26-4

EXPIRATION DATE: 10/31/2015

EQUIPMENT DESCRIPTION:

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-25) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-25) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#4)

PERMIT UNIT REQUIREMENTS

1. The thermal oxidizer shall be fired solely on PUC quality natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The thermal oxidizer shall be equipped with an operational temperature indicator at the combustion chamber. The temperature shall be monitored and recorded continuously. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The thermal oxidizer shall be heated to at least 1400 degrees Fahrenheit prior to any contaminated air steam entering the oxidizer, and shall operate at a minimum temperature of 1400 degrees Fahrenheit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. The thermal oxidizer shall operate at all times when dehydration is taking place. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Only glycol shall be used as the dehydration medium. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The VOC control efficiency of the thermal oxidizer shall not be less than 97.5%. [District NSR Rule and District Rule 4408, 5.1.3] Federally Enforceable Through Title V Permit
7. NOx emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.1 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
8. CO emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.084 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. PM10 emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.0076 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
10. SOx emissions from natural gas combustion in the thermal oxidizer shall not exceed 0.00285 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
11. The combined VOC emissions from dehydration units N-608-25 and N-608-26, including the combustion contaminants from the thermal oxidizer, shall not exceed 1.95 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Source testing to determine the thermal oxidizer VOC control efficiency and the combined VOC emissions from units N-608-25 and -26 shall be conducted annually. [District Rules 1081, 7.2 and 4408, 5.1.3.2] Federally Enforceable Through Title V Permit
13. 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, 7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit
15. VOC emissions shall be measured by EPA Method 25, 25A, 25B, or 18. [District Rules 1081, 5.0 and 4408, 6.2.2.4] Federally Enforceable Through Title V Permit
16. Permittee shall maintain monthly records of the amount of gas dehydrated by dehydration units N-608-25 and -26. [District NSR Rule and District Rule 4408, 6.1.1] Federally Enforceable Through Title V Permit
17. Permittee shall maintain the following records: APCD permit number; location, size of glycol dehydrator reboiler (MMBTU/hr), and type of glycol used; description of any installed VOC control system; flow diagram of the dehydrator and any VOC controls; maintenance records of the VOC control system; reports of source tests; all records necessary to document inputs to and outputs of the GRI-GLYCalc software, if used. [District NSR Rule and District Rule 4408, 6.1.2] Federally Enforceable Through Title V Permit
18. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 4408, 6.1.4] Federally Enforceable Through Title V Permit

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

Appendix III

SSPE Calculations

SSPE Calculation:

N-608-1-5

625 BHP CATERPILLAR MODEL G-398 NATURAL GAS FIRED IC ENGINE POWERING AN EMERGENCY GENERATOR (SERIAL # 73B1022) SERVING THE TURNER CUT STATION

N-608-2-5

625 BHP CATERPILLAR MODEL G-398 NATURAL GAS FIRED IC ENGINE POWERING AN EMERGENCY GENERATOR (SERIAL # 73B1012) SERVING THE TURNER CUT STATION

N-608-3-5

625 BHP CATERPILLAR MODEL G-398 NATURAL GAS FIRED IC ENGINE POWERING AN EMERGENCY GENERATOR (SERIAL # 73B1020) SERVING THE WHISKY SLOUGH STATION

N-608-4-5

625 BHP CATERPILLAR MODEL G-398 NATURAL GAS FIRED IC ENGINE POWERING AN EMERGENCY GENERATOR (SERIAL # 73B1025) SERVING THE WHISKY SLOUGH STATION

The IC engines under these permit units are identical engine. Therefore, a single calculation will be performed. Emissions factors were taken from engineering evaluation N-1060086, the annual operating hour for each engine is limited to 100 hours per current PTO.

N-608-1-5, -2-5, -3-5, & -4-5 (Each):

Emission Factors (EF) for each IC engine are listed below:

Pollutant	Emission Factors (EF)	Source
NO _x	16.8 g/hp-hr	N-1060086
SO _x	0.0094 g/hp-hr	N-1060086
PM ₁₀	0.063 g/hp-hr	N-1060086
CO	0.69 g/hp-hr	N-1060086
VOC	1.07 g/hp-hr	N-1060086

Potential to Emit (PE) for each IC engine are listed below:

Pollutant	Potential to Emit (PE)				
	EF (g/hp-hr)	Conversion (g/lb)	Power Rating (hp)	Operating Schedule (hr/yr)	Annual PE (lb/yr)
NO _x	16.8	453.6	625	100	2,315
SO _x	0.0094	453.6	625	100	1
PM ₁₀	0.063	453.6	625	100	9
CO	0.69	453.6	625	100	95
VOC	1.07	453.6	625	100	147

N-608-7-4

NATURAL GAS DEHYDRATION SYSTEM (TURNER CUT STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-24) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-24) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#1).

