



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

August 28, 2012

Mr. Gerardo Rios (R9Airpermits\_sc@epa.gov)  
Chief, Permits Office  
US EPA, Region IX- Air 3.  
75 Hawthorne Blvd.  
San Francisco, CA 94105

**Subject:** Transmittal of Proposed Title V Significant Permit Revision  
San Diego Gas & Electric/Moreno Valley Storage Facility ID 004242

Dear Mr. Rios:

Enclosed are the proposed Title V Significant Permit Revision, public notice, and the permit evaluation for San Diego Gas & Electric/Moreno Valley Storage Facility, located at 14601 Virginia St., Moreno Valley CA 92555. This proposed Title V Significant Permit Revision submitted under application no. 539441 is for the approval of alternate VOC limits for two 2-stroke, lean burn engines subject to Rule 1110.2. The engines are also subject to 40 CFR 60 Subpart JJJ and 40 CFR 63 Subpart ZZZZ. With your receipt of the proposed Title V permit revision today, we will note that the EPA 45-day review period will begin on August 28, 2012.

If you have any questions concerning the proposed Title V Significant Permit Revision, please contact Mr. Roy Olivares at (909) 396-2208 or by e-mail at rolivares@aqmd.gov.

Sincerely,

Brian L. Yeh  
Senior Manager  
Mechanical, Chemical and Public Services  
Engineering and Compliance

BLY:AYL:JTY:rd0

Enclosure: Proposed Title V Significant Permit Revision  
Public Notice  
Permit Evaluation



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
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## NOTICE OF PROPOSED TITLE V SIGNIFICANT PERMIT REVISION

The South Coast Air Quality Management District (AQMD) is proposing to revise the existing Title V permit that was previously issued to the following facility:

**San Diego Gas & Electric**  
14601 Virginia Street  
Moreno Valley, CA 91313  
Facility ID# 4242

*Contact Person:*

Zach Muepo  
Sr. Env. Specialist  
P O Box 2300  
Chatsworth, CA 91313-2300

This is an existing facility applying for a significant permit revision for their Title V permit. The facility is a natural gas storage facility that is requesting to comply with alternate VOC limits for their lean burn engines that are subject to AQMD Rule 1110.2 (d)(1)(B). The engines are also subject to New Source Performance Standards (NSPS) 40 CFR 60 Subpart JJJJ and National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subpart ZZZZ.

Pursuant to Title V of the federal Clean Air Act and AQMD Rule 3000(b)(31)(I), a facility with a Title V permit that proposes to modify existing equipment subject to a NSPS or NESHAP is considered a significant permit revision. Accordingly, the above facility has submitted a Title V Significant Permit Revision application and requested the AQMD to revise their Title V permit. The proposed permit incorporates the addition of the alternate VOC limits for two existing lean burn engines.

The proposed permit is available for public review at AQMD, 21865 Copley Drive,

Diamond Bar, CA 91765 and Moreno Valley Public Library 25480 Alessandro Blvd, Moreno Valley, CA 92553. Information regarding the facility owner's compliance history submitted to the AQMD pursuant to California Health & Safety Code Section 42336, or otherwise known to the AQMD based on credible information, is also available from the AQMD for public review. For more information or to review additional supporting documents, call the AQMD's Title V hotline at (909) 396-3013. Written comments should be submitted to:

South Coast Air Quality Management District  
Mechanical, Chemical and Public Services Team  
21865 Copley Drive  
Diamond Bar, CA 91765  
Attention: Roy Olivares

Comments must be received by October 1, 2012. The AQMD will consider all public comments and may revise the Title V permit in accordance with AQMD rules and regulations.

The public may request AQMD to conduct a public hearing on the proposed permit by submitting a Hearing Request Form (Form 500-G) to Mr. Brian Yeh at the above AQMD address. The AQMD will hold a public hearing if there is evidence that the proposed permit is not correct or is not adequate to ensure compliance with regulatory requirements, and a hearing will likely provide additional information that will affect the drafting and/or issuance of the permit. A public hearing request form and the public hearing schedule may be obtained from the AQMD by calling the Title V hotline at (909) 396-3013, or from the internet at <http://www.aqmd.gov/titlev>. The request for a public hearing is due by September 15, 2012. A copy of the hearing request must also be sent by first class mail to the appropriate facility contact person listed above.

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	1
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

**PERMIT TO OPERATE**

APPLICANT	SAN DIEGO GAS AND ELECTRIC
MAILING ADDRESS	PO BOX 2300 SC 9314 CHATSWORTH, CA 91313
EQUIPMENT LOCATION	14601 VIRGINIA STREET MORENO VALLEY, CA
COMPANY ID	4242

**EQUIPMENT DESCRIPTION:**

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions	Conditions
<b>PROCESS 1: POWER GENERATION</b>					
<b>System 2;</b>					
INTERNAL COMBUSTION ENGINE, LEAN BURN, TWO STROKE, NON-EMERGENCY, NATURAL GAS, CLARK, MODEL HSRA-8LECM, COMPRESSOR DRIVER, WITH STAGED COMBUSTION, AFTERCOOLER, TURBOCHARGER, WITH INSULATED EXHAUST DUCT, 955 HP, WITH:  A/N: 500090	D5	C25, C33	NOx: LARGE UNIT	NOx: 150 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]  CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  VOC: 30 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  PM: (9) [RULE 404, 2-7-1986]	C12.1, D12.2, D29.1, E448.3, H23.2, H23.4, K67.2
CO OXIDATION CATALYST, PLATINUM BASED, DCL, MODEL RC4X4X1, AND AIR FUEL RATIO CONTROLLER, (WASTE GATE VALVE), EMBEDDED IN THE	C25				



**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

TOTAL PAGES:	PAGE NO.:
27	3
APPL. NO.	DATE
See Below	8/24/2012
PROCESSED BY	CHECKED BY
RDO	

**E&C DIVISION**

**APPLICATION PROCESSING AND CALCULATIONS**

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions	Conditions
BASED, BASF, AND AIR FUEL RATIO CONTROLLER, (WASTE GATE VALVE), EMBEDDED IN THE ENGINE CONTROL SYSTEM					
INTERNAL COMBUSTION ENGINE, LEAN BURN, TWO STROKE, NON-EMERGENCY, NATURAL GAS, CLARK, MODEL HSRA-8LECM, COMPRESSOR DRIVER, WITH STAGED COMBUSTION, AFTERCOOLER, TURBOCHARGER, 955 HP, WITH:  A/N: 500092	D7	C32, C35	NOx: LARGE UNIT	NOx: 150 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]  CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  VOC: 30 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  PM: (9) [RULE 404, 2-7-1986]	C12.1, D12.2, D29.1, E448.3, H23.2, H23.4, K67.2
CO OXIDIATION CATALYST, PLATINUM BASED, DCL, , MODEL RC4X4X1, AND AIR FUEL RATIO CONTROLLER, (WASTE GATE VALVE), EMBEDDED IN THE ENGINE CONTROL SYSTEM	C32	D7			
CO OXIDIATION CATALYST, PLATINUM BASED, BASF, AND AIR FUEL RATIO CONTROLLER, (WASTE GATE VALVE), EMBEDDED IN THE ENGINE CONTROL	C35				

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

TOTAL PAGES:	PAGE NO.:
27	4
APPL. NO.	DATE
See Below	8/24/2012
PROCESSED BY	CHECKED BY
RDO	

**E&C DIVISION**

**APPLICATION PROCESSING AND CALCULATIONS**

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions	Conditions
SYSTEM					
INTERNAL COMBUSTION ENGINE, LEAN BURN, TWO STROKE, NON-EMERGENCY, NATURAL GAS, COOPER BESSEMER, MODEL 8Q155HC2, COMPRESSOR DRIVER, WITH, TURBOCHARGER, AFTERCOOLED, WITH INSULATED EXHAUST DUCT, 3000 HP, WITH:  A/N: 539440  CO OXIDATION CATALYST, PLATINUM BASED, DCL, MODEL RC4X4X1, WITH INSULATED HOUSING	D8          C28		NOx: MAJOR SOURCE	CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  VOC: 47 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  PM: (9) [RULE 404, 2-7-1986]	D12.2, D29.2, D82.1, E193.1, H23.2, H23.4, K67.2
INTERNAL COMBUSTION ENGINE, LEAN BURN, TWO STROKE, NON-EMERGENCY, NATURAL GAS, COOPER BESSEMER, MODEL 8Q155HC2, COMPRESSOR DRIVER, WITH, TURBOCHARGER, AFTERCOOLED, WITH INSULATED EXHAUST DUCT, 3000 HP, WITH:  A/N: 539326  CO OXIDATION	D9          C29	C29          D9	NOx: MAJOR SOURCE	CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  VOC: 47 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  PM: (9) [RULE 404, 2-7-1986]	D12.2, D29.2, D82.1, E193.1, H23.2, H23.4, K67.2

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	5
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions	Conditions
CATALYST, PLATINUM BASED, DCL, MODEL RC4X4X1, WITH INSULATED HOUSING					
INTERNAL COMBUSTION ENGINE, LEAN BURN, TWO STROKE, NON-EMERGENCY, NATURAL GAS, COOPER BESSEMER, MODEL 8V-275C2, COMPRESSOR DRIVER, WITH, TURBOCHARGER AND AFTERCOOLER, 3200 HP, WITH:  A/N: 500096	D10	C11		CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  VOC: 30 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]  PM: (9) [RULE 404, 2-7-1986]	D12.2, D29.1, D82.1, E193.1, H23.2, H23.4, K67.2
CO OXIDATION CATALYST, PLATINUM BASED, DCL, MODEL RC4X4X1, WITH INSULATED HOUSING	C11				

APPLICATION NO 539441

TITLE V REVISION

**PERMIT CONDITIONS**

**D5, D6 and D7**

A99.1 Remove

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

TOTAL PAGES:	PAGE NO.:
27	6
APPL. NO.	DATE
See Below	8/24/2012
PROCESSED BY	CHECKED BY
RDO	

**E&C DIVISION****APPLICATION PROCESSING AND CALCULATIONS**

- A99.2 Remove
- C12.1 Keep
- D12.2 Add time meter conditions-as required per Rule 1110.2 (f)(1)(B).
- D28.1 Remove source condition required by P/C
- D28.2 Remove source condition required by P/C
- D29.1 Add CO and VOC source testing requirements by Rule 1110.2. Standard testing conditions for engines Subject to Rule 1110.2.
- E448.3 the device has the operating two different oxidation controls system (DCL or BASF)
- H23.2 Keep
- H23.4 RICE generic condition
- K67.2 Standard Rule 1110.2 record keeping condition

C12.1 The operator shall use the equipment in such a manner that the Engine brake horsepower being monitored as indicated below is less than 1000 BHP

The operator shall install and maintain a display to accurately indicates the:

1. The brake horsepower of the engine. In addition, the operator shall keep records in a manner approved the District, on quarterly basis  
[Rule 2012]

D12.1 The operator shall install and maintain a(n) non-resettable elapsed meter to accurately indicate the elapsed operating time of the engine.  
[Rule 1110.2]

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant to be tested	Required Test Method(s)	Averaging Time	Test Location
CO emissions	District method 100.1	15 minutes	Outlet
VOC emissions	District Method 25.3	15 minutes	Outlet

The test shall be conducted once every two years or 8760 operating hours, whichever comes first. If the engine operates less than 2000 hours since the previous test, then testing once every 3 years

If the engine has not been operated within 3 months of the test date, follow the testing schedule per Rule 1110.2 (f) (1) (C).

