South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

April 24, 2008

Mr. Robert Worl, Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Final Determination of Compliance (FDOC) for Edison Mission Energy's (EME's) Proposed Valle Del Sol Energy, LLC (VSE) Project (Facility ID No. 146534), to be located at 29500 Rouse Road, Romoland, CA 92585; (05-AFC-3)

Dear Mr. Worl:

This is in reference to Edison Mission Energy's (EME's) Proposed Valle Del Sol, LLC (VSE) Power Plant Project and VSE's Application for Certification (AFC) and Title V Application for a Permit to Construct filed with the California Energy Commission (CEC) and the South Coast Air Quality Management District (AQMD), respectively. As you know, VSE has proposed to construct a 500 net megawatt (MW) power plant, Valle Del Sol Energy, LLC, at 29500 Rouse Road, Romoland, CA 92585.

Due to the AQMD Governing Board's further amendments to Rule 1309.1, AQMD reevaluated the VSE Project to determine its compliance with the August 3, 2007 Amended Rule 1309.1. Subsequently, AQMD issued a revised Preliminary Determination of Compliance for VSE on February 1, 2008. AQMD also distributed a new Public Notice for this project on February 1, 2008 and provided a review and comment period for the amended DOC. During the comment period, AQMD received comments from the applicant and U.S Environmental Protection Agency (EPA) Region IX. AQMD has reviewed and responded to each of the comments.

Attached please find AQMD's FDOC indicating that VSE will comply with all applicable air quality Rules and Regulations, along with a revised draft copy of the permit. Please note that VSE must also obtain a Final Title V Permit from AQMD prior to the start of construction.

At this time, AQMD has not issued a Final Title V Permit to Construct for this project, and VSE must comply with the following additional requirements of Rule 1309.1 prior to AQMD releasing the Priority Reserve credits and issuance of the Final Title V Permit.

Rule 1303(b)(2)
VSE must provide emission offsets for NOx, VOC, SOx, and PM_{10} emissions. Emission offsets for PM10, SOx, and VOC will be provided in the form of Emission Reduction Credits (ERCs). Some or all of the emission offsets for PM10, and SOx may also be obtained from the AQMD's Priority Reserve pursuant to AQMD Rule 1309.1.

Rule 2005(b)(2)
Emission offsets for NOx will be in the form of RECLAIM Trading Credits (RTCs).

Rule 1309.1(c)(2)
VSE pays a mitigation fee pursuant to subdivision (g).

Rule 1309.1(c)(3)
VSE conducts a due diligence effort [based on an ERC cost not to exceed the applicable mitigation fee for that pollutant at the location of the electrical generating facility (EGF) and as specified in subdivision (g) of Rule 1309.1] approved by the Executive Officer to secure available ERCs for requested Priority Reserve pollutants. Such efforts shall include securing available ERCs including those available through state emission banks or creating ERCs through SIP approved credit generation programs as available.

Rule 1309.1(c)(4)
VSE enters into a long-term contract (at least one year) with the State of California to sell at least 50 percent of the portion of power which it has generated using the Priority Reserve Credits and the Executive Officer determines at the time of permitting, and based on consultations with State power agencies that the State of California is both entering into such long term contract and that a need for such contract exists at the time of permitting, if the facility is a net generator.

Rule 1309.1(d)(6)
VSE must use any ERCs held first, before access to the Priority Reserve is allowed.

Rule 1309.1(d)(14)
VSE secures final certification and approval for this project from the California Energy Commission, and has entered into a long term contract with Southern California Edison Company or the San Diego Gas and Electric Company or the State of California to provide electricity in Southern California.

If you have any questions regarding this project, please contact Mr. Kenneth L. Coats at (909) 396-2527 kcoats@aqmd.gov or Mr. John Yee at (909) 396-2531 jyee@aqmd.gov. For any questions regarding this letter and the FDOC, please contact Mr. Michael D. Mills, Senior Manager at (909) 396-2578 mmills@aqmd.gov.

Sincerely,

Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering and Compliance

MN:klc
Enclosure
cc: Mr. Thomas J. McCabe, EME

South Coast
Air Quality Management District
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April 24, 2008

Mr. Gerardo Rios – via email (R9AirPermits_sc@epa.gov)
USEPA Region IX, Mail Stop AIR-3
75 Hawthorne St.
San Francisco, CA 94105

Subject: Response to EPA comments for Edison Mission Energy's (EME's) Proposed Valle Del Sol, LLC (VSE) Project (Facility ID No. 146534), to be located at 29500 Rouse Road, Romoland, CA 92585; (05-AFC-3)

Dear Mr. Rios:

This is in reference to Edison Mission Energy's (EME's) Proposed Valle Del Sol, LLC (VSE) Power Plant Project and VSE's Application for Certification (AFC) and Title V Application for a Permit to Construct filed with the California Energy Commission (CEC) and the South Coast Air Quality Management District (AQMD), respectively. As you know, VSE has proposed to construct a 500 net megawatt (MW) power plant, Valle Del Sol, LLC, at the above described location. During the 45-day review period, EPA provided comments on the proposed Permit to Construct and Title V Permit for the above facility as listed in the email from EPA to AQMD dated March 7, 2008. Below is AQMD's response to those comments:

Comment No. 2
Conditions D12.3 and D12.4 establish temperature and differential pressure ranges for the catalyst. EPA notes that no provisions are made to account for operation during the startup period, during which the catalyst may not be able to comply with the required ranges. If the emission units can not comply during the startup period, the permit should be revised to specify what the temperature and pressure requirements are during the start up period.

AQMD Response:
AQMD agrees with EPA regarding the need for maximum temperature and pressure limits and will revise conditions D12.3 and D12.4 to include a maximum temperature and pressure limit which cannot be exceeded during the start-up period. AQMD believes that there is no need for a range as long as the maximum temperature and pressure are specified.

Comment No. 4
While Condition C1.4 limits the annual hours of operation for the turbines, and Condition D12.7 requires the installation of a non-resettable elapsed time meter, EPA could not locate any requirement to monitor and record the hours of operation in Section K of the permit. Please add a condition requiring at least monthly monitoring and recordkeeping of the elapsed time meter readings.

AQMD Response:
Electrical generating facilities located in Zone 1 as described in AQMD Rule 1309.1(b)(5(A)(ii) are not subject to a limitation on annual hours of operation. There are also no other applicable air quality rules or regulations which

limit the annual hours of operation. Therefore, the draft permit contains no condition limiting the annual hours of operation or requiring the installation of a non-resettable elapsed time meter.

Comment No. 5
EPA notes that for several of the conditions related to source testing, found in Subsection D of Section H of the permit (e.g. see Condition D29.3), the required test method is listed as "Approved District Method." Since specific SIP approved test methods are available for each of these tests, the Title V permit must list the specific test methods required to be used. The District may add a condition stating that an alternative test method may be allowed, but only upon both District and EPA concurrence. In a similar manner, many of these same conditions specify that the required Averaging Time is "District-approved averaging time." Again each specific test method has a corresponding required averaging time. Please revise all Conditions in Subsection D to provide specific test method and averaging time requirements.

AQMD Response:
AQMD concurs with EPA and will make the following revisions to the appropriate source testing conditions: The required averaging time for PM will be revised from "District approved averaging time" to read "4 hours". The required test method for PM will be revised from "Approved District Method" to read "Method 5". The required test method for SOx will be revised from "Approved District Method" to read AQMD Method 307-91." The required test method for VOC will be revised from "Approved District Method" to read "AQMD Method 25.3". In addition to the test methods stated above, please note that the appropriate source test conditions have been revised to allow the use of alternative test methods as approved by AQMD, CARB and EPA.

If you have any questions regarding this project, please contact Mr. Kenneth L. Coats at (909) 396-2527 kcoats@aqmd.gov or Mr. John Yee at (909) 396-2531 jyee@aqmd.gov.

Sincerely,

Michael D. Mills

Michael D. Mills, P.E.
Senior Manager
General Commercial & Energy Team
Engineering & Compliance

cc: Mr. Robert Worl, CEC
Mr. Thomas J. McCabe, EME
CERTIFIED MAIL/RETURN RECEIPT REQUESTED

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

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
Process 3 : RULE 219 EXEMPT EQUIPMENT SUBJECT TO SOURCE SPECIFIC RULES					
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS	E32			**VOC:** (9) [**RULE 1113,11-8-1996;***RULE 1113,7-9-2004;***RULE 1171,11-7-2003;***RULE 1171,5-6-2005***]	K67.3
RULE 219 EXEMPT EQUIPMENT, EXEMPT HAND WIPING OPERATIONS	E33			**VOC:** (9) [**RULE 1171,11-7-2003;***RULE 1171,5-6-2005***]	

* (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
VALLE DEL SOL ENERGY, LLC

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
VALLE DEL SOL ENERGY, LLC

SECTION D: DEVICE ID INDEX

Device Index For Section D			
Device ID	**Section D Page No.**	**Process**	**System**
E32	1	3	0
E33	1	3	0

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

FACILITY CONDITIONS

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[**RULE 401, 3-2-1984**; RULE 401, 11-9-2001]

F24.1 Accidental release prevention requirements of Section 112(r)(7):

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[40CFR 68 - Accidental Release Prevention, 5-24-1996]

DEVICE CONDITIONS

K. Record Keeping/Reporting

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

K67.3 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

For architectural applications where no thinners, reducers, or other VOC containing materials are added, maintain semi-annual records for all coating consisting of (a) coating type, (b) VOC content as supplied in grams per liter (g/l) of materials for low-solids coatings, (c) VOC content as supplied in g/l of coating, less water and exempt solvent, for other coatings.

For architectural applications where thinners, reducers, or other VOC containing materials are added, maintain daily records for each coating consisting of (a) coating type, (b) VOC content as applied in grams per liter (g/l) of materials used for low-solids coatings, (c) VOC content as applied in g/l of coating, less water and exempt solvent, for other coatings.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : E32]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
Process 1 : INTERNAL COMBUSTION					
System 1 : GAS TURBINES, POWER GENERATION					
GAS TURBINE, UNIT NO.1, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F, WITH WATER INJECTION WITH A/N:	D1	C3	NOX: MAJOR SOURCE**	**CO:** 2000 PPMV NATURAL GAS (5) **[RULE 407,4-2-1982]** ; **CO:** 6 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988]** **NOX:** 10.29 LBS/MMSCF NATURAL GAS (1A) **[RULE 2012,5-6-2005]** ; **NOX:** 2.5 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988** **RULE 2005,5-6-2005]** ; **NOX:** 15 PPMV NATURAL GAS (8) **[40CFR 60 Subpart KKKK,7-6-2006]** ; **NOX:** 123.46 LBS/MMSCF NATURAL GAS (1) **[RULE 2012,5-6-2005]** **NOX:** 0.08 LBS/MEGAWATT-HOUR NATURAL GAS (5) **[RULE 1309.1,5-3-2002;***RULE 1309.1,8-3-2007***]** ; **PM10:** 0.06 LBS/MEGAWATT-HOUR NATURAL GAS (5) **[RULE 1309.1,5-3-2002**	A63.1, A99.1, A99.2, A99.3, A99.4, A99.5, A195.1, A195.2, A195.3, A327.1, A433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, E193.5, H23.1, I296.1, K40.1, K67.1

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(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
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
Process 1 : INTERNAL COMBUSTION					
GENERATOR, 104 MW				*RULE 1309.1,8-3-2007*] ; **PM10:** 0.01 GRAINS/SCF NATURAL GAS (5A) [**RULE 475,10-8-1976;***RULE 475,8-7-1978*] ; **PM10:** 11 LBS/HR NATURAL GAS (5B) [**RULE 475,10-8-1976** *RULE 475,8-7-1978*] ; **PM10:** 0.1 GRAINS/SCF (5C) [**RULE 409,8-7-1981**] ; **SO2:** (9) [**40CFR 72 - Acid Rain Provisions,11-24-1997**] **SOX:** 0.06 LBS/MMBTU NATURAL GAS (8) [**40CFR 60 Subpart KKKK,7-6-2006**] ; **VOC:** 2 PPMV NATURAL GAS (4) [**RULE 1303(a)(1)-BACT,5-10-1996** *RULE 1303(a)(1)-BACT,12-6-2002*]	
CO OXIDATION CATALYST, NO. 1, ENGLEHARD CAMET, WITH 72 CUBIC FEET OF TOTAL CATALYST VOLUME A/N:	C3	D1 C4			

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FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1 : INTERNAL COMBUSTION					
SELECTIVE CATALYTIC REDUCTION, NO. 1, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, WIDTH: 20 FT 3 IN; HEIGHT: 28 FT 8 IN; LENGTH: 1 FT 8 IN WITH A/N: AMMONIA INJECTION, GRID	C4	C3 S6		**NH3:** 5 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002*]	A195.4, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, NO. 1, HEIGHT: 90 FT; DIAMETER: 13 FT 6 IN A/N:	S6	C4			
GAS TURBINE, UNIT NO.2, NATURAL GAS, GENERAL ELECTRIC , MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F, WITH WATER INJECTION WITH A/N:	D7	C9	NOX: MAJOR SOURCE**	**CO:** 2000 PPMV NATURAL GAS (5) **[RULE 407,4-2-1982]** ; **CO:** 6 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988]** **NOX:** 10.29 LBS/MMSCF NATURAL GAS (1A) **[RULE 2012,5-6-2005]** ; **NOX:** 2.5 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988**	A63.1, A99.1, A99.2, A99.3, A99.4, A99.5, A195.1, A195.2, A195.3, A327.1, A433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, E193.5, H23.1, I296.1, K40.1, K67.1

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(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
VALLE DEL SOL ENERGY, LLC

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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
Process 1 : INTERNAL COMBUSTION					
				RULE 2005,5-6-2005] ; **NOX:** 15 PPMV NATURAL GAS (8) **[40CFR 60 Subpart KKKK,7-6-2006]** ; **NOX:** 123.46 LBS/MMSCF NATURAL GAS (1) **[RULE 2012,5-6-2005]** **NOX:** 0.08 LBS/MEGAWATT-HOUR NATURAL GAS (5) **[RULE 1309.1,5-3-2002;***RULE 1309.1,8-3-2007***]** ; **PM10:** 0.01 GRAINS/SCF NATURAL GAS (5) **[RULE 475,10-8-1976** *RULE 475,8-7-1978***]** ; **PM10:** 11 LBS/HR NATURAL GAS (5A) **[RULE 475,10-8-1976;***RULE 475,8-7-1978***]** ; **PM10:** 0.1 GRAINS/SCF NATURAL GAS (5B) **[RULE 409,8-7-1981]** **PM10:** 0.06 LBS/MEGAWATT-HOUR (5C) **[RULE 1309.1,5-3-2002;***RULE 1309.1,8-3-2007***]** ; **SO2:** (9) **[40CFR 72 - Acid Rain Provisions,11-24-1997]**	

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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
Process 1 : INTERNAL COMBUSTION					
GENERATOR, 104 MW				**SOX:** 0.06 LBS/MMBTU NATURAL GAS (8) **[40CFR 60 Subpart KKKK,7-6-2006]** ; **VOC:** 2 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996** *RULE 1303(a)(1)-BACT,12-6-2002]*	
CO OXIDATION CATALYST, NO. 2, ENGLEHARD CAMET, WITH 72 CUBIC FEET OF TOTAL CATALYST VOLUME A/N:	C9	D7 C10			
SELECTIVE CATALYTIC REDUCTION, NO. 2, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, WIDTH: 20 FT 3 IN; HEIGHT: 28 FT 8 IN; LENGTH: 1 FT 8 IN WITH A/N: AMMONIA INJECTION, GRID	C10	C9 S12		**NH3:** 5 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002]*	A195.4, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, NO. 2, HEIGHT: 90 FT; DIAMETER: 13 FT 6 IN A/N:	S12	C10			

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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
Process 1 : INTERNAL COMBUSTION					
GAS TURBINE, UNIT NO.3, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F, WITH WATER INJECTION WITH A/N:	D13	C15	NOX: MAJOR SOURCE**	**CO:** 2000 PPMV NATURAL GAS (5) **[RULE 407,4-2-1982]** ; **CO:** 6 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988]** **NOX:** 10.29 LBS/MMSCF NATURAL GAS (1A) **[RULE 2012,5-6-2005]** ; **NOX:** 2.5 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988** **RULE 2005,5-6-2005]** ; **NOX:** 15 PPMV NATURAL GAS (8) **[40CFR 60 Subpart KKKK,7-6-2006]** ; **NOX:** 123.46 LBS/MMSCF NATURAL GAS (1) **[RULE 2012,5-6-2005]** **NOX:** 0.08 LBS/MEGAWATT-HOUR NATURAL GAS (5) **[RULE 1309.1,5-3-2002;***RULE 1309.1,8-3-2007***]** ; **PM10:** 0.01 GRAINS/SCF NATURAL GAS (5) **[RULE 475,10-8-1976**	A63.1, A99.1, A99.2, A99.3, A99.4, A99.5, A195.1, A195.2, A195.3, A327.1, A433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, E193.5, H23.1, I296.1, K40.1, K67.1

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1 : INTERNAL COMBUSTION					
GENERATOR, 104 MW				*RULE 475,8-7-1978*] ; **PM10:** 11 LBS/HR NATURAL GAS (5A) [**RULE 475,10-8-1976;***RULE 475,8-7-1978*] ; **PM10:** 0.1 GRAINS/SCF NATURAL GAS (5B) [**RULE 409,8-7-1981**] **PM10:** 0.06 LBS/MEGAWATT-HOUR (5C) [**RULE 1309.1,5-3-2002;***RULE 1309.1,8-3-2007*] ; **SO2:** (9) [**40CFR 72 - Acid Rain Provisions,11-24-1997**] **SOX:** 0.06 LBS/MMBTU NATURAL GAS (8) [**40CFR 60 Subpart KKKK,7-6-2006**] ; **VOC:** 2 PPMV NATURAL GAS (4) [**RULE 1303(a)(1)-BACT,5-10-1996** *RULE 1303(a)(1)-BACT,12-6-2002*]	
CO OXIDATION CATALYST, NO. 3, ENGLEHARD CAMET, WITH 72 CUBIC FEET OF TOTAL CATALYST VOLUME A/N:	C15	D13 C16			

* (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
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
Process 1 : INTERNAL COMBUSTION					
SELECTIVE CATALYTIC REDUCTION, NO. 3, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, WIDTH: 20 FT 3 IN; HEIGHT: 28 FT 8 IN; LENGTH: 1 FT 8 IN WITH A/N: AMMONIA INJECTION, GRID	C16	C15 S18		**NH3:** 5 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002*]	A195.4, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, NO. 3, HEIGHT: 90 FT; DIAMETER: 13 FT 6 IN A/N:	S18	C16			
GAS TURBINE, UNIT NO.4, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F, WITH WATER INJECTION WITH A/N:	D19	C21	NOX: MAJOR SOURCE**	**CO:** 2000 PPMV NATURAL GAS (5) **[RULE 407,4-2-1982]** ; **CO:** 6 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988]** **NOX:** 10.29 LBS/MMSCF NATURAL GAS (1A) **[RULE 2012,5-6-2005]** ; **NOX:** 2.5 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988**	A63.1, A99.1, A99.2, A99.3, A99.4, A99.5, A195.1, A195.2, A195.3, A327.1, A433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, E193.5, H23.1, I296.1, K40.1, K67.1

* (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
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
Process 1 : INTERNAL COMBUSTION					
				RULE 2005,5-6-2005] ; **NOX:** 15 PPMV NATURAL GAS (8) **[40CFR 60 Subpart KKKK,7-6-2006]** ; **NOX:** 123.46 LBS/MMSCF NATURAL GAS (1) **[RULE 2012,5-6-2005]** **NOX:** 0.08 LBS/MEGAWATT-HOUR NATURAL GAS (5) **[RULE 1309.1,5-3-2002;***RULE 1309.1,8-3-2007***]** ; **PM10:** 0.01 GRAINS/SCF NATURAL GAS (5) **[RULE 475,10-8-1976** ***RULE 475,8-7-1978***] ; **PM10:** 11 LBS/HR NATURAL GAS (5A) **[RULE 475,10-8-1976;***RULE 475,8-7-1978***]** ; **PM10:** 0.1 GRAINS/SCF NATURAL GAS (5B) **[RULE 409,8-7-1981]** **PM10:** 0.06 LBS/MEGAWATT-HOUR (5C) **[RULE 1309.1,5-3-2002;***RULE 1309.1,8-3-2007***]** ; **SO2:** (9) **[40CFR 72 - Acid Rain Provisions,11-24-1997]**	

* (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
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
Process 1 : INTERNAL COMBUSTION					
GENERATOR, 104 MW				**SOX:** 0.06 LBS/MMBTU NATURAL GAS (8) **[40CFR 60 Subpart KKKK,7-6-2006]** ; **VOC:** 2 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996** *RULE 1303(a)(1)-BACT,12-6-2002]*	
CO OXIDATION CATALYST, NO. 4, ENGLEHARD CAMET, WITH 72 CUBIC FEET OF TOTAL CATALYST VOLUME A/N:	C21	D19 C22			
SELECTIVE CATALYTIC REDUCTION, NO. 4, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, WIDTH: 20 FT 3 IN; HEIGHT: 28 FT 8 IN; LENGTH: 1 FT 8 IN WITH A/N: AMMONIA INJECTION, GRID	C22	C21 S24		**NH3:** 5 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002]*	A195.4, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, NO. 4, HEIGHT: 90 FT; DIAMETER: 13 FT 6 IN A/N:	S24	C22			

* (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
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
Process 1 : INTERNAL COMBUSTION					
GAS TURBINE, UNIT NO.5, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F, WITH WATER INJECTION WITH A/N:	D25	C27	NOX: MAJOR SOURCE**	**CO:** 2000 PPMV NATURAL GAS (5) **[RULE 407,4-2-1982]** ; **CO:** 6 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988]** **NOX:** 10.29 LBS/MMSCF (1A) **[RULE 2012,5-6-2005]** ; **NOX:** 2.5 PPMV NATURAL GAS (4) **[RULE 1703 - PSD Analysis,10-7-1988;RULE 2005,5-6-2005]** **NOX:** 15 PPMV NATURAL GAS (8) **[40CFR 60 Subpart KKKK,7-6-2006]** ; **NOX:** 123.46 LBS/MMSCF NATURAL GAS (1) **[RULE 2012,5-6-2005]** **NOX:** 0.08 LBS/MEGAWATT-HOUR NATURAL GAS (5) **[RULE 1309.1,5-3-2002;***RULE 1309.1,8-3-2007***]** ; **PM10:** 0.01 GRAINS/SCF NATURAL GAS (5) **[RULE 475,10-8-1976**	A63.1, A99.1, A99.2, A99.3, A99.4, A99.5, A195.1, A195.2, A195.3, A327.1, A433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, E193.5, H23.1, I296.1, K40.1, K67.1

* (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
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
Process 1 : INTERNAL COMBUSTION					
GENERATOR, 104 MW				*RULE 475,8-7-1978*] ; **PM10:** 11 LBS/HR NATURAL GAS (5A) [**RULE 475,10-8-1976;***RULE 475,8-7-1978*] ; **PM10:** 0.1 GRAINS/SCF NATURAL GAS (5B) [**RULE 409,8-7-1981**] **PM10:** 0.06 LBS/MEGAWATT-HOUR NATURAL GAS (5C) [**RULE 1309.1,5-3-2002;***RULE 1309.1,8-3-2007*] ; **SO2:** (9) [**40CFR 72 - Acid Rain Provisions,11-24-1997**] **SOX:** 0.06 LBS/MMBTU NATURAL GAS (8) [**40CFR 60 Subpart KKKK,7-6-2006**] ; **VOC:** 2 PPMV NATURAL GAS (4) [**RULE 1303(a)(1)-BACT,5-10-1996** *RULE 1303(a)(1)-BACT,12-6-2002*]	
CO OXIDATION CATALYST, NO. 5, ENGLEHARD CAMET, WITH 72 CUBIC FEET OF TOTAL CATALYST VOLUME A/N:	C27	D25 C28			

* (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
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
Process 1 : INTERNAL COMBUSTION					
SELECTIVE CATALYTIC REDUCTION, NO. 5, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, WIDTH: 20 FT 3 IN; HEIGHT: 28 FT 8 IN; LENGTH: 1 FT 8 IN WITH A/N: AMMONIA INJECTION, GRID	C28	C27 S30		**NH3:** 5 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002*]	A195.4, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, NO. 5, HEIGHT: 90 FT; DIAMETER: 13 FT 6 IN A/N:	S30	C28			
System 2 : EMERGENCY FIRE PUMP					
INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, LEAN BURN, DIESEL FUEL, CLARKE, MODEL JW6H-UF50, WITH AFTERCOOLER, TURBOCHARGER, 340 BHP A/N:	D34		NOX: PROCESS UNIT**	**CO:** 0.45 GRAM/BHP-HR DIESEL (4) **[RULE 1703 - PSD Analysis,10-7-1988]** ; **NOX:** 469 LBS/1000 GAL DIESEL (1) **[RULE 2012,5-6-2005]** **NOX + ROG:** 4.65 GRAM/BHP-HR DIESEL (4) **[RULE 1703 - PSD Analysis,10-7-1988;RULE 2005,5-6-2005]** ; **PM10:** 0.09 GRAM/BHP-HR DIESEL (4) **[RULE 1303(a)(1)-BACT,5-10-1996**	B61.1, C1.3, D12.5, D12.6, E193.1, E193.2, I296.2, K67.2

* (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
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
Process 1 : INTERNAL COMBUSTION					
				RULE 1303(a)(1)-BACT,12-6-2002] ; **SOX:** 0.005 GRAM/BHP-HR DIESEL (4) **[RULE 1303(a)(1)-BACT,5-10-1996;***RULE 1303(a)(1)-BACT,12-6-2002*;**RULE 1703 - PSD Analysis,10-7-1988]**	
Process 2 : INORGANIC CHEMICAL STORAGE					
STORAGE TANK, FIXED ROOF, TK-1, AMMONIA, 19 PERCENT, WITH PRV SET AT A MINIMUM OF 25 PSIG, 16000 GALS; DIAMETER: 12 FT; HEIGHT: 12 FT A/N:	D31				C157.1, E144.1, E193.1

* (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
VALLE DEL SOL ENERGY, LLC

SECTION H: 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
VALLE DEL SOL ENERGY, LLC

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	**Section H Page No.**	**Process**	**System**
D1	1	1	1
C3	2	1	1
C4	3	1	1
S6	3	1	1
D7	3	1	1
C9	5	1	1
C10	5	1	1
S12	5	1	1
D13	6	1	1
C15	7	1	1
C16	8	1	1
S18	8	1	1
D19	8	1	1
C21	10	1	1
C22	10	1	1
S24	10	1	1
D25	11	1	1
C27	12	1	1
C28	13	1	1
S30	13	1	1
D31	14	2	0
D34	13	1	2

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

FACILITY CONDITIONS

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[**RULE 401, 3-2-1984**; RULE 401, 11-9-2001]

F24.1 Accidental release prevention requirements of Section 112(r)(7):

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[**40CFR 68 - Accidental Release Prevention, 5-24-1996**]

DEVICE CONDITIONS

A. Emission Limits

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

A63.1 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 2,778 LBS IN ANY ONE MONTH
SOX	Less than or equal to 281 LBS IN ANY ONE MONTH
VOC	Less than or equal to 1106 LBS IN ANY ONE MONTH

The operator shall calculate the monthly emissions for VOC, PM10, and SOx using the equation below and the following emisison factors: VOC: 2.00 lb/mmcf; PM10: 6.93 lb/mmcf; and SOx: 0.71 lb/mmcf

Monthly emissions, lb/month = X (EF)

Where X = monthly fuel usage, mmcf/month, and EF = emission factor indicated above

The operator shall provide the AQMD with written notification of the date of initial CO catalyst use within seven (7) days of this event.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19, D25]

A99.1 The 2.5 PPM NOX emission limit(s) shall not apply during turbine commissioning, start-up, and shutdown periods. The commissioning period shall not exceed 134 hours. Start-up time shall not exceed 60 minutes for each start-up. Shutdown periods shall not exceed 10 minutes for each shutdown. The turbine shall be limited to a maximum of 350 start-ups per year. Written records of commissioning, start-ups and shutdowns shall be made available upon request by the Executive Officer.