N-608-24-3

NATURAL GAS DEHYDRATION SYSTEM (TURNER CUT STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-7) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-7) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#2)

These two natural gas dehydration systems served by a common 6.75 MMBtu/hr thermal oxidizer. Emissions factors were taken from the current PTO, these two permit units have a combined VOC limit of 1.95 lb/hr.

N-608-7-4 and N-608-24-3 (Combined):

Emissions Factors (EF) for the shared TO are listed below:

Pollutant	Emission Factors	Source
NO _x	0.1 lb/MMBtu	Current Permit to Operate
SO _x	0.00285 lb/MMBtu	Current Permit to Operate
PM ₁₀	0.0076 lb/MMBtu	Current Permit to Operate
CO	0.084 lb/MMBtu	Current Permit to Operate
VOC	1.95 lb/hr	Current Permit to Operate

Combined Potential to Emit (PE) from these units, the shared TO are listed below

Pollutant	Potential to Emit (PE)			
	EF (lb/MMBtu) or (lb/hr)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	PE1 (lb/yr)
NO _x	0.1	6.75	8,760	5,913
SO _x	0.00285	6.75	8,760	169
PM ₁₀	0.0076	6.75	8,760	449
CO	0.084	6.75	8,760	4,967
VOC	1.95 (lb/hr)	--	8,760	17,082

N-608-8-3

ONE 1,000 GALLON ABOVEGROUND CONVULT STORAGE TANK SERVED BY AN EBW COAXIAL PHASE I VAPOR RECOVERY SYSTEM (G-70-116-F) AND ONE FUELING POINT WITH ONE GASOLINE DISPENSING NOZZLE SERVED BY A BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-116-F).

Emissions factor is taken from current GEAR as follows:

VOC emission factors	
Emission Factor (lb-VOC/1,000 gal)	Emission Source
0.42	Tank filling loss (95%)
0.053	Breathing loss (A/G tank)
0.42	Vehicle fueling loss (95%)
0.42	Spillage
1.313	Total VOC losses

Per current GEAR, since this is a 1,000 gallons tank, the emission is calculated based on one tank turn over per day, and a worst-case scenario of 365 days operation as follows:

$$\begin{aligned} \text{Annual throughput (gal/yr)} &= 1 \text{ Tank turn over gal/day} \times 365 \text{ days/yr} \\ &= 1,000 \text{ gal/day} \times 365 \text{ days/yr} \\ &= 365,000 \text{ gal/yr} \end{aligned}$$

$$\begin{aligned} \text{Annual Emission (lb/yr)} &= 365,000 \text{ gal/yr} \times 1.313 \text{ (lb-VOC/1,000 gal)} \\ &= 479 \text{ lb-VOC/year} \end{aligned}$$

N-608-13-5

267 BHP CATERPILLAR MODEL 3306-DI DIESEL FIRED EMERGENCY IC ENGINE POWERING A FIRE PUMP (SERIAL # 64Z204154).

N-608-14-5

267 BHP CATERPILLAR MODEL 3306-DI DIESEL FIRED EMERGENCY IC ENGINE POWERING A FIRE PUMP (SERIAL # 64Z204157).

The IC engines under these permit units are identical engine. Therefore, a single calculation will be performed. Except SO_x, all other EFs and annual emissions were taken from engineering evaluation N-1060086. Per current PTO, the annual operating hour is limited to 100 hours. The District requires the use of ultra-low sulfur (0.0015% by weight) diesel fuel. Emission factor for SO_x is calculated by following mass balance equation:

$$\frac{0.000015 \text{ lb - S}}{\text{lb - fuel}} \times \frac{7.1 \text{ lb - fuel}}{\text{gallon}} \times \frac{2 \text{ lb - SO}_2}{1 \text{ lb - S}} \times \frac{1 \text{ gal}}{137,000 \text{ Btu}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp - hr}} \times \frac{453.6 \text{ g}}{\text{lb}} = 0.0051 \frac{\text{g - SO}_x}{\text{bhp - hr}}$$

N-608-13-5 & -14-5 (Each):

Emission Factors (EF) for each IC engine are listed below:

Pollutant.	Emission Factors (EF)	Source
NO _x	14.1 g/hp-hr	N-1060086
SO _x	0.0051 g/hp-hr	Mass balance equation above
PM ₁₀	1.0 g/hp-hr	N-1060086
CO	3.03 g/hp-hr	N-1060086
VOC	1.14 g/hp-hr	N-1060086