The source test results shall be submitted to the District no later than 60 days after the source test was conducted, per Rule 1110.2 (f) (1) (C) (vi.)

The operator of the engine shall keep sufficient operating records to demonstrate that it meets the requirements of extension of the source testing deadlines  
[Rule 1110.2]

E448.3 The operator shall comply with the following requirements

When the device is in operation, the DCL or BASF oxidation control system can be operated on this device  
[Rule 1110.2]

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

TOTAL PAGES: PAGE NO.:

27

7

**E&C DIVISION**

APPL. NO.

DATE

See Below

8/24/2012

PROCESSED BY

CHECKED BY

**APPLICATION PROCESSING AND CALCULATIONS**

RDO

H23.2 This equipment is subject to the applicable requirements of the following Rules or Regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1110.2
CO	District Rule	1110.2

Whether or not explicitly stated on this permit, including, but not limited to, reporting, record keeping, monitoring, source testing, and other criteria defined in approved Rule 1110.2 (f)(1)(D) inspection and monitoring plan, start-up shall be defined as 60 minutes hour from when fuel is introduced to each engine for combustion.  
[Rule 1110.2]

H23.4 This equipment is subject to the applicable requirements of the following Rules or Regulations:

Contaminant	Rule	Rule/Subpart
CO	40CFR63, SUBPART	ZZZZ
Formaldehyde	40CFR63, SUBPART	ZZZZ

[40CFR 63 Subpart ZZZZ, 1-18-2008]

K67.2 The operator shall keep records in a manner approved by the District, for the following parameter(s) or item(s):

This engine shall comply with the following additional monitoring and record keeping requirements of Rule 1110.2 (F)(1)(e) as outlined below:

1. Total hours of operation
2. Type of gaseous fuel
3. Fuel consumption (cubic feet of gas) and,
4. Cumulate hours of operation since the last source test required in subparagraph (f)(1)(c) of Rule 1110.2

All records required by these devices shall be retained for a minimum of five years, and shall be made available to any District representative upon request.

[Rule 1110.2]

**D8 and D9**

A99.1 Remove

A99.2 Remove

D12.2 Add time meter conditions-as required per Rule 1110.2 (f)(1)(B).

D28.1 Remove source condition required by P/C

D28.2 Remove source condition required by P/C

D29.2 Add CO and VOC source testing requirements by Rule 1110.2. Standard testing conditions for engines Subject to Rule 1110.2. Require VOC testing at least once per year.

D82.1 Keep

E193.1 Keep

H23.4 RICE generic condition

H23.2 Keep

K67.2 Standard Rule 1110.2 record keeping condition

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	8
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

A195.1 The 47 ppmv VOC emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.

The VOC concentration shall not apply during the engine start-up period. A start-up period shall not exceed 30 minutes from the time initial fuel is consumed by the engine  
 [Rule 1110.2]

D12.2 The operator shall install and maintain a(n) non-resettable elapsed meter to accurately indicate the elapsed operating time of the engine.  
 [Rule 1110.2]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant to be tested	Required Test Method(s)	Averaging Time	Test Location
CO emissions	District method 100.1	15 minutes	Outlet
VOC emissions	District Method 25.3	15 minutes	Outlet

For CO the test shall be conducted once every two years or 8760 operating hours, whichever comes first. If the engine operates less than 2000 hours since the previous test, then testing once every 3 years

For VOC the test shall be conducted once every year.

If the engine has not been operated within 3 months of the test date, follow the testing schedule per Rule 1110.2 (f) (1) (C).

The source test results shall be submitted to the District no later than 60 days after the source test was conducted, per Rule 1110.2 (f) (1) (C) (vi.)

The operator of the engine shall keep sufficient operating records to demonstrate that it meets the requirements of extension of the source testing deadlines  
 [Rule 1110.2]

D82.1 The operator shall install and maintain a CEMS to measure the following parameters

NOx concentration in ppmv  
 [RULE 2012]

E193.1 The operator shall operate and maintain this equipment according to the following requirements:

The catalyst inlet temperature shall be maintained to assure it does not exceed 1200 degrees Fahrenheit.

The operator shall operate and maintain a temperature measuring and recording system to measure and record exhaust temperature at the catalyst inlet pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. The system shall use a measuring device with a minimum accuracy tolerance of 2.2°C or 0.75% of the temperature value, whichever is larger. The system shall be inspected, maintained, and calibrated on an annual basis. A temperature measurement shall be recorded every 15 min

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

TOTAL PAGES: PAGE NO.:

27

9

**E&C DIVISION**

APPL. NO.

DATE

See Below

8/24/2012

PROCESSED BY

CHECKED BY

**APPLICATION PROCESSING AND CALCULATIONS**

RDO

For the purpose of this condition, an excursion shall be defined as when the recorded temperature is greater than 1200 degrees Fahrenheit occurs during the normal operation of the equipment it serves. The operator shall review the records of the catalyst bed inlet temperature on a daily basis to determine if an excursion occurs or shall install an alarm system to alert the operator when an excursion occurs.

Whenever an excursion occurs, the operator shall inspect this equipment to identify the cause of such an excursion, take immediate corrective actions to maintain the temperature below 1200 degrees Fahrenheit, and keep records of the duration and cause (including unknown cause, if applicable) of the excursion and the corrective actions taken.

All excursions shall be reported to the AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR Part 64.9 and Condition Nos. 22 and 23 in Section K of this permit. The semi-annual monitoring report shall include the total operating time of this equipment and the total accumulated duration of all excursions for each semi-annual reporting period specified in Condition No. 23, Section K of this permit.

The operator shall submit an application with an Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to the AQMD if an accumulation of excursions exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23, Section K of this permit. The required QIP shall be submitted to the AQMD within 90 calendar days after the due date for the semi-annual monitoring report.

The operator shall keep adequate records in a format that is acceptable to the AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR Part 64.9 for a minimum of five years.

[40 CFR Part 64, 10-22-1997]

- H23.2 This equipment is subject to the applicable requirements of the following Rules or Regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1110.2
CO	District Rule	1110.2

Whether or not explicitly stated on this permit, including, but not limited to, reporting, record keeping, monitoring, source testing, and other criteria defined in approved Rule 1110.2 (f) (1) (D) inspection and monitoring plan, start-up shall be defined as 60 minutes from when fuel is introduced to each engine for combustion.

[Rule 1110.2]

- H23.4 This equipment is subject to the applicable requirements of the following Rules or Regulations:

Contaminant	Rule	Rule/Subpart
CO	40CFR63, SUBPART	ZZZZ
Formaldehyde	40CFR63, SUBPART	ZZZZ

[40CFR 63 Subpart ZZZZ, 1-18-2008]

- X67.2 The operator shall keep records in a manner approved by the District, for the following parameter(s) or item(s):

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

TOTAL PAGES:	PAGE NO.:
27	10
APPL. NO.	DATE
See Below	8/24/2012
PROCESSED BY	CHECKED BY
RDO	

**E&C DIVISION****APPLICATION PROCESSING AND CALCULATIONS**

This engine shall comply with the following additional monitoring and record keeping requirements of Rule 1110.2 (F) (1) (e) as outlined below:

1. Total hours of operation
2. Type of gaseous fuel
3. Fuel consumption (cubic feet of gas) and,
4. Cumulate hours of operation since the last source test required in subparagraph (f) (1) (c) of Rule 1110.2

All records required by these devices shall be retained for a minimum of five years, and shall be made available to any District representative upon request.

[Rule 1110.2]

**D10**

- A99.1 Remove  
A99.2 Remove  
D12.2 Add time meter conditions-as required per Rule 1110.2 (f)(1)(B).  
D28.1 Remove source condition required by P/C  
D28.2 Remove source condition required by P/C  
D29.1 Add CO and VOC source testing requirements by Rule 1110.2. Standard testing conditions for engines Subject to Rule 1110.2.  
D82.1 Keep  
E193.1 keep  
H23.2 Keep  
H23.4 RICE generic condition  
K67.2 Standard Rule 1110.2 record keeping condition
- D12.1 The operator shall install and maintain a(n) non-resettable elapsed meter to accurately indicate the elapsed operating time of the engine.  
[Rule 1110.2]
- D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant to be tested	Required Test Method(s)	Averaging Time	Test Location
CO emissions	District method 100.1	15 minutes	Outlet
VOC emissions	District Method 25.3	15 minutes	Outlet

the test shall be conducted once every two years or 8760 operating hours, whichever comes first. If the engine operates less than 2000 hours since the previous test, then testing once every 3 years

If the engine has not been operated within 3 months of the test date, follow the testing schedule per Rule 1110.2 (f) (1) (C).

The source test results shall be submitted to the District no later than 60 days after the source test was conducted, per Rule 1110.2 (f) (1) (C) (vi.)

The operator of the engine shall keep sufficient operating records to demonstrate that it meets the requirements of extension of the source testing deadlines

[Rule 1110.2]

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT****E&C DIVISION****APPLICATION PROCESSING AND CALCULATIONS**

TOTAL PAGES:	PAGE NO.:
27	11
APPL. NO.	DATE
See Below	8/24/2012
PROCESSED BY	CHECKED BY
RDO	

D82.1 The operator shall install and maintain a CEMS to measure the following parameters

NOx concentration in ppmv  
[RULE 2012]

E193.1 The operator shall operate and maintain this equipment according to the following requirements:

The catalyst inlet temperature shall be maintained to assure it does not exceed 1200 degrees Fahrenheit.

The operator shall operate and maintain a temperature measuring and recording system to measure and record exhaust temperature at the catalyst inlet pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. The system shall use a measuring device with a minimum accuracy tolerance of 2.2°C or 0.75% of the temperature value, whichever is larger. The system shall be inspected, maintained, and calibrated on an annual basis. A temperature measurement shall be recorded every 15 min

For the purpose of this condition, an excursion shall be defined as when the recorded temperature is greater than 1200 degrees Fahrenheit occurs during the normal operation of the equipment it serves. The operator shall review the records of the catalyst bed inlet temperature on a daily basis to determine if an excursion occurs or shall install an alarm system to alert the operator when an excursion occurs.

Whenever an excursion occurs, the operator shall inspect this equipment to identify the cause of such an excursion, take immediate corrective actions to maintain the temperature below 1200 degrees Fahrenheit, and keep records of the duration and cause (including unknown cause, if applicable) of the excursion and the corrective actions taken.

All excursions shall be reported to the AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR Part 64.9 and Condition Nos. 22 and 23 in Section K of this permit. The semi-annual monitoring report shall include the total operating time of this equipment and the total accumulated duration of all excursions for each semi-annual reporting period specified in Condition No. 23, Section K of this permit.

The operator shall submit an application with an Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to the AQMD if an accumulation of excursions exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23, Section K of this permit. The required QIP shall be submitted to the AQMD within 90 calendar days after the due date for the semi-annual monitoring report.