[RULE 1703 - PSD Analysis, 10-7-1988; RULE 2005, 5-6-2005]

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

A99.2 The 6.0 PPM CO emission limit(s) shall not apply during turbine commissioning, start-up, and shutdown periods. The commissioning period shall not exceed 134 hours. Start-up time shall not exceed 60 minutes for each start-up. Shutdown periods shall not exceed 10 minutes for each shutdown. The turbine shall be limited to a maximum of 350 start-ups per year. Written records of commissioning, start-ups and shutdowns shall be made available upon request by the Executive Officer.

[RULE 1703 - PSD Analysis, 10-7-1988]

[Devices subject to this condition : D1, D7, D13, D19, D25]

A99.3 The 123.46 LBS/MMCF NOX emission limit(s) shall only apply during the interim reporting period during initial turbine commissioning to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from entry into RECLAIM.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D1, D7, D13, D19, D25]

A99.4 The 10.86 LBS/MMSCF NOX emission limit(s) shall only apply during the interim reporting period after initial turbine commissioning to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from entry into RECLAIM.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D1, D7, D13, D19, D25]

A99.5 The 2.0 PPM ROG emission limit(s) shall not apply during turbine commissioning, start-up, and shutdown periods. The commissioning period shall not exceed 134 hours. Start-up time shall not exceed 60 minutes for each start-up. Shutdown periods shall not exceed 10 minutes for each shutdown. The turbine shall be limited to a maximum of 350 start-ups per year. Written records of commissioning, start-ups and shutdowns shall be made available upon request by the Executive Officer.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

A195.1 The 2.5 PPMV NOX emission limit(s) is averaged over 60 minutes at 15% O2, dry.

[RULE 1703 - PSD Analysis, 10-7-1988; RULE 2005, 5-6-2005]

[Devices subject to this condition : D1, D7, D13, D19, D25]

A195.2 The 6.0 PPMV CO emission limit(s) is averaged over 60 minutes at 15% O2, dry.

[RULE 1703 - PSD Analysis, 10-7-1988]

[Devices subject to this condition : D1, D7, D13, D19, D25]

A195.3 The 2.0 PPMV VOC emission limit(s) is averaged over 60 minutes at 15% O2, dry.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(1)-Modeling, 5-10-1996**; RULE 1303(b)(1)-Modeling, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

A195.4 The 5 PPMV NH3 emission limit(s) is averaged over 60 minutes at 15% O2, dry basis. The operator shall calculate and continuously record the NH3 slip concentration using the following.

NH3 = (ppmv) [a-b*c/1EE+06]*1EE+06/b, where

a = NH3 injection rate (lb/hr)/17 (lb/lb-mol)

b = dry exhaust gas flow rate (scf/hr)/385.3 scf/lb-mol

c = change in measured NOx across the SCR (ppmvd at 15% O2)

The operator shall install and maintain a NOx analyzer to measure the SCR inlet NOx ppmv accurate to plus or minus 5 percent calibrated at least once every twelve months

The NOx analyzer shall be installed and operated within 90 days of initial start-up

The operator shall use the above described method or another alternative method approved by the Executive Officer

The ammonia slip calculation procedures described above shall not be used for compliance determination or emission information without corroborative data using an approved reference method for the determination of ammonia

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 2012, 5-6-2005]**

[Devices subject to this condition : C4, C10, C16, C22, C28]

A327.1 For the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

[RULE 475, 10-8-1976; RULE 475, 8-7-1978]

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

A433.1 The operator shall comply at all times with the 2.5 ppm 1-hour BACT limit for NOx, except as defined in condition A99.1 and for the following scenario::

Operating Scenario	Maximum Hourly Emission Limit	Operational Limit
Start-up	10 lb/hr	NOx emissions not to exceed 10 lbs total per start-up per turbine. Each turbine shall be limited to 350 start-ups per year, with each start-up not to exceed 60 minutes.

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 5-6-2005]

[Devices subject to this condition : D1, D7, D13, D19, D25]

B. Material/Fuel Type Limits

B61.1 The operator shall only use diesel fuel containing the following specified compounds:

Compound	Range	ppm by weight
Sulfur	less than or equal to	15

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 431.2, 5-4-1990**; RULE 431.2, 9-15-2000]

[Devices subject to this condition : D34]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

B61.2 The operator shall not use natural gas containing the following specified compounds:

Compound	Range	grain per 100 scf
H2S	greater than	0.25

This concentration limit is an annual average based on monthly samples of natural gas composition or gas supplier documentation. The gaseous fuel sample shall be tested using District method 307-91 for total sulfur calculated as H2S.

[**RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19, D25]

C. Throughput or Operating Parameter Limits

C1.1 The operator shall limit the fuel usage to no more than 393 MM cubic feet in any one calendar month.

For the purpose of this condition, fuel usage shall be defined as the total natural gas usage of a single turbine.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[**RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

C1.3 The operator shall limit the operating time to no more than 199.99 hour(s) in any one year.

For the purpose of this condition, operating time shall be defined as being inclusive of time allotted for maintenance and testing.

[RULE 1110.2, 6-3-2005; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996**; **RULE 1304(c)-Offset Exemption, 6-14-1996**; **RULE 2012, 5-6-2005**]

[Devices subject to this condition : D34]

C157.1 The operator shall install and maintain a pressure relief valve with a minimum pressure set at 25 psig.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D31]

D. Monitoring/Testing Requirements

D12.1 The operator shall install and maintain a(n) flow meter to accurately indicate the fuel usage being supplied to the turbine.

The operator shall also install and maintain a device to continuously record the parameter being measured.

[**RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002; **RULE 2012, 5-6-2005**]

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

D12.2 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The ammonia injection rate shall remain between 13.5 gallons per hour and 16.5 gallons per hour

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1703 - PSD Analysis, 10-7-1988**; **RULE 2005, 5-6-2005]**

[Devices subject to this condition : C4, C10, C16, C22, C28]

D12.3 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet of the SCR reactor.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The catalyst temperature shall not exceed 850 degrees F during start-up.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1703 - PSD Analysis, 10-7-1988**; **RULE 2005, 5-6-2005]**

[Devices subject to this condition : C4, C10, C16, C22, C28]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

D12.4 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The pressure drop across the catalyst shall not exceed 7.6 inches of water column

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1703 - PSD Analysis, 10-7-1988**; **RULE 2005, 5-6-2005]**

[Devices subject to this condition : C4, C10, C16, C22, C28]

D12.5 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; **RULE 1304(c)-Offset Exemption, 6-14-1996**; **RULE 2012, 5-6-2005]**

[Devices subject to this condition : D34]

D12.6 The operator shall install and maintain a(n) non-resettable totalizing fuel flow meter to accurately indicate the fuel usage of the engine.

[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; **RULE 1304(c)-Offset Exemption, 6-14-1996**; **RULE 2012, 5-6-2005]**

[Devices subject to this condition : D34]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

D29.1 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
NOX emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
CO emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	District Method 5	4 hours	Outlet of the SCR serving this equipment
SOX emissions	AQMD Laboratory Method 307-91	Not Applicable	Fuel Sample
VOC emissions	District Method 25.3	1 hour	Outlet of the SCR serving this equipment
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after intial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measur the fuel flow rate (CFH), the flue gas flow rate and the turbine generating capacity in MW.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at maximum, average, and mininum loads.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas fired turbines, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of cannisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

Because the VOC BACT level was set using data derived from various source test results, this alternate VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

For the purpose of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of AQMD, CARB, and EPA.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002; **RULE 1703 - PSD Analysis, 10-7-1988**; **RULE 2005, 5-6-2005**]

[Devices subject to this condition : D1, D7, D13, D19, D25]

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
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted and the results submitted to the District within 45 days after the test date. The AQMD shall be notified of the date and time of the test at least seven days prior to the test.

The test(s) shall be conducted at least quarterly during the first twelve months of operation and at least quarterly thereafter. The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using District Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted to determine compliance with the Rule 1303 concentration limit.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

D29.3 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
SOX emissions	AQMD Laboratory Method 307-91	Not Applicable	Fuel sample
VOC emissions	District Method 25.3	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	District Method 5	4 hours	Outlet of the SCR serving this equipment

The test(s) shall be conducted at least once every three years.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in MW.

The test shall be conducted in accordance AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at 100 percent load.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas fired turbines, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of cannisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

Because the VOC BACT level was set using data derived from various source test results, this alternate VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

For the purpose of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of AQMD, CARB, and EPA.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

D29.4 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
NOX emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	District Method 5	4 hours	Outlet of the SCR serving this equipment

The test shall be conducted after District approval of the source test protocol, but no later than 180 days after intial start-up. The District shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted at full load to demonstrate compliance with the 0.080 lb/MW-hr NOx and 0.060 lb/MW-hr PM10 requirements set forth in Rule 1309.1. If the actual measurement is within the accuracy of the devices used for electrical power measurement, the result will be acceptable.

The lb/MW-hr emission rate of each electrical generating unit shall be determined by dividing (a) the lb/hr emission rate measured at the location and in accordance with the test method specified above, by (b) the adjusted gross electrical output of each electrical generating unit.

The adjusted gross electrical output of each electrical generating unit shall be determined by making the following adjustments to the mesured gross electrical output:

1) Apply the manufacturer's standard correction factors to calculate gross electrical output at ISO conditions.

2) Apply the GE site-specific LMS100 power degradation curve to adjust measured gross electrical output, as corrected to ISO conditions, to undegraded electrical generating unit conditions as defined by the turbine manufacturer. The maximum power degradation adjustment shall not exceed 1 percent.

The test shall be conducted in accordance with District approved test protocol. The protocol shall be submitted to the District engineer no later than 45 days before the proposed test date and shall be approved by the District brefore the test commences.

The test protocol shall include the proposed operating conditions of the electrical generating unit during the test, the correction and degradation factors and documentation of their validity, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

For the purpose of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of AQMD, CARB, and EPA.

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[**RULE 1309.1, 5-3-2002**; RULE 1309.1, 8-3-2007]

[Devices subject to this condition : D1, D7, D13, D19, D25]

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

CO concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS shall be installed and operated no later than 90 days after initial start-up of the turbine, and in accordance with an approved AQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD. Within two weeks of the turbine start-up, the operator shall provide written notification to the District of the exact date of start-up.

The CEMS shall be installed and operated to measure the CO concentrations over a 15 minute averaging time period.

The CEMS will convert the actual CO concentrations to mass emission rates (lbs/hr) and record the hourly emission rates on a continuous basis.

CO Emission Rate, lb/hr = K Cco Fd [20.9/(20.9% - %O2 d)][(Qg*HHV)/106], where

K = 7.267EE-8 (lb/scf)/ppm

Cco = Average of four consecutive 15 minute average CO concentrations, ppm

Fd = 8710 dscf/MMBTU natural gas

%O2 d = Hourly average % by volume O2 dry, corresponding to Cco

Qg = Fuel gas usage during the hour, scf/hr

HHV = Higher heating value of fuel gas, BTU/scf

[RULE 1703 - PSD Analysis, 10-7-1988]

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

D82.2 The operator shall install and maintain a CEMS to measure the following parameters:

NOX concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS shall be installed and operating no later than 90 days after initial start-up of the turbine and shall comply with the requirements of Rule 2012. During the interim period between the initial start-up and the provisional certification date of the CEMS, the operator shall comply with the monitoring requirements of Rule 2012(h)(2) and 2012(h)(3). Within two weeks of the turbine start-up date, the operator shall provide written notification to the AQMD of the exact date of start-up.

The CEMS shall be installed and operating (for BACT purposes only) no later than 90 days after initial start-up of the turbine.

[RULE 1703 - PSD Analysis, 10-7-1988; RULE 2005, 5-6-2005; RULE 2012, 5-6-2005]

[Devices subject to this condition : D1, D7, D13, D19, D25]

E. Equipment Operation/Construction Requirements

E144.1 The operator shall vent this equipment, during filling, only to the vessel from which it is being filled.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D31]

E179.1 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that hour.

Condition Number D 12- 2

Condition Number D 12- 3

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1703 - PSD Analysis, 10-7-1988]**

[Devices subject to this condition : C4, C10, C16, C22, C28]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

E179.2 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every month and shall be calculated upon the average of the continuous monitoring for that month.

Condition Number D 12- 4

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1703 - PSD Analysis, 10-7-1988]**

[Devices subject to this condition : C4, C10, C16, C22, C28]

E193.1 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the final California Energy Commission decision for the 05-AFC-3 project

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D1, C4, D7, C10, D13, C16, D19, C22, D25, C28, D31, D34]

E193.2 The operator shall operate and maintain this equipment according to the following requirements:

This equipment shall only operate if utility electricity is not available

This equipment shall only be operated for the primary purpose of providing a backup source of power to drive an emergency fire pump.

This equipment shall only be operated for maintenance and testing, not to exceed 50 hours in any one year.

This equipment shall not be operated under a Demand Response Program (DRP).

An engine operating log shall be kept in writing, listing the date of operation, the elapsed time, in hours, and the reason for operation. The log shall be maintained for a minimum of five years and shall be made available to AQMD personnel upon request.

[RULE 1110.2, 6-3-2005; RULE 1470, 3-4-2005]

[Devices subject to this condition : D34]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

E193.3 The operator shall operate and maintain this equipment according to the following requirements:

Devices D1, D7, D13, D19, and D25 shall be fully and legally operational within 3 years of issuance of the Permit to Construct.

[**RULE 1309.1, 5-3-2002**; RULE 1309.1, 8-3-2007]

[Devices subject to this condition : D1, D7, D13, D19, D25]

E193.5 The operator shall install this equipment according to the following requirements:

PM10 emission rates from this equipment shall not exceed 0.060 lb/MW-hr

NOx emission rates from this equipment shall not exceed 0.080 lb/MW-hr

Compliance with the NOx and PM10 emission rates shall be demonstrated once over the lifetime of the project in accordance with condition D29.4

[**RULE 1309.1, 5-3-2002**; RULE 1309.1, 8-3-2007]

[Devices subject to this condition : D1, D7, D13, D19, D25]

H. Applicable Rules

H23.1 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
NOX	40CFR60, SUBPART	KKKK
SOX	40CFR60, SUBPART	KKKK

[40CFR 60 Subpart KKKK, 7-6-2006]

[Devices subject to this condition : D1, D7, D13, D19, D25]

I. Administrative

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

I296.1 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

To comply with this condition, the operator shall prior to the 1st compliance year hold a minimum NOx RTCs of 38,664 lbs/yr. This condition shall apply during the 1st 12 months of operation, commencing with the initial operation of the gas turbine.

To comply with this condition, the operator shall, prior to the beginning of all years subsequent to the first compliance year, hold a minimum of 30,222 lbs/yr of NOx RTCs for operation of the gas turbine. In accordance with Rule 2005(f), unused RTCs may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1st compliance year.

[RULE 2005, 5-6-2005]

[Devices subject to this condition : D1, D7, D13, D19, D25]

I296.2 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

To comply with this condition, the operator shall, prior to each compliance year hold a minimum NOx RTCs of 2,097 lbs/yr.

In accordance with Rule 2005(f), unused RTCs may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1st compliance year

[RULE 2005, 5-6-2005]

[Devices subject to this condition : D34]

K. Record Keeping/Reporting

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

K40.1 The operator shall provide to the District a source test report in accordance with the following specifications:

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.

Emission data shall be expressed in terms of concentration (ppmv) corrected to 15 percent oxygen (dry basis), mass rate (lb/hr), and lb/mmcf. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).

All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.

Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002; **RULE 2005, 5-6-2005**]

[Devices subject to this condition : D1, D7, D13, D19, D25]

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Natural gas fuel use after CEMS certification

Natural gas fuel use during the commissioning period

Natural gas fuel use after the commissioning period and prior to CEMS certification

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

[Devices subject to this condition : D1, D7, D13, D19, D25]

FACILITY PERMIT TO OPERATE
VALLE DEL SOL ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

Date of operation, the elapsed time, in hours, and the reason for operation

[RULE 1110.2, 6-3-2005]

[Devices subject to this condition : D34]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGES 57	PAGE 1
ENGINEERING AND COMPLIANCE DIVISION	APPLICATION NO. 450931 (Master File)	DATE 4-22-2008
ENGINEERING ANALYSIS / EVALUATION	PROCESSED BY: Ken Coats	REVIEWED BY:

VALLE DEL SOL ENERGY, LLC
FINAL DETERMINATION OF COMPLIANCE (FDOC)

COMPANY NAME AND ADDRESS

Valle del Sol Energy, LLC
% Edison Mission Energy
18101 Von Karman Avenue
Irvine, CA 92612

Contact: Mr. Thomas J. McCabe, Jr
AQMD Facility ID: 146534

EQUIPMENT LOCATION

29500 Rouse Road
Romoland, CA 92585

EQUIPMENT DESCRIPTION (Section H of the Facility Permit)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 1: GAS TURBINES, POWER GENERATION					
GAS TURBINE, UNIT NO. 1, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F WITH WATER INJECTION, WITH A/N 450931 GENERATOR, 104 MW	D1	C3	NOX: MAJOR SOURCE	**CO:** 6.0 PPMV NATURAL GAS (4) [Rule 1703(a)(2)-PSD-BACT]; **CO:** 2000 PPMV NATURAL GAS (5) [Rule 407] **NOX:** 15 PPMV NATURAL GAS (8) [40CFR60 Subpart KKKK] **NOX:** 123.46 LB/MMCF NATURAL GAS(1) [Rule 2012] **NOX:** 10.29 LB/MMCF NATURAL GAS (1A) [Rule 2012] **NOX:** 2.5 PPMV NATURAL GAS (4)[Rule 2005-BACT; Rule 1703(a)(2)-PSD-BACT] **NOX:** 0.080 LB/MW-hr [Rule 1309.1] **VOC:** 2.0 PPMV (4) NATURAL GAS [Rule 1303(a)(1)-BACT] **PM10**: 0.01 GRAIN/DSCF NATURAL GAS (5A) [Rule 475]; **PM10**: 0.1 GRAIN/DSCF NATURAL GAS(5) [Rule 409]; **PM10**: 11 LB/HR NATURAL GAS (5B) [Rule 475] **PM10:** 0.060 LB/MW-hr (5C) [Rule 1309.1] **SOX**: 0.060 LB/MMBTU NATURAL GAS (8) [40 CFR60 Subpart KKKK] **SO2**: (9) Acid Rain Provisions	A63.1, A99.1, A99.2, A99.3, A99.4, A195.1, A195.2, A195.3, A327.1, A433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, E193.5, H23.1, I296.1, K40.1, K67.1

~~Strikethroughs~~ and underlines indicate changes from the PDOC dated January 1, 2008

EQUIPMENT DESCRIPTION (continued)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 1: GAS TURBINES, POWER GENERATION					
CO OXIDATION CATALYST NO. 1, ENGELHARD CAMET, 72 CUBIC FEET OF TOTAL CATALYST VOLUME, WITH A/N: 450937	C3	D1 C4			
SELECTIVE CATALYTIC REDUCTION NO. 1, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, HEIGHT: 28 FT 8 IN; WIDTH: 20 FT 3 IN; LENGTH: 1 FT 8 IN; WITH NH3 INJECTION GRID A/N: 450937	C4	C3 S6		**NH3:** 5.0 PPMV (4) [Rule 1303(a)(1)-BACT]	A195.4 D12.2 D12.3 D12.4 E179.1 E179.2 E193.1
STACK NO. 1, DIAMETER: 13 FT 6 IN, HEIGHT: 90 FT A/N: 450931	S6	C4			
GAS TURBINE, UNIT NO. 2, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F, WITH WATER INJECTION, WITH A/N 450932 GENERATOR, 104 MW	D7	C9	NOX: MAJOR SOURCE	**CO:** 6.0 PPMV NATURAL GAS (4) [Rule 1703(a)(2)-PSD-BACT]; **CO:** 2000 PPMV NATURAL GAS (5) [Rule 407] **NOX:** 15 PPMV NATURAL GAS (8) [40CFR60 Subpart KKKK] **NOX:** 123.46 LB/MMCF NATURAL GAS(1) [Rule 2012] **NOX:** 10.29 LB/MMCF NATURAL GAS (1A) [Rule 2012] **NOX:** 2.5 PPMV NATURAL GAS (4)[Rule 2005-BACT; Rule 1703(a)(2)-PSD-BACT] **NOX:** 0.080 LB/MW-hr [Rule 1309.1] **VOC:** 2.0 PPMV (4) NATURAL GAS [Rule 1303(a)(1)-BACT] **PM10**: 0.01 GRAIN/DSCF NATURAL GAS (5A) [Rule 475]; **PM10**: 0.1 GRAIN/DSCF NATURAL GAS(5) [Rule 409]; **PM10**: 11 LB/HR NATURAL GAS (5B) [Rule 475] **PM10:** 0.060 LB/MW-hr (5C) [Rule 1309.1] **SOX**: 0.060 LB/MMBTU NATURAL GAS (8) [40 CFR60 Subpart KKKK] **SO2**: (9) Acid Rain Provisions	A63.1, A99.1, A99.2, A99.3, A99.4, A195.1, A195.2, A195.3, A327.1, A433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, E193.5, H23.1, I296.1, K40.1, K67.1

EQUIPMENT DESCRIPTION (continued)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 1: GAS TURBINES, POWER GENERATION					
CO OXIDATION CATALYST NO. 2, ENGELHARD CAMET, 72 CUBIC FEET OF TOTAL CATALYST VOLUME, WITH A/N: 450938	C9	D7 C10			
SELECTIVE CATALYTIC REDUCTION NO. 2, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, HEIGHT: 28 FT 8 IN; WIDTH: 20 FT 3 IN; LENGTH: 1 FT 8 IN; WITH NH3 INJECTION GRID A/N: 450938	C10	C9 S12		**NH3:** 5.0 PPMV (4) [Rule 1303(a)(1)-BACT]	A195.4 D12.2 D12.3 D12.4 E179.1 E179.2 E193.1
STACK NO. 2, DIAMETER: 13 FT 6 IN, HEIGHT: 90 FT A/N: 450932	S12	C10			
GAS TURBINE, UNIT NO. 3, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F WITH WATER INJECTION, WITH A/N 450933 GENERATOR, 104 MW	D13	C15	NOX: MAJOR SOURCE	**CO:** 6.0 PPMV NATURAL GAS (4) [Rule 1703(a)(2)-PSD-BACT]; **CO:** 2000 PPMV NATURAL GAS (5) [Rule 407] **NOX:** 15 PPMV NATURAL GAS (8) [40CFR60 Subpart KKKK] **NOX:** 123.46 LB/MMCF NATURAL GAS(1) [Rule 2012] **NOX:** 10.29 LB/MMCF NATURAL GAS (1A) [Rule 2012] **NOX:** 2.5 PPMV NATURAL GAS (4)[Rule 2005-BACT; Rule 1703(a)(2)-PSD-BACT] **NOX:** 0.080 LB/MW-hr [Rule 1309.1] **VOC:** 2.0 PPMV (4) NATURAL GAS [Rule 1303(a)(1)-BACT] **PM10**: 0.01 GRAIN/DSCF NATURAL GAS (5A) [Rule 475]; **PM10**: 0.1 GRAIN/DSCF NATURAL GAS(5) [Rule 409]; **PM10**: 11 LB/HR NATURAL GAS (5B) [Rule 475] **PM10:** 0.060 LB/MW-hr (5C) [Rule 1309.1] **SOX**: 0.060 LB/MMBTU NATURAL GAS (8) [40 CFR60 Subpart KKKK] **SO2**: (9) Acid Rain Provisions	A63.1, A99.1, A99.2, A99.3, A99.4, A195.1, A195.2, A195.3, A327.1, A433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, E193.5, H23.1, I296.1, K40.1, K67.1