Potential to Emit (PE) for each IC engine are listed below:

Pollutant	Potential to Emit (PE)				
	EF (g/hp-hr)	Conversion (g/lb)	Power Rating (hp)	Operating Schedule (hr/yr)	Annual PE (lb/yr)
NO _x	14.1	453.6	267	100	830
SO _x	0.0051	453.6	267	100	0
PM ₁₀	1.0	453.6	267	100	59
CO	3.03	453.6	267	100	178
VOC	1.14	453.6	267	100	67

N-608-15-2

220 BHP NATURAL GAS FIRED RICH BURN EMERGENCY IC ENGINE POWERING AN ELECTRICAL GENERATOR

Emissions factors were taken from engineering evaluation N-1060086, the annual operating hour for this engine is limited to 82 hours per current PTO.

Emission Factors (EF) are listed below:

Pollutant	Emission Factors (EF)	Source
NO _x	7.48 g/hp-hr	N-1060086
SO _x	0.0094 g/hp-hr	N-1060086
PM ₁₀	0.063 g/hp-hr	N-1060086
CO	12.3 g/hp-hr	N-1060086
VOC	0.099 g/hp-hr	N-1060086

Potential to Emit (PE) for each IC engine are listed below:

Pollutant	Potential to Emit (PE)				
	EF (g/hp-hr)	Conversion (g/lb)	Power Rating (hp)	Operating Schedule (hr/yr)	Annual PE (lb/yr)
NO _x	7.48	453.6	220	82	297
SO _x	0.0094	453.6	220	82	0
PM ₁₀	0.063	453.6	220	82	3
CO	12.3	453.6	220	82	489
VOC	0.099	453.6	220	82	4

N-608-16-3

ONE 3,500 GALLON ABOVEGROUND METHANOL STORAGE TANK (TURNER CUT STATION)

N-608-17-3

ONE 3,500 GALLON ABOVEGROUND METHANOL STORAGE TANK (WHISKY SLOUGH STATION)

The methanol storage tanks under these permit units are identical tanks. Annual emissions from these permit units were taken from engineering evaluation N-1071202.

Annual PE _{N-608-16-3} = 1 lb-VOC/year

Annual PE _{N-608-17-3} = 1 lb-VOC/year

N-608-18-3

1,500 BHP WAUKESHA MODEL 9390 GL LEAN BURN NATURAL GAS FIRED IC ENGINE POWERING A NATURAL GAS COMPRESSOR (PG&E DESIGNATION K-3).

N-608-19-3

1,500 BHP WAUKESHA MODEL 9390 GL LEAN BURN NATURAL GAS FIRED IC ENGINE POWERING A NATURAL GAS COMPRESSOR (PG&E DESIGNATION K-4).

The IC engines under these permit units are identical engine. Therefore, a single calculation will be performed. Emissions factors and annual operating hour for each engine were taken from current PTO.

N-608-18-3 & -19-3 (Each):

Emission Factors (EF) for each IC engine are listed below:

Pollutant	Emission Factors (EF)	Source
NO _x	0.9 g/hp-hr	Current PTO
SO _x	0.002 g/hp-hr	Current PTO
PM ₁₀	0.1 g/hp-hr	Current PTO
CO	3.0 g/hp-hr	Current PTO
VOC	0.9 g/hp-hr	Current PTO

Potential to Emit (PE) for each IC engine are listed below:

Pollutant	Potential to Emit (PE)				
	EF (g/hp-hr)	Conversion (g/lb)	Power Rating (hp)	Operating Schedule (hr/yr)	Annual PE (lb/yr)
NO _x	0.9	453.6	1,500	6,600	19,643
SO _x	0.002	453.6	1,500	6,600	44
PM ₁₀	0.1	453.6	1,500	6,600	2,183
CO	3.0	453.6	1,500	6,600	65,476
VOC	0.9	453.6	1,500	6,600	19,643

N-608-20-3

1,150 BHP WAUKESHA MODEL 7042 GL LEAN BURN NATURAL GAS FIRED IC ENGINE POWERING A NATURAL GAS COMPRESSOR (PG&E DESIGNATION K-5).

N-608-21-3

1,150 BHP WAUKESHA MODEL 7042 GL LEAN BURN NATURAL GAS FIRED IC ENGINE POWERING A NATURAL GAS COMPRESSOR (PG&E DESIGNATION K-6).

The IC engines under these permit units are identical engine. Therefore, a single calculation will be performed. Emissions factors and annual operating hour for each engine were taken from current PTO.