The operator shall keep adequate records in a format that is acceptable to the AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR Part 64.9 for a minimum of five years.  
[40 CFR Part 64, 10-22-1997]

H23.1 This equipment is subject to the applicable requirements of the following Rules or Regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1110.2
CO	District Rule	1110.2

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	12
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

Whether or not explicitly stated on this permit, including, but not limited to, reporting, record keeping, monitoring, source testing, and other criteria defined in approved Rule 1110.2 (f) (1) (D) inspection and monitoring plan, start-up shall be defined as 60 minutes from when fuel is introduced to each engine for combustion.  
 [Rule 1110.2]

H23.4 This equipment is subject to the applicable requirements of the following Rules or Regulations:

Contaminant	Rule	Rule/Subpart
CO	40CFR63, SUBPART	ZZZZ
Formaldehyde	40CFR63, SUBPART	ZZZZ

[40CFR 63 Subpart ZZZZ, 1-18-2008]

K67.2 The operator shall keep records in a manner approved by the District, for the following parameter(s) or item(s):

This engine shall comply with the following additional monitoring and record keeping requirements of Rule 1110.2 (F) (1) (e) as outlined below:

1. Total hours of operation
2. Type of gaseous fuel
3. Fuel consumption (cubic feet of gas) and,
4. Cumulate hours of operation since the last source test required in subparagraph (F) (1) (c) of Rule 1110.2

All records required by these devices shall be retained for a minimum of five years, and shall be made available to any District representative upon request.  
 [Rule 1110.2]

**BACKGROUND:**

The facility is used to compress natural gas using non-emergency internal combustion engines. The compressed gas is then sent down the pipe line to go to various customers. These applications were filed as modification in July of 2009 and Permits to Construct were granted in October of 2009.

The applicant is requesting to change the Rule 1110.2 VOC compliance limit on their permit, for D8 and D9, from 30 ppmv, as required per Table II of R1110.2(d)(1)(B), to a higher alternate limit as stated in the same section of the rule (not to exceed 250 ppmv). This provision allowed up to 250 VOC ppmv limit, because the engines are 2-stroke lean burn engines that cannot produce a high enough exhaust gas temperature to fully utilize oxidation type catalyst used on rich burn engines. The requested VOC concentration limit of 47 ppmv is well below the upper end VOC limit of this Rule of 250 ppmv. This provision states the following:

*"If the operator of a two-stroke engine equipped with an oxidation catalyst and insulated exhaust ducts and catalyst housing demonstrates that the CO and VOC limits effective on and after July 1, 2010 are not achievable, then the Executive Officer may, with the United States Environmental Protection Agency (EPA) approval, establish technologically achievable, case-*

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	13
	APPL. NO.	DATE
	See Below	8/28/2012
	PROCESSED BY	CHECKED BY
RDO		

*by-case CO and VOC limits in place of the concentration limits effective on and after July 1, 2010."*

The application package includes a final report, along with data summarized in tables, as well as a catalyst vendor's guarantee of 47 ppmvd-VOC at 15% O<sub>2</sub> as the alternate limit proposed for D8 and D9 engines. These engines are major NO<sub>x</sub> sources per RECLAIM. The draft permit for Moreno Valley will be forwarded to EPA, Region IX, Permits Office, to the attention of Gerardo Rios, for the 45 day review. The District will request EPA to review and approve the alternate VOC limits through EPA, Region IX, Rulemaking Office.

The applicant requested an alternate VOC limit on June 30, 2010 via email to District staff that included testimonials from catalyst vendors and some emission testing results. The District requested clarification in response on July 9, 2010 for the information they provided in a meeting at the District. It was conveyed to the applicant that since the July 1, 2010 deadline had passed, they would need to apply for a variance with the Hearing Board to continue to operate the engines above the 30 ppm limit of Rule 1110.2. In July of 2010 it was determined the engines may not be able to comply with the VOC 30 ppmv limit of Rule 1110.2. September 8, 2010 the applicant was granted a variance (case no. 3607-12). The variance allowed the applicant to operate engines with oxidation catalyst and conduct source testing using several catalyst vendors to establish an alternative VOC concentration limit (the limit changed from 250 ppmv to 30 ppmv) as specified in Rule 1110.2 (d)(1)(B). During the first year of the variance, actual operational times for these engines were less than expected during this 12-month test period. As a result, the applicant prepared and submitted an interim report with updated test plan to AQMD's Hearing Board and requested for an extension of variance to complete the testing. On September 15, 2011, AQMD's Hearing Board extended the variance period for an additional 12 months so that all testing can be completed and necessary data sets collected to establish case-by-case VOC emission limits for these engines. The Variance was extended until 10/31/2012. For the second year of the variance AQMD staff continued to work closely with SDG&E to ensure that all tests were conducted in accordance with the test plan approved by AQMD. In addition, AQMD periodically conducted side-by-side testing on these engines to verify that all data were representative of the required testing and the analytical methods met the AQMD approved standards. The testing has been completed and a report was forwarded to the District in June of 2012 (copy in file). AQMD has determined the following VOC emissions limits listed below (@ 15% O<sub>2</sub> averaged over 15 minutes) are appropriate for these two-stroke engines and has forwarded the report with recommendation to EPA on 7/20/2012:

Facility	AQMD Device ID	Station Designation	Engine Model	VOC Emission Limit
SDG&E Moreno Valley	D5, D6, & D7	Units 1, 2, & 3	Clark HSRA-8LEC, 995 HP	30 ppm*

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	14
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

SDG&E Moreno Valley	D8 & D9	Units 8 & 9	Cooper 8Q155HC2, 3000 HP	47 ppm
SDG&E Moreno Valley	D10	Unit 10	Cooper 8V-275C2, 3200 HP	30 ppm*

\*Will meet the current Rule 1110.2 emission limit for VOC of 30 ppm, corrected to 15% O<sub>2</sub>

The applicant is proposing an alternate VOC concentration limit per Rule 1110.2 (d)(1)(B) for units D9 and D10. A change of conditions applications (a/n 500093 and 500095) were filed for these devices with the District on 06/07/2012.

In the Facility Permit ID# 4242, changes are requested to Section D by the change of conditions on two non-emergency natural gas fueled ICEs (D8 and D9) converting permits to construct to permits to operate for D5, D6, D7 and D10 (and updating permit wording/conditions). Attached is a draft of Section D in the Facility Permit affected by these changes. Per Rule 3000 (b)(31)(I) this is a Significant Permit Revision.

When Rule 1110.2 was revised in 2008, section (d)(1)(B) allowed for a alternate VOC concentration limit for two stoke lean burn engines, the reason for this is because these type of engines run cooler exhaust and oxidation catalyst does not effectively reduces the VOC concentrations to the proposed concentrations limits of the Rule. The applicant provide a final report on 6/1/2012, detailing all the type of testing and the emissions guarantee provided by the vender (copy in file)

Device no.	D5	D6	D7	D8	D9	D10
Application no.	500090 (p/c issued)	500091 (p/c issued)	500092 (p/c issued)	539400	539326	500096 (p/c issued)
RECLAIM Type	Large source	Large source	Large source	Major source	Major source	Large source-
Engine model	Clark HSRA8-LEC	Clark HSRA8-LEC	Clark HSRA8-LEC	Cooper Quad	Cooper Quad	Cooper 8V-275
HP	995	995	995	3000	3000	3200
Control	DCL	BASF	DCL	DCL	DCL	DCL
Proposed VOC limit	30	30	30	47	47	30

### COMPLIANCE HISTORY

There has been no compliance actions with this facility for the past two years (07/17/2010-07/15/2012).

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	15
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

**Permitting since the Title V permit was renewed since 10/14/2009, ref a/n 437363**

Title V application	Project	30 day ave-lb/dy				
		NOx	VOC	CO	SOx	PM10
539441	Ice, D8 and D9	+0	+28	+0	+0	+0
Change in emissions		+0	+28	+0	+0	0

**CALCULATIONS**

1. Emissions calculations

A. Determine emissions from NOx, CO and VOC

$$R1(LB / HR) = \frac{hp \times gr / bhp - hr}{454 gr / lb}$$

B. SOx AND PM10 Emissions calculations

Determine emissions from SOx and PM ( if EF not given in gr/bhp-hr)

$$R1(LB / HR) = \frac{EF \times GAS USAGE}{1 \times 10^6}$$

*Note R1 = R2*

*Where SOx EF equal lb/MMCF (ref SCAQMD emissions fee form B-3)*

*Where PM10 EF equal lb/MMBTU (ref AP-42, table 3.2-1, Uncontrolled emissions factors for 2 stroke lean burn engines.)*

*Note to convert lb/mmbtu to lb/mmcf, use the following formula*

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT****E&C DIVISION****APPLICATION PROCESSING AND CALCULATIONS**

TOTAL PAGES:	PAGE NO.:
27	16
APPL. NO.	DATE
See Below	8/24/2012
PROCESSED BY	CHECKED BY
RDO	

$$Lb/mmcft = lb/mmbtu * 1050 btu/ft^3$$

**2. EMISSIONS CALCULATIONS PER ENGINE****A. D8 and D9**

	lb/hr	lb/dy	30-dy ave	R2-lb/yr
NOx	9.91	237.89	237.89	86590.31
VOC	1.64	39.43	39	14350.90
CO	15.29	366.98	367	133579.98
SOx	0.014	0.343	0.3	124.84
PM10	0.23087	5.541	6	2016.89

See attachment for emissions calculation details

**B. D10**

	lb/hr	lb/dy	30-dy ave	R2-lb/yr
NOx	10.57	253.74	253.74	92363.00
VOC	1.12	26.84	27	9768.93
CO	16.31	391.44	391	142485.31
SOx	0.015	0.356	0.4	129.45
PM10	0.23940	5.746	6	2091.40

See attachment for emissions calculation details

**C. D5, D6 and D7**

	lb/hr	lb/dy	30-dy ave	R2-lb/yr
NOx	5.00	119.98	119.98	43672.21
VOC	0.35	8.35	8	3038.48
CO	5.07	121.71	122	44304.03
SOx	0.006	0.144	0.1	52.32
PM10	0.09676	2.322	2	845.27

See attachment for emissions calculation details

**3. Previous emission D8 and D9**

	lb/hr	lb/dy	30-dy ave	R2-lb/yr
NOx	9.91	237.89	237.89	86590.31
ROG	1.05	25.16	25	9158.37

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	17
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

CO	15.29	366.98	367	133579.98
SOx	0.012	0.296	0.3	107.87
PM10	0.19950	4.788	5	1742.83

#### 4. Rule 1110.2 SOURCE TEST SUMMARY

The Final Report submitted by the applicant entitled "Case by Case Demonstration to Determine Technical Achievability of SCAQMD Rule 1110.2 Volatile Organic Compound (VOC) Limit of 30 ppm for 2-Stroke Lean Burn Engines and the Development of Alternative Limits" dated June 1, 2012 includes a summary of the test results and the analyses of those results by two different catalyst vendors; DCL and BASF, for the Moreno Valley and PDR engines, respectively (copy in file). The vendor analyses, specifically DCL for Moreno Valley, led to the development of the proposed warranted VOC stack emission of 47 ppmvd-VOC corrected to 15% O2 measured per AQMD Method 25.3 for the PDR engines; identified as Device D8) and Device D8) in the DCL report.

Rule 1110.2 paragraph (g) outlines AQMD Methods 25.1 or 25.3 as the method to use to verify compliance with the VOC limits of the rule. Emission measurements using these methods are of little use to catalyst manufacturers when they analyze data to determine a warranted VOC limit. The preferred method for analysis is data obtained by EPA Method 18, which speciates the constituents to yield the actual reduction of each compound. In addition, formaldehyde is included as a VOC in Method 25.3 and not in Method 18. Thus, providing a warranted value on Method 25.3 presented a challenge for DCL.