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EQUIPMENT DESCRIPTION (Continued)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 1: GAS TURBINES, POWER GENERATION					
CO OXIDATION CATALYST NO. 3, ENGELHARD CAMET, 72 CUBIC FEET OF TOTAL CATALYST VOLUME, WITH A/N: 450939	C15	D13 C16			
SELECTIVE CATALYTIC REDUCTION NO. 3, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, HEIGHT: 28 FT 8 IN; WIDTH: 20 FT 3 IN; LENGTH: 1 FT 8 IN; WITH NH3 INJECTION GRID A/N: 450939	C16	C15 S18		**NH3:** 5.0 PPMV (4) [Rule 1303(a)(1)-BACT]	A195.4 D12.2 D12.3 D12.4 E179.1 E179.2 E193.1
STACK NO. 3, DIAMETER: 13 FT 6 IN, HEIGHT: 90 FT A/N: 450933	S18	C16			
GAS TURBINE, UNIT NO. 4, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F, WITH WATER INJECTION, WITH A/N 450935 GENERATOR, 104 MW	D19	C21	NOX: MAJOR SOURCE	**CO:** 6.0 PPMV NATURAL GAS (4) [Rule 1703(a)(2)-PSD-BACT]; **CO:** 2000 PPMV NATURAL GAS (5) [Rule 407] **NOX:** 15 PPMV NATURAL GAS (8) [40CFR60 Subpart KKKK] **NOX:** 123.46 LB/MMCF NATURAL GAS(1) [Rule 2012] **NOX:** 10.29 LB/MMCF NATURAL GAS (1A) [Rule 2012] **NOX:** 2.5 PPMV NATURAL GAS (4)[Rule 2005-BACT; Rule 1703(a)(2)-PSD-BACT] **NOX:** 0.080 LB/MW-hr [Rule 1309.1] **VOC:** 2.0 PPMV (4) NATURAL GAS [Rule 1303(a)(1)-BACT] **PM10**: 0.01 GRAIN/DSCF NATURAL GAS (5A) [Rule 475]; **PM10**: 0.1 GRAIN/DSCF NATURAL GAS(5) [Rule 409]; **PM10**: 11 LB/HR NATURAL GAS (5B) [Rule 475] **PM10:** 0.060 LB/MW-hr (5C) [Rule 1309.1] **SOX**: 0.060 LB/MMBTU NATURAL GAS (8) [40 CFR60 Subpart KKKK] **SO2**: (9) Acid Rain Provisions	A63.1, A99.1, A99.2, A99.3, A99.4, A195.1, A195.2, A195.3, A327.1, A433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, E193.5, H23.1, I296.1, K40.1, K67.1

EQUIPMENT DESCRIPTION (Continued)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 1: GAS TURBINES, POWER GENERATION					
CO OXIDATION CATALYST NO. 4, ENGELHARD CAMET, 72 CUBIC FEET OF TOTAL CATALYST VOLUME, WITH A/N: 450940	C21	D19 C22			
SELECTIVE CATALYTIC REDUCTION NO. 4, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, HEIGHT: 28 FT 8 IN; WIDTH: 20 FT 3 IN; LENGTH: 1 FT 8 IN; WITH NH3 INJECTION GRID A/N: 450940	C22	C21 S24		**NH3:** 5.0 PPMV (4) [Rule 1303(a)(1)-BACT]	A195.4 D12.2 D12.3 D12.4 E179.1 E179.2 E193.1
STACK NO. 4, DIAMETER: 13 FT 6 IN, HEIGHT: 90 FT A/N: 450935	S24	C22			
GAS TURBINE, UNIT NO. 5, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 904 MMBTU/HR AT 45 DEGREES F, WITH WATER INJECTION, WITH A/N 450936 GENERATOR, 104 MW	D25	C27	NOX: MAJOR SOURCE	**CO:** 6.0 PPMV NATURAL GAS (4) [Rule 1703(a)(2)-PSD-BACT]; **CO:** 2000 PPMV NATURAL GAS (5) [Rule 407] **NOX:** 15 PPMV NATURAL GAS (8) [40CFR60 Subpart KKKK] **NOX:** 123.46 LB/MMCF NATURAL GAS(1) [Rule 2012] **NOX:** 10.29 LB/MMCF NATURAL GAS (1A) [Rule 2012] **NOX:** 2.5 PPMV NATURAL GAS (4)[Rule 2005-BACT; Rule 1703(a)(2)-PSD-BACT] **NOX:** 0.080 LB/MW-hr [Rule 1309.1] **VOC:** 2.0 PPMV (4) NATURAL GAS [Rule 1303(a)(1)-BACT] **PM10**: 0.01 GRAIN/DSCF NATURAL GAS (5A) [Rule 475]; **PM10**: 0.1 GRAIN/DSCF NATURAL GAS(5) [Rule 409]; **PM10**: 11 LB/HR NATURAL GAS (5B) [Rule 475] **PM10:** 0.060 LB/MW-hr (5C) [Rule 1309.1] **SOX**: 0.060 LB/MMBTU NATURAL GAS (8) [40 CFR60 Subpart KKKK] **SO2**: (9) Acid Rain Provisions	A63.1, A99.1, A99.2, A99.3, A99.4, A195.1, A195.2, 195.3, A327.1, 433.1, B61.2, C1.1, D12.1, D29.1, D29.2, D29.3, D29.4, D82.1, D82.2, E193.1, E193.3, 193.5, H23.1, I296.1, K40.1, K67.1

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EQUIPMENT DESCRIPTION (Continued)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 1: GAS TURBINES, POWER GENERATION					
CO OXIDATION CATALYST NO. 5, ENGELHARD CAMET, 72 CUBIC FEET OF TOTAL CATALYST VOLUME, WITH A/N: 450942	C27	D25 C28			
SELECTIVE CATALYTIC REDUCTION NO. 5, HALDOR-TOPSOE DNX-920, WITH 718 CUBIC FEET OF TOTAL CATALYST VOLUME, HEIGHT: 28 FT 8 IN; WIDTH: 20 FT 3 IN; LENGTH: 1 FT 8 IN; WITH NH3 INJECTION GRID A/N: 450942	C28	C27 S30		**NH3:** 5.0 PPMV (4) [Rule 1303(a)(1)-BACT]	A195.4 D12.2 D12.3 D12.4 E179.1 E179.2 E193.1
STACK NO. 5, DIAMETER: 13 FT 6 IN, HEIGHT: 90 FT A/N: 450936	S30	C28			
System 2: EMERGENCY FIRE PUMP					
INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, DIESEL FUEL, LEAN BURN, CLARKE, MODEL JW6H-UF50, 340 BHP WITH AFTERCOOLER, TURBOCHARGER A/N: 450943	D34		NOX: PROCESS UNIT	**NOX+NMHC:** 4.65 GM/BHP-HR DIESEL (4) [Rule 2005; Rule 1703(a)(2)-PSD-BACT]; **NOX:** 469 LB/1000 GAL DIESEL (1) [Rule 2012] **CO:** 0.45 GM/BHP-HR DIESEL (4) [Rule 1703(a)(2)-PSD-BACT] **PM10:** 0.09 GM/BHP-HR DIESEL (4) [Rule 1303-BACT] **SOX:** 0.0055 GM/BHP-HR DIESEL (4) [Rule 1303-BACT, Rule 1703(a)(2)-PSD-BACT]	B61.1, C1.3, D12.5, D12.6, E193.1, E193.2, I296.2, K67.2
Process 2: INORGANIC CHEMICAL STORAGE					
STORAGE TANK, TK-1, FIXED ROOF, AMMONIA, 19 PERCENT, DIAMETER: 12'-0"; HEIGHT: 12'-0"; 16,000 GALLONS, WITH PRV SET AT 25 PSIG WITH A/N: 451184	D31				C157.1, E144.1, E193.1

Section D of the Facility Permit

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 3: RULE 219 EXEMPT EQUIPMENT SUBJECT TO SOURCE SPECIFIC RULES					
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATING	E32			VOC: (9) [Rule 1113], [Rule 1171]	K67.3
RULE 219 EXEMPT EQUIPMENT, EXEMPT HAND WIPING OPERATIONS	E33			VOC: (9) [Rule 1171]	

BACKGROUND

In order to pursue the development of a proposed natural gas fired peaker project, Edison Mission Energy (EME) has organized a special purpose entity known as Valle Del Sol Energy, LLC a Delaware limited liability company, to develop, own and operate the proposed peaker project. Valle Del Sol Energy, LLC is a wholly-owned subsidiary of EME.

Valle Del Sol Energy, LLC is proposing to construct a new power plant which will consist of five (5) combustion-turbine-generators (CTGs) for a total rated peak generating capacity of 520 MW at 45°F. The gas turbines will be General Electric LMS100 units. Each turbine will drive a generator rated at 104 MW at 45°F. The project is expected to have an annual capacity factor of approximately 20 to 40 percent, depending on weather-related customer demand, load growth, hydroelectric supplies, generating unit retirements and other factors.

Each of the proposed CTGs will be configured in simple cycle, and therefore there will be no heat recovery steam generators (HRSG), duct burners, or steam turbines used at this plant. The net power generated (after taking away auxiliary power consumption) will be derived solely from the five generators. Selective catalytic reduction (SCR) systems and CO oxidation catalysts will be utilized for control of NOx and CO emissions, respectively. One 16,000 gallon ammonia (NH_3) storage tank will be constructed for the storage of 19% aqueous ammonia which is part of the SCR process. A 5-cell mechanical drift cooling tower will provide heat removal for the gas turbine auxiliary cooling requirements. The site will also employ a 340 bhp diesel emergency fire pump engine. The California Energy Commission (CEC) has the statutory responsibility for certification of power plants rated at 50 MW and larger, including any related facilities such as transmission lines, fuel supply lines, and water pipelines. The CEC's 12-month, one-stop permitting process is a certified regulatory program under the California Environmental Quality Act (CEQA) and also includes several opportunities for public and inter-agency participation. The CEC's certification process subsumes all requirements of state, local, or regional agencies otherwise required before a new plant is constructed. The CEC coordinates its review of the facility with the federal agencies that will be issuing permits to ensure that the CEC certification incorporates conditions of certification that would be required by various federal agencies. Since the Valle Del Sol Energy Project (VSE) will be rated at greater than 50 megawatts, it is subject to the CEC's 12-month certification process. As part of this process, VSE submitted an application for certification (05-AFC-3) to the CEC on December 1, 2005 seeking certification for the new power plant. In addition to the CEC certification process, VSE submitted applications to AQMD seeking Permits to Construct for the new power plant. The following table shows the corresponding application numbers (A/Ns):

Table 1 Applications for Permits to Construct Submitted to AQMD

Application Number	Equipment Description
450931	Gas Turbine No. 1
450932	Gas Turbine No. 2
450933	Gas Turbine No. 3
450935	Gas Turbine No. 4
450936	Gas Turbine No. 5
450937	SCR/CO Catalyst for Turbine No. 1
450938	SCR/CO Catalyst for Turbine No. 2
450939	SCR/CO Catalyst for Turbine No. 3
450940	SCR/CO Catalyst for Turbine No. 4
450942	SCR/CO Catalyst for Turbine No. 5
450943	Emergency Fire Pump Engine
451184	Aqueous Ammonia Storage Tank
450866	Initial Title V Application

Each of the applications were submitted to the AQMD on November 30, 2005, except for the application for the NH_3 storage tank, which was submitted on December 9, 2005. AQMD deemed the applications complete on December 13, 2005. Because VSE will have the potential to generate electricity greater than 25 MW, it will be subject to the federal Acid Rain requirements and therefore the federal Title V permitting requirements apply. VSE has opted to be included in the NOx RECLAIM program upon initial permit issuance.

Processing Fee Summary

On November 30, 2005, AQMD received the thirteen (13) applications shown in the table above along with a processing fee of $58,309.40. The applicant also included a signed form 400-XPP and the appropriate fees for expedited permit processing. The five LMS100s are identical and therefore, four of these devices receive a 50% discount off of the original processing fee of $9,459.62. In addition, the five SCR/CO catalysts are identical and therefore, four of these devices receive a 50% discount off of the original processing fee of $2,437.95. The total fees include the normal processing fees multiplied by 1.5 for expedited processing. A fee summary is shown in the table below.

Table 2 Summary of Processing Fees for VSE

A/N	Submittal Date	Deemed Complete	Equipment	Schedule	Processing Fee	XPP	TOTAL
450931	11-30-2005	12-13-2005	LMS100 Gas Turbine No. 1	G	$9,459.62	1.5	$14,189.43
450932	11-30-2005	12-13-2005	LMS100 Gas Turbine No. 2	G	$4,729.81	1.5	$7,094.72
450933	11-30-2005	12-13-2005	LMS100 Gas Turbine No. 3	G	$4,729.81	1.5	$7,094.72
450935	11-30-2005	12-13-2005	LMS100 Gas Turbine No. 4	G	$4,729.81	1.5	$7,094.72
450936	11-30-2005	12-13-2005	LMS100 Gas Turbine No. 5	G	$4,729.81	1.5	$7,094.72
450937	11-30-2005	12-13-2005	SCR/CO Catalyst No. 1	C	$2,437.95	1.5	$3,856.93
450938	11-30-2005	12-13-2005	SCR/CO Catalyst No. 2	C	$1,218.98	1.5	$1,828.47
450939	11-30-2005	12-13-2005	SCR/CO Catalyst No. 3	C	$1,218.98	1.5	$1,828.47
450940	11-30-2005	12-13-2005	SCR/CO Catalyst No. 4	C	$1,218.98	1.5	$1,828.47
450942	11-30-2005	12-13-2005	SCR/CO Catalyst No. 5	C	$1,218.98	1.5	$1,828.47
450943	11-30-2005	12-13-2005	Emergency Fire Pump	B	$1,541.34	1.5	$2,312.01
451184	12-7-2005	12-13-2005	Ammonia Storage Tank	A	$967.11	1.5	$1,450.67
450866	11-30-2005	12-13-2005	Title V Application	N/A	$1.007.60	N/A	$1.007.60
					TOTAL PROCESSING FEE		**$58,309.40**

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Site Description

The proposed location of VSE is approximately 0.34 mile north of Rouse Road on the east side of the northerly extension of Junipero Road. The new power plant will be located on an approximately 20-acre parcel (Assessor's Parcel Nos. 331-250-019 and 331-250-020) in Township 5S, Range 3W, Section 14, in Romoland, in an unincorporated parcel of Riverside County. Although the project site is currently in agricultural use, the land is presently zoned for industrial use, with the nearest residence located approximately 0.31 miles from the proposed project site. The site lies southwest of and adjacent to the Burlington Northern Santa Fe (BNSF) rail line which traverses the area in a northwest to southeast direction. The site lies in the area bounded by Matthews Road on the north, Menifee on the east, Palomar Road on the west, and McCall Boulevard to the south. Other residential areas lie to the west, north, and south of the site, with the area to the east of the site being sparsely populated, however new housing tracts are now being built.

COMPLIANCE RECORD

VSE is a new facility and construction on the proposed power plant has not yet begun. No additional existing sources are presently operating under the above facility ID. As a confirmation, the AQMD's Compliance Tracking System database indicates no compliance activity for this facility ID.

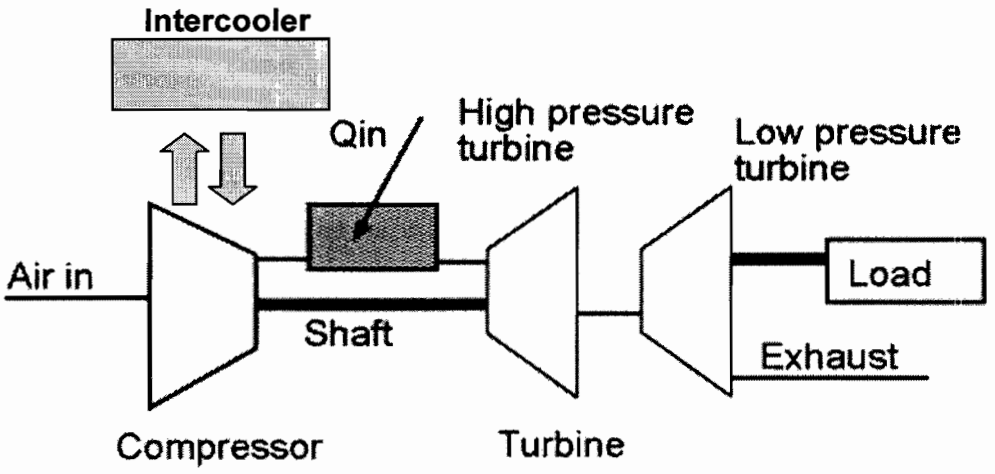
PROCESS DESCRIPTION

The proposed power plant will operate in simple cycle configuration and will employ five (5) General Electric LMS100 combustion gas turbines, each of which employ off-engine intercooling technology with the use of water and an external heat exchanger for increased thermal efficiency. The LMS100 system includes a 3-spool gas turbine configured with an intercooler located between the low-pressure compressor (LPC) and the high-pressure compressor (HPC).

Intercooling

Intercooling provides significant benefits to the Brayton cycle by reducing the work of compression for the HPC, which allows for higher pressure ratios and thereby increasing overall efficiency. For the LMS100, the cycle pressure ratio is 42:1. The reduced inlet temperature for the HPC allows increased mass flow resulting in higher specific power. The lower resultant compressor discharge temperature provides colder cooling air to the turbines, which in turn allows increased firing temperatures equivalent to those of the LM6000, producing an overall cycle efficiency in excess of 46% in simple cycle configuration. This represents a 10% increase in the efficiency over the LM6000. The LMS100 can be configured with two different types of intercooling systems, with the first type being a wet intercooling system which uses an air-to-water heat exchanger (shell and tube design) and an evaporative cooling tower. The second system consisting of bellows expansion joints, moisture separator, variable bleed valve system, and associated piping and involves a dry intercooling system requiring no water. It uses an air-to-air heat exchanger constructed with panels of finned tubes mounted in an A-frame configuration. All five LMS100s proposed for construction at VSE will be configured with a wet intercooling system. A general diagram of the LMS100 employing wet intercooling technology to be used at VSE is shown in the diagram below.

LMS100 Gas Turbine with Intercooler



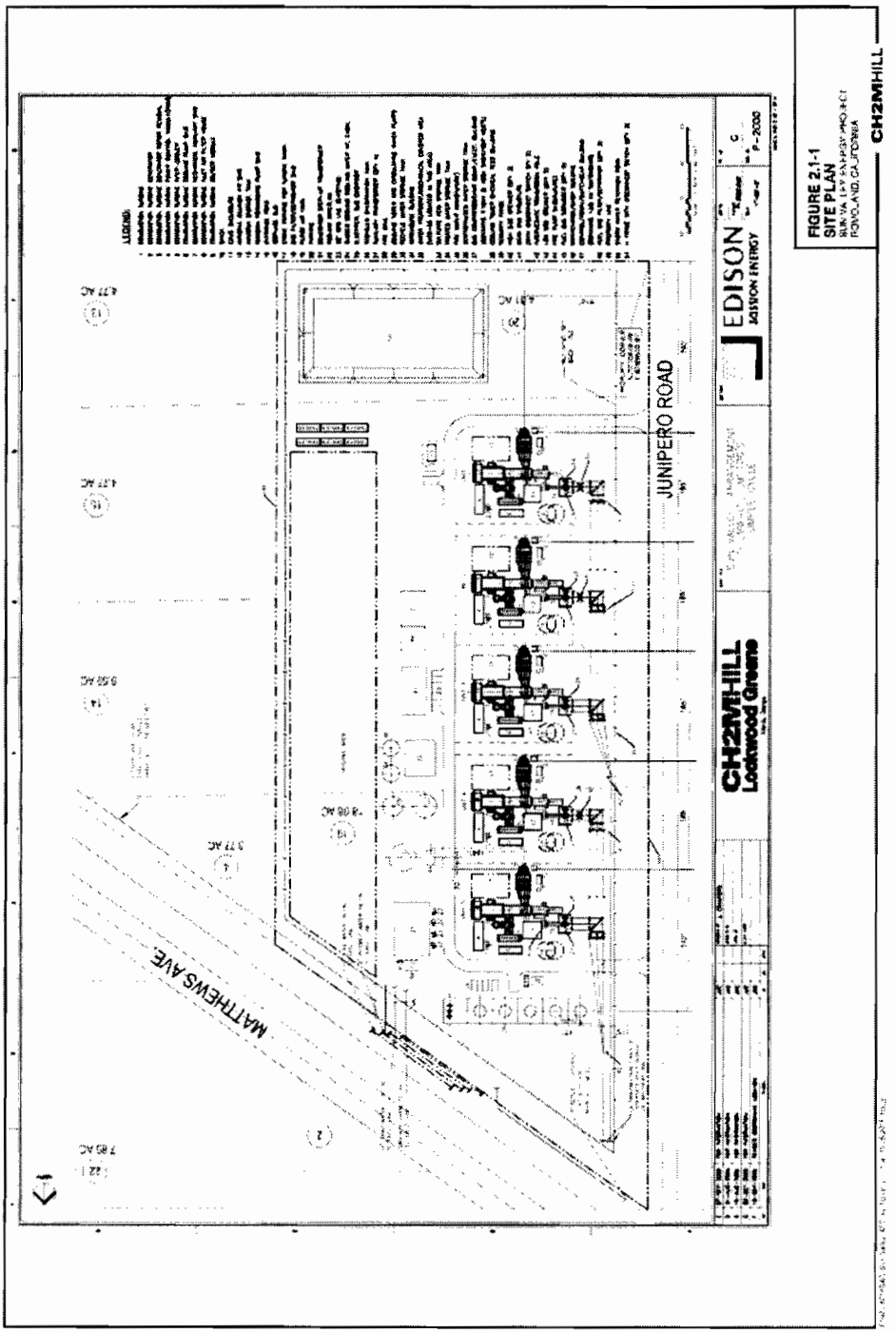
VSE will connect to Southern California Edison's (SCE) electrical transmission system using a 115kV transmission line. The connection will be made at the Valley Substation, which is located approximately 600 feet north of the proposed project site. Reclaimed water for the cooling tower and evaporative cooler make-up will be supplied by a 12 inch diameter direct connection to a reclaimed water pipeline in a utility easement directly north of the proposed project site. The Eastern Municipal Water District will supply approximately 851 acre-feet/year (ac-ft/yr) of reclaimed water for the project. The following table lists the technical specifications for the General Electric LMS100 CTG.

Table 3 Combustion Turbine Generator Specifications[1]

Parameter	Specifications
Manufacturer	General Electric
Model	LMS100PA[2]
Fuel Type	PUC[3] Quality Natural Gas
Natural Gas Heating Value	1,050 BTU/scf
Gas Turbine Heat Input (HHV)	904 MMBTU/hr at 45°F and 60% relative humidity
Fuel Consumption	0.861 MMSCF/hr[4]
Gas Turbine Exhaust Flow	364,419 DSCFM
Gas Turbine Exhaust Temperature	762°F
Exhaust Moisture	6-8%
Gas Turbine Power Generation	104 MW
Net Plant Heat Rate, LHV	8,061 BTU/kW-hr

[1] Values in this table are on a per-turbine basis
[2] GE manufactures two versions of the LMS100 CTG. VSE plans to install the LMS100PA. The PA model utilizes water injection for NOx abatement while the PB version utilizes dry low emission (DLE) combustors for NOx abatement.
[3] PUC is the acronym for the California Public Utilities Commission
[4] Represents the maximum possible fuel consumption of the CTG, based on 904 MMBTU/hr heat input and 1,050 BTU/scf fuel heat content. However, the emission calculations will be based on a worst-case operating scenario as identified by the applicant, which may result in a lower fuel usage depending on the ambient temperature, the employment and rate of intercooling, water injection rates, and electrical load generated.

~~Strikethroughs~~ and underlines indicate changes from the PDOC dated January 1, 2008



~~Strikethroughs~~ and underlines indicate changes from the PDOC dated January 1, 2008

The site plan shown on the previous page was prepared for VSE by CH2MHILL and shows the general layout of the proposed facility. The five LMS100 CTGs can be seen in the center of the page while the 5-cell cooling tower and circulating water pumps are located to the left of the CTGs. The diagonal line running parallel to Matthews Avenue represents the 12 inch diameter natural gas line which will provide the fuel for the CTGs. The potable water, fire water, and sanitary drain lines are shown in the center of the layout, just to the left of the CTGs.

Definition of a Peaking Unit in Rule 2012

A traditional peaking unit is defined as a turbine which is used intermittently to produce energy on a demand basis and does not operate more than 1,300 hours per year. This definition is found in Rule 2012- "Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen (NOx) Emissions, Attachment A-F as amended December 5, 2003". VSE will have the potential to operate for about 3,468 hours/year inclusive of start-up, shutdown, commissioning, maintenance, (if any) and normal operations. Since the annual hours of operation will exceed that which is allowed for a traditional peaking unit under Rule 2012, the LMS100s will not be classified as official peaking units in the equipment descriptions. The CTGs will be listed as NOx Major Sources under Rule 2012.

Air Pollution Control (APC) System

All five CTGs will utilize two primary means for the reduction of NOx emissions. On the front end, VSE will rely on the use of demineralized water for water injection directly into the CTGs. The demineralized water will be produced by reverse osmosis (RO) and an ion exchange system and will be stored in a 100,000 gallon demineralized water storage tank. The use of demineralized water injection will reduce the 1-hour average NOx concentration to 25 ppmv on a dry basis at 15% O_2 prior to entry to the selective catalytic reduction (SCR) units. On the back end, ank SCR catalyst with ammonia injection will be used downstream of each CTG for further reduction of NOx emissions and a CO oxidation catalyst will be used downstream of each CTG for CO emissions reduction. As a result, the NOx emissions will be limited to 2.5 ppmv, 1-hour average, dry basis at 15% O_2. CO emissions will be limited to 6.0 ppmv, 1-hour average, dry basis, at 15% O_2. VOC emissions will be limited to 2.0 ppmv, dry basis at 15% O_2. SOx and PM_{10} emissions will be mitigated through the use of PUC quality natural gas. Detailed descriptions of the air pollution control system are given in the next section. The CO catalyst is permitted together with the SCR catalyst.