N-608-20-3 & -21-3 (Each):

Emission Factors (EF) for each IC engine are listed below:

Pollutant	Emission Factors (EF)	Source
NO _x	0.9 g/hp-hr	Current PTO
SO _x	0.002 g/hp-hr	Current PTO
PM ₁₀	0.1 g/hp-hr	Current PTO
CO	3.0 g/hp-hr	Current PTO
VOC	0.9 g/hp-hr	Current PTO

Potential to Emit (PE) for each IC engine are listed below:

Pollutant	Potential to Emit (PE)				
	EF (g/hp-hr)	Conversion (g/lb)	Power Rating (hp)	Operating Schedule (hr/yr)	Annual PE (lb/yr)
NO _x	0.9	453.6	1,150	6,600	15,060
SO _x	0.002	453.6	1,150	6,600	33
PM ₁₀	0.1	453.6	1,150	6,600	1,673
CO	3.0	453.6	1,150	6,600	50,198
VOC	0.9	453.6	1,150	6,600	15,060

N-608-25-4

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-26) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-26) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#3)

N-608-26-4

NATURAL GAS DEHYDRATION SYSTEM (WHISKY SLOUGH STATION) AND ODORIZING SYSTEM (SHARED WITH N-608-25) INCLUDING TWO CONTACTOR TOWERS AND A 3-PHASE GAS SEPARATOR SERVED BY A 6.75 MMBTU/HR THERMAL OXIDIZER (SHARED WITH N-608-25) AND A PERMIT EXEMPT < 5 MMBTU/HR REBOILER (#4)

Emissions from these permit units were calculated in section VII.C of this document, and listed below.

Combined Potential to Emit (PE) for these units (N-608-25-4 & -26-4) from the shared TO are listed below:

Pollutant	Potential to Emit (PE)			PE1 (lb/yr)
	EF (lb/MMBtu) or (lb/hr)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	
NO _x	0.1	6.75	8,760	5,913
SO _x	0.00285	6.75	8,760	169
PM ₁₀	0.0076	6.75	8,760	449
CO	0.084	6.75	8,760	4,967
VOC	1.95 (lb/hr)	--	8,760	17,082

N-608-27-1

1,680 BHP WAUKESHA MODEL L7044GSI NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION (NSCR) AND AN O2 CONTROLLER. THE UNIT POWERS A NATURAL GAS COMPRESSOR (PG&E DESIGNATION K-7)

N-608-28-1

1,680 BHP WAUKESHA MODEL L7044GSI NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION (NSCR) AND AN O2 CONTROLLER. THE UNIT POWERS A NATURAL GAS COMPRESSOR (PG&E DESIGNATION K-8)

N-608-29-1

1,680 BHP WAUKESHA MODEL L7044GSI NATURAL GAS-FIRED IC ENGINE WITH NON-SELECTIVE CATALYTIC REDUCTION (NSCR) AND AN O2 CONTROLLER. THE UNIT POWERS A NATURAL GAS COMPRESSOR (PG&E DESIGNATION K-9)

The IC engines under these permit units are identical engine. Therefore, a single calculation will be performed. Emissions factors and annual operating hour for each engine were taken from current PTO.

N-608-27-1, -28-1, & -29-1 (Each):

Emission Factors (EF) for each IC engine are listed below:

Pollutant	Emission Factors (EF)	Source
NO _x	0.070 g/hp-hr	Current PTO
SO _x	0.011 g/hp-hr	Current PTO
PM ₁₀	0.02 g/hp-hr	Current PTO
CO	0.475 g/hp-hr	Current PTO
VOC	0.121 g/hp-hr	Current PTO

Potential to Emit (PE) for each IC engine are listed below:

Pollutant	Potential to Emit (PE)				
	EF (g/hp-hr)	Conversion (g/lb)	Power Rating (hp)	Operating Schedule (hr/yr)	Annual PE (lb/yr)
NO _x	0.070	453.6	1,680	6,600	1,711
SO _x	0.011	453.6	1,680	6,600	269
PM ₁₀	0.02	453.6	1,680	6,600	489
CO	0.475	453.6	1,680	6,600	11,611
VOC	0.121	453.6	1,680	6,600	2,958

N-608-30-1

25,000 GALLON CONDENSATE STORAGE TANK (TURNER CUT STATION)

N-608-31-1

25,000 GALLON CONDENSATE STORAGE TANK (WHISKY SLOUGH STATION)

The condensate storage tanks under these permit units are identical tanks. Annual emissions from these permit units were taken from engineering evaluation N-1063164.