During the variance the applicant underwent a comprehensive testing program from August 2009 to April of 2012 to provide the catalyst manufactures (DCL and BASF) the minimum amount hours of operation on the catalyst to provide an emissions warrantee on the control equipment. For D5, D6, D7 and D10 the catalyst provider was able to warrantee the VOC emissions at 30 ppm, thus the VOC emission comply with Rule 1110.1 (d)(1)(B)(ii) Table II. For D8 and D9 the catalyst provider was able to warrantee the VOC emissions at 47 ppm, thus per Rule 1110.2 (d)(1)(B) for 2 stroke lean burn engines equipped with oxidation control the Rule allows for a higher level provided the 7/1/2010 emissions level are not achievable. To establish a higher concentration limit greater than 30 ppmv for VOC, the applicant provided a detailed a reported dated 6/1/2012 (copy in file). District Source Testing staff reviewed the source testing data in the report (test reports dated from 9/2009 to 4/2012) and approved the values, see email dated 7/19/2012. The report has been forward on 7/20/2012 to EPA for review and concurrence

For Moreno Valley the engines were divided in three groups and the goal for each engine in the group was to have the engines operate for at least 2000 hours.

#### Group 1

Device	Hours operated
--------	----------------

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	18
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

D5	1454
D6	2623
D7	2000

D5 and D6 did not reach the 2000 hours but the catalyst vendor DCL allowed data from D7 to help forecast the performance of the catalyst for D5 and D6 since these engines are identical to D7, The group 1 engines exhibited the highest exhaust temperatures of all the engines, consistently over 650 and over 700 degrees F; this improved overall catalyst performance, and DCL provided a 30 ppmv warrantee for these engines. Because of the exhaust gas temperature profile.

**Group 2**

Device	Hours operated
D8	<2000
D9	>2000

D8 did not reach the 2000 hours (the catalyst was changed from BASF to DCL halfway through the testing program, the BASF catalyst did not perform well on these engines) but the catalyst vendor DCL allowed data from D9 to help forecast the performance of the catalyst for D8 as the two engines are identical models. The exhaust temp from the group 2 engines are 100 F lower than the group 1 engines. This was enough to have adverse affect on catalyst performance. DCL provided a 47 ppmv warrantee for these engines.

**Group 3**

Device	Hours operated
D10	>2000

D10 completed testing one full year prior to the other engines. None of the VOC emissions from D10 were over 30 ppmv, and with ample compliance margin. D10 exhaust temperature is the coolest from all the engines, but the engine VOC emissions are 40 to 60 ppmv less than the Group 1 or 2 engines. DCL provided a 30 ppmv warrantee for this engine.

**5. Rule 1110.2 SOURCE TEST SUMMARY**

The permit to construct permit conditions D28.1 and D28.2 required testing to be done to determine compliance with the VOC and CO concentration limits of Rule 1110.2. The most recent test for VOC and CO where used and the results have been approved by District Source testing staff

A D5

High fire

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

TOTAL PAGES:	PAGE NO.:
27	19
APPL. NO.	DATE
See Below	8/24/2012
PROCESSED BY	CHECKED BY
RDO	

**E&C DIVISION****APPLICATION PROCESSING AND CALCULATIONS**

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	8.1	250	Yes
VOC	8.4	30	yes

## Low Fire

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	8.8	250	Yes
VOC	10.95	30	yes

## B D6

## High fire

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	158	250	Yes
VOC	11.7	30	yes

## Low Fire

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	178	250	Yes
VOC	12.6	30	yes

## C D7

## High fire

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	9.74	250	Yes
VOC	11.54	30	yes

## Low Fire

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	10.9/	250	Yes
VOC	16.29	30	yes

## D D8

## High fire

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	11.3	250	Yes
VOC	34	30	yes

## Low Fire

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	9.52	250	Yes
VOC	20.1	30	yes

## E D9

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	20
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

**High fire**

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	8.5	250	Yes
VOC	20.2	47 (proposed)	yes

**Low Fire**

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	8.5	250	Yes
VOC	18.6	47 (proposed)	yes

**F D10**

**High fire**

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	6.33	250	Yes
VOC	17.2	47 (proposed)	yes

**Low Fire**

Pollutant	Actual PPMv	Allowed PPMv	Compliance
CO	4.28	250	Yes
VOC	16.6	47 (proposed)	yes

**RULES EVALUATION:**

**Rule 212 – Standards for Approving Permits and Issuing Public Notice**

The facility is not located within 1,000 feet of any K-12 school. It is not subject to the requirements of Rule 212(c)(1). There were control installed on the engines to comply with the VOC and CO requirements of Rule 1110.2, there is a next reduction in emissions, thus it is not subject to the requirements of Rule 212(g).

**Rule 401 – Visible Emissions**

Compliance with this rule is expected for the engines equipped with controls.

**Rule 402 – Nuisance**

Equipment is expected to comply

**Rule 404 – Particulate Matter - Concentration**

Natural gas is used as a fuel, grain loading from the engine expected to comply

**Rule 1110.2. Compliance is expected with the following sections:**

Section (d)(1)(B)(ii), states that “If the operator of a two-stroke engine equipped with an oxidation catalyst and insulated exhaust ducts and catalyst housing demonstrates that the CO and VOC limits effective on and after July 1, 2010 are not achievable, then the Executive Officer may, with United States Environmental

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT****E&C DIVISION****APPLICATION PROCESSING AND CALCULATIONS**

TOTAL PAGES:	PAGE NO.:
27	21
APPL. NO.	DATE
See Below	8/24/2012
PROCESSED BY	CHECKED BY
RDO	

Protection Agency (EPA) approval, establish technologically achievable, case-by-case CO and VOC limits in place of the concentration limits effective on and after July 1, 2010. The case-by-case limits shall not exceed 250 ppmvd VOC and 2000 ppmvd CO." The San Diego Gas & Electric, Moreno Valley (fac ID 4242) (SDG&E) and Southern California Gas Company, Playa del Rey (fac ID 8582) (SCGC) have requested to use the case-by-case analysis to determine VOC limits higher than the 30 ppmvd as required by this clause under Table II. Both facilities have shown that by July 1, 2010 the VOC emission limit could not be maintained on a consistent manner, the CO emission requirements were able to be met by the July 1, 2010 time line. The facilities have operated their respective equipment under a District Variance and have ran extensive testing during the last two years to try and determine what appropriate VOC limit can be found for their engines. During this testing period two types of oxidation catalysts were used, as well as, trying to determine whether cleaning of the catalysts assists in retaining their control efficiencies. The goals of the testing was to determine commercial availability of the control equipment, reliability of the control equipment, and effectiveness over the expected range of operation.

The engines and demonstration results are summarized in the table below:

Engine	Was 30 ppm VOC sustainable?	Proposed VOC Limit (at 15% O2)
SDG&E Moreno Valley D5, D6, & D7	Yes	30
SDG&E Moreno Valley D8 & D9	No	47
SDG&E Moreno Valley D10	Yes	30
SCGC Playa Del Rey D14, D16, & D17	No	56

In the SCGC facility, three engines Device 14, 16, and 17, could not meet the 30 ppmvd limit and through testing the facility has requested an alternate limit of 56 ppmvd. In the SDG&E facility, two engines Device 8 and 9, could not meet the 30 ppmvd limit and through testing the facility has requested an alternate limit of 47 ppmvd. Based upon the staff report for February 1, 2008 rule amendment date, the total rule emission reduction resulting from lowering the VOC limit from 250 ppm to 30 ppm was estimated to be 1372 lbs/day. Using the same criteria used in the staff report for total rule emission reduction calculations, the emission foregone for the engines at SCGC and SDG&E facilities are estimated to be 2.75 lbs/day and 1.21 lbs/day, respectively.

Combined for both facilities the estimated emissions foregone would be  $(2.75 \text{ lbs/day} + 1.21 \text{ lbs/day}) / 1372 \text{ lbs/day} = 0.29\%$  of the total rule emission reductions

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	22
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
	RDO	

for VOC for the February 1, 2008 rule amendment. This amount of emissions foregone is considered to be insignificant and is not expected to interfere with the clean air goal of this rule amendment.

Based upon the extensive testing, the District believes this request for alternative limits are warranted and have submitted the testing information to EPA for their concurrence and approval of these alternative limits.

Section (d)(1)(E)-D5, D6 and D7 are equipped with air to fuel ratio controller and is listed on the permit. D8, D9 and D10 are equipped with NOx CEMs are not required to have a air to fuel ratio controller.

Section (e)(4)-Requires I&M plan to be submitted to the District by 8/1/2008. The plan has been filed with the District (see a/n 487311, the applicant file a new plan that is under review, a/n 512258)

Section (e)(5)-Does apply, applications filed for D5, D6 and D7 to install the air fuel ratio control and control system.

Section (f)(1)(A)(i)-D8, D9 and D10 are each greater than 1000 HP, but is subject to RECLAIM as a Major Source and is required to have a NOx CEMs per that regulation., thus this section does not apply

Section (f)(1)(A)(ii)-The combined HP for D5, D6 and D7 are greater than 1500 HP, but the facility is in RECLAIM and is a large source and not required to have a NOx CEMs, thus does not apply

Section (f)(1)(A)(vii)-A CO CEMs not required for lean burn engines, thus does not apply

Section (f)(1)(B)-install time meter. Time meter is already installed on the engines.

Section (f)(1)(C)(i)-Effective 8/1/08 require source testing once every 2 years or every 8760 operating hours. If the engines operate less than 2000 hours since the previous test, then testing is once every three years. For D5, D6, D7 and D8 permit condition will require VOC testing once every 2 years. For D8 and D9 require VOC testing every year (applicant is requesting a 47 ppmv VOC concentration limit, require annual testing to demonstrate compliance with this limit). The CO testing for D8 and D9 will be per these Rule requirements.

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	23
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
	RDO	

Section (f)(1)(C)(ii)-Conduct test for at least 60 minutes. Test must occur at least after 40 hours after a tune up

Section (f)(1)(C)(ii)-Use contractor that is approved to do the necessary test

Section (f)(1)(C)(iv)-Submit source test protocol at least 60 days prior to testing and the protocol has to be approved by the District (if required by this Rule).

Section (f)(1)(C)(vi)-Submit source test reports within 60 days of the test (if required by the Rule)

Section (f)(1)(D)-Require one I&M per facility to be submitted to the District. Plan has been submitted to the District (see a/n 487311 and filed a revised plan, a/n 512258).

Section (f)(1)(D)(iii)(II) the engines are lean burn that are subject to RECLAIM and are subject to the 250 ppmv CO concentration limit of this Rule, then the testing the engines once every 2000 hours of operation with a portable analyzer. Included in the plan evaluation, (see a/n 512258).

Section (f)(1)(D)(iii)(V) the portable analyzer shall be calibrated. Included in the plan evaluation (see a/n 512258)

Section (f)(1)(D)(iv) Procedures for daily monitoring. Included in the plan evaluation, (see a/n 512258).

Section (f)(1)(E) Operating log

The inspection and monitoring plan is required to be submitted in the compliance plan per section (e)(4). The requirements of section (f)(1)(D) will be addressed in the compliance plan, (plan filed, see a/n 487311 and revised plan under pending application no. 512258). Permit conditions for this section of the Rule will only address the min. periodic monitoring requirements.

Reg. XIII Compliance with the following sections is anticipated.

1303 (a)-BACT- The oxidation control was added to the engines to comply with the VOC and CO limits of Rule 1110.2, there is a net decrease in emissions, BACT does not apply.

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT****E&C DIVISION****APPLICATION PROCESSING AND CALCULATIONS**

TOTAL PAGES:	PAGE NO.:
27	24
APPL. NO.	DATE
See Below	8/24/2012
PROCESSED BY	CHECKED BY
RDO	

1303 (b)(1)- Does not apply no increase in emissions

1303 (b)(2)- Offsets, For D8 and D9 there is a net reduction in VOC emissions, no offsets required.