Selective Catalytic Reduction/CO Catalyst Systems (A/N 450937, 450938, 450939, 450940, & 450942)

Table 4 shows the specifications for the SCR manufacturer to be used for the simple cycle CTGs.

Table 4 - Selective Catalytic Reduction

Catalyst Properties	Specifications
Manufacturer	Haldor-Topsoe
Catalyst Description	Ti V honeycomb single layer structure
Catalyst Model No.	DNX 920
Catalyst Volume	850 ft^3
Guaranteed Life	Earliest of 20,000 hrs from first gas-in or 51 months from contracted delivery
Space Velocity	23,580 hr^{-1}
Ammonia Injection Rate	190 lb/hr
NOx removal efficiency	>90%
NOx at stack outlet	2.5 ppmv at 15% O_2
Exhaust Temperature	740-800°F

The SCR catalyst will use ammonia injection in the presence of the catalyst to reduce NOx. Diluted ammonia vapor will be injected into the exhaust gas stream via a grid of nozzles located upstream of the catalyst module. The subsequent chemical reaction will reduce NOx to elemental nitrogen (N_2) and water, resulting in NOx concentrations in the exhaust gas at no greater than 2.5 ppmvd at 15% O_2 on a 1-hour average.

CO Oxidation Catalyst

The CO oxidation catalyst will be installed within the catalyst housing which will reduce CO in the exhaust gas to no greater than 6 ppmvd at 15% O_2, on a 1-hour average. The exhaust from each catalyst housing will be discharged from individual 90-foot tall, 13.5 foot diameter exhaust stacks. Each CTG will have its own individual stack.

VSE has indicated that the CO catalyst manufacturer is to be Engelhard. The following table lists the specifications for the CO catalyst. The operating temperature window is between 500°F and 1,250°F.

Table 5 - CO Oxidation Catalyst

Catalyst Properties	Specifications
Manufacturer	Engelhard
Model	Camet
Catalyst Type	Pt on Al single layer metal monolith
Catalyst Life	20,000 hours or 5 years
Space Velocity	125,000 hr^{-1}
Volume	200 ft^3
CO removal efficiency	90%
CO at stack outlet	6.0 ppmvd at 15% O_2
Exhaust gas velocity	24 ft/s

Aqueous Ammonia Storage Tank (A/N 451184)

The ammonia will be transported to the site in aqueous form and will have a maximum concentration of 19% by weight. The ammonia will be stored in a specially designated tank with a capacity of 16,000 U.S. gallons with a maximum design pressure of 25 psig, and will be constructed to ASME Section VIII specifications. A vapor return line will be used during receiving operations to control filling losses.

Heated Ammonia Vaporization Skid

The ammonia vaporization skids will be used to vaporize the 19% aqueous ammonia so that it can be transferred to the ammonia injection grids. The ammonia vaporization equipment will be shop-assembled and skid mounted for easy field installation. During cold start-up of the turbine, it will take some time (~10 minutes) before the ammonia injection chamber is hot enough to heat the ammonia for injection. Therefore, each ammonia injection chamber is equipped with an electric pre-heater unit which can be initiated prior to the cold start-ups to ensure that the ammonia is adequately heated prior to injection. The ammonia vaporization skids are typically configured with two dilution air fans (one operating and one spare) and two pre-heater elements (one operating and one spare) housed in a common heater box. In addition, the aqueous ammonia is typically atomized in the ammonia injection chamber and is then fed to the ammonia distribution header.

Ammonia Distribution Header

A carbon steel ammonia distribution header will be used to receive the hot ammonia/air mixture from the ammonia vaporization skid and deliver it evenly to the ammonia injection grid piping. Typically, the injection grid supply piping is equipped with manual butterfly valves and flow instrumentation used for adequate balancing of ammonia flow.

Performance Warranties

Performance warranties for the CO/oxidation and SCR catalysts have been included with the application package and are part of the engineering file. According to the performance warranty[5] for the CO/oxidation catalyst, it will be able to achieve approximately 90% CO reduction from inlet levels of CO. The SCR catalyst will be able to achieve approximately 90% reduction efficiency from inlet levels of NOx and the maximum ammonia slip is warranted to not exceed 5.0 ppmvd at 15% O_2. The table below shows the warranted emissions for NOx, CO, VOC and NH_3 slip.

Table 6 - Warranted Emissions for APC System

Pollutant	Warranted Emissions
Outlet NOx emissions	2.5 ppmv at 15% O_2, dry basis
Outlet CO emissions	6.0 ppmv at 15% O_2, dry basis
Outlet VOC emissions	2.0 ppmv at 15% O_2, dry basis
Ammonia Slip	5.0 ppmv at 15% O_2, dry basis

Cooling Tower System

A 5-cell cooling tower will be included in the proposed design to provide for the gas turbine auxiliary cooling requirements. Two 50% capacity circulating water pumps will provide water to cool three closed-cooling water heat exchangers. The circulating water rate will be 35,500 gallons per minute (GPM). The heat exchangers are each rated at 33% capacity. The closed-cooling water heat exchangers will provide high-quality cooling water to a GE provided pump skid for each CTG. The pump skid will then provide cooling water to the CT compressor intercooler and to the lubrication system. Drift is water entrained by and carried with the air as unevaporated fine droplets. PM_{10} matter is released from a cooling tower through drift. Any solids that are dissolved in the cooling water will be carried out of the tower with the water droplets that are entrained in the air. The water droplet will ultimately evaporate and leave the dissolved solid as PM_{10}. The rate of PM_{10} that is discharged to the atmosphere depends significantly on the drift factor for the cooling tower. The drift factor is the percentage of coolant that leaves through drift with respect to the total flow rate of coolant through the tower. Typical drift rates based on the age of the cooling tower are shown in Table 7 below.

[5] The performance warranty does not explicitly state an expected conversion efficiency for VOC. However, based on experience with similar turbines, it is expected that at least a 50% reduction efficiency for VOC can result such that VOC emissions at the catalyst outlet can be expected to meet 2.0 ppmvd @ 15% O_2. Therefore, uncontrolled VOC emissions are assumed to be 4.0 ppmvd at 15% O_2, dry basis.

Table 7 - Typical Drift Rates Based on the Age of the Cooling Tower

Year of Construction	Drift Rate as a Percentage of Circulating Water Flow Rate
1970s	0.01%
Early 1980's	0.008%
Mid 1980's	0.005%
1990's	0.002%
2000	0.001%
Current Technology	0.0005%

In keeping with current technology, maximum drift loss will be limited to 0.0005% of the circulating water flow. The following table lists the specifications for the cooling tower.

Table 8 - Cooling Tower Specifications

Cooling Tower Parameters	Specifications
Manufacturer	Marley
Number of Cells	5
Exhaust Fan Diameter (ft)	22
Exhaust Flow per Cell (ACFM)	860,100
Circulating Water Rate (GPM)	35,500
Circulating Water Rate (MMlb/hr)	17.74
Fan Exit Height (ft AGL)	39.09

Emergency Fire Pump Engine (A/N 450943)

The fire pump engine will be a diesel fueled Clarke unit, model no. JW6H-UF50. It has a power rating of 340 bhp at 2,100 rpm. The specifications are listed in the table below.

Table 9 - Emergency Fire Pump Specifications

Emergency Fire Pump Parameters	Specifications
Manufacturer	Clarke
Power output	340 bhp at 2,100 rpm
Fuel Consumption	16.0 gal/hr
Exhaust temperature	744°F
Exhaust flow	2,066 ACFM
Stack height	40 ft
Stack diameter	5 in

CRITERIA POLLUTANT EMISSIONS

The total emissions from the power plant will include the summation of all five CTGs, the emergency fire pump engine, and the PM_{10} emissions from the cooling tower. The emissions from the gas turbines are based on the following formula and assumptions:

$$EF(lb/MMBTU) = ppmvd \times MW \times \left(\frac{1}{SMV}\right)\left(\frac{20.9}{5.9}\right) \times F_d$$

where,

ppmvd = Uncontrolled (or controlled) concentration at 15% O_2, dry basis
MW = Molecular weight, lb/lb-mol
SMV = Specific molar volume at 68°F = 385.3 dscf/lb-mol
F_d = Dry oxygen f-factor for natural gas at 68°F = 8,710 dscf/MMBTU

Assumptions:

1. Emissions are based on the worst case operating scenario
2. PM_{10} emissions are based on 0.0067 lb/MMBTU
3. SO_2 to SO_3 conversion in APC equipment is accounted for in the PM_{10} AP-42 emission factor
4. SOx emissions are based on 0.25 grains/100 scf
5. 30-Day Averages are based on 463 hours/month of operation
6. Emissions are based on total fuel consumption rather than total hours of operation

The applicant has identified fifteen possible operating scenarios. The fifteen scenarios are listed as operating conditions (OC)100 through 114 in Section 5 of the applicant's submittal and are summarized in the table below:

Table 10 - Operating Scenarios

	Ambient Temp °F	H_2O Injection, lb/hr	Relative Humidity (%)	Intercooler (on/off)	Compressor Inlet Temp °F
OC100	30	35,385 (100%)	60	On	30
OC101	30	24,795 (70%)	60	On	30
OC102	30	15,760 (45%)	60	On	30
OC103	59	32,449 (92%)	60	On	53
OC104	59	22,235 (63%)	60	On	53
OC105	59	13,945 (39%)	60	On	53
OC106	84	28,325 (80%)	53	On	73
OC107	84	18,872 (53%)	53	On	73
OC108	84	11,031 (31%)	53	On	73
OC109	90	28,389 (80%)	37	On	73
OC110	90	18,917 (53%)	37	On	73
OC111	90	11,074 (31%)	37	On	73
OC112	110	28,408 (80%)	10	On	74
OC113	110	18,932 (54%)	10	On	74
OC114	110	11,527 (33%)	10	On	74

Detail of Operating Conditions

Analysis of the applicant's operating scenarios reveals that GE ran the tests while varying the water injection rate, and compressor inlet temperature. Ambient temperature was allowed to vary from a minimum of 30°F to a maximum of 110°F. Note from the table above that for each ambient temperature, the load was varied between maximum (100%), average (75%), and minimum (50%) loads. The top five

cases where fuel flow to the CTGs is the greatest (and therefore yielding the highest emissions) are shown in the table below.

Table 11 - Worst Case Operating Scenario

	Top 5 Operating Conditions				
	100	103	106	109	112
Ambient Temperature, °F	30	59	84	90	110
Ambient Pressure, psia	13.937	13.937	13.937	13.937	13.937
Fuel Consumption, MMBTU/hr	803.3	791.6	748.4	749.5	749.6
Fuel Consumption, lb/hr	38,941	38,373	36,277	36,330	36,337
Exhaust Temperature, °F	761.1	781.6	796.6	796.2	796.1
Load, MW	103.8	101.3	94.2	94.4	94.4
Water Injection (on/off)	On	On	On	On	On
Water Injection, lb/hr	35,385	32,449	28,325	28,389	28,408
Intercooler (on/off)	On	On	On	On	On

Of the top five cases, the worst case scenario occurs during periods of maximum fuel consumption (803.3 MMBTU/hr) at full load (103.8 MW), low ambient temperature (30°F), with water injection in full use, and the intercooler in operation, as identified in the table above by operating condition no. 100. Therefore, to address the worst case scenario, the facility's NSR emissions will be based on the parameters listed in operating condition no. 100.

There are essentially four modes of operation for the CTGs. Emissions from the four operating modes are distinctly different and must be calculated independently. The following table gives more detail of the four operating modes.

Table 12 - Operating Modes of the CTGs

Mode	Description
Commissioning	The process of fine-tuning each of the CTGs. Facility follows a systematic approach to optimize performance of the CTGs and the associated control equipment. Emissions are expected to be greater during commissioning than during normal operation. This mode affects only the initial year of operation.
Start-up	The applicant has indicated that there will be up to two start-ups per day for each CTG, with each start-up lasting 35 minutes. Start up emissions are higher due to the fact that the control equipment has not reached optimal temperature to begin the chemical reactions needed to convert NOx to elemental nitrogen and water.
Normal Operation	Normal operation occurs after the CTGs and the control equipment are working optimally, at their designated levels, i.e. NOx emissions are controlled to 2.5 ppmvd at 15% O_2, CO emissions to 6.0 ppmv at 15% O_2, and VOC to 2.0 ppmvd at 15% O_2. Emissions may vary due to ambient conditions.
Shutdown	Shutdown occurs at the initiation of the turbine shutdown sequence and ends with the cessation of CTG firing, and will last approximately 11 minutes thereafter. Typically, the shutdown process will emit less than the start-up process but may emit slightly greater than during normal operation because both H_2O injection into the CTGs and NH_3 injection into the SCR reactor have ceased operation

Commissioning Period

Gas turbine commissioning consists of zero load, partial load and full load testing performed immediately after construction for the purposes of optimizing turbomachinery, gas turbine combustors, and optimizing and testing of the SCR/CO catalysts. Several parameters such as water injection rate and degree of SCR and CO control may be varied simultaneously during testing at the discretion of the applicant. Emissions

during the commissioning year (usually the first year of operation) may be higher than those during a non-commissioning year due to the fact that the combustors may not be optimally tuned and the SCR/CO catalysts may be only partially operational or not operational at all. The applicant has allocated up to 134 hours of commissioning for each of the 5 CTGs and has further stated that all commissioning will be accomplished within the 9 months prior to initial operation. The commissioning schedule will comprise 6 phases in which the CTGs will be operated at zero, minimum, average and maximum loads while varying the water injection rates and the degree of SCR reactor and CO catalyst control. There will be some cases where the 5 CTGs will be run simultaneously during the commissioning period, and some cases where only one unit may be tested at a time. It will be assumed that the commissioning of the units will be simultaneous to address the worst case scenario. The table below shows the applicant's proposed commissioning schedule along with the cumulative emissions for each of the 5 CTGs during the commissioning period.

Table 13 - Proposed Commissioning Schedule

Commissioning Phase	1	2	3	4	5	6	Totals
Water Injection (% operation)	0	0	50%	100%	100%	100%	
SCR Reactor (% operation)	0	0	0	0	50%	100%	
CO Catalyst (% operation)	0	0	0	0	100%	100%	
Hours per phase	20	14	24	12	24	40	134
Average Load (%)	0%	5%	50%	100%	75%	100%	
NOx (lb/hr)	91	99	175	81	35	8.1	
CO (lb/hr)	55	60	168	255	9	12	
VOC (lb/hr)	2	2	3	5	4	2	
PM_{10} (lb/hr)	1	1	3	6	5	6	
SOx (lb/hr)	0.051	0.061	0.170	0.306	0.238	0.306	
HHV (MMBTU/hr)	150	180	500	900.5	700	900.5	
NOx (lb/mmscf)	641	581	370	95	53	9	
CO (lb/mmscf)	387	352	355	299	14	14	
VOC (lb/mmscf)	14	12	6	6	6	2	
PM_{10} (lb/MMBTU)	0.0066	0.0066	0.0066	0.0066	0.0066	0.0066	
SOx (lb/MMBTU)	0.00068	0.00068	0.00068	0.00068	0.00068	0.00068	
Total NOx lbs, (5 units)	9,100	6,930	21,000	4,860	4,200	1,620	**47,710**
Total CO lbs, (5 units)	5,500	4,200	20,160	15,300	1,080	2,400	**48,640**
Total VOC lbs, (5 units)	200	140	360	300	480	400	**1,880**
Total PM_{10} lbs, (5 units)	100	70	360	360	600	1,200	**2,690**
Total SOx lbs, (5 units)	10.2	12.2	34.0	61.2	47.6	61.2	**226.4**

Start-up / Shutdown of CTGs

The applicant has stated that there will be 350 start-ups and 350 shutdowns per year, with up to 2 start ups per day, with the balance of 2,768 hours left for commissioning and normal operations. According to the applicant, each start-up event is expected to last 35 minutes. During start-up operations, the turbine is assumed to operate at elevated NOx and CO average concentration rates due to the phased-in effectiveness of the SCR reactor and CO oxidation catalysts. Start-ups begin with each turbine's initial firing and continue until each unit complies with the permitted emission concentration limits.

NOx levels are in the 50-100 ppmvd range from the first 3-8 minutes of start-up. Water is injected during the 8th minute of start-up and 25 ppmvd at 15% O_2 is achieved by minute 10 when the unit reaches full load. NOx emissions are further reduced from 25 ppmvd to 2.5 ppmvd over a 30-60 minute period after the

CTG achieves full load. CO emissions are assumed to be in the 100-500 ppmvd range for minutes 3 through 10 of start-up. At full load (minute 10), the CO emissions are approximately 100 ppmvd. CO emissions are further reduced from 100 ppmvd to 6 ppmvd over a 30-60 minute period after the CTG achieves full load. GE has provided start-up estimates for the five CTGs and these numbers are included in Appendix A. Shutdowns begin with the initiation of the turbine shutdown sequence and end with the cessation of turbine firing. According to the applicant, each shutdown will last eleven minutes. Upon initiation of the shutdown process, ammonia and water injection will be discontinued. Normal operating emission rates are assumed to occur during the preceding 48 minutes of the shutdown period. GE has provided shutdown estimates for the five CTGs and these numbers are included in Appendix A.

Normal Operations

The emissions during normal operations are assumed to be fully controlled to Best Available Control Technology (BACT) levels, and exclude emissions due to commissioning, start up and shutdown periods, which are not subject to BACT levels. Hourly, monthly, annual, and 30-day averages are calculated and shown in Appendices A through C. The emission calculations for the emergency fire pump and cooling tower are contained in Appendices D and E.

Emissions During A Commissioning Year

The tables below show the cumulative emissions during a commissioning year from all 5 gas turbines which includes commissioning, start-up, shutdown and normal operation, as well as the emissions from the emergency fire pump which is assumed to operate for the designated maximum of 199 hours per year, and the PM_{10} emissions from the 5-cell cooling tower.

Mass Emission Rates, lb/hr (Commissioning Year)

	Emissions, lb/hr					
LMS100PA CTG	NOx	CO	VOC	SO_2	PM_{10}	NH_3
Normal Operations	41.05	60.00	11.40	3.03	30.00	30.35
Start up	52.10	102.00	14.05	3.03	30.00	N/A
Shutdown	55.00	140.00	15.00	3.03	30.00	N/A
Commissioning	356.04	362.99	14.02	1.69	20.07	N/A
Emergency Fire Pump	10.54	0.337	0.112	0.0041	0.067	N/A
5-Cell Cooling Tower	N/A	N/A	N/A	N/A	0.443	N/A
TOTALS	**514.73**	**665.33**	**54.58**	**10.78**	**110.58**	**30.35**

Mass Emission Rates, lb/month (Commissioning Year)

	Emissions, lb/month					
LMS100PA CTG	NOx	CO	VOC	SO_2	PM_{10}	NH_3
Normal Operations	15,105.00	22,080.00	4,195.00	1,115.00	11,040.00	11,168.80
Start up	2,084.00	4,080.00	562.00	120.00	1,200.00	N/A
Shutdown	2,200.00	5,600.00	600.00	120.00	1,200.00	N/A
Commissioning	5,340.00	5,445.00	210.75	25.50	300.00	N/A
Emergency Fire Pump	174.79	5.59	1.86	0.07	1.12	N/A
5-Cell Cooling Tower	N/A	N/A	N/A	N/A	128.30	N/A
TOTALS	**24,903.79**	**37,210.59**	**5,569.60**	**1,383.07**	**13,869.42**	**11,168.80**

Mass Emission Rates, lb/year (Commissioning Year)

	Emissions, lb/year					
LMS100PA CTG	NOx	CO	VOC	SO_2	PM_{10}	NH_3
Normal Operations	108,125.00	158,040.00	30,030.00	7,980.00	79,020.00	79,939.42
Start up	18,235.00	35,700.00	4,920.00	1,060.00	10,500.00	N/A
Shutdown	19,250.00	49,000.00	5,250.00	1,060.00	10,500.00	N/A
Commissioning	47,710.00	48,640.00	1,880.00	228.00	2,690.00	N/A
Emergency Fire Pump	2,097.46	67.06	22.35	0.82	13.41	N/A
5-Cell Cooling Tower	N/A	N/A	N/A	N/A	1,539.60	N/A
TOTALS	**195,417.46**	**291,447.06**	**42,104.63**	**10,327.82**	**104,263.01**	**79,939.42**

Emissions During A Non-Commissioning Year

The tables below show the cumulative emissions during a non-commissioning year from all 5 gas turbines which includes, start-up, shutdown and normal operation, as well as the emissions from the emergency fire pump which is assumed to operate for the designated maximum of 199 hours per year, and the PM_{10} emissions from the 5-cell cooling tower.

Mass Emission Rates, lb/hr (Non-Commissioning Year)

	Emissions, lb/hr					
LMS100PA CTG	NOx	CO	VOC	SO_2	PM_{10}	NH_3
Normal Operations	41.05	60.00	11.40	3.03	30.00	30.35
Start up	52.10	102.00	14.05	3.03	30.00	N/A
Shutdown	55.00	140.00	15.00	3.03	30.00	N/A
Emergency Fire Pump	10.54	0.337	0.112	0.0041	0.067	N/A
5-Cell Cooling Tower	N/A	N/A	N/A	N/A	0.443	N/A
TOTALS	**158.69**	**302.34**	**40.56**	**9.09**	**90.51**	**30.35**

Mass Emission Rates, lb/month (Non-Commissioning Year)

	Emissions, lb/month					
LMS100PA CTG	NOx	CO	VOC	SO_2	PM_{10}	NH_3
Normal Operations	15,720.00	22,980.00	4,365.00	1,161.49	11,490.00	11,625.29
Start up	2,084.00	4,080.00	562.00	121.20	1,200.00	N/A
Shutdown	2,200.00	5,600.00	600.00	121.20	1,200.00	N/A
Emergency Fire Pump	174.79	5.59	1.86	0.07	1.12	N/A
5-Cell Cooling Tower	N/A	N/A	N/A	N/A	128.30	N/A
TOTALS	**20,178.79**	**32,665.59**	**5,528.00**	**1,403.96**	**14,019.42**	**11,625.29**

Mass Emission Rates, lb/year (Non-Commissioning Year)

	Emissions, lb/year					
LMS100PA CTG	NOx	CO	VOC	SO_2	PM_{10}	NH_3
Normal Operations	113,626.40	166,080.00	31,555.00	8,387.00	83,040.00	83,945.03
Start up	18,235.00	35,700.00	4,920.00	1,060.00	10,500.00	N/A
Shutdown	19,250.00	49,000.00	5,250.00	1,060.00	10,500.00	N/A
Emergency Fire Pump	2,097.46	67.06	22.35	0.82	13.41	N/A
5-Cell Cooling Tower	N/A	N/A	N/A	N/A	1,539.60	N/A
TOTALS	**153,208.86**	**250,847.06**	**41,747.35**	**10,507.82**	**105,593.01**	**83,945.03**

~~Strikethroughs~~ and underlines indicate changes from the PDOC dated January 1, 2008

30-Day Averages

The 30 Day Average emissions are calculated in Appendix B for both a commissioning and non-commissioning year for the worst case operating scenario. The worst case operating scenario was defined as OC100 in Table 11 above. The values in the tables below are the cumulative 30 day averages for the entire facility (5 CTGs, the emergency fire pump and the cooling tower).

Cumulative 30-Day Averages, lb/day (Commissioning Year)

	30 Day Average, lb/day				
Five LMS100PA CTGs	NOx[6]	CO	VOC	SOx	PM_{10}
Normal Operations		736	140	37	368
Start up		136	19	4	40
Shutdown		187	20	4	40
Commissioning		181	7	1	10
One Emergency Fire Pump[7]		0	0	0	0
One 5-Cell Cooling Tower		N/A	N/A	N/A	(4)[8]
TOTALS		**1,240**	**186**	**46**	**458**

Cumulative 30-Day Averages, lb/day (Non-Commissioning Year)

	30 Day Average, lb/day				
Five LMS100PA CTGs	NOx[6]	CO	VOC	SOx	PM_{10}
Normal Operations		766	145	37	383
Start up		136	19	4	40
Shutdown		187	20	4	40
One Emergency Fire Pump[7]		0	0	0	0
One 5 Cell Cooling Tower		N/A	N/A	N/A	(4)[8]
TOTALS		**1,089**	**184**	**45**	**463**

The following is a comparison of the cumulative 30-day averages for the entire facility (5-LMS100 PA gas turbines, 1-emergency fire pump, and 1-cooling tower) for both a commissioning year and a non-commissioning year. The maximum 30-day averages for each pollutant, shown in bold.

	NOx[6]	CO	VOC	SOx	PM_{10}
30 Day Average (Commissioning Year)		**1,240**	**186**	**46**	458
30 Day Average (Non-Commissioning Year)		1,089	184	45	**463**

The following table shows the 30-day averages from <u>one</u> individual LMS100PA gas turbine for both a commissioning year and a non-commissioning year. The maximum 30-day averages for each pollutant are shown in bold.