Annual PE_{N-608-30-1} = 160 lb-VOC/year

Annual PE_{N-608-31-1} = 160 lb-VOC/year

SSPE1

Permit Number	Pollutants (lb/yr)				
	NO _x	SO _x	PM ₁₀	CO	VOC
N-608-1-5	2,315	1	9	95	147
N-608-2-5	2,315	1	9	95	147
N-608-3-5	2,315	1	9	95	147
N-608-4-5	2,315	1	9	95	147
N-608-7-4	5,913	169	449	4,967	17,082
N-608-24-3					
N-608-8-3	0	0	0	0	479
N-608-13-5	830	0	59	178	67
N-608-14-5	830	0	59	178	67
N-608-15-2	297	0	3	489	4
N-608-16-3	0	0	0	0	1
N-608-17-3	0	0	0	0	1
N-608-18-3	19,643	44	2,183	65,476	19,643
N-608-19-3	19,643	44	2,183	65,476	19,643
N-608-20-3	15,060	33	1,673	50,198	15,060
N-608-21-3	15,060	33	1,673	50,198	15,060
N-608-25-4	5,913	169	449	4,967	17,082
N-608-26-4					
N-608-27-1	1,711	269	489	11,611	2,958
N-608-28-1	1,711	269	489	11,611	2,958
N-608-29-1	1,711	269	489	11,611	2,958
N-608-30-1	0	0	0	0	160
N-608-31-1	0	0	0	0	160
PE without ERC	97,582	1,303	10,234	277,340	113,971
ERC N-126-3	0	0	0	60,300	0
ERC N-868-1	0	0	0	0	12,402
ERC N-868-2	7,314	0	0	0	0
SSPE1	104,896	1,303	10,234	337,640	126,373
Major Source Threshold Levels	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	Yes	Yes

Appendix IV
Ambient Air Quality Analysis (AAQA)
&
Risk Management Review (RMR)

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Wai-Man- Permit Services
 From: Kou Thao – Technical Services
 Date: 5-22-12
 Facility Name: PG&E
 Location: McDonald Island,
 Holt, CA
 Application #(s): N-608-25-5 & 26-5
 Project #: N-1120252

A. RMR SUMMARY

RMR Summary			
Categories	(Thermal Oxidizer for units 25-5 & 26-5)	Project Totals	Facility Totals
Prioritization Score	0.00	0.00	7.35
Acute Hazard Index	1.99E-06	1.99E-06	6.00E-01
Chronic Hazard Index	4.49E-07	4.49E-07	4.49E-07
Maximum Individual Cancer Risk (10⁻⁶)	1.27E-09	1.27E-09	3.50E+00
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 # 25-5 & 26-5

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on May 17, 2012, to perform a Risk Management Review for a proposed installation of an 11.44 mmbtu/hr natural gas thermal oxidizer to replace the existing thermal oxidizer serving two natural gas dehydration systems under permit units 25-5 and 26-5.

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. Toxic emissions for this proposed unit were calculated using 2001 Ventura County's Air Pollution Control District's emission factors for Natural Gas Fired external combustion. The AERMOD model was used, with the parameters outlined below and meteorological data for 2005-2009 from Stockton 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			
For thermal oxidizer serving permit units -25-5 & -26-5			
Source Type	Point	Location Type	Rural
Stack Height (m)	14.63	Closest Receptor (m)	804.67
Stack Diameter. (m)	1.31	Type of Receptor	Residential
Stack Exit Velocity (m/s)	118.20 ¹	Max Hours per Year	8760
Stack Exit Temp. (°K)	1088.56	Fuel Type	NG
Burner Rating (MMBtu/hr)	11.44		

¹Stack as per permitting engineer is a horizontal stack, and therefore was modeled as such.

Technical Services performed modeling for criteria pollutants CO, NO_x, SO_x and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were 0.39 lb/hr CO, 0.47 lb/hr NO_x, 0.013 lb/hr SO_x, and 0.036 lb/hr PM₁₀. The engineer supplied the maximum fuel rate for the IC engine used during the analysis.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

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

*Results were taken from the attached PSD spreadsheet.

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

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

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).**

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

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
- F. AAQA Report

Appendix V

Compliance Certification

**San Joaquin Valley
Unified Air Pollution Control District**

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)


- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Pacific Gas & Electric Co.	FACILITY ID: N - 608
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Pacific Gas & Electric Co.	
3. Agent to the Owner:	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:



Signature of Responsible Official

1/30/12

Date

Jane Yura

Name of Responsible Official (please print)

Vice President of Gas Operations

Title of Responsible Official (please print)