RULE 1401-Does not apply, no increase in HP rating or rule 1401 emissions, does not apply per section (g)(1)(B).

**RULE XVII-Prevention of Significant Deterioration**

1701 (b)(2)(A)- There are emissions decreased in CO and VOC, does not apply

1714 (b)(2)(A) The annual criteria emissions are well below the threshold limits of this Rule, thus GHG emission are well below the threshold limits and does not apply

Reg.2005 Compliance with the following sections is anticipated.

2005 (c)(1)-BACT- Does not apply no increase in HP rating or emissions.

2005 (c)(1)(B)- Does not apply no increase in HP rating or emissions.

2005 (c)(2)-Complies

2005 (f)- The applicant has ample RTCs for the operation of the subject equipment. The engines were existing at the time the facility entered the RECLAIM.

**A. D5, D6 and D7**

Equipment	Rule-Large source	Section-emissions factor or concentration limit	type	Value
ICE	(d)(1)(B)(ii)	(d)(2)(C)	Concentration limit	150 ppmv
ICE	(d)(2)(A)	Install fuel meter		

**B. D8, D9 and D10**

Equipment	Rule-Major source	Section-emissions factor or	type	Value

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	25
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

		concentration limit		
ICE	(c)(1)(B)(ii)	(c)(3)	None	none

**Regulation XXX**

This facility (id 4242) is included in Phase Two of the Title V universe. Therefore proposed equipment is expected to comply with the following sections:

**Rule 3000 (b)(31)(i)** does apply based on the following

Per Rule 3000 (b)(31)(i) the engines are subject to NSPS and NESHAP requirements

**Rule 3006**

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "Significant permit revision" and will be subject to the public participation requirements under Rule 3006 (a)(1)(B). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not raise any objections within the review period, a revised Title V permit will be issued to this facility.

**Rule 3003**

Section (j)(1)(A) The EPA Administrator will timely receive the Significant revision upon completion of District evaluation.

Section (j)(1)(C) The EPA Administrator will timely receive the draft of the Significant revision upon completion of District evaluation.

Section (j)(1)(D) The EPA Administrator will timely receive the final Title V permit upon issuance by the District

Section (j)(4)(A) The applicant will be timely notified of any refusal to accept all recommendations for the draft permit

**California Environmental Quality Act (CEQA)**

Does not apply

**NSPS**

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	26
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

**40 CFR 60 SUBPART JJJJ – STANDARD OF PERFORMANCE FOR STATIONARY SPARK IGNITION CONTROL ENGINES**

**§60.4230**

The engines were constructed prior to June 12, 2006. In addition, the engines have not been modified (as defined per 40 CFR 60.14) or reconstructed (as defined per 40 CFR 60.15) after June 12, 2006; therefore, this subpart is not applicable.

**40 CFR 63 SUBPART ZZZZ – NESHAPS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES**

**§63.6585**

The facility is a Major Source for HAP emissions and subject to 40 CFR 63 Subpart HHH and the existing engines are stationary RICE as defined by this section; therefore, it is subject to the requirements of this subpart.

**§63.6590**

As defined by this section, the facility is an Affected Source with Existing Stationary RICE, since the engines were constructed prior to December 19, 2012. In addition the engines have not been modified or reconstructed (as defined per §63.2).

**§63.6600**

(c) As previously mentioned, the facility is a Major HAP source that operates existing 2 stroke lean burn (2SLB) engines; therefore, per this section, the equipment does not have to meet the emission limitations or the operating limitations of the this subpart.

**§63.6645**

(a)(5) There are no notification requirements for existing stationary RICE not subject to numerical emission standards.

**§63.6650**

(a) There are no applicable reporting requirements in Table 7 for this equipment.

**§63.6655**

(a) Records are only required for equipment that must comply with the emission and operating limitations of this subpart. Therefore, recordkeeping is not required per this subpart.

**§63.6665**

There are no general provisions that apply to this equipment.

Will add general permit condition to comply with the rule

**RECOMMENDATIONS**

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>E&amp;C DIVISION</b>  <b>APPLICATION PROCESSING AND CALCULATIONS</b>	TOTAL PAGES:	PAGE NO.:
	27	27
	APPL. NO.	DATE
	See Below	8/24/2012
	PROCESSED BY	CHECKED BY
RDO		

Based on the analysis in this report, the equipment is expected to comply with the applicable Rules and Regulations of the SCAQMD and the applicable Rule 1110.2 requirements.

For this reason, the following disposition is recommended; issue a revised Title V Facility Permit reflecting issuing permits to operate for six non- emergency engines under section D.

Updates in Section D of the Title V facility Permit resulting from this addition are listed in Equipment and Condition sections of the attached draft permit.

**RECOMMENDATIONS**

FOR THIS APPLICATION THE FOLLOWING DISPOSITION IS RECOMMENDED:

Issue P/O

47 ppm ✓

D8 and D9  
Engine data

Engine hp	3000	hp
fuel type	natural gas	
fuel rate nat gas	23145.00	ft3/hr
calculate fuel rate	no	yes/no
calculate fuel rate		ft3/hr
heat content	1.05E+03	btu/ft3
engine load	100%	%
thermal eff	28%	%
convertor installed	yes	
PM10	1.00	
hr/dy	24	hr
dy/wk	7	dy
dy/mon	30	dy
wk/yr	52	wk

Outlet of the APC emissions

	R2	units	PPMV
NOx	1.5	g/bhp-hr	98.64 ppmv
ROG	0.2486	g/bhp-hr	47.00 ppmv
CO	2.314	g/bhp-hr	250.00 ppmv
SOx	0.6174	lb/mmcf	
Sox	5.88E-04	lb/mmbtu	
PM10	9.50E-03	lb/mmbtu	
PM10	9.975	lb/mmcf	

PM and SOx E.F ref AP 42 table 3.2-1, natural gas I

Emissions Calculations

	lb/hr	lb/dy	30-dy ave	R2-lb/yr
NOx	9.91	237.89	237.89	86590.31
ROG	1.64	39.43	39	14350.90
CO	15.29	366.98	367	133579.98
SOx	0.014	0.343	0.3	124.84
PM10	0.23087	5.541	6	2016.89

Detailed calculations

lbNOx/hr  
 =[E.F, g/bhp-hr][Rating, hp]  
 =[1.50 g/bhp-hr][3000 hp][1 lb/454 g]  
 =[9.91 lb/hr]

lbNox/day  
 =[lbNOx/hr][hr/day]  
 =[9.91 lb/hr][24hr/day]  
 =[237.89 lb/day]

30 day NOx ave  
 =[lbNox/day][days/mon]/[30 days/mon]  
 =[237.89 lb/day][30days/mon]/[30 days/mon]

lbNox/year  
 =[lbNox/day][days/wk][wk/yr]  
 [237.89 lb/day][7days/wk][52wk/yr]

Nat gas I

=[237.89 lb/day]

[86592 lb/year]

lbROG/hr

[E.F. g/bhp-hr][Rating, hp]

[0.25 g/bhp-hr][3000 hp][1 lb/454 g]

[1.64 lb/hr]

lbROG/day

[lbROG/hr][hr/day]

[1.64 lb/hr] [24 hr/day]

[39.43 lb/day]

30 day ROG ave

[lbROG/day][days/mon]/[30 days/mon]

[39.43 lb/day][30days/mon]/[30 days/mon]

[39.43 lb/day]

lbROG/year

[lbROG/day][days/wk][wk/yr]

[39.43 lb/day][7days/wk][52wk/yr]

[14351 lb/year]

lbCO/hr

[E.F. g/bhp-hr][Rating, hp]

[2.31 g/bhp-hr][3000 hp][1 lb/454 g]

[15.29 lb/hr]

lbCO/day

[lbCO/hr][hr/day]

[15.29 lb/hr][24hr/day]

[366.98 lb/day]

30 day CO ave

[lbCO/day][days/mon]/[30 days/mon]

[366.98 lb/day][30days/mon]/[30 days/mon]

[366.98 lb/day]

lbCO/year

[lbCO/day][days/wk][wk/yr]

[366.98 lb/day][7days/wk][52wk/yr]

[133580 lb/year]

lbSOx/hr

[SOx E.F.][Fuel rate]

[0.62 lb/mmcf][23145.00 ft<sup>3</sup>/hr][1mmcf/1000000 ft<sup>3</sup>]

[0.0143 lb/hr]

lbSOx/day

[lbSOx/hr] x [hr/day]

[0.0143 lb/hr] x [24 hr/day]

[0.3432 lb/day]

30 day SOx ave

[lbSOx/day][days/mon]/[30 days/mon]

[0.3432 lb/day][30days/mon]/[30 days/mon]

[0.3432 lb/day]

lbSOx/year

[lbSOx/day][days/wk][wk/yr]

[0.3432 lb/day][7days/wk][52wk/yr]

[125 lb/year]

PM-lb/hr

[PM E.F.][lbPM/mmcf]

#REF!

#REF!

lbPM/day

[lbPM/hr][hr/day]

#REF!

#REF!

30 day PM ave

[lbPM/day][days/mon]/[30 days/mon]

#REF!

#REF!

lbPM/year

[lbPM/day][days/wk][wk/yr]

#REF!

#REF!

PM10-lb/hr

[PM10 E.F.][Fuel rate]

PM10-lb/dy

[PM10-lb/hr][hr/day]

Nat gas I

[9.98 lb/mmcft][23145.00 ft<sup>3</sup>/hr][1 mcf/1000000 ft<sup>3</sup>]  
[0.2309 lb/hr]

[0.2309 lb/hr] [24 hr/day]  
[5.541 lb/day]

30 day pm10 ave  
[lbPM10/day][days/mon]/[30 days/mon]  
[5.541 lb/day][30days/mon]/[30 days/mon]  
#REF!