[6] VSE has elected to enter RECLAIM. As such, RECLAIM Trading Credits (RTC) will be used to satisfy the NOx offsetting requirements of Rule 2005, and therefore the 30-Day Averages for NOx need not be calculated

[7] The emergency fire pump is exempt from offsets (and modeling) under Rule 1304(a)(4)-Emergency Equipment if operated < 200 hr/yr

[8] The cooling tower is exempt from requiring a permit under Rule 219(e)(3) and consequently it is exempt from NSR. Therefore, offsets are not required for the cooling tower

	NOx[6]	CO	VOC	SOx	PM_{10}
30 Day Average (Commissioning Year)		**248**	**37**	**9**	92
30 Day Average (Non-Commissioning Year)		218	37	9	**93**

PROHIBITORY RULE EVALUATION

RULE 212-Standards for Approving Permits

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million (1EE-6) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million (10EE-6) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million (10EE-6) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX. The total facility wide residential MICR is expected to be less than 1EE-6. ~~However, since the emissions of criteria pollutants for the facility exceed the thresholds in Rule 212(g), a public notice is required in accordance with the requirements of Rule 212. A public notice will be issued followed by a 30-day public comment period prior to issuance of a permit.~~ Since the requirements of Rule 1309.1 as amended on August 3, 2007 have changed significantly since VSE originally requested access to the Priority Reserve, it has been determined by AQMD Management that a new 30-day Public Notice period pursuant to Rule 212(g) and Rule 3006(a) as well as a 45-day EPA review period are required prior to issuance of the permits to construct. The Public Notice was published in the Riverside Press Enterprise on February 8, 2008. The Public Notice period ended on March 9, 2008. Copies of the Public Notice, Draft Permit and Engineering Analysis were sent to the applicant as well as EPA, ARB, Federal Land Manager, US Department of Agriculture, SCAG, and the County of Riverside for their review and comments. AQMD received one comment from EME and no comments from any of the governmental agencies or the general public during this period. EPA however, did provide comments during the 45-day review period which ended on March 24, 2008. The comments were sent to AQMD via email dated March 7, 2008 in which EPA asked AQMD to consider comments no. 2, 4, and 5 from WCEP as applicable to SVEP. The applicant provided written verification in a letter dated March 6, 2008 in which EME states that the Public Notice was distributed to each address within ¼ mile radius of the project. The addresses for the Public Notice were acquired by CH2MHILL, using the Metroscan data system which provides all addresses within a given radial distance from the project, in this case, ¼ mile. Proof of such distribution was provided in the form of United States Postal Service certification. A total of 151 addresses were included in the applicants distribution. AQMD distributed the notice to an additional 1,398 interested parties.

FACILITY / EQUIPMENT AND SCHOOL LOCATIONS

This proposed project is located at 29500 Rouse Road, Romoland, which is in an unincorporated part of Riverside County. Schools located nearest to the facility are at least a minimum of 0.37 miles away from the proposed project site as measured by the Mapquest program found at *http://www.mapquest.com.*

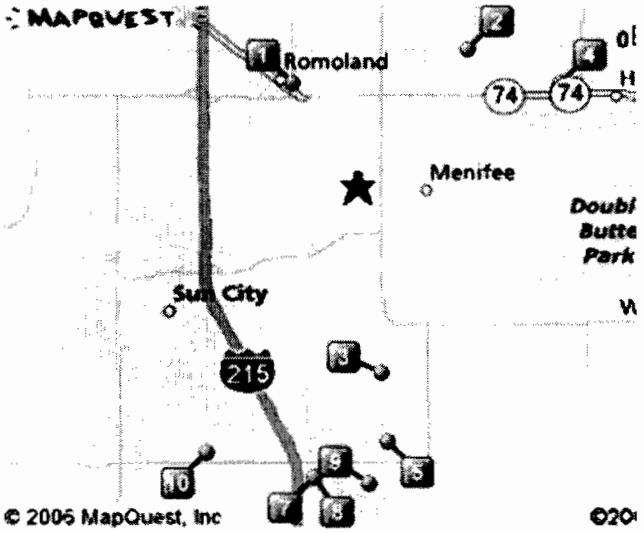
As an alternate means of determining the sensitive receptor distance from the proposed site, latitude/longitude coordinates were collected at the proposed site as well as the closest sensitive receptors using a digital camera equipped with a GPS receiver. The receptor coordinates were then converted to distances, measured in feet, from the proposed site. The following table shows the distance from VSE to each sensitive receptor as measured by (1) Mapquest and (2) using GPS coordinates (fenceline-to-fenceline)

Name of School	Address	Mapquest Distance Miles (feet)	GPS Distance (feet)
1. Romoland Elementary School	25800 Antelope Rd, Romoland	1.37 (7,234)	5,566
2. Harvest Valley Elementary School	29955 Watson Rd, Sun City	1.97 (10,402)	8,030
3. Freedom Crest Elementary School	29282 Menifee Rd, Menifee	2.06 (10,877)	12,174
4. Romoland School District	25900 Leon Rd, Homeland	2.58 (13,622)	Not Measured
5. Menifee Elementary School	30205 Menifee Rd, Menifee	2.82 (14,890)	17,396
6. Simily's (Private School)	P.O. Box 514, Homeland	3.21 (16,949)	Not Measured
7. H&R Block (Private School)	30141 Antelope Rd, Menifee	3.24 (17,107)	Not Measured
8. Tri-City SDA Elementary School	30141 Antelope Rd, Menifee	3.26 (17,213)	Not Measured
9. Kirkpatrick Elementary School	28800 Reviere Dr, Menifee	3.26 (17,213)	Not Measured
10. Tri-City Adventist School	29885 Bradley Rd, Sun City	3.38 (17,846)	Not Measured
11. Boulder Elementary School[9]	27327 Junipero Rd, Romoland	N/A	2,975

Each of the sensitive receptors are located at distances greater than 1,000 feet from the proposed VSE site, as verified by both Mapquest and GPS coordinates.

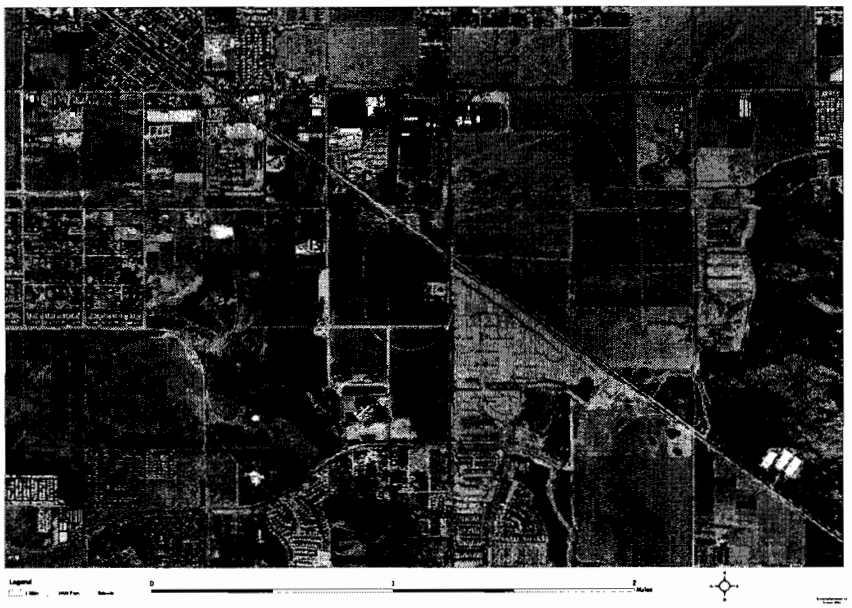
The map below is a graphical representation of the surrounding vicinity of the proposed VSE site, which includes the locations of the sensitive receptors enumerated 1-10 below. The proposed project site is therefore not located within 1,000 feet of the outer boundary of a school.

[9] This school is not depicted on Mapquest as of October 12, 2006.



Below is an aerial shot of the surrounding vicinity of the proposed Valle Del Sol Energy Project. The inner circle depicts the area within 1,000 feet from the proposed site. The larger circle represents an area within 1 mile of the proposed site.

Sun Valley Energy Project
29500 Rouse Road, Romoland



RULE 401-Visible Emissions

This rule limits visible emissions to an opacity of less than 20 percent (Ringlemann No.1), as published by the United States Bureau of Mines. It is unlikely, with the use of the SCR /CO catalyst configuration that

there will be visible emissions. However, in the unlikely event that visible emissions do occur, anything greater than 20 percent opacity is not expected to last for greater than 3 minutes. During normal operation, no visible emissions are expected. Therefore, based on the above and on experience with other CTGs, compliance with this rule is expected.

RULE 402-Nuisance

This rule requires that a person not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which cause, or have a natural tendency to cause injury or damage to business or property. The new turbine will be operated in a fairly remote (non-residential) area of San Bernardino County and is not expected to create a public nuisance based on experience with identical CTGs. Therefore, compliance with Rule 402 is expected.

RULE 403-Fugitive Dust

The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. The provisions of this rule apply to any activity or man-made condition capable of generating fugitive dust. This rule prohibits emissions of fugitive dust beyond the property line of the emission source. The applicant will be taking steps to prevent and/or reduce or mitigate fugitive dust emissions from the project site. Such measures include covering loose material on haul vehicles, watering, and using chemical stabilizers when necessary. The installation and operation of the CTGs is expected to comply with this rule.

RULE 407-Liquid and Gaseous Air Contaminants

This rule limits CO emissions to 2,000 ppmvd and SO_2 emissions to 500 ppmvd, averaged over 15 minutes. For CO, the CTGs will meet the BACT limit of 6.0 ppmvd at 15% O_2, 1-hr average, and the turbine will be conditioned as such. For SO_2, equipment which complies with Rule 431.1 is exempt from the SO_2 limit in Rule 407. The applicant will be required to comply with Rule 431.1 and thus the SO_2 limit in Rule 407 will not apply.

RULE 409-Combustion Contaminants

This rule restricts the discharge of contaminants from the combustion of fuel to 0.23 grams per cubic meter (0.1 grain per cubic foot) of gas, calculated to 12% CO_2, averaged over 15 minutes. The equipment is expected to meet this limit based on the calculations shown below:

Estimated exhaust gas 364,419 DSCFM = 21.87 mmscf/hr
Maximum PM10 Emissions 6 lb/hr
Estimated CO2 in exhaust 3%

$$\text{Grain Loading} = \frac{(6\ \text{lb/hr})(7000\ \text{gr/lb})}{21.87\text{EE6}\ \text{scf/hr}} \times \frac{12}{3} = 0.00768\ \text{gr/dscf} << 0.1\ \text{gr/dscf}$$

RULE 431.1-Sulfur Content of Gaseous Fuels
VSE will use pipeline quality natural gas which will comply with the 16 ppmv sulfur limit, calculated as H2S, specified in this rule. VSE has provided a gas analysis which demonstrates the natural gas has a sulfur content of less than 0.25 gr/100scf, which is equivalent to a sulfur concentration of about 4 ppmv. It is also much less than the 1 gr/100scf limit typical of pipeline quality natural gas. Compliance is expected.

RULE 474-Fuel Burning Equipment-Oxides of Nitrogen
Superseded by NOx RECLAIM.

RULE 475-Electric Power Generating Equipment
This rule applies to power generating equipment rated greater than 10 MW installed after May 7, 1976. Requirements specify that the equipment must comply with a PM_{10} mass emission limit of 11 lb/hr or a PM_{10} concentration limit of 0.01 grains/dscf. Compliance is demonstrated if either the mass emission limit or the concentration limit is met. The PM_{10} mass emissions from the VSE turbines is estimated to be 6 lb/hr. The estimated grain loading is less than 0.01 grain/dscf (see calculations under Rule 409 analysis). Therefore, compliance is expected. Compliance will be verified through performance tests.

NEW SOURCE REVIEW (NSR) ANALYSIS
The following section describes the NSR analysis for VSE. The facility can comply with NSR either by qualifying for various exemptions from or by demonstrating compliance with the following rules. Since VSE is a new facility, there are no exemptions from any portions of NSR. Therefore each of the following NSR rules will apply. Each piece of equipment at VSE is evaluated for compliance with the rules in the table below.

Table 14 - Applicable NSR Rules for VSE

Applicable NSR Rules for Non-RECLAIM Pollutants (CO, SOx, VOC, PM_{10})	Applicable NSR Rules for RECLAIM Pollutants (NOx)
Rule 1303(a)-BACT	Rule 2005(b)(1)(A)-BACT
Rule 1303(b)(1)-Modeling	Rule 2005(b)(1)(B)-Modeling
Rule 1303(b)(2)-Offsets	Rule 2005(b)(2)-Offsets
Rule 1303(b)(3)-Sensitive Zone Requirements	Rule 2005(e)-Trading Zone Restrictions
Rule 1303(b)(4)-Facilitywide Compliance	Rule 2005(g)-Additional Requirements
Rule 1303(b)(5)-Major Polluting Facilities	Rule 2005(h)-Public Notice
Rule 1309.1 - Priority Reserve	Rule 2005(i)-Rule 1401 Compliance
	Rule 2005(j)-Compliance with Fed/State NSR

RULE 1303(a) and Rule 2005(b)(1)(A)-BACT – LMS100 CTGs
These rules state that the Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. VSE is a new source with a potential for an increase in emissions and therefore, BACT is required. Each of the LMS100 CTGs proposed for construction by VSE will be operated on a simple cycle (no steam turbine, HRSG, or secondary electrical generator is associated with simple cycle configurations). As of the date of this evaluation, BACT for simple cycle gas turbines is shown in Table 15 below:

Table 15 - BACT Requirements for Simple Cycle Gas Turbines

NOx	CO	VOC	PM_{10}/SOx	NH_3
2.5 ppmvd, at 15% O_2, 1-hour rolling average	In Attainment. See PSD Analysis for BACT Requirements	2.0 ppmvd, at 15% O_2, 1-hour rolling average	Pipeline quality natural gas w/ S content ≤ 1 grain/100 scf	5.0 ppmvd at 15% O_2, 1-hour rolling average

This information was based on a search of the BACT Clearinghouse database and the latest information available is that for a permit issued to the City of Riverside, in April 2005. This unit is an LM6000 Sprint PC model operating on a simple cycle similar to the five CTGs being proposed by VSE. The unit was permitted at the above emission levels and has been in operation for over one year. Therefore, emission levels in Table 15 are now officially considered BACT for a simple cycle CTG. The applicant has provided a performance warranty which accompanied the initial application package which indicates that each LMS100 operating on a simple cycle can comply with and for NOx, even exceed the above BACT requirements. The warranty was provided by GE and is included in the engineering file. The applicant is proposing the BACT levels for this project shown in Table 16 below. Also, based on the Facility Permit issued to the City of Riverside (A/N 426694) in April 2005, the averaging times for NOx, and VOC in those permits were reduced from a 3-hour rolling average to a more restrictive 1-hour rolling average. AQMD now considers the more restrictive 1-hour averaging times to be Achieved in Practice and VSE will therefore be required to comply with the 1-hour averages for NOx, and VOC.

Table 16 - Proposed BACT for VSE CTGs

NOx	CO	VOC	PM_{10}/SOx	NH_3
2.5 ppmvd, @ 15% O_2, 1-hour average	In Attainment. See PSD Analysis for BACT Requirements	2.0 ppmvd, @ 15% O_2, 1-hour average	PUC quality natural gas w/ S content ≤ 1 grain/100 scf	5.0 ppmvd @ 15% O_2, 1-hour average

A NOx CEMS will be used to verify compliance with the NOx BACT limit. The proposed control levels in the table above will exceed the current BACT requirements for NOx and will meet current BACT requirements for all remaining criteria pollutants including NH_3. BACT is satisfied for each of the CTGs.

RULE 1303(a) and Rule 2005(b)(1)(A)-BACT – Emergency Fire Pump

The emergency fire pump is required to employ BACT because the maximum daily emissions from this source are expected to exceed 1 lb/day. As a starting point, the BACT Guidelines found in Part D – Non Major Polluting Facilities specify the following for emergency internal combustion engines:

EPA Tier III Certification Levels Required for Compression Ignition Engines

Rating/size	Deemed Complete after	NMHC+NOx (gm/BHP-hr)	CO (gm/BHP-hr)	PM_{10} (gm/BHP-hr)
50≤BHP<100	6/30/2008	3.5	3.7	0.30
100≤BHP<175	6/30/2007	3.0	3.7	0.22
175≤BHP<300	7/13/2006	3.0	2.6	0.15
300≤~~BHP~~<750	7/13/2006	3.0	2.6	0.15

The engine falls into the EPA Tier III BACT category highlighted above. However, since VSE will be a Major Polluting Facility as defined in AQMDs BACT Guidelines, BACT for Major Sources applies. Four compression ignition emergency fire pump engines were permitted between 12/13/2000 and 12/9/2003, and the permits were issued to LA County (A/N 418342), East LA College (A/N 417691), Ultramar (A/N 395874), and Pharmavite (A/N 372822). Each of these engines drives an emergency fire pump rated between 110 bhp and 300 bhp. A closer search of AQMD's BACT Clearinghouse for each of these engines reveals no significant advancements in BACT determinations for this category of engine. As for PM_{10}, some diesel fired engines are currently employing particulate traps to control PM_{10} emissions. As such, EME will be required to evaluate the technological feasibility of using a particulate trap on the emergency fire pump. In the event that it is not technologically feasible to install a particulate trap to control PM_{10} emissions, the Tier III BACT levels will apply to the emergency fire pump, unless it can be demonstrated, according to AQMD BACT Guidelines, that there are currently no UL listed fire pumps which can meet the Tier III emission standards. In that case, Tier II limits will apply.

EME has submitted a letter dated December 11, 2006 from Clarke, the engine manufacturer, which indicates the installation of after-treatment devices such as particulate traps will compromise reliability and performance and most importantly, safe operation of the fire pump, and that its installation would most likely void the fire pump's UL certification. EME submitted an email dated January 30, 2008 (see file) which indicates that the findings of the December 11, 2006 letter with regard to installation of after-treatment devices on fire pumps is still applicable. Therefore, EME proceeded to investigate the possibility of purchasing an engine which will comply with the Tier III emission standards. Currently, according to EME, in a letter dated December 18, 2006 from Clarke, fire pumps which are UL certified that can meet Tier III standards are currently not being provided or sold and are still in development. Therefore, the Tier II standards apply to this fire pump. BACT for SOx emissions for compression ignition emergency fire pumps is diesel fuel with a sulfur content no greater than 0.0015% by weight. A BACT summary for the emergency fire pump is shown below.

Proposed BACT for Emergency Fire Pump (A/N 450943)

Pollutant	EPA Tier II Levels	Proposed BACT	Comply (Yes/No)
NOx+NMHC	4.8 gm/BHP-hr	4.65 gm/BHP-hr	Yes
PM_{10}	0.15 gm/BHP-hr	0.09 gm/BHP-hr or particulate trap	Yes (Will meet emission limit in lieu of particulate trap)
SOx	On or after June 1, 2004 the user may only purchase diesel fuel with a sulfur content no greater than 0.0015% by weight (Rule 431.2)		Yes

The manufacturer has indicated that this engine can comply with the Tier II emission levels specified above, and the user will only purchase diesel fuel with a sulfur content of no greater than 0.0015% by weight. The emergency fire pump is expected to comply with current BACT.

RULE 1303(a)-BACT – Cooling Tower

Rule 219(e)(3) provides and exemption for water cooling towers and water cooling ponds not used for evaporative cooling of process water or not used for evaporative cooling of water from barometric jets or

from barometric condensers and in which no chromium compounds are contained. The 5-cell cooling tower being proposed at VSE will meet the requirements of Rule 219(e)(3) and is therefore exempt from NSR. BACT therefore does not apply.

RULE 1303(a)-BACT – Ammonia Storage Tank

A pressure relief valve that will be set at no less than 25 psig will control ammonia emissions from the storage tank. In addition, a vapor return line will be used to control ammonia emissions during storage tank filling operations. Based on the above, compliance with BACT requirements is expected.

Based on the above BACT analysis, the 5 CTGs, the emergency fire pump, and the ammonia tank will comply with the current BACT requirements found in Regulation XIII (for the non-RECLAIM pollutants) and in Regulation XX (for the RECLAIM pollutants). BACT for all equipment is satisfied.

RULE 1303(b)(1) and Rule 2005(b)(1)(B) - Modeling

The applicant has conducted air dispersion modeling using the EPA Industrial Source Complex Short Term ISCST3 air dispersion model, Version 3. The Tier 4 Health Risk Assessment was conducted in accordance with guidelines set forth by the California Office of Environmental Health Hazard Assessment (OEHHA) and the California Air Resources Board (CARB). The OEHHA/CARB computer program (HARP) was used to determine the health risk assessment. The air dispersion model was run at a single normalized emission rate of 1.0 gram/sec. The applicant has submitted modeling results for both a commissioning and non-commissioning year which considered building downwash effects through the use of the EPA Building Profile Input Program, a program which is compatible with the ISCST3 model. Effects of terrain slope, aspect ratio, plume height, wind speed, wind direction and temperature were also accounted for in the analysis. The data was collected at the AQMD's Riverside monitoring station. The analysis further accounted for flat, simple, intermediate, and complex terrain. Terrain features were taken from 1-second U.S. Geological Survey (USGS) data taken from its Digital Elevation Model (DEM). The DEM data provides terrain elevations with 1-meter vertical resolution and 10-meters horizontal resolution based on a UTM coordinate system. The EPA SCREEN3 model was used to estimate potential impacts due to fumigation. Potential fumigation impacts were estimated for NO_2 and SO_2. Table A-2 shown below is found in Rule 1303 and lists the most stringent ambient air quality standards and allowable change in concentration for each air contaminant. The appropriate averaging times are also listed.

Table A-2
Most Stringent Ambient Air Quality Standard and Allowable Change in Concentration
For Each Air Contaminant/Averaging Time Combination

Air Contaminant	Averaging Time	Most Stringent Air Quality Standard		Significant Change in Air Quality Concentration	
Nitrogen Dioxide	1-hour	25 pphm	500 $\mu g/m^3$	1 pphm	20 $\mu g/m^3$
	Annual	5.3 pphm	100 $\mu g/m^3$	0.05 pphm	1 $\mu g/m^3$
Carbon Monoxide	1-hour	20 ppm	23 $\mu g/m^3$	1 pphm	1.1 $\mu g/m^3$
	8-hour	9.0 ppm	10 $\mu g/m^3$	0.45 pphm	0.50 $\mu g/m^3$
Suspended Particulate Matter <10μm (PM_{10})	24-hour		50 $\mu g/m^3$		2.5 $\mu g/m^3$
	AGM[10]		30 $\mu g/m^3$		1 $\mu g/m^3$
Sulfate	24-hour		25 $\mu g/m^3$		1 $\mu g/m^3$

[10] AGM is the acronym for Annual Geometric Mean

EPA has granted the State's request to re-designate South Coast as attainment for CO effective June 11, 2007. Therefore, based on this decision, and pursuant to New Source Review, there will be no modeling required for CO emission increases for permits issued on or after June 11, 2007. The applicant is required under Rule 1303(b)(1) to demonstrate compliance with one of the following requirements for NOx and SO_2:

(a) The most stringent air quality standard shown in Table A-2 above, or
(b) The significant change in air quality concentration standards shown in Table A-2 above, if the most stringent air quality standards are exceeded

The applicant has provided the following modeled maximum project impacts for each individual turbine at VSE. Therefore, the numbers in the table below are on a permit unit basis. Each individual turbine plus the background concentration is less than the most stringent standard.

Maximum Project Impacts for VSE for Attainment Pollutants

	Average	CTG No.1 ($\mu g/m^3$)	CTG No.2 ($\mu g/m^3$)	CTG No.3 ($\mu g/m^3$)	CTG No.4 ($\mu g/m^3$)	CTG No.5 ($\mu g/m^3$)	Bkgrnd ($\mu g/m^3$)	Most Stringent Standard ($\mu g/m^3$)	Comply (Yes/No)
NOx	1-hr	7.60	7.60	7.50	7.50	7.40	191.3	470	Yes
	Annual	0.18	0.18	0.18	0.18	0.18	45.9	100	Yes
SO_2	1-hr	0.80	0.80	0.70	0.70	0.60	53.2	650	Yes
	3-hr	0.80	0.80	0.70	0.70	0.60	53.2	1,300	Yes
	24-hr	0.30	0.30	0.30	0.20	0.20	39.9	109	Yes
	Annual	0.016	0.016	0.016	0.016	0.016	8	80	Yes

Since PM_{10} is a non-attainment pollutant, it is required to comply with the 24-hour and annual PM_{10} significance levels in the table below. This table shows the 24-hour and the annual significance levels for turbines 1 through 5.

Significance Modeling for VSE for Non-Attainment Pollutants, ($\mu g/m^3$)

Equipment	24-hour PM_{10} Concentration	24 hour PM_{10} Significance Level	Annual PM_{10} Concentration	Annual PM_{10} Significance Level	Comply (Yes/No)
Turbine No. 1	2.245	2.5	0.156	1	Yes
Turbine No. 2	2.192	2.5	0.160	1	Yes
Turbine No. 3	2.143	2.5	0.162	1	Yes
Turbine No. 4	2.095	2.5	0.164	1	Yes
Turbine No. 5	2.049	2.5	0.166	1	Yes

AQMD modeling staff reviewed the applicant's analyses for both air quality modeling and health risk assessment (HRA). Modeling staff provided their comments in a memorandum from Ms. Jill Whynot to Mr. Mike Mills dated November 30, 2006. A copy of this memorandum is contained in the engineering file. Staff's review of the modeling and HRA analyses concluded that the applicant used EPA ISCST3 model version 02035 along with the appropriate model options in the analyses for NOx, PM_{10}, and SO_2. The applicant modeled both the cumulative and individual permit unit impacts for the project. The memorandum states that the ISCST3 modeling as performed by the applicant conforms to the District's dispersion modeling requirements. No significant deficiencies were reported.

RULE 1303(b)(2) and Rule 2005(b)(2)-Offsets – LMS100 PA CTGs

Since VSE is a new facility with an emissions increase, offsets will be required for all criteria pollutants. VSE will be included in NOx RECLAIM and as such, NOx increases will be offset with RTCs at a 1.0 to1 ratio. Non-RECLAIM criteria pollutants (VOC, SOx, and PM_{10}) will be offset by either the purchase of Emission Reduction Credits (ERCs) and/or Priority Reserve Credits (PRCs) at a 1.2 to 1 ratio. The facility may elect to offset emission increases using either purchased ERCs or PRCs or any combination thereof as allowed by AQMD Rules and Regulations. The required RTCs for NOx for the first and second years of operation are shown below. The values include start-ups, commissioning (first year only), normal operation, and shutdowns. (The total emissions for the second year excludes commissioning).

Required NOx RTCs

Operating Condition 100	Hours per Year	NOx (lb/hr)	NOx (lb/year) per device	NOx (lb/year) cumulative
CTGs				
Startup	350	10.42	3,647.00	18,235.00
Shutdown	350	11.00	3,850.00	19,250.00
Normal Operation	2,634	8.21	21,625.14	108,125.70
Commissioning	134	71.21	9,542.14	47,710.70
CTG Totals	3,468		38,664.28	193,321.40
Emergency Fire Pump	199	10.54	2,097.46	2,097.46
Total 1st Year Emissions (lb/year)			40,761.74	195,418.86
Offset Ratio			1.00	1.00
1st year RTCs (lb/year)			40,761.74	195,418.86
2nd year RTCs (lb/year)			**32,319.74**	**153,208.86**

Table 17 shows the facility-wide 30-day averages for VOC, PM_{10} and SOx. Offsets are based upon 30-day averages from individual permit units.

As mentioned above, VSE may elect to use both ERCs and PRCs to provide the required offsets, as shown below, however, PRCs are only available for PM_{10} and SOx as depicted in the table below. ERCs will be purchased for the VOC offsets. The amounts in Table 18 are required to fully offset the facility increases and satisfy the requirements of Rule 1303(b)(2): Note maximum 30-day average for PM_{10} excludes the emissions from the cooling tower per Rule 219(e)(3). Since CO is in attainment, offsets for this pollutant are not required.

Table 17 – 30-Day Averages for the Entire Facility, (lb/day)

	NOx	CO	VOC	SOx	PM_{10}
Maximum 30 Day Average			186	46	463

Table 18 - Required Offsets for Non-RECLAIM Pollutants (per-turbine basis, lb/day)

	NOx	CO	VOC	SOx	PM_{10}
Maximum 30 Day Average			37	9	93
ERC Offset Ratio			1.2	1.2	1.2
PRC Offset Ratio			N/A	1.2	1.2
Required Offsets if ERCs are chosen			**44**	**11**	**112**
Required Offsets if PRCs are chosen			**N/A**	**11**	**112**

The facility's maximum monthly and annual fuel usage for the simultaneous operation of the 5 CTGs will be 1,966 mmscf and 14,725 mmscf, respectively, based on operating condition 100. The monthly fuel cap will correspond to 463 hours/month of operation. This value was selected by VSE. The monthly and annual fuel usage for the emergency fire pump are 264 gallons and 3,200 gallons, respectively. The calculations are shown below and a monthly fuel cap will be included on the Facility Permit as a condition.

Monthly:
CTGFuel= (803.3 MMBTU/hr)(1.11)(1 scf/1,050 BTU)(463 hr/month)(5 CTGs) = 1,966 MMscf/month
ICEFuel= (16.0 gal/hr)*16.5 hr/month = 264 gal/month

Annually:
CTGFuel= (803.3 MMBTU/hr)(1.11)(1 scf/1,050 BTU)(3,468 hr/year)(5 CTGs) = 14,725 MMscf/year
ICEFuel= (16.0 gal/hr)*199.99 hr/year = 3,200 gal/year

Table 19 below shows the total amount of ERC's that EME has purchased as of ~~January 29, 2008~~ March 11, 2008. The table consists of several ERC certificates for VOC as shown. Shaded areas in the table indicate that no ERC's for that particular pollutant have been acquired by EME as of ~~January 29, 2008~~ March 11, 2008.

Table 19 - Total Amount of Emission Reduction Credits currently held by EME, Valle Del Sol Energy, LLC

Pollutant	ERC Certificate No.	Date of Purchase	Origin	Seller	Amount of ERC (lb/day)
VOC	AQ003679	10/23/2006	Electrofilm Manufacturing	Electrofilm Manufacturing	8
VOC	AQ002683	11/8/2006	Magnatek, Inc	Magnetek, Inc	1
VOC	AQ006303	11/13/2006	Scope Products	Greg K Environmental Fund	100
VOC	AQ004209	11/13/2006	Plastic Dress Up Co	Dart Container Corp	117
VOC	AQ006962	10/31/2007	Inland Gas & Electric GP LLC	Inland Gas & Electric GP LLC	20
VOC	AQ006930	11/6/2007	CE2 Environmental Markets, LP	CE2 Environmental Markets, LP	10
VOC	AQ007095	11/6/2007	Rep-LA1, LLC	Rep-LA1, LLC	21
VOC	AQ003916	12/18/2007	Jensen Industries	Jensen Industries	12
VOC	AQ006982	1/4/2008	Greg K Environmental Fund	Greg K Environmental Fund	26
VOC	AQ007045	1/4/2008	Greg K Environmental Fund	Greg K Environmental Fund	11
CO					
PM_{10}					
SOx					

VSE has indicated that the required amounts of offsets will be provided prior to issuance of the Facility Permit. Compliance with offset requirements of Rules 1303(b)(2) and 2005(b)(2) is expected.

RULES 1303(b)(3)-Sensitive Zone Requirements and 2005(e)-Trading Zone Restrictions
Both rules state that credits must be obtained from the appropriate trading zone. In the case of Rule 1303(b)(3), unless credits are obtained from the Priority Reserve, facilities located in the South Coast Air Basin are subject to the Sensitive Zone requirements specified in Health & Safety Code Section 40410.5. VSE is located in Zone 2a and is therefore eligible to obtain its ERCs from either Zone 1 or Zone 2a. Similarly in the case of Rule 2005(e), VSE, because of its location may obtain RTCs from either Zone 1 or Zone 2, at its choosing. Compliance is expected with both rules.

RULE 1303(b)(4)- Facility Compliance
The new facility will comply with all applicable Rules and Regulations of the AQMD.

RULE 1303(b)(5)- Major Polluting Facility
VSE has addressed the alternative analysis, statewide compliance, plume visibility, and CEQA requirements of this rule and based on experience with similar equipment recently permitted, it is expected that VSE will comply with the provisions of this rule.

Rule 1303(b)(5)(A) – Alternative Analysis
The applicant is required to conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for the VSE and to demonstrate that the benefits of the proposed project outweigh the environmental and social costs associated with this project.

EME has performed a comparative evaluation of alternative sites as part of the AFC process and has concluded that the benefits of providing additional electricity and increased employment in the surrounding area will outweigh the environmental and social costs incurred in the construction and operation of the proposed facility.

Rule 1303(b)(5)(B) – Statewide Compliance
EME has certified in the 400-A form that all major sources under its ownership or control in the State of California are in compliance with all federal, state, and local air quality rules and regulations. In addition, EME has submitted an email to the AQMD dated October 19, 2006 stating that "any and all facilities that EME owns or operates in the State of California (including the proposed VSE) are in compliance or are on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act". Therefore, compliance is expected.

Rule 1303(b)(5)(C) – Protection of Visibility
Modeling is required if the source is within a Class I area and the NOx and PM_{10} emissions exceed 40 TPY and 15 TYP respectively. Since the nearest Class I area is located well beyond the proposed VSE site, modeling from plume visibility is not required, however, the applicant has provided modeling impact data for the Class I areas as part of the AFC process. Compliance is expected.

Rule 1303(b)(5)(D) – Compliance through CEQA
The California Energy Commission's (CEC) certification process is essentially equivalent to CEQA. Since the applicant is required to receive a certification from the CEC, the applicable CEQA requirements and deficiencies will be addressed. Compliance is expected.

RULE 1309.1-Priority Reserve

This rule requires electrical generating facilities (EGF) seeking access to the Priority Reserve to comply with the requirements in R-1309.1. On September 8, 2006 the AQMD Governing Board adopted amendments to Rule 1309.1 to allow electric generating facilities (EGFs) access to the AQMD's Priority Reserve credits to offset their emission increases. However, due to significant public comments and concerns expressed at the adoption hearing, the AQMD Governing Board directed AQMD staff to propose further amendments to Rule 1309.1 in response to public concerns about emission and public health impacts associated with the operation of EGFs. In addition, the Governing Board directed AQMD staff to hold a hold a public meeting to inform interested parties about the specifics of the proposed project. The meeting was held on October 18, 2006. On August 3, 2007 the AQMD Governing Board replaced the September 8, 2006 version of Rule 1309.1 with the August 3, 2007 version. The requirements of Rule 1309.1 as replaced on August 3, 2007 have changed significantly since VSE originally requested access to the Priority Reserve. The August 3, 2007 amendments include a set of new requirements for EGFs in order to be qualified to access the Priority Reserve. Included in the requirements the VSE must meet prior to issuance of any DOC or Proposed Title V Permit are elements which require more stringent emission standards for nitrogen oxides (NOx), fine particulate matter (PM_{10}), and toxics, consideration of the use of renewable/alternative energy, and other requirements.

Rule 1309.1(b)(5)(A)(i) defines three geographical zones within the jurisdiction of the South Coast Air Quality Management District based on the average $PM_{2.5}$ concentration for years 2003 through 2005, as shown in Table 20 below. Also defined in Rule 1309.1 (b)(5)(A)(i) is the Environmental Justice Area (EJA).

Table 20 - Rule 1309.1 Zone Definitions

Zone No.	Rule 1309.1 Definition
1	Areas within the AQMD with an average $PM_{2.5}$ concentration of less than 18 $\mu g/m^3$
2	Areas within the AQMD with an average $PM_{2.5}$ concentration between 18 $\mu g/m^3$ and 20 $\mu g/m^3$
3	Areas within the AQMD with an average $PM_{2.5}$ concentration of greater than 20 $\mu g/m^3$
EJA	Area of grid cells where 10% of population lives in poverty, and cancer risk > 1 x 10^{-3}; or PM_{10} > 46 $\mu g/m^3$

Rule 1309.1(b)(5)(A)(ii) states that an in-District power plant located in Zone 1 shall demonstrate compliance with the specific requirements of Rule 1309.1 (b)(5)(A)(ii)(a) and (b) in order to draw credits from the Priority Reserve. VSE is located at 29500 Rouse Road, Romoland, CA which is located in Zone 1 as defined in Rule 1309.1. Therefore VSE is required to demonstrate compliance with each of the following specific requirements of Rule 1309.1(b)(5)(A)(ii). The specific requirements for power plants proposed for construction in Zone 1 are summarized in Table 21 below:

Table 21 - Rule 1309.1 Zone 1 Specific Requirements

Rule Subpart	Specific Requirements
Rule 1309.1(b)(5)(A)(ii)(a)	Unit PM_{10} emissions ≤ 0.060 lb/MW-hr
Rule 1309.1(b)(5)(A)(ii)(b)	Unit NOx emissions ≤ 0.080 lb/MW-hr

Rule 1309.1(b)(5)(A)(ii)(a)& (b) – NOx and PM_{10} Emissions

The NOx and PM_{10} emissions from each gas turbine must not exceed 0.080 lb/MW-hr and 0.060 lb/MW-hr, respectively, as determined at ISO conditions of 14.7 psia, 60 degrees F, and 60% relative humidity. As shown in Table 22 below, the emissions from each of the five gas turbines will comply with Rule 1309.1(b)(5)(A)(ii)(a) and (b).

Table 22 - NOx and PM_{10} Emissions

Equipment	Pollutant	lb/MW-hr, at ISO conditions	Maximum Allowable lb/MW-hr	Comply (Yes/No)
Gas Turbine No. 1	NOx	0.078	0.080	Yes
	PM_{10}	0.058	0.060	Yes
Gas Turbine No. 2	NOx	0.078	0.080	Yes
	PM_{10}	0.058	0.060	Yes
Gas Turbine No. 3	NOx	0.078	0.080	Yes
	PM_{10}	0.058	0.060	Yes
Gas Turbine No. 4	NOx	0.078	0.080	Yes
	PM_{10}	0.058	0.060	Yes
Gas Turbine No. 5	NOx	0.078	0.080	Yes
	PM_{10}	0.058	0.060	Yes

Rule 1309.1(c)(5)(B) – Renewable/Alternative Energy

This rule requires that in order to have access to the Priority Reserve, the applicant must demonstrate to the satisfaction of the Executive Officer that the renewable/alternative energy consisting of but not limited to hydropower, wind, wave, solar, geothermal, fossil fuel, and fuel cell technologies are not viable options for the power to be generated at the site. Wave, geothermal and hydropower options are not viable based on the location of the proposed plant. Therefore, EME provided an analysis on October 15, 2007 (see file) in which wind, solar, and fuel cell technologies were considered.

Wind

EME considered a state-of-the-art wind turbine generator with a hub height of 260 feet and rotor diameter of 295, placing the height of the structure at slightly over 400 feet. The closest that wind turbine generators can be spaced safely is 800 feet apart. The VSE site is approximately 500 x 1500 feet, leaving room for a single 2 MW at the widest part of the parcel. According to EME, this location would place the turbine at an unsafe clearance from neighboring structures and existing SCE power lines. Therefore, wind technology at WCE site is not a viable option.

Solar

According to EME, a 400 MW solar-only powerplant located in Ivanpah has applied to the CEC for certification. Each 100 MW phase would require 850 acres of land which includes all ancillary and heat rejection equipment, and would thus produce 0.12 MW per acre. VSE's entire site is only 20 acres in size and would only support 2-4 MW of power through solar generation. Therefore, the VSE site is too small to accommodate solar generation.

Fuel Cell

EME stated in the October 15, 2007 letter that the only fuel cell available commercially today is the PureCell 200 built by UTC Power. The cost of the unit is approximately $4,000/kW. The installed cost of

the unit approaches $1.1 million. At a rated output of 200 kW, this translates to about $5,500/kW, installed. Other types of fuel cells are less developed. By contrast, a diesel generator costs $800 to $1,500 per kilowatt, and a natural gas turbine can be $400 per kilowatt or less. According to EME the largest fuel cell claimed to be commercially available by its manufacturer is a 2.4 MW unit and are not available in sufficient volume Based on the above, fuel cell technology is not a viable option. In addition, prior to access to the Priority Reserve and issuance of the permits to construct, VSE must demonstrate to the satisfaction of the Executive Officer that it has met each of the following requirements:

Rule 1309.1(c)(2)
VSE pays a mitigation fee pursuant to subdivision (g)

Rule 1309.1(c)(3)
VSE conducts a due diligence effort [based on an ERC cost not to exceed the applicable mitigation fee for that pollutant at the location of the electrical generating facility (EGF) and as specified if subdivision (g) of Rule 1309.1] approved by the Executive Officer to secure available ERCs for requested Priority Reserve pollutants. Such efforts shall include securing available ERCs including those available through state emission banks or creating ERCs through SIP approved credit generation programs as available.

Rule 1309.1(c)(4)
VSE enters into a long-term contract (at least one year) with the State of California to sell at least 50 percent of the portion of power which it has generated using the Priority Reserve Credits and provided the Executive Officer determines at the time of permitting and based on consultations with State power agencies that the State of California is both entering into such long term contracts and that a need for such contract exists at the time of permitting, if the facility is a net generator.

Rule 1309.1(d)(6)
VSE must use any ERCs held first, before access to the Priority Reserve is allowed.

Rule 1309.1(d)(14)
VSE secures final certification and approval for this project from the California Energy Commission, and has entered into a long term contract with Southern California Edison Company or the San Diego Gas and Electric Company or the State of California to provide electricity in Southern California.

REQUIRED OFFSETS
Table 23 below shows the required offsets for PM10 and SOx. Note that VOC offsets will not be obtained from the Priority Reserve, but will be offset with emission reduction credits.

Table 23 - Offsets Required for VSE

PM10	30 Day Ave lb/day	ERC Offset Factor	Required Offsets (lb/day)
CTG No. 1	93	1.2	112
CTG No. 2	93	1.2	112
CTG No. 3	93	1.2	112
CTG No. 4	93	1.2	112
CTG No. 5	93	1.2	112
		TOTALS	560
		Unit Cost $/lb/day	92,000
		Total PM10 Cost $	$51,520,000

~~Strikethroughs~~ and underlines indicate changes from the PDOC dated January 1, 2008

SOx	30 Day Ave lb/day	ERC Offset Factor	Required Offsets (lb/day)
CTG No. 1	9	1.2	11
CTG No. 2	9	1.2	11
CTG No. 3	9	1.2	11
CTG No. 4	9	1.2	11
CTG No. 5	9	1.2	11
		TOTALS	55
		Unit Cost $/lb/day	34,400
		Total SOx Cost $	$1,892,000
		Total Cost $	$53,412,000

Rule 1401 – New Source Review of Toxic Air Contaminants:
This rule specifies limits for maximum individual cancer risk (MICR), acute hazard index (HIA), chronic hazard index (HIC) and cancer burden (CB) from new permit units, relocations, or modifications to existing permits which emit toxic air contaminants. Rule 1401 requirements are summarized as follows in Table 24:

Table 24 – Rule 1401 Requirements per Turbine

Parameters and Specifications	Rule 1401 Requirements
MICR, without T-BACT	$\leq 1x10^{-6}$
MICR, with T-BACT	$\leq 1x10^{-5}$
Acute Hazard Index	≤ 1.0
Chronic Hazard Index	≤ 1.0
Cancer Burden	≤ 0.5

The applicant performed a Tier 4 health risk assessment using the Hot Spots Analysis and Reporting Program (HARP, version 1.2a). The analysis included an estimate of the MICR for the nearest residential and commercial receptors, the acute and chronic hazard indices. PRA modeling staff reviewed the applicant's methodology and procedures used, and re-ran the HARP model and verified the health risk and hazard indices which were presented by the applicant. It was noted that a 15 percent fractional consumption rate for home grown produce for residential receptors was used in determining the risk. The AQMD's HRA procedures require the use of a 5.2 percent fractional consumption rate. It was further noted that the cancer risk for the commercial receptor was estimated by applying an adjustment factor to the residential cancer risk, when the "point estimate" risk calculation method should be used. The HARP model was re-run with the corrected fractional consumption rate and point estimate methodology. PRA staff determined that each of the health risk values for MICR, HIA and HIC were appropriately estimated (see memorandum in file, dated November 30, 2006 from Ms. Jill Whynot to Mr. Mike Mills, and subsequent email in file from Yi Huang to Ken Coats dated December 7, 2006).

Table 25 below is a summary of the revised cancer and non-cancer risk assessment results on a permit-unit basis. The cancer burden is not calculated because the MICR is less than 1 x 10^{-6} for both residential and commercial receptors.

Table 25 - Rule 1401 Modeled Results

	Residential MICR	Commercial MICR	Residential HIA	Commercial HIA	Residential HIC	Commercial HIC
Gas Turbine No. 1	$1.42*10^{-11}$	$6.68*10^{-11}$	0.00057	0.00123	0.0000175	0.00000074
Gas Turbine No. 2	$1.42*10^{-11}$	$6.68*10^{-11}$	0.00056	0.00124	0.0000174	0.00000074
Gas Turbine No. 3	$1.42*10^{-11}$	$6.68*10^{-11}$	0.00056	0.00123	0.0000175	0.00000074
Gas Turbine No. 4	$1.42*10^{-11}$	$6.68*10^{-11}$	0.00055	0.00122	0.0000174	0.00000074
Gas Turbine No. 5	$1.42*10^{-11}$	$6.68*10^{-11}$	0.00056	0.00122	0.0000174	0.00000074
Total Project	$7.10*10^{-11}$	$3.34*10^{-10}$	0.00280	0.00614	0.0000872	0.00000370

Table 25 shows that VSE will comply with the applicable requirements of Rule 1401.

RULE 1470-Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines

Rule 1470 imposes the following requirements on compression ignition engines:

Paragraph (c)(1) requires the use of CARB Diesel fuel. The use of No. 2 diesel fuel will satisfy this requirement. Paragraph (c)(2)(A) imposes operating requirements for engines located within 500 feet from a school. Since the engine is located greater than 500 feet to the nearest school, the requirements of this section are not applicable.

Paragraph (c)(2)(B) allows operation of this device during an impending rotating electric power outage only if:

1. The permit specifically allows this operation
2. The utility company has actually ordered the outage
3. The engine is in a specific location covered by the outage.
4. The engine is operated no more than 30 minutes prior to the outage, and
5. The engine operation is terminated immediately after the outage.

AQMD will require a condition to limit the maintenance and testing to less than 50 hours per year. This engine is expected to meet these requirements.

Paragraph (c)(2)(C) limits hours for maintenance and testing to 50 hours per year for PM_{10} emissions up to 0.15 gm/bhp-hr, and a maximum of 100 hours per year for PM_{10} emissions up to 0.01 gm/bhp-hr. Therefore, the engine will comply with paragraph (c)(2)(C).

Also, part (iv) of paragraph (c)(2)(C) requires that the engine meet the standards for off road engines in Title 13, CCR section 2423. This engine will comply with the requirements for off road engines. Therefore, compliance with Rule 1470 is expected.

Rule 2005(g) – Additional Requirements

As with Rule 1303(b)(5) for the Non-RECLAIM pollutants, VSE has addressed the alternative analysis, statewide compliance, plume visibility, and CEQA requirements of this rule for NOx and SOx and based on experience with similar equipment recently permitted, it is expected that VSE will comply with the provisions of this rule.

Rule 2005(g) – Additional Requirements
As with Rule 1303(b)(5) for the Non-RECLAIM pollutants, VSE has addressed the alternative analysis, statewide compliance, protection of visibility, and CEQA compliance requirements of this rule for NOx. These requirements are essentially the same as those found in Rule 1303(b)(5), subparts A through D for non-RECLAIM pollutants, and are summarized below.

Rule 2005(g)(1) – Statewide Compliance
EME has certified in the 400-A form that all major sources under its ownership or control in the State of California are in compliance with all federal, state, and local air quality rules and regulations. In addition, EME has submitted an email to the AQMD dated October 19, 2006 stating that "any and all facilities that EME owns or operates in the State of California (including the proposed VSE) are in compliance or are on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act. Therefore, compliance is expected.

Rule 2005(g)(2) – Alternative Analysis
The applicant is required to conduct an analysis of alternative sites, sizes, production processes, environmental control techniques for the VSE and to demonstrate that the benefits of the proposed project outweigh the environmental and social costs associated with this project. EME has performed a comparative evaluation of alternative sites as part of the AFC process and has concluded that the benefits of providing additional electricity and increased employment in the surrounding area will outweigh the environmental and social costs incurred in the construction and operation of the proposed facility.

Rule 2005(g)(3) – Compliance through CEQA
The California Energy Commission's (CEC) certification process is a CEQA certified process. Since the applicant is required to receive a certification from the CEC, the applicable CEQA requirements and deficiencies will be addressed. Compliance is expected

Rule 2005(g)(4) – Protection of Visibility
Modeling is required if the source is within a Class I area and the NOx emissions exceed 40 TPY. Since the nearest Class I area is located well beyond the proposed VSE site, modeling from plume visibility is not required, however, the applicant has provided modeling impact data for the Class I areas as part of the AFC process. Compliance is expected

Rule 2005(h) – Public Notice
VSE will comply with the requirements for Public Notice found in Rule 212. Therefore compliance with Rule 2005(h) is demonstrated.

Rule 2005(i) – Rule 1401 Compliance.
VSE will comply with Rule 1401 as demonstrated in the Tier 4 analysis and subsequently reviewed and found to be satisfactory by AQMD modeling staff. Compliance is expected.

Rule 2005(j) – Compliance with State and Federal NSR.
VSE will comply with the provisions of this rule by having demonstrated compliance with AQMD NSR Regulations XIII and Rule 2005-NSR for RECLAIM.

REGULATION XVII-Prevention of Significant Deterioration

This regulation applies to the preconstruction review of major stationary sources that emit attainment air contaminants. For a simple cycle power plant, the applicable major stationary source threshold in Regulation XVII is 250 tons per year or more of any pollutant regulated by the Clean Air Act. Table 26 below shows the potential to emit for VSE.

Table 26 - VSE Potential to Emit

	NOx	CO	SO_2
Facility PTE (tpy)	97.71	145.72	5.16
Threshold (tpy)	250	250	250

Rule 1703(a)(2) requires each permit unit be constructed using BACT for each attainment air contaminant for which there is a net emission increase. The BACT requirements for CO as well as the applicant's BACT proposals for the CTGs and the internal combustion engine are listed in Table 27 below:

Table 27 - CO BACT

Equipment	AQMD BACT	Proposed BACT	Compliance (Y/N)
LMS 100 CTGs	6.0 ppmvd at 15% O2, 1-hour rolling average	6.0 ppmvd at 15% O2, 1-hour rolling average	Yes
Internal Combustion Engine	2.6 gm/BHP-hr	0.45 gm/BHP-hr	Yes

As shown in Table 27, the equipment will comply with AQMD BACT requirements for major sources. The facility PTE is less than the major stationary source threshold of 250 tpy for each of the attainment pollutants in the South Coast Air Basin. Therefore air quality modeling provisions of Rule 1703(a)(3) are not applicable to this project.

INTERIM PERIOD EMISSION FACTORS

RECLAIM requires that a NOx emission factor be used for reporting emissions during the interim reporting period. The interim period is defined as a period, typically 12 months in duration, when the CEMS has not been certified. During this period, the emissions cannot be accurately quantified, monitored, or verified. The emissions during this period are assumed to be at uncontrolled levels. The interim reporting period can be broken down into the two parts which includes the commissioning period in which an uncontrolled[11] emission rate is assumed, and the remaining period at which controlled rates at BACT are assumed.

Since VSE will be included in NOx RECLAIM, an interim period emission factor for NOx will be determined. Although not a RECLAIM pollutant, a CO emission factor will also be calculated so that the applicant may use it to report emissions during the interim period when the CEMS is not yet certified for CO. In the event CEMS data is not available, NOx, CO, and SOx emissions during the interim period will be calculated using monthly fuel usage and the emission factors derived below. There will be two interim period emission factors calculated for NOx and two interim period emission factors calculated for CO. The first factor will be for use during commissioning stage when the CTGs are assumed to be operating at uncontrolled levels

[11] The emission factor for the commissioning period is an average for the entire 134 hour commissioning period. During this period, the turbines may be uncontrolled, partially controlled, or 100% controlled.

and the second factor will be for use after commissioning is complete and the CTGs are assumed to operate at BACT levels. The specific calculations are shown in Appendix G and the results are shown in the tables below.