PM10 lb/yr  
[PM10-lb/dy][days/wk][wk/yr]  
#REF!  
[2017 lb/year]

**Rule 1303 (b)(1)-Screen Table A-1**

BTU/Hr	2.43E+07
--------	----------

Item	Emissions rate (lb/hr)		Compliance
	Allowed	calculated	
NOx	0.31	9.911894	No
CO	25.9	15.29075	Yes
PM10	2.8	0.230871	Yes

30 ppmv

D8 and D9  
Engine data

Engine hp	3000	hp
fuel type	natural gas	
fuel rate nat gas	20000.00	ft3/hr
calculate fuel rate	no	yes/no
calculate fuel rate		ft3/hr
heat content	1.05E+03	btu/ft3
engine load	100%	%
thermal eff	28%	%
converter installed	yes	
PM10	1.00	
hr/dy	24	hr
dy/wk	7	dy
dy/mon	30	dy
wk/yr	52	wk

Outlet of the APC emissions

	R2	units	PPMV	
NOx	1.5	g/bhp-hr	98.64	ppmv
ROG	0.15865	g/bhp-hr	30.00	ppmv
CO	2.314	g/bhp-hr	250.00	ppmv
SOx	0.6174	lb/mmcf		
Sox	5.88E-04	lb/mmbtu		
PM10	9.50E-03	lb/mmbtu		
PM10	9.975	lb/mmcf		

PM and SOx E.F ref AP 42 table 3.2-1, natural gas 1

Emissions Calculations

	lb/hr	lb/dy	30-dy ave	R2-lb/yr
NOx	9.91	237.89	237.89	86590.31
ROG	1.05	25.16	25	9158.37
CO	15.29	366.98	367	133579.98
SOx	0.012	0.296	0.3	107.87
PM10	0.19950	4.788	5	1742.83

Detailed calculations

lbNOx/hr  
 =[E.F, g/bhp-hr][Rating, hp]  
 =[1.50 g/bhp-hr][3000 hp][1 lb/454 g]  
 =[9.91 lb/hr]

lbNox/day  
 =[lbNOx/hr][hr/day]  
 =[9.91 lb/hr][24hr/day]  
 =[237.89 lb/day]

30 day NOx ave  
 =[lbNox/day][days/mon]/[30 days/mon]  
 =[237.89 lb/day][30days/mon]/[30 days/mon]

lbNox/year  
 =[lbNox/day][days/wk][wk/yr]  
 =[237.89 lb/day][7days/wk][52wk/yr]

Nat gas I

=[237.89 lb/day]

[86592 lb/year]

lbROG/hr

[E.F. g/bhp-hr][Rating, hp]  
[0.16 g/bhp-hr][3000 hp][1 lb/454 g]  
[1.05 lb/hr]

lbROG/day

[lbROG/hr][hr/day]  
[1.05 lb/hr] [24 hr/day]  
[25.16 lb/day]

30 day ROG ave

[lbROG/day][days/mon]/[30 days/mon]  
[25.16 lb/day][30days/mon]/[30 days/mon]  
[25.16 lb/day]

lbROG/year

[lbROG/day][days/wk][wk/yr]  
[25.16 lb/day][7days/wk][52wk/yr]  
[9158 lb/year]

lbCO/hr

[E.F. g/bhp-hr][Rating, hp]  
[2.31 g/bhp-hr][3000 hp][1 lb/454 g]  
[15.29 lb/hr]

lbCO/day

[lbCO/hr][hr/day]  
[15.29 lb/hr][24hr/day]  
[366.98 lb/day]

30 day CO ave

[lbCO/day][days/mon]/[30 days/mon]  
[366.98 lb/day][30days/mon]/[30 days/mon]  
[366.98 lb/day]

lbCO/year

[lbCO/day][days/wk][wk/yr]  
[366.98 lb/day][7days/wk][52wk/yr]  
[133580 lb/year]

lbSOx/hr

[SOx E.F.][Fuel rate]  
[0.62 lb/mmcf][20000.00 ft3/hr][1mmcf/1000000 ft3]  
[0.0123 lb/hr]

lbSOx/day

[lbSOx/hr] x [hr/day]  
[0.0123 lb/hr] x [24 hr/day]  
[0.2952 lb/day]

30 day SOx ave

[lbSOx/day][days/mon]/[30 days/mon]  
[0.2952 lb/day][30days/mon]/[30 days/mon]  
[0.2952 lb/day]

lbSOx/year

[lbSOx/day][days/wk][wk/yr]  
[0.2952 lb/day][7days/wk][52wk/yr]  
[107 lb/year]

PM-lb/hr

[PM E.F.][lbPM/mmcf]  
#REF!  
#REF!

lbPM/day

[lbPM/hr][hr/day]  
#REF!  
#REF!

30 day PM ave

[lbPM/day][days/mon]/[30 days/mon]  
#REF!  
#REF!

lbPM/year

[lbPM/day][days/wk][wk/yr]  
#REF!  
#REF!

PM10-lb/hr

[PM10 E.F.][Fuel rate]

PM10-lb/dy

[PM10-lb/hr][hr/day]

Nat gas l

[9.98 lb/mmcf][20000.00 ft3/hr][1 mmcf/1000000 ft3]  
[0.1995 lb/hr]

[0.1995 lb/hr] [24 hr/day]  
[4.788 lb/day]

30 day pm10 ave  
[lbPM10/day][days/mon]/[30 days/mon]  
[4.788 lb/day][30days/mon]/[30 days/mon]  
#REF!

PM10 lb/yr  
[PM10-lb/dy][days/wk][wk/yr]  
#REF!  
[1743 lb/year]

**Rule 1303 (b)(1)-Screen Table A-1**

BTU/Hr	2.10E+07
--------	----------

Item	Emissions rate (lb/hr)		Compliance
	Allowed	calculated	
NOx	0.31	9.911894	No
CO	25.9	15.29075	Yes
PM10	2.8	0.1995	Yes

D5, D6 and D7

Engine data

Engine hp	995	hp
fuel type	natural gas	
fuel rate nat gas	9700.00	ft3/hr
calculate fuel rate	no	yes/no
calculate fuel rate	no	ft3/hr
heat content	1.05E+03	btu/ft3
engine load	100%	%
thermal eff	28%	%
convertor installed	yes	
PM10	1.00	
hr/dy	24	hr
dy/wk	7	dy
dy/mon	30	dy
wk/yr	52	wk

Outlet of the APC emissions

	R2	units	PPMV	
NOx	2.281	g/bhp-hr	150.01	ppmv
ROG	0.1587	g/bhp-hr	30.01	ppmv
CO	2.314	g/bhp-hr	250.00	ppmv
SOx	0.6174	lb/mmcf		
Sox	5.88E-04	lb/mmbtu		
PM10	9.50E-03	lb/mmbtu		
PM10	9.975	lb/mmcf		

PM and SOx E.F ref AP 42 table 3.2-1, natural gas I

Emissions Calculations

	lb/hr	lb/dy	30-dy ave	R2-lb/yr
NOx	5.00	119.98	119.98	43672.21
ROG	0.35	8.35	8	3038.48
CO	5.07	121.71	122	44304.03
SOx	0.006	0.144	0.1	52.32
PM10	0.09676	2.322	2	845.27

Detailed calculations

$\text{lbNOx/hr} = [\text{E.F., g/bhp-hr}][\text{Rating, hp}]$   
 $= [2.28 \text{ g/bhp-hr}][995 \text{ hp}][1 \text{ lb}/454 \text{ g}]$   
 $= [5.00 \text{ lb/hr}]$

$\text{lbNox/day} = [\text{lbNOx/hr}][\text{hr/day}]$   
 $= [5.00 \text{ lb/hr}][24\text{hr/day}]$   
 $= [119.98 \text{ lb/day}]$

$\text{30 day NOx ave} = [\text{lbNox/day}][\text{days/mon}]/[\text{30 days/mon}]$   
 $= [119.98 \text{ lb/day}][30\text{days/mon}]/[30 \text{ days/mon}]$

$\text{lbNox/year} = [\text{lbNox/day}][\text{days/wk}][\text{wk/yr}]$   
 $= [119.98 \text{ lb/day}][7\text{days/wk}][52\text{wk/yr}]$

Nat gas l

=[119.98 lb/day]

[43673 lb/year]

lbROG/hr

lbROG/day

[E.F. g/bhp-hr][Rating, hp]

[lbROG/hr][hr/day]

[0.16 g/bhp-hr][995 hp][1 lb/454 g]

[0.35 lb/hr] [24 hr/day]

[0.35 lb/hr]

[8.35 lb/day]

30 day ROG ave

lbROG/year

[lbROG/day][days/mon]/[30 days/mon]

[lbROG/day][days/wk][wk/yr]

[8.35 lb/day][30days/mon]/[30 days/mon]

[8.35 lb/day][7 days/wk][52wk/yr]

[8.35 lb/day]

[3038 lb/year]

lbCO/hr

lbCO/day

[E.F. g/bhp-hr][Rating, hp]

[lbCO/hr][hr/day]

[2.31 g/bhp-hr][995 hp][1 lb/454 g]

[5.07 lb/hr][24hr/day]

[5.07 lb/hr]

[121.71 lb/day]

30 day CO ave

lbCO/year

[lbCO/day][days/mon]/[30 days/mon]

[lbCO/day][days/wk][wk/yr]

[121.71 lb/day][30days/mon]/[30 days/mon]

[121.71 lb/day][7 days/wk][52wk/yr]

[121.71 lb/day]

[44304 lb/year]

lbSOx/hr

lbSOx/day

[SOx E.F.][Fuel rate]

[lbSOx/hr] x [hr/day]

[0.62 lb/mmcf][9700.00 ft3/hr][1mmcf/1000000 ft3]

[0.0060 lb/hr] x [24 hr/day]

[0.0060 lb/hr]

[0.1440 lb/day]

30 day SOx ave

lbSOx/year

[lbSOx/day][days/mon]/[30 days/mon]

[lbSOx/day][days/wk][wk/yr]

[0.1440 lb/day][30days/mon]/[30 days/mon]

[0.1440 lb/day][7 days/wk][52wk/yr]

[0.1440 lb/day]

[52 lb/year]

PM-lb/hr

lbPM/day

[PM E.F.][lbPM/mmcf]

[lbPM/hr][hr/day]

#REF!

#REF!

#REF!

#REF!

30 day PM ave

lbPM/year

[lbPM/day][days/mon]/[30 days/mon]

[lbPM/day][days/wk][wk/yr]

#REF!

#REF!

#REF!

#REF!

PM10-lb/hr

PM10-lb/dy

[PM10 E.F.][Fuel rate]

[PM10-lb/hr][hr/day]

Nat gas I

[9.98 lb/mmcft][9700.00 ft3/hr][1mmcft/1000000 ft3]  
[0.0968 lb/hr]

[0.0968 lb/hr] [24 hr/day]  
[2.322 lb/day]

30 day pm10 ave  
[lbPM10/day][days/mon]/[30 days/mon]  
[2.322 lb/day][30days/mon]/[30 days/mon]  
#REF!

PM10 lb/yr  
[PM10-lb/dy][days/wk][wk/yr]  
#REF!  
[845 lb/year]

**Rule 1303 (b)(1)-Screen Table A-1**

BTU/Hr	1.02E+07
--------	----------

Item	Emissions rate (lb/hr)		Compliance
	Allowed	calculated	
NOx	0.31	4.999108	No
CO	25.9	5.071432	Yes
PM10	2.8	0.096758	Yes

D10

**Engine data**

Engine hp	3200	hp
fuel type	natural gas	
fuel rate nat gas	24000.00	ft3/hr
calculate fuel rate	no	yes/no
calculate fuel rate	no	ft3/hr
heat content	1.05E+03	btu/ft3
engine load	100%	%
thermal eff	28%	%
converter installed	yes	
PM10	1.00	
hr/dy	24	hr
dy/wk	7	dy
dy/mon	30	dy
wk/yr	52	wk

**Outlet of the APC emissions**

	R2	units	PPMV	
NOx	1.5	g/bhp-hr	98.64	ppmv
ROG	0.15865	g/bhp-hr	30.00	ppmv
CO	2.314	g/bhp-hr	250.00	ppmv
SOx	0.6174	lb/mmcf		
Sox	5.88E-04	lb/mmbtu		
PM10	9.50E-03	lb/mmbtu		
PM10	9.975	lb/mmcf		

PM and SOx E.F ref AP 42 table 3.2-1, natural gas I

**Emissions Calculations**

	lb/hr	lb/dy	30-dy ave	R2-lb/yr
NOx	10.57	253.74	253.74	92363.00
ROG	1.12	26.84	27	9768.93
CO	16.31	391.44	391	142485.31
SOx	0.015	0.356	0.4	129.45
PM10	0.23940	5.746	6	2091.40