Commissioning Period

Pollutants	NOx	CO
Total emissions (lbs)	47,710	48,640
Total Fuel (mmscf)	386.43	386.43
Emission Factor (lb/mmscf)	**123.46**	**125.87**

Remaining Period (Non-Commissioning)

Pollutants	NOx	CO
Total emissions (lbs)	145,610	242,740
Total Fuel (mmscf)	14,156.7	14,156.7
Emission Factor (lb/mmscf)	**10.29**	**17.15**

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The CEC is the lead agency for this project and EME filed an Application for Certification (05-AFC-3) for the project on December 1, 2005. VSE will be subject to the CEC's 12-month energy facility licensing process which will address public issues and concerns involving zoning, biological resources, water resources, air quality, transmission, public health and safety, and their resolution. The CEC's 12-month licensing process is a certified regulatory program under CEQA and includes several opportunities for public participation. The CEC's license/certification subsumes all requirements of state, local, or regional agencies otherwise required before a new plant is constructed. The CEC coordinates its review of the facility with the federal, state, and local agencies that will be issuing permits to ensure that its certification incorporates the conditions that would be required by these various agencies. The AFC process is the functional equivalent of a traditional CEQA review and will address and resolve issues related to CEQA.

40CFR Part 60 Subpart GG – NSPS for Stationary Gas Turbines

40CFR60 Subpart GG has been superseded by 40 CFR60 Subpart KKKK.

40CFR Part 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines

Subpart KKKK establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines with a heat input greater than 10 MMBTU/hr (10.7 gigajoules per hour), based on higher heating value, which commenced construction, modification or reconstruction after February 18, 2005.

§60.4320(a) The turbine is natural gas-fired and has a heat input > 850 MMBTU/hr, therefore, it is subject to a NO_X emission limit of 15 ppmv @ 15% O_2 from Table 1 of this subpart. The turbine is required to comply with BACT for NOx which is officially at 2.5 ppmv at 15% O2, dry basis for a simple cycle plant. However, GE has submitted performance warranties which indicate the CTGs will meet a NOx level of 2.5 ppmv at 15% O2 on a 1-hour average which is more stringent than this subpart. Therefore, compliance with this section is expected.

§60.4330(a)(2) Natural gas fuel burned in the turbine has a sulfur content of 0.0006 lb-SO_2/MMBtu, which is less than 0.06 lb-SO_2/MMBTU (26 ng-SO_2/J) required by this section. Therefore, compliance with the sulfur dioxide limits of this section is expected.

§60.4335 The LMS100PA turbines use water injection to help reduce NO_X to compliance levels. Monitoring is required and will be accomplished with a CEMS; therefore, compliance with this section is expected with a certified CEMS.

§60.4345 The CEMS is required to be certified according to the Performance Specification 2 (PS 2) in appendix B to this part. SCE will be required to file a CEMS application package with Source Test Engineering to certify the CEMS to meet the requirements of Rule 218 or 40CFR60 appendix B. Therefore, compliance with this section is expected.

§60.4400(a) An initial source test will be required per §60.8. The annual source testing requirement for NOx will be satisfied through the annual RATAs performed on the CEMS. Compliance with the source testing requirements is expected.

40CFR Part 72 – Acid Rain Provisions

VSE is subject to the requirements of the federal Acid Rain program because the electricity generated will be rated at greater than 25 MW. This program is similar to RECLAIM in that facilities are required to cover SO_2 emissions with SO_2 allowances that are similar in concept to RTC's. SO_2 allowances are however, not required in any year when the unit emits less than 1,000 lbs of SO_2. Facilities with insufficient allowances are required to purchase SO_2 credits on the open market. In addition, both NOx and SO_2 emissions will be monitored and reported directly to USEPA. Based on the above, compliance with this rule is expected.

REGULATION XXX – Title V

VSE is a Title V facility because the cumulative emissions will exceed the Title V major source thresholds and because it is also subject to the federal acid rain provisions. The initial Title V permit will be processed and the required public notice will be sent along with the Rule 212(g) Public Notice, which is also required for this project. EPA is afforded the opportunity to review and comment on the project within a 45-day review period.

Combined Modeling Impacts on Local Community

AQMD held a public meeting to inform the public about the specifics of the proposed project. The meeting was held on October 18, 2006. Topics discussed included facility emissions, local impacts on schools, and surrounding area. At this meeting, several audience members spoke in favor of constructing the proposed power plant to provide additional electricity during peak demand hours and to create much needed jobs, and some in opposition of the project expressing concerns about potential public health impacts. Most of the comments received were answered on-site during the meeting. However, one comment in particular expressed concerns about the cumulative emissions and public health impacts between the proposed Valle Del Sol Energy Project and the Inland Empire Energy Center (IEEC) located nearby. Based on this comment AQMD looked into the combined modeling and health risk impacts from both VSE and IEEC power plants on the local community.

Combined Modeling Impacts from VSE and IEEC on Local Community

		New Impacts, µg/m^3 (VSE)	Existing Impacts, µg/m^3 (IEEC)
PM_{10}	24-hr	11.0	1.22
	Annual	0.80	1.04
NO_2	1-hr	261.40	0
	Annual	1.14	1.67
CO	1-hr	55.15	18.22
	8-hr	64.51	7.06

Combined Health Risk Impacts from VSE and IEEC on Local Community

New Impacts (VSE)	Health Effect	Receptor	Impact
	Cancer risk, µg/m^3	Uninhabited Area	0.03EE-6
		Residential	<0.01EE-6
		Commercial	<0.01EE-6
	Acute Hazard Index, (dimensionless)		0.01
	Chronic Hazard Index, (dimensionless)		0.09
Existing Impacts (IEEC)	Health Effect	Receptor	Impact
	Cancer Risk, µg/m^3	Uninhabited Area	2.29EE-6
		Residential	0.53EE-6
		Commercial	0.16EE-6
	Acute Hazard Index, (dimensionless)		0.05
	Chronic Hazard Index, (dimensionless)		0.09

The individual impacts of each project have been evaluated and addressed in the earlier analysis for VSE and in the application evaluation for the IEEC project and have both shown compliance with requirements of all applicable Rules and Regulations. The results of the combined analysis are shown in the above tables, and summarize the impacts of criteria pollutants and health risks on the local community. This analysis was strictly performed to provide additional information with respect to the comments received at the public meeting.

COMMENTS/RESPONSE TO COMMENTS AND PROPOSED REVISIONS TO THE AMENDED DETERMINATION OF COMPLIANCE ISSUED JANUARY 11, 2008:

Comment No. 2 from EPA
Conditions D12.3 and D12.4 establish temperature and differential pressure ranges for the catalyst. EPA notes that no provisions are made to account for operation during the startup period, during which the catalyst may not be able to comply with the required ranges. If the emission units can not comply during the startup period, the permit should be revised to specify what the temperature and pressure requirements are during the start up period.

AQMD Response:
AQMD agrees with EPA regarding the need for maximum temperature and pressure limits and will revise conditions D12.3 and D12.4 to include a maximum temperature and pressure limit which cannot be exceeded during the start-up period.

Comment No. 4 from EPA
While Condition C1.4 limits the annual hours of operation for the turbines, and Condition D12.7 requires the installation of a non-resettable elapsed time meter, EPA could not locate any requirement to monitor and record the hours of operation in Section K of the permit. Please add a condition requiring at least monthly monitoring and recordkeeping of the elapsed time meter readings.

AQMD Response:
Electrical generating facilities located in Zone 1 as described in AQMD Rule 1309.1(b)(5(A)(ii) are not subject to a limitation on annual hours of operation. Therefore, the draft permit contains no condition requiring the installation of a non-resettable elapsed time meter.

Comment No. 5 from EPA
EPA notes that for several of the conditions related to source testing, found in Subsection D of Section H of the permit (e.g. see Condition D29.3), the required test method is listed as "Approved District Method." Since specific SIP approved test methods are available for each of these tests, the Title V permit must list the specific test methods required to be used. The District may add a condition stating that an alternative test method may be allowed, but only upon both District and EPA concurrence. In a similar manner, many of these same conditions specify that the required Averaging Time is "District-approved averaging time." Again each specific test method has a corresponding required averaging time. Please revise all Conditions in Subsection D to provide specific test method and averaging time requirements.

AQMD Response:
AQMD concurs with EPA and will make the following revisions to the appropriate source testing conditions: The required averaging time for PM will be revised from "District approved averaging time" to read "4 hours". The required test method for PM will be revised from "Approved District Method" to read "Method 5". The required test method for SOx will be revised from "Approved District Method" to read AQMD Method 307-91." The required test method for VOC will be revised from "Approved District Method" to read "AQMD Method 25.3".

Comment No. 6 from EME
EME has indicated to AQMD that their interpretation of the language in Rule 1309.1 is that an in-District electrical generating facility located in Zone 2 shall demonstrate compliance with each of the subsections in subparagraph (iii) of the rule with no references to a limitation on total megawatts (MW) of electricity generated. Thus EME does not need proposed condition E193.4 which limits the total electrical generating capacity to 500 MW or less

AQMD Response:
Upon review of the rule language in Rule 1309.1, the AQMD concurs with this interpretation. Therefore, condition E193.4, will be removed from the amended Determination of Compliance issued on January 11, 2008. Please note that condition E193.4 corresponds to AQ -19 in the CEC AFC document and should be removed accordingly.

RECOMMENDATION(S):

Issue a Facility Permit to Construct with the following permit conditions.

PERMIT CONDITIONS:

(LMS100PA CTGs)

A63.1 The operator shall limit emission from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
PM_{10}	2,778 LBS IN ANY ONE MONTH
SOx	281 LBS IN ANY ONE MONTH
VOC	1,106 LBS IN ANY ONE MONTH

The operator shall calculate the monthly emissions for VOC, PM10 and SOx using the equation below and the following emission factors: VOC: 2.00 lb/mmcf; PM10: 6.93 lb/mmcf; and SOx: 0.71 lb/mmcf.

Monthly Emissions, lb/mon = X (E.F.)

Where X = monthly fuel usage, mmscf/month and E.F. = emission factor indicated above.

The operator shall provide the AQMD with written notification of the date of initial CO catalyst use within seven (7) days of this event.
[Rule 1303 - Offsets]

A99.1 The 2.5 PPM NOx emission limits shall not apply during turbine commissioning, start-up, and shutdown periods. The commissioning period shall not exceed 134 hours. Start-up time shall not exceed 60 minutes for each start-up. Shutdown periods shall not exceed 10 minutes for each shutdown. The turbine shall be limited to a maximum of 350 start-ups per year. Written records of commissioning, start-ups and shutdowns shall be maintained and made available upon request from the Executive Officer.
[Rule 2005, Rule 1703(a)(2) - PSD-BACT]

A99.2 The 6.0 PPM CO emission limits shall not apply during turbine commissioning, start-up, and shutdown periods. The commissioning period shall not exceed 134 hours. Start-up time shall not exceed 60 minutes for each start-up. Shutdown periods shall not exceed 10 minutes for each shutdown. The turbine shall be limited to amaximum of 350 start-ups per year. Written records of commissioning, start-ups and shutdowns shall be maintained and made available upon request from the Executive Officer.
[Rule 1703(a)(2) - PSD-BACT]

A99.3 The 123.46 LBS/MMCF NOx emission limit shall only apply during the interim reporting period during initial turbine commissioning to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from entry into RECLAIM.

[Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions]

A99.4 The 10.29 LBS/MMCF NOx emission limits shall only apply during the interim reporting period after initial turbine commissioning to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from entry into RECLAIM.
[Rule 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen Emissions]

A195.1 The 2.5 PPMV NOX emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.
[Rule 2005, Rule 1703(a)(2) - PSD-BACT]

A195.2 The 6.0 PPMV CO emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.
[Rule 1703(a)(2) - PSD-BACT]

A195.3 The 2.0 ppmv VOC emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.
[Rule 1303(a) - BACT, Rule 1303(b)(1) - Modeling, Rule 1303(b)(2) - Offsets]

A327.1 For the purpose of determining compliance with District Rule 475, combustion contaminants emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.
[Rule 475]

A433.1 The operator shall comply at all times with the 2.5 ppm 1-hour BACT limit for NOx, except as defined in condition A99.1 and for the following scenario:

Operating Scenario	Maximum Hourly Emission Limit	Operational Limit
Start-up	10 lb/hr	NOx emissions not to exceed 10 lbs total per start-up per turbine. Each turbine shall be limited to 350 start-ups per year, with each start-up not to exceed 60 minutes.

[Rule 1703(a)(2)-PSD-BACT, Rule 2005]

B61.2 The operator shall not use natural gas containing the following specified compounds:

Compound	Grains per 100 scf
H2S	0.25

This concentration limit is an annual average based on monthly samples of natural gas composition or gas supplier documentation. The gaseous fuel sample shall be tested using District method 307-91 for total sulfur calculated as H2S.
[Rule 1303(b) - Offset]

C1.1 The operator shall limit the fuel usage to no more than 393 mmcf in any one calendar month.

For the purpose of this condition, fuel usage shall be defined as the total natural gas usage of a single turbine.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.
[Rule 1303(b)(2) - Offset]

D12.1 The operator shall install and maintain a(n) flow meter to accurately indicate the fuel usage being supplied to the turbine.

The operator shall also install and maintain a device to continuously record the parameter being measured
[Rule 1303(b)(2) - Offset, Rule 2012]

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
NOX emissions	District Method 100.1	1 hour	Outlet of the SCR
CO emissions	District Method 100.1	1 hour	Outlet of the SCR
SOX emissions	~~Approved District method~~ District method 307.91	~~District approved averaging time~~ N/A	Fuel Sample
VOC emissions	~~Approved District method~~ District method 25.3	1 hour	Outlet of the SCR
PM10 emissions	~~Approved District method~~ District method 5	~~District approved averaging time~~ 4 hours	Outlet of the SCR
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in MW.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at maximum, average, and minimum loads.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas fired turbines only, VOC compliance shall be demonstrated as follows:
a) Stack gas samples are extracted into Summa canisters maintaining a final canister

pressure between 400-500 mm Hg absolute, b) Pressurization of canisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

Because the VOC BACT level was set using data derived from various source test results, this alternate VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

For the purposes of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of AQMD, CARB, and EPA.

[Rule 1303(a)(1) - BACT, Rule 1303(b)(2) - Offset, Rule 2005, Rule 1703(a)(2) - PSD-BACT]

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
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR

The test shall be conducted and the results submitted to the District within 45 days after the test date. The AQMD shall be notified of the date and time of the test at least 7 days prior to the test.

The test shall be conducted at least quarterly during the first twelve months of operation and at least annually thereafter. The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using District Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration limit
[Rule 1303(a)(1) - BACT]

D29.3 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
SOX emissions	~~Approved District method~~ District method 307.91	~~District approved averaging time~~ N/A	Fuel Sample
VOC emissions	~~Approved District method~~ District	1 hour	Outlet of the SCR

PM10 emissions	method 25.3 ~~Approved District method~~ District method 5	~~District approved averaging time~~ 4 hours	Outlet of the SCR

The test shall be conducted at least once every three years.
The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in MW.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of allsampling and analytical procedures.

The test shall be conducted when this equipment is operating at 100 percent load.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

Because the VOC BACT level was set using data derived from various source test results, this alternate VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

For the purposes of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of AQMD, CARB, and EPA.

[Rule 1303(a)(1) - BACT, Rule 1303(b)(2) - Offset]

D29.4 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
NOx	District Method 100.1	1 hour	Outlet of the SCR

PM10	~~Approved District method~~ District method 5	~~District approved averaging time~~ 4 hours	Outlet of the SCR

The test shall be conducted after District approval of the source test protocol, but no later than 180 days after initial start-up. District shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted at full load to demonstrate compliance with the 0.080 lb/MW-hr NOx and 0.060 lb/MW-hr PM10 requirements set forth in Rule 1309.1. If the actual measurement is within the accuracy of the devices used for electrical power measurement, the result will be acceptable.

The lb/MW-hr emission rate of each electrical generating unit shall be determined by dividing (a) the lb/hr emission rate measured at the location and in accordance with the test method specified above, by (b) the adjusted gross electrical output of each electrical generating unit.

The adjusted gross electrical output of each electrical generating unit shall be determined by making the following adjustments to the measured gross electrical output:

1) Apply the manufacturer's standard correction factors to calculate gross electrical output at ISO conditions.

2) Apply the GE site-specific LMS100 power degradation curve to adjust measured gross electrical output, as corrected to ISO conditions, to undegraded electrical generating unit conditions as defined by the turbine manufacturer. The maximum power degradation adjustment shall not exceed 1 percent.

The test shall be conducted in accordance with District approved test protocol. The protocol shall be submitted to the District engineer no later than 45 days before the proposed test date and shall be approved by the District before the test commences.

The test protocol shall include the proposed operating conditions of the electrical generating unit during the test, the correction and degradation factors and documentation of their validity, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

For the purposes of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of AQMD, CARB, and EPA.
[Rule 1309.1]

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

CO concentration in ppmv
Concentrations shall be corrected to 15 percent oxygen on a dry basis
The CEMS shall be installed and operated no later than 90 days after initial start-up of the turbine, and in accordance with an approved AQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD. Within two weeks of the turbine start-up, the operator shall provide written notification to the District of the exact date of start-up.

The CEMS shall be installed and operated to measure CO concentrations over a 15 minute averaging time period.

The CEMS would convert the actual CO concentrations to mass emission rates (lbs/hr) using the equation below and record the hourly emission rates on a continuous basis.

CO Emission Rate, lbs/hr = K Cco Fd[20.9/(20.9% - %O2 d)][(Qg * HHV)/106], where

K = 7.267 *10^{-8} (lb/scf)/ppm

Cco = Average of four consecutive 15 min. ave. CO concentration, ppm

Fd = 8710 dscf/MMBTU natural gas

%O_2 d = Hourly ave. % by vol. O_2 dry, corresponding to Cco

Qg = Fuel gas usage during the hour, scf/hr

HHV = Gross high heating value of fuel gas, BTU/scf

[Rule 1703(a)(2) - PSD-BACT]

D82.2 The operator shall install and maintain a CEMS to measure the following parameters:

NOx concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis.
The CEMS shall be installed and operating no later than 90 days after initial start-up of the turbine and shall comply with the requirements of Rule 2012. During the interim period between the initial start-up and the provisional certification date of the CEMS, the operator shall comply with the monitoring requirements of Rule 2012(h)(2)and 2012(h)(3). Within two weeks of the turbine start-up date, the operator shall provide written notification to the District of the exact date of start-up.

The CEMS shall be installed and operating (for BACT purposes only) no later than 90 days after initial start up of the turbine.
[Rule 1703(a)(2) - PSD-BACT, Rule 2005, Rule 2012]

E193.1 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the final California Energy Commission decision for the 05-AFC-3 project.
[CEQA]

E193.3 The operator shall operate and maintain this equipment according to the following requirements:

Devices D1, D7, D13, D19, and D25 shall be fully and legally operational within three years of issuance of the Permit to Construct
[Rule 1309.1]

E193.5 The operator shall install this equipment according to the following requirements:

PM10 emission rates from this equipment shall not exceed 0.060 lb/MW-hr

NOx emission rates from this equipment shall not exceed 0.080 lb/MW-hr

Compliance with the PM10 and NOx emission rates shall be demonstrated once over the lifetime of the project in accordance with condition D29.4
[Rule 1309.1]

H23.1 This equipment is subject to the applicable requirements of the following rules and regulations:

CONTAMINANT	RULE	RULE/SUBPART
NOx	40CFR60 Subpart	KKKK
SOx	40CFR60 Subpart	KKKK

[40CFR60 Subpart KKKK]

I296.1 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emission increase.

To comply with this condition, the operator shall prior to the 1st compliance year hold a minimum NOx RTCs of 38,664 lbs/yr. This condition shall apply during the 1st 12 months of operation, commencing with the initial operation of the gas turbine.

To comply with this condition, the operator shall, prior to the beginning of all years subsequent to the 1st compliance year, hold a minimum of 30,222 lbs/yr of NOx RTC's for operation of the gas turbine. In accordance with Rule 2005(f), unused RTC's may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1st compliance year.
This condition shall apply to each turbine individually.
[Rule 2005]

K40.1 The operator shall provide to the District a source test report in accordance withthe following specifications:

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.
Emission data shall be expressed in terms of concentration (ppmv) corrected to 15 percent oxygen (dry basis), mass rate (lb/hr), and lb/MMCF. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains/DSCF.
All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute.
All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.
Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

[Rule 1303(a)(1) - BACT, Rule 1303(b)(2) - Offset, Rule 2005]

K67.1 The operator shall keep records in a manner approved by the District, for the following parameter(s) or item(s):

Natural gas fuel use after CEMS certification
Natural gas fuel use during the commissioning period
Natural gas fuel use after the commissioning period and prior to CEMS certification

[Rule 2012]

(SCR/CO Catalyst)

A195.4 The 5 ppmv NH3 emission limit is averaged over 60 minutes at 15% O2, dry basis. The operator shall calculate and continuously record the NH3 slip concentration using the following:

NH3 (ppmv) = [a-b*c/1EE+06]*1EE+06/b

where,
a = NH3 injection rate (lbs/hr)/17(lb/lb-mol)
b = dry exhaust gas flow rate (scf/hr)/385.3 scf/lb-mol)
c = change in measured NOx across the SCR (ppmvd at 15% O2)

The operator shall install and maintain a NOx analyzer to measure the SCR inlet NOx ppmv accurate to plus or minus 5 percent calibrated at least once every twelve months.
The NOx analyzer shall be installed and operated within 90 days of initial start-up.
The operator shall use the above described method or another alternative method approved by the Executive Officer.
The ammonia slip calculation procedures described above shall not be used for compliance determination or emission information without corroborative data using an approved reference method for the determination of ammonia.

[Rule 1303(a)(1) - BACT, Rule 2012]

D12.2 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia.

The operator shall also install and maintain a device to continuously record the parameter being measured.
The measuring device or gauge shall be accurate to within plus or minus 5 percent.
It shall be calibrated once every twelve months.
The ammonia injection rate shall remain between 13.5 inches of water column and 16.5 inches of water column.

[Rule 1303(a)(1) - BACT, Rule 2005, Rule 1703(a)(2) - PSD-BACT]

D12.3 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor.

The operator shall also install and maintain a device to continuously record the parameter being measured.
The measuring device or gauge shall be accurate to within plus or minus 5 percent.
It shall be calibrated once every twelve months.
The catalyst temperature shall not exceed 850 degrees F during the start-up period

[Rule 1303(a)(1) - BACT, Rule 2005, Rule 1703(a)(2) - PSD-BACT]

D12.4 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column.

The operator shall also install and maintain a device to continuously record the parameter being measured.
The measuring device or gauge shall be accurate to within plus or minus 5 percent.
It shall be calibrated once every twelve months.
The pressure drop across the catalyst shall not exceed 7.6 inches of water column during the start-up period.

[Rule 1303(a)(1) - BACT, Rule 2005, Rule 1703 - PSD]

E179.1 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

Condition Number D12.2
Condition Number D12.3
[Rule 1303(a)(1) - BACT, Rule 1703(a)(2) - PSD-BACT]

E179.2 For the purpose of the following condition numbers, continuously record shall be defined as measuring at least once every month and shall be calculated based upon the average of the continuous monitoring for that month.

Condition Number: D12.4
[Rule 1303(a)(1) - BACT, Rule 1703(a)(2) - PSD-BACT]

E193.1 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the final California Energy Commission decision for the 05-AFC-3 project.
[CEQA]

(Ammonia Storage Tank)

C157.1 The operator shall install and maintain a pressure relief valve with a minimum pressure set at 25 psig.
[Rule 1303(a)(1) - BACT]

E144.1 The operator shall vent this equipment, during filling, only to the vessel from which it is being filled.
[Rule 1303(a)(1) - BACT]

E193.1 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the final California Energy Commission decision for the 05-AFC-3 project.
[CEQA]

(Emergency Fire Pump)

C1.3 The operator shall limit the operating time to no more than 199.99 hours in any one year. For the purposes of this condition, the operating time is inclusive of time allotted for maintenance and testing
[Rule 1110.2, Rule 1304, Rule 2012]

D12.5 The operator shall install and maintain a(n) non-resettable elapsed meter to accurately indicate the elapsed operating time of the engine.
[Rule 1304, Rule 1470, Rule 2012]

D12.6 The operator shall install and maintain a(n) non-resettable totalizing fuel meter to accurately indicate the fuel usage of the engine.
[Rule 1304, Rule 2012]

B61.1 The operator shall only use diesel fuel containing the following specified compounds:

COMPOUND	Range	PPM BY WEIGHT
Sulfur	Less than or equal to	15

[Rule 431.2]

E193.1 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the final California Energy Commission decision for the 05-AFC-3 project.
[CEQA]

E193.2 The operator shall operate and maintain this equipment according to the following requirements:

1. This equipment shall only operate if utility electricity is not available.
2. This equipment shall only be operated for the primary purpose of providing a backup source of power to drive a fire pump.
3. This equipment shall only be operated for maintenance and testing, not to exceed 50 hours in any one year.
4. This equipment shall not be operated under a Demand Response Program (DRP).
5. An engine operating log shall be kept in writing, listing the date of operation, the elapsed time, in hours, and the reason for operation. The log shall be maintained for a minimum of 5 years and made available to AQMD personnel upon request.

[Rule 1110.2]

I296.2 This equipment shall not be operated unless the operator demonstrates to the Executive Officer the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

To comply with this condition, the operator shall, prior to each compliance year hold a minimum NOx RTCs of 2,097 lbs.