**Detailed calculations**

lbNOx/hr

$$= [E.F, g/bhp-hr][Rating, hp]$$

$$= [1.50 g/bhp-hr][3200 hp][1 lb/454 g]$$

$$= [10.57 lb/hr]$$

lbNox/day

$$= [lbNOx/hr][hr/day]$$

$$= [10.57 lb/hr][24hr/day]$$

$$= [253.74 lb/day]$$

30 day NOx ave

$$= [lbNox/day][days/mon]/[30 days/mon]$$

$$= [253.74 lb/day][30days/mon]/[30 days/mon]$$

lbNox/year

$$= [lbNox/day][days/wk][wk/yr]$$

$$= [253.74 lb/day][7days/wk][52wk/yr]$$

Nat gas I

=[253.74 lb/day]

[92361 lb/year]

lbROG/hr

[E.F. g/bhp-hr][Rating, hp]  
[0.16 g/bhp-hr][3200 hp][1 lb/454 g]  
[1.12 lb/hr]

lbROG/day

[lbROG/hr][hr/day]  
[1.12 lb/hr] [24 hr/day]  
[26.84 lb/day]

30 day ROG ave

[lbROG/day][days/mon]/[30 days/mon]  
[26.84 lb/day][30days/mon]/[30 days/mon]  
[26.84 lb/day]

lbROG/year

[lbROG/day][days/wk][wk/yr]  
[26.84 lb/day][7days/wk][52wk/yr]  
[9769 lb/year]

lbCO/hr

[E.F. g/bhp-hr][Rating, hp]  
[2.31 g/bhp-hr][3200 hp][1 lb/454 g]  
[16.31 lb/hr]

lbCO/day

[lbCO/hr][hr/day]  
[16.31 lb/hr][24hr/day]  
[391.44 lb/day]

30 day CO ave

[lbCO/day][days/mon]/[30 days/mon]  
[391.44 lb/day][30days/mon]/[30 days/mon]  
[391.44 lb/day]

lbCO/year

[lbCO/day][days/wk][wk/yr]  
[391.44 lb/day][7days/wk][52wk/yr]  
[142485 lb/year]

lbSOx/hr

[SOx E.F.][Fuel rate]  
[0.62 lb/mmcf][24000.00 ft3/hr][1mmcf/1000000 ft3]  
[0.0148 lb/hr]

lbSOx/day

[lbSOx/hr] x [hr/day]  
[0.0148 lb/hr] x [24 hr/day]  
[0.3552 lb/day]

30 day SOx ave

[lbSOx/day][days/mon]/[30 days/mon]  
[0.3552 lb/day][30days/mon]/[30 days/mon]  
[0.3552 lb/day]

lbSOx/year

[lbSOx/day][days/wk][wk/yr]  
[0.3552 lb/day][7days/wk][52wk/yr]  
[129 lb/year]

PM-lb/hr

[PM E.F.][lbPM/mmcf]  
#REF!  
#REF!

lbPM/day

[lbPM/hr][hr/day]  
#REF!  
#REF!

30 day PM ave

[lbPM/day][days/mon]/[30 days/mon]  
#REF!  
#REF!

lbPM/year

[lbPM/day][days/wk][wk/yr]  
#REF!  
#REF!

PM10-lb/hr

[PM10 E.F.][Fuel rate]

PM10-lb/dy

[PM10-lb/hr][hr/day]

Nat gas 1

[9.98 lb/mmcft][24000.00 ft3/hr][1mmcf/1000000 ft3]  
[0.2394 lb/hr]

[0.2394 lb/hr] [24 hr/day]  
[5.746 lb/day]

30 day pm10 ave  
[lbPM10/day][days/mon]/[30 days/mon]  
[5.746 lb/day][30days/mon]/[30 days/mon]  
#REF!

PM10 lb/yr  
[PM10-lb/dy][days/wk][wk/yr]  
#REF!  
[2091 lb/year]

**Rule 1303 (b)(1)-Screen Table A-1**

BTU/Hr	2.52E+07
--------	----------

Item	Emissions rate (lb/hr)		Compliance
	Allowed	calculated	
NOx	0.31	10.57269	No
CO	25.9	16.31013	Yes
PM10	2.8	0.2394	Yes

# Moreno Valley Lean Burn Engines

Foregone O<sub>6</sub>TE/combustion

## DATA

Rating	3000 bhp
SMV	385 scf/mol
Fd	8710 dscf/10E6 Btu
HHV	1050 MMBtu/MMscf
MW (as CH4)	16 lb-mol/mol
2005 Gas Usage	
D8	10.6 MMscf/yr
D9	8.69 MMscf/yr
Total	19.29 MMscf/yr

Limit 30 ppmvd  
 EF (lb/MMscf) =  $\frac{\text{ppmvd} \times \text{Fd} \times \text{MW} \times \text{HHV} \times (20.9/(20.9-15))}{\text{SMV}}$  = 40.391

### EMISSION RATES at 30 ppmvd VOC (as CH4)

RATE	Total
lb/yr	779.14
lb/day	2.13

where lb/dy = lb/yr / 365 dy/yr

Limit 47 ppmvd  
 EF (g/bhp-hr) =  $\frac{\text{ppmvd} \times \text{Fd} \times \text{MW} \times \text{HHV} \times (20.9/(20.9-15))}{\text{SMV}}$  = 63.279

### EMISSION RATES at 47 ppmvd VOC (as CH4)

RATE	Total
lb/yr	1220.65
lb/day	3.34

where lb/dy = lb/yr / 365 dy/yr

### Foregone Emission Rates (56 ppmvd - 30 ppmvd)

RATE	Total
lb/hr	441.51
lb/day	1.21

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
<b>System 1: GAS TURBINE</b>					
GAS TURBINE, NO. 4, NATURAL GAS, SOLAR, MODEL SATURN 1,000, 0.85 MW, 13.11 MMBTU/HR A/N: 01302E	D1		NOX LARGE SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 67 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	
GAS TURBINE, NO. 5, NATURAL GAS, SOLAR, MODEL SATURN 1,000, 0.85 MW, 13.11 MMBTU/HR A/N: 01302E	D2		NOX LARGE SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 64 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	
GAS TURBINE, NO. 6, NATURAL GAS, SOLAR, MODEL SATURN 1,000, 0.85 MW, 13.11 MMBTU/HR A/N: 01302E	D3		NOX LARGE SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 68 PPMV NATURAL GAS (3) [RULE 2012, 12-7-1995; RULE 2012, 4-9-1999]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	
GAS TURBINE, NO. 7, NATURAL GAS, SOLAR, MODEL SATURN 1,000, 0.85 MW, 13.11 MMBTU/HR A/N: 01302E	D4		NOX LARGE SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 68 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]; PM: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]	
<b>System 2: NON-EMERGENCY, IC ENGINE</b>					

- \* (1) (1A) (1B) Denotes RECLAIM emission factor
  - (2) (2A) (2B) Denotes RECLAIM emission rate
  - (3) Denotes RECLAIM concentration limit
  - (4) Denotes BACT emission limit
  - (5) (5A) (5B) Denotes command and control emission limit
  - (6) Denotes air toxic control rule limit
  - (7) Denotes NSR applicability limit
  - (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
  - (9) See App B for Emission Limits
  - (10) See section J for NESHAP/MACT requirements
- \*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, WESTERLY ENGINE, NO. 1, WITH INSULATED EXHAUST DUCT, NATURAL GAS, CLARK, MODEL HSRA-8LEC, LEAN BURN, TWO CYCLE, WITH STAGED COMBUSTION, AFTERCOOLER, TURBOCHARGER, 995 HP WITH A/N:	D5	C25 C33	NOX: LARGE SOURCE**	CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010], NOX: 150 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986], VOC: 30 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]	C12.1, D12.2, D29.1, E448.3, H23.2, H23.4, K67.2
CO OXIDATION CATALYST, PLATINUM BASED, WITH AN AIR TO FUEL RATIO CONTROLLER, (WASTE GATE VALVE), DCL, MODEL RC4X4X1 WITH INSULATED HOUSING, EMBEDDED IN THE ENGINE CONTROL SYSTEM.	C25	D5			
CO OXIDATION CATALYST, PLATINUM BASED, WITH AN AIR TO FUEL RATIO CONTROLLER, (WASTE GATE VALVE), BASF, MODEL WITH INSULATED HOUSING, EMBEDDED IN THE ENGINE CONTROL SYSTEM.	C33	D5			

\* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate  
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit  
 (5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit  
 (7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)  
 (9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

\*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, MIDDLE ENGINE, NO 2., COMPRESSOR DRIVER, WITH INSULATED EXHAUST DUCT, NATURAL GAS, CLARK, MODEL HSRA-8LEC. LEAN BURN TWO CYCLE, WITH STAGED COMBUSTION, AFTERCOOLER, TURBOCHARGER, 995 HP WITH A/N:	D6	C26 C34	NOX LARGE SOURCE**	CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010], NOX: 150 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC: 30 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]	C12 1, D12 2, D29 1, E448.3, H23 2, H23 4, K67 2
CO OXIDATION CATALYST, PLATINUM BASED., WITH AN AIR TO FUEL RATIO CONTROLLER, DCL, MODEL RC4X4X1 WITH INSULATED HOUSING, (WASTE GATE VALVE), EMBEDDED IN THE ENGINE CONTROL SYSTEM	C26	D6			
CO OXIDATION CATALYST, PLATINUM BASED, WITH AN AIR TO FUEL RATIO CONTROLLER, (WASTE GATE VALVE), BASF, MODEL WITH INSULATED HOUSING, EMBEDDED IN THE ENGINE CONTROL SYSTEM.	C34	D6			

\* (1) (1A) (1B) Denotes RECLAIM emission factor  
 (3) Denotes RECLAIM concentration limit  
 (5) (5A) (5B) Denotes command and control emission limit  
 (7) Denotes NSR applicability limit  
 (9) See App B for Emission Limits  
 (2) (2A) (2B) Denotes RECLAIM emission rate  
 (4) Denotes BACT emission limit  
 (6) Denotes air toxic control rule limit  
 (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)  
 (10) See section J for NESHAP/MACT requirements

\*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, EASTERLY ENGINE, NO. 3, COMPRESSOR DRIVER, WITH INSULATED EXHAUST DUCT, NATURAL GAS, CLARK, MODEL HSRA-8LEC. LEAN BURN, TWO CYCLE, WITH STAGED COMBUSTION, AFTERCOOLER, TURBOCHARGER, 995 HP WITH A/N:	D7	C32 C35	NOX: LARGE SOURCE**	CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]; NOX: 150 PPMV NATURAL GAS (3) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; VOC 30 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]	C12 1, D12.2, D29 1, E448.3, H23 2, H23.4, K67 2
CO OXIDATION CATALYST, PLATINUM BASED, WITH AN AIR TO FUEL RATIO CONTROLLER (WASTE GATE VALVE), RC4X4X1 WITH INSULATED HOUSING, DCL, EMBEDDED IN THE ENGINE CONTROL SYSTEM.	C32	D7			
CO OXIDATION CATALYST, PLATINUM BASED, WITH AN AIR TO FUEL RATIO CONTROLLER, (WASTE GATE VALVE), BASF, MODEL WITH INSULATED HOUSING, EMBEDDED IN THE ENGINE CONTROL SYSTEM.	C35	D7			

\* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate  
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit  
 (5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit  
 (7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)  
 (9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

\*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, NO. 8, NATURAL GAS, COOPER BESSEMER, MODEL 8Q155HC2, WITH INSULATED EXHAUST DUCT, WITH AFTERCOOLER, TURBOCHARGER, 3000 HP WITH A/N	D8		NOX MAJOR SOURCE**	CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]; PM: (9) [RULE 404, 2-7-1986]; VOC: 47 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]	A195.1, D12.2, D29.2, D82.1, E193.1, H23.2, H23.4, K67.2
CO OXIDATION CATALYST, PLATINUM BASED, DCL, MODEL RC4X4X1, WITH INSULATED HOUSING	C28	D8			
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, NO. 9, NATURAL GAS, COOPER BESSEMER, MODEL 8Q155HC2, WITH INSULATED EXHAUST DUCT, WITH AFTERCOOLER, TURBOCHARGER, 3000 HP WITH A/N:	D9		NOX MAJOR SOURCE**	CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]; PM: (9) [RULE 404, 2-7-1986]; VOC: 47 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]	A195.1, D12.2, D29.2, D82.1, E193.1, H23.2, H23.4, K67.2
CO OXIDATION CATALYST, PLATINUM BASED, DCL, MODEL RC4X4X1, WITH INSULATED HOUSING	C29	D9			

- (1) (1A) (1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5) (5A) (5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2) (2A) (2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
- (10) See section J for NESHAP/MACT requirements

\*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
INTERNAL COMBUSTION ENGINE, NON-EMERGENCY, NO. 10, NATURAL GAS, COOPER BESSEMER, MODEL 8V-275C2, WITH INSULATED EXHAUST DUCT, WITH AFTERCOOLER, TURBOCHARGER, 3200 HP WITH A/N	D10	C11	NOX: MAJOR SOURCE**	CO: 250 PPMV NATURAL GAS (5) [RULE 1110.2, 6-3-2005]. PM: (9) [RULE 404, 2-7-1986]; VOC: 30 PPMV NATURAL GAS (5) [RULE 1110.2, 7-9-2010]	D12.2, D29.1, D82.1, E193.1, H23.2, H23.4, K67.2
CO OXIDATION CATALYST, PLATINUM BASED, DCL, MODEL RC4X4X1, WITH INSULATED HOUSING	C11	D10			
<b>System 3: EMERGENCY ELECTRICAL GENERATION, IC ENGINE</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NO. 2, NATURAL GAS, WAUKESHA, MODEL F1197GU, 200 HP WITH A/N: 195313	D12		NOX PROCESS UNIT**	NOX: 753 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]. PM: (9) [RULE 404, 2-7-1986]	C1.1, D12.1, D135.1
GENERATOR					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NO. 3, NATURAL GAS, CATERPILLAR, MODEL G379HCNA, WITH TURBOCHARGER, 329 HP WITH A/N: 195312	D13		NOX PROCESS UNIT**	NOX: 753 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]. PM: (9) [RULE 404, 2-7-1986]	C1.1, D12.1, D135.1
GENERATOR					

\* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate  
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit  
 (5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit  
 (7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)  
 (9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

\*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NO. 4, NATURAL GAS, WAUKESHA, MODEL 6NKR2G, 200 HP WITH A/N: 195314  GENERATOR	D14		NOX: PROCESS UNIT**	NOX: 753 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005], PM: (9) [RULE 404, 2-7-1986]	C1.1, D12.1, D135.1
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NO. 1, NATURAL GAS, CATERPILLAR, MODEL 3408, WITH CATALYTIC REDUCTION, 400 HP WITH A/N: 239200  GENERATOR	D15		NOX: PROCESS UNIT**	NOX: 753 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005], PM: (9) [RULE 404, 2-7-1986]	C1.1, D12.1, D135.1

\* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate  
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit  
 (5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit  
 (7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)  
 (9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

\*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device

**FACILITY PERMIT TO OPERATE  
SAN DIEGO GAS & ELECTRIC**

**SECTION D: DEVICE ID INDEX**

**The following sub-section provides an index  
to the devices that make up the facility  
description sorted by device ID.**

**FACILITY PERMIT TO OPERATE  
 SAN DIEGO GAS & ELECTRIC  
 SECTION D: DEVICE ID INDEX**

<b>Device Index For Section D</b>			
<b>Device ID</b>	<b>Section D Page No.</b>	<b>Process</b>	<b>System</b>
D1	1	1	1
D2	1	1	1
D3	1	1	1
D4	1	1	1
D5	2	1	2
D6	3	1	2
D7	4	1	2
D8	5	1	2
D9	5	1	2
D10	6	1	2
C11	6	1	2
D12	6	1	3
D13	6	1	3
D14	7	1	3
D15	7	1	3
C25	2	1	2
C26	3	1	2
C28	5	1	2
C29	5	1	2
C32	4	1	2
C33	2	1	2
C34	3	1	2
C35	4	1	2

## **FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

**The operator shall comply with the terms and conditions set forth below:**

#### **DEVICE CONDITIONS**

##### **A. Emission Limits**

A195.1 The 47 PPMV VOC emission limit(s) is averaged over 15 minutes at 15 percent oxygen.

The VOC concentration shall not apply during the engine start-up period. A start-up period shall not exceed 60 minutes from the time initial fuel is consumed by the engine.

[RULE 1110.2, 7-9-2010]

[Devices subject to this condition : D8, D9]

##### **C. Throughput or Operating Parameter Limits**

C1.1 The operator shall limit the operating time to no more than 200 hour(s) in any one year.

To comply with this condition, the operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996]

[Devices subject to this condition : D12, D13, D14, D15]

C12.1 The operator shall use this equipment in such a manner that the Engine brake horsepower being monitored as indicated below is less than 1000 BHP.

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

**The operator shall comply with the terms and conditions set forth below:**

The operator shall install and maintain a display to accurately indicates the:

1. the brake horsepower

of the engine. In addition, the operator shall keep records, in a manner approved by the District, on quaterly basis.

**[RULE 2012, 5-6-2005]**

[Devices subject to this condition : D5, D6, D7]

#### **D. Monitoring/Testing Requirements**

D12.1 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

**[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996]**

[Devices subject to this condition : D12, D13, D14, D15]

D12.2 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

**[RULE 1110.2, 7-9-2010]**

[Devices subject to this condition : D5, D6, D7, D8, D9, D10]

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

**The operator shall comply with the terms and conditions set forth below:**

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
CO emissions	District method 100.1	15 minutes	Outlet
VOC emissions	District Method 25.3	15 minutes	Outlet

The test shall be conducted once every two years or 8760 operating hours, whichever comes first. If the engine operates less than 2000 hours since the previous test, then testing once every 3 years

If the engine has not been operated within 3 months of the test date, follow the testing schedule per Rule 1110.2 (f)(1)(C).

The source test results shall be submitted to the District no later than 60 days after the source test was conducted, per Rule 1110.2 (f)(1)(C)(vi.)

[RULE 1110.2, 7-9-2010]

[Devices subject to this condition : D5, D6, D7, D10]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
CO emissions	District method 100.1	15 minutes	Outlet
VOC emissions	District Method 25.3	15 minutes	Outlet

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

**The operator shall comply with the terms and conditions set forth below:**

For CO the test shall be conducted once every two years or 8760 operating hours, whichever comes first. If the engine operates less than 2000 hours since the previous test, then testing once every 3 years

For VOC the test shall be conducted once every year.

If the engine has not been operated within 3 months of the test date, follow the testing schedule per Rule 1110.2 (f)(1)(C).

The source test results shall be submitted to the District no later than 60 days after the source test was conducted, per Rule 1110.2 (f)(1)(C)(vi.)

[RULE 1110.2, 7-9-2010]

[Devices subject to this condition : D8, D9]

D82.1 The operator shall install and maintain a CEMS to measure the following parameters:

NOX concentration in ppmv

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D8, D9, D10]

D135.1 The operator shall inspect, adjust, and certify the ignition or fuel injection timing of this engine a minimum of once every 3 years of operation. Inspections, adjustments, and certifications shall be performed by a qualified mechanic and performed in accordance with the engine manufacturer's specifications and procedures.

[RULE 1303(a)(1)-BACT, 5-10-1996]

## **FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

**The operator shall comply with the terms and conditions set forth below:**

[Devices subject to this condition : D12, D13, D14, D15]

#### **E. Equipment Operation/Construction Requirements**

E193.1 The operator shall operate and maintain this equipment according to the following requirements:

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

**The operator shall comply with the terms and conditions set forth below:**

The catalyst inlet temperature shall be maintained to assure it does not exceed 1200 degrees Fahrenheit.

The operator shall operate and maintain a temperature measuring and recording system to measure and record exhaust temperature at the catalyst inlet pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. The system shall use a measuring device with a minimum accuracy tolerance of 2.2°C or 0.75% of the temperature value, whichever is larger. The system shall be inspected, maintained, and calibrated on an annual basis. A temperature measurement shall be recorded every 15 min

For the purpose of this condition, an excursion shall be defined as when the recorded temperature is greater than 1200 degrees Fahrenheit occurs during the normal operation of the equipment it serves. The operator shall review the records of the catalyst bed inlet temperature on a daily basis to determine if an excursion occurs or shall install an alarm system to alert the operator when an excursion occurs.

Whenever an excursion occurs, the operator shall inspect this equipment to identify the cause of such an excursion, take immediate corrective actions to maintain the temperature below 1200 degrees Fahrenheit, and keep records of the duration and cause (including unknown cause, if applicable) of the excursion and the corrective actions taken.

All excursions shall be reported to the AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR Part 64.9 and Condition Nos. 22 and 23 in Section K of this permit. The semi-annual monitoring report shall include the total operating time of this equipment and the total accumulated duration of all excursions for each semi-annual reporting period specified in Condition No. 23, Section K of this permit.

The operator shall submit an application with an Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to the AQMD if an accumulation of excursions exceeds 5 percent duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23, Section K of this permit. The required QIP shall be submitted to the AQMD within 90 calendar days after the due date for the semi-annual monitoring report.

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

The operator shall keep adequate records in a format that is acceptable to the AQMD to demonstrate compliance with all applicable requirements specified in this condition and 40 CFR Part 64.9 for a minimum of five years.

[40CFR Part 64, 10-22-1997]

[Devices subject to this condition : D8, D9, D10]

E448.3 The operator shall comply with the following requirements:

When the device is in operation, the DCL or BASF oxidation control system can be operated on this device

[RULE 1110.2, 7-9-2010]

[Devices subject to this condition : D5, D6, D7]

#### H. Applicable Rules

H23.2 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
CO	District Rule	1110.2
VOC	District Rule	1110.2

Whether or not explicitly stated on this permit, including, but not limited to, reporting, record keeping, monitoring, source testing, and other criteria defined in approved Rule 1110.2 (f)(1)(D) inspection and monitoring plan, start-up shall be defined as 60 minutes from when fuel is introduced to each engine for combustion

## FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

**The operator shall comply with the terms and conditions set forth below:**

[RULE 1110.2, 7-9-2010]

[Devices subject to this condition : D5, D6, D7, D8, D9, D10]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
CO	40CFR63, SUBPART	ZZZZ
Formaldehyde	40CFR63, SUBPART	ZZZZ

[40CFR 63 Subpart ZZZZ, 1-18-2008]

[Devices subject to this condition : D5, D6, D7, D8, D9, D10]

#### **K. Record Keeping/Reporting**

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

This engine shall comply with the following additional monitoring and record keeping requirements of Rule 1110.2 (F)(1)(e) as outlined below:

1. Total hours of operation
2. Type of gaseous fuel
3. Fuel consumption (cubic feet of gas) and,
4. Cumulate hours of operation since the last source test required in subparagraph (f) (1)(c) of Rule 1110.2

## **FACILITY PERMIT TO OPERATE SAN DIEGO GAS & ELECTRIC**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

**The operator shall comply with the terms and conditions set forth below:**

[RULE 1110.2, 7-9-2010]

[Devices subject to this condition : D5, D6, D7, D8, D9, D10]