In accordance with Rule 2005(f), unused RTCs may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1st compliance year.
[Rule 2005]

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

Date of operation, the elapsed time, in hours, and the reason for operation *[Rule 1110.2]*

(Section D; Device E32)

K67.3 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

For architectural applications where thinners, reducers, or other VOC containing materials are added, maintain daily records for each coating consisting of (a) coating type, (b) VOC content as applied in grams per liter (g/l) of materials used for low-solids coatings, (c) VOC content as applied in g/l of coating, less water and exempt solvent, for other coatings.

For architectural applications where no thinners, reducers, or other VOC containing materials are added, maintain semi-annual records consisting of (a) coating type, (b) VOC content as applied in grams per liter (g/l) of materials used for low-solids coatings, (c) VOC content as applied in g/l of coating, less water and exempt solvent, for other coatings.

[Rule 3004-Periodic Monitoring]

VALLE DEL SOL ENERGY PROJECT
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   - Non-Commissioning year
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   - 30-Day Averages (Non-commissioning year)
3. Appendix C - LMS100PA Annual Emissions
   - Commissioning year
   - Non-commissioning year
4. Appendix D - Emergency Fire Pump Emissions
5. Appendix E - Cooling Tower Emissions
6. Appendix F - NOx RTC calculations
7. Appendix G - Interim Period Emission Factors

Appendix A - VALLE DEL SOL ENERGY, LLC
LMS100 PA Hourly Emissions - Normal Operations

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Data:
Standard Conditions: 29.92 inches Hg and 68 degrees Fahrenheit
Emission Factor (lb/MMBTU) = (ppmvd)*(MW)*(1/SMV)*(20.9/5.9)*(Fd)*(1/1E6)
where,
controlled ppmvd = controlled concentration corrected to 15% O2
MW = molecular weight (lb/lb-mol)
SMV = specific molar volume at 68 degrees Fahrenheit = 385.3 dscf/lb-mol
Fd = dry oxygen F-factor for natural gas = 8,710 dscf/MMBTU at 68 degrees Fahrenheit
Emission Rate Uncontrolled = Emission Factor Uncontrolled (lb/MMBTU) * Heat Input (MMBTU/hr)
Emission Rate Controlled = Emission Factor Controlled (lb/MMBTU) * Heat Input (MMBTU/hr)
Uncontrolled Emissions from the CTG:
NOx = 25 ppm @ 15% O2, CO = 100 ppm @ 15% O2, VOC = 4 ppm, PM10 = 0.0066 lbs/MMBTU; SOx = 0.25 grains/100 scf

CO Emissions

Operating Condition Number	Heat Input (MMBTU/hr)	Pollutant Conc. Uncontrolled (ppmvd)	Pollutant Conc. Controlled (ppmvd)	Molecular Weight (lbs/lb-mole)	Specific Molar Volume (dscf/lb-mole)	Dry Fuel Factor (dscf/MMBTU)	Emission Factor Uncontrolled (lb/MMBTU)	Emission Factor Controlled (lb/MMBTU)	Emission Rate Uncontrolled (lb/hr)	Emission Rate Controlled (lb/hr)
100	891.7	100	6	28	385.3	8,710	0.2242	0.0135	199.93	12.00
103	870.8	100	6	28	385.3	8,710	0.2242	0.0135	195.24	11.71
106	823.2	100	6	28	385.3	8,710	0.2242	0.0135	184.59	11.08
109	824.5	100	6	28	385.3	8,710	0.2242	0.0135	184.86	11.09
112	824.6	100	6	28	385.3	8,710	0.2242	0.0135	184.88	11.09
Average	846.9									11.39

Appendix A - VALLE DEL SOL ENERGY, LLC
LMS100 PA Hourly Emissions - Normal Operations

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NOx Emissions

Operating Condition Number	Heat Input (MMBTU/hr)	Pollutant Conc. Uncontrolled (ppmvd)	Pollutant Conc. Controlled (ppmvd)	Molecular Weight (lb/lb-mol)	Specific Molar Volume (dscf/lb-mole)	Dry Fuel Factor (dscf/MMBTU)	Emission Factor Uncontrolled (lb/MMBTU)	Emission Factor Controlled (lb/MMBTU)	Emission Rate Uncontrolled (lb/hr)	Emission Rate Controlled (lb/hr)
100	891.7	25	2.5	46	385.3	8,710	0.0921	0.0092	82.11	8.21
103	870.8	25	2.5	46	385.3	8,710	0.0921	0.0092	80.19	8.02
106	823.2	25	2.5	46	385.3	8,710	0.0921	0.0092	75.81	7.58
109	824.5	25	2.5	46	385.3	8,710	0.0921	0.0092	75.92	7.59
112	824.6	25	2.5	46	385.3	8,710	0.0921	0.0092	75.93	7.59
Average	**846.9**									**7.80**

VOC Emissions

Operating Condition Number	Heat Input (MMBTU/hr)	Pollutant Conc. Uncontrolled (ppmvd)	Pollutant Conc. Controlled (ppmvd)	Molecular Weight (lb/lb-mol)	Specific Molar Volume (dscf/lb-mol)	Dry Fuel Factor (dscf/MMBTU)	Emission Factor Uncontrolled (lb/MMBTU)	Emission Factor Controlled (lb/MMBTU)	Emission Rate Uncontrolled (lb/hr)	Emission Rate Controlled (lb/hr)
100	891.7	4	2.0	16	385.3	8,710	0.0051	0.0026	4.57	2.28
103	870.8	4	2.0	16	385.3	8,710	0.0051	0.0026	4.46	2.23
106	823.2	4	2.0	16	385.3	8,710	0.0051	0.0026	4.22	2.11
109	824.5	4	2.0	16	385.3	8,710	0.0051	0.0026	4.23	2.11
112	824.6	4	2.0	16	385.3	8,710	0.0051	0.0026	4.23	2.11
Average	**846.9**									**2.17**

Appendix A - VALLE DEL SOL ENERGY, LLC
LMS100 PA Hourly Emissions - Normal Operations

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PM10 Emissions

Operating Condition Number	Heat Input (MMBTU/hr)	Emission Factor[1] (lb/MMBTU)	Emission Rate Uncontrolled (lb/hr)	Emission Rate Controlled (lb/hr)
100	891.7	0.0067	6.00	6.00
103	870.8	0.0067	5.86	5.86
106	823.2	0.0067	5.54	5.54
109	824.5	0.0067	5.55	5.55
112	824.6	0.0067	5.55	5.55
Average	**846.9**		**5.70**	**5.70**

SOx Emissions

Operating Condition Number	Heat Input (MMBTU/hr)	Emission Factor[2] (lb/MMBTU)	Emission Rate Uncontrolled (lb/hr)	Emission Rate Controlled (lb/hr)
100	891.7	0.00068	0.606	0.606
103	870.8	0.00068	0.592	0.592
106	823.2	0.00068	0.560	0.560
109	824.5	0.00068	0.561	0.561
112	824.6	0.00068	0.561	0.561
Average	**846.9**		**0.576**	**0.576**

[1] Based on manufacture guarantee of 6 lb/hr at 891.7 MMBTU/hr = 0.00673 lb/MMBTU

[2] Based on a maximum sulfur content of 0.25 grains/100 scf fuel; 1,050 BTU/scf natural gas; and 7,000 grains/lb, and 1 mole S for 2 moles SO_2

Appendix A - VALLE DEL SOL ENERGY, LLC
LMS100 PA Hourly Emissions - Normal Operations

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NH3 Emissions

Operating Condition Number	Heat Input (MMBTU/hr)	Pollutant Conc. Controlled (ppmvd)	Molecular Weight (lb/lb-mol)	Specific Molar Volume (dscf/lb-mol)	Dry Fuel Factor (dscf/MMBTU)	Emission Factor (lb/MMBTU)	Emission Rate (lb/hr)
100	891.7	5	17	385.3	8,710	0.0068	6.07
103	870.8	5	17	385.3	8,710	0.0068	5.93
106	823.2	5	17	385.3	8,710	0.0068	5.60
109	824.5	5	17	385.3	8,710	0.0068	5.61
112	824.6	5	17	385.3	8,710	0.0068	5.61
Average	**846.9**						**5.76**

Appendix A - VALLE DEL SOL ENERGY, LLC
LMS100 PA Hourly Emissions - Start-Up / Shutdown Operations

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Assumptions

Start-up / shutdown events will not significantly afftect SOx and PM10 emissions. Emission rates are assumed to be equal to normal operations
One start-up per hour

Start-Up Emissions

Pollutant	Start-Up Emission Factor (lb/event)[1]	Normal Operations (lb/hr)[2]	Normal Operations (lb/hr)[3]	Start-Up Emissions (lbs/hr)
CO	15.4	12.00	5.00	20.40
NOx	7.0	8.21	3.42	10.42
VOC	2.1	1.71	0.71	2.81
PM10	N/A	N/A	N/A	6.00
SOx	N/A	N/A	N/A	0.606

[1] A start-up event is defined as the first 35 minutes of start-up, per GE specs

[2] The emission rates in this column are assumed to occur for 1 full hour

[3] The emission rates in this column are prorated for the remaining 25 minutes of start-up by multiplying by 25/60

Shutdown Emissions

Pollutant	Shutdown Emission Factor (lb/event)[4]	Normal Operations (lb/hr)[5]	Normal Operations (lb/hr)[6]	Shutdown Emissions (lb/hr)
CO	18.2	12.00	9.80	28.00
NOx	4.3	8.21	6.70	11.00
VOC	1.6	1.71	1.40	3.00
PM10	N/A	6.00	N/A	6.00
SOx	N/A	0.606	N/A	0.606

[4] Emission rates in this column occur during the first 11 minutes of shutdown, per GE specs

[5] Emission rates in this column are assumed to occur for one full hour

[6] Emission rates in this column are pro-rated for the remaining 49 minutes of shutdown by multiplying by 49/60

Appendix B - VALLE DEL SOL ENERGY, LLC
LMS100 PA Monthly Emissions - Commissioning Year

PAGES	PAGE	A/N 450931
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Operating Condition 100	Hours per Month	CO (lbs/hr)	NOx (lbs/hr)	VOC (lbs/hr)	PM10 (lbs/hr)	SOx (lbs/hr)	CO (lbs/month)	NOX (lbs/month)	VOC (lbs/month)	PM10 (lbs/month)	SOx (lbs/month)
Unit 1 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 1 Commissioning[1]	15	72.60	71.21	2.81	4.01	0.34	1,089	1,068	42	60	5
Unit 1 Normal Operation	368	12.00	8.21	2.28	6.00	0.61	4,416	3,021	839	2,208	223
Unit 1 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 1 Totals	**463**						**7,441**	**4,946**	**1,114**	**2,748**	**277**
Unit 2 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 2 Commissioning[1]	15	72.60	71.21	2.81	4.01	0.34	1,089	1,068	42	60	5
Unit 2 Normal Operation	368	12.00	8.21	2.28	6.00	0.61	4,416	3,021	839	2,208	223
Unit 2 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 2 Totals	**463**						**7,441**	**4,946**	**1,114**	**2,748**	**277**
Unit 3 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 3 Commissioning[1]	15	72.60	71.21	2.81	4.01	0.34	1,089	1,068	42	60	5
Unit 3 Normal Operation	368	12.00	8.21	2.28	6.00	0.61	4,416	3,021	839	2,208	223
Unit 3 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 3 Totals	**463**						**7,441**	**4,946**	**1,114**	**2,748**	**277**
Unit 4 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 4 Commissioning[1]	15	72.60	71.21	2.81	4.01	0.34	1,089	1,068	42	60	5
Unit 4 Normal Operation	368	12.00	8.21	2.28	6.00	0.61	4,416	3,021	839	2,208	223
Unit 4 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 4 Totals	**463**						**7,441**	**4,946**	**1,114**	**2,748**	**277**
Unit 5 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 5 Commissioning[1]	15	72.60	71.21	2.81	4.01	0.34	1,089	1,068	42	60	5
Unit 5 Normal Operation	368	12.00	8.21	2.28	6.00	0.61	4,416	3,021	839	2,208	223
Unit 5 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 5 Totals	**463**						**7,441**	**4,946**	**1,114**	**2,748**	**277**
Total Monthly Emissions (lb/month)							37,205	24,731	5,568	13,741	1,383

[1]From Table 12-Proposed Commissioning Schedule in analysis; totals divided by 5 turbines and divided by 134 hours

Appendix B - VALLE DEL SOL ENERGY, LLC
LMS100 PA Monthly Emissions - Non-Commissioning Year

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Operating Condition 100	Hours per Month	CO (lb/hr)	NOx (lb/hr)	VOC (lb/hr)	PM10 (lb/hr)	SOx (lb/hr)	CO (lb/month)	NOX (lb/month)	VOC (lb/month)	PM10 (lb/month)	SOx (lb/month)
Unit 1 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 1 Normal Operations	383	12.00	8.21	2.28	6.00	0.61	4,596	3,144	873	2,298	232
Unit 1 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 1 Totals	**463**						**6,532**	**4,001**	**1,106**	**2,778**	**281**
Unit 2 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 2 Normal Operations	383	12.00	8.21	2.28	6.00	0.61	4,596	3,144	873	2,298	232
Unit 2 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 2 Totals	**463**						**6,532**	**4,001**	**1,106**	**2,778**	**281**
Unit 3 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 3 Normal Operations	383	12.00	8.21	2.28	6.00	0.61	4,596	3,144	873	2,298	232
Unit 3 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 3 Totals	**463**						**6,532**	**4,001**	**1,106**	**2,778**	**281**
Unit 4 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 4 Normal Operations	383	12.00	8.21	2.28	6.00	0.61	4,596	3,144	873	2,298	232
Unit 4 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 4 Totals	**463**						**6,532**	**4,001**	**1,106**	**2,778**	**281**
Unit 5 Start-Up	40	20.40	10.42	2.81	6.00	0.61	816	417	112	240	24
Unit 5 Normal Operations	383	12.00	8.21	2.28	6.00	0.61	4,596	3,144	873	2,298	232
Unit 5 Shutdown	40	28.00	11.00	3.00	6.00	0.61	1,120	440	120	240	24
Unit 5 Totals	**463**						**6,532**	**4,001**	**1,106**	**2,778**	**281**
Total Monthly Emissions (lb/month)							**32,660**	**20,006**	**5,528**	**13,890**	**1,403**

Appendix B - VALLE DEL SOL ENERGY, LLC
LMS100 PA - 30 Day Averages[1] - Commissioning Year

PAGES	PAGE	A/N 450931
BY KLC	DATE 2/8/06	

Operating Condition 100	Hours per Month	CO (lb/hr)	PM10 (lb/hr)	VOC (lb/hr)	SOx (lb/hr)	CO (lb/month)	PM10 (lb/month)	VOC (lb/month)	SOx (lb/month)
Unit 1 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 1 Commissioning	15	72.60	4.01	2.81	0.338	1,089	60	42	5
Unit 1 Normal Operations	368	12.00	6.00	2.28	0.606	4,416	2,208	839	223
Unit 1 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
Unit 2 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 2 Commissioning	15	72.60	4.01	2.81	0.338	1,089	60	42	5
Unit 2 Normal Operations	368	12.00	6.00	2.28	0.606	4,416	2,208	839	223
Unit 2 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
Unit 3 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 3 Commissioning	15	72.60	4.01	2.81	0.338	1,089	60	42	5
Unit 3 Normal Operations	368	12.00	6.00	2.28	0.606	4,416	2,208	839	223
Unit 3 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
Unit 4 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 4 Commissioning	15	72.60	4.01	2.81	0.338	1,089	60	42	5
Unit 4 Normal Operations	368	12.00	6.00	2.28	0.606	4,416	2,208	839	223
Unit 4 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
Unit 5 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 5 Commissioning	15	72.60	4.01	2.81	0.338	1,089	60	42	5
Unit 5 Normal Operations	368	12.00	6.00	2.28	0.606	4,416	2,208	839	223
Unit 5 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
						lb/month	**lb/month**	**lb/month**	**lb/month**
Total Monthly Emissions (lb/month)						37,205	13,741	5,568	1,383
						lb/day	**lb/day**	**lb/day**	**lb/day**
30-Day Average (lb/day)						**1,240**	**458**	**186**	**46**

[1] SVEP will be in NOx RECLAIM. As such NOx will be offset with RTCs, and therefore no entries for NOx are included in the table below

Appendix B - VALLE DEL SOL ENERGY, LLC
LMS100 PA - 30 Day Averages[1] - Non-Commissioning Year

PAGES	PAGE	A/N 450931
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Operating Condition 100	Hours per Month	CO (lb/hr)	PM10 (lb/hr)	VOC (lb/hr)	SOx (lb/hr)	CO (lb/month)	PM10 (lb/month)	VOC (lb/month)	SOx (lb/month)
Unit 1 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 1 Commissioning	0	72.60	4.01	2.81	0.606	0	0	0	0
Unit 1 Normal Operations	383	12.00	6.00	2.28	0.606	4,596	2,298	873	232
Unit 1 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
Unit 2 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 2 Commissioning	0	72.60	4.01	2.81	0.606	0	0	0	0
Unit 2 Normal Operations	383	12.00	6.00	2.28	0.606	4,596	2,298	873	232
Unit 2 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
Unit 3 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 3 Commissioning	0	72.60	4.01	2.81	0.606	0	0	0	0
Unit 3 Normal Operations	383	12.00	6.00	2.28	0.606	4,596	2,298	873	232
Unit 3 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
Unit 4 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 4 Commissioning	0	72.60	4.01	2.81	0.606	0	0	0	0
Unit 4 Normal Operations	383	12.00	6.00	2.28	0.606	4,596	2,298	873	232
Unit 4 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
Unit 5 Startup	40	20.40	6.00	2.81	0.606	816	240	112	24
Unit 5 Commissioning	0	72.60	4.01	2.81	0.606	0	0	0	0
Unit 5 Normal Operations	383	12.00	6.00	2.28	0.606	4,596	2,298	873	232
Unit 5 Shutdown	40	28.00	6.00	3.00	0.606	1,120	240	120	24
						lb/month	**lb/month**	**lb/month**	**lb/month**
Total Monthly Emissions (lb/month)						32,660	13,890	5,528	1,403
						lb/day	**lb/day**	**lb/day**	**lb/day**
30-Day Average (lb/day)						**1,089**	**463**	**184**	**45**

[1] SVEP will be in NOx RECLAIM. As such NOx will be offset with RTCs, and therefore no entries for NOx are included in the table below

Appendix C - VALLE DEL SOL ENERGY, LLC
LMS100 PA Annual Emissions - Commissioning Year

PAGES	PAGE	A/N 450931
BY KLC	DATE 2/8/06	

Operating Condition 100	Hours per Year	CO (lbs/hr)	NOx (lbs/hr)	VOC (lbs/hr)	PM10 (lbs/hr)	SOx (lbs/hr)	CO (lbs/year)	NOX (lbs/year)	VOC (lbs/year)	PM10 (lbs/year)	SOx (lbs/year)
Unit 1 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 1 Commissioning[1]	134	72.60	71.21	2.81	4.01	0.34	9,728	9,542	377	537	45
Unit 1 Normal Operation	2,634	12.00	8.21	2.28	6.00	0.61	31,608	21,625	6,006	15,804	1,596
Unit 1 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 1 Totals	**3,468**						**58,276**	**38,664**	**8,416**	**20,541**	**2,066**
Unit 2 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 2 Commissioning[1]	134	72.60	71.21	2.81	4.01	0.34	9,728	9,542	377	537	45
Unit 2 Normal Operation	2,634	12.00	8.21	2.28	6.00	0.61	31,608	21,625	6,006	15,804	1,596
Unit 2 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 2 Totals	**3,468**						**58,276**	**38,664**	**8,416**	**20,541**	**2,066**
Unit 3 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 3 Commissioning[1]	134	72.60	71.21	2.81	4.01	0.34	9,728	9,542	377	537	45
Unit 3 Normal Operation	2,634	12.00	8.21	2.28	6.00	0.61	31,608	21,625	6,006	15,804	1,596
Unit 3 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 3 Totals	**3,468**						**58,276**	**38,664**	**8,416**	**20,541**	**2,066**
Unit 4 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 4 Commissioning[1]	134	72.60	71.21	2.81	4.01	0.34	9,728	9,542	377	537	45
Unit 4 Normal Operation	2,634	12.00	8.21	2.28	6.00	0.61	31,608	21,625	6,006	15,804	1,596
Unit 4 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 4 Totals	**3,468**						**58,276**	**38,664**	**8,416**	**20,541**	**2,066**
Unit 5 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 5 Commissioning[1]	134	72.60	71.21	2.81	4.01	0.34	9,728	9,542	377	537	45
Unit 5 Normal Operation	2,634	12.00	8.21	2.28	6.00	0.61	31,608	21,625	6,006	15,804	1,596
Unit 5 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 5 Totals	**3,468**						**58,276**	**38,664**	**8,416**	**20,541**	**2,066**
Total Annual Emissions (lb/year)							**291,382**	**193,321**	**42,078**	**102,707**	**10,328**

[1]From Table 12-Proposed Commissioning Schedule in analysis; totals divided by 5 turbines

Appendix C - VALLE DEL SOL ENERGY, LLC
LMS100 PA Annual Emissions - Non-Commissioning Year

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Operating Condition 100	Hours per Year	CO (lbs/hr)	NOx (lbs/hr)	VOC (lbs/hr)	PM10 (lbs/hr)	SOx (lbs/hr)	CO (lbs/year)	NOX (lbs/year)	VOC (lbs/year)	PM10 (lbs/year)	SOx (lbs/year)
Unit 1 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 1 Normal Operations	2768	12.00	8.21	2.28	6.00	0.61	33,216	22,725	6,311	16,608	1,677
Unit 1 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 1 Totals	**3,468**						**50,156**	**30,222**	**8,345**	**20,808**	**2,102**
Unit 2 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 2 Normal Operations	2768	12.00	8.21	2.28	6.00	0.61	33,216	22,725	6,311	16,608	1,677
Unit 2 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 2 Totals	**3,468**						**50,156**	**30,222**	**8,345**	**20,808**	**2,102**
Unit 3 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 3 Normal Operations	2768	12.00	8.21	2.28	6.00	0.61	33,216	22,725	6,311	16,608	1,677
Unit 3 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 3 Totals	**3,468**						**50,156**	**30,222**	**8,345**	**20,808**	**2,102**
Unit 4 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 4 Normal Operations	2768	12.00	8.21	2.28	6.00	0.61	33,216	22,725	6,311	16,608	1,677
Unit 4 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 4 Totals	**3,468**						**50,156**	**30,222**	**8,345**	**20,808**	**2,102**
Unit 5 Start-Up	350	20.40	10.42	2.81	6.00	0.61	7,140	3,647	984	2,100	212
Unit 5 Normal Operations	2768	12.00	8.21	2.28	6.00	0.61	33,216	22,725	6,311	16,608	1,677
Unit 5 Shutdown	350	28.00	11.00	3.00	6.00	0.61	9,800	3,850	1,050	2,100	212
Unit 5 Totals	**3,468**						**50,156**	**30,222**	**8,345**	**20,808**	**2,102**
Total Annual Emissions (lb/year)							**250,780**	**151,111**	**41,723**	**104,040**	**10,508**

Appendix D - VALLE DEL SOL ENERGY, LLC
Emergency Fire Pump Emissions

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Data:
Standard Conditions: 29.92 inches Hg and 68 degrees Fahrenheit
Manufacturer: Clarke
Model No.: JW6H-UF50
Type of Fuel: No. 2 Diesel w/ 0.05% sulfur compounds by weight
Rated Power: 340 bhp at 2,100 rpm
Engine Design: Lean Burn
Maximum Rated Fuel Consumption: 16.0 gph
No. of Cylinders: 6

Assumptions:
Maximum hours of operation: 199 hours/year
Steady speed, steady load operations

Pollutant	Emission Factor[6] (lb/BHP-hr)	Emission Factor[7] (gm/BHP-hr)	Maximum Rated Power (BHP)	Conversion Factor (gm/lb)	Emission Rate (lb/hr)	Annual Emission Rate[8] (lb/year)	Monthly Emission Rate[9] (lb/month)	30 Day Average[10] (lb/day)
NOx	0.031		340	454	10.540	2097.46	174.79	6
CO		0.45	340	454	0.337	67.06	5.59	0
VOC		0.15	340	454	0.112	22.35	1.86	0
PM10		0.09	340	454	0.067	13.41	1.12	0
SOx		0.0055	340	454	0.0041	0.82	0.07	0

[6] NOx is based on the factor found in Table 3.3-1 of AP-42; NOx = 0.031 lb/bhp-hr.
[7] Provided by the engine manufacturer (Clarke)
[8] Emission rate (lb/hr) multiplied by 199
[9] Emission rate (lb/year) divided by 12
[10] Emission rate (lb/month) divided by 30

Appendix E - VALLE DEL SOL ENERGY, LLC
Cooling Tower Emissions

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Data:
Manufacturer: Marley
No. of cells: 5
Drift Loss: 0.0005%
Maximum TDS in Circulating Water: 5,000 mg/l
Circulating Water Rate: 35,500 gpm
Fan Exit Height : 39.09 ft AGL
Exhaust Fan Diameter: 22 ft
PM10 Emissions (lb/hr) = (Maximum TDS)*[(3.785*60)/(454*1000)]*(Circulating Water Rate)*(Drift Loss)
Water Source: Reclaimed/Recycled Water
Tower Dimensions: Deck Height: 27.09 ft AGL; Deck Length: 210.7 ft; Deck Width: 36.67 ft

Assumptions:
Cooling tower emissions based on 3,468 hr/yr operation
100% of TDS in solution is converted to PM10 at a drift loss of 0.0005%

Pollutant	Maximum TDS in circulating water (mg/l)	Circulating Water Rate (gpm)	Drift Loss (percent)	PM10 Emissions (lb/hr)	PM10 Emissions (lb/year)	PM10 Emissions[11] (lb/month)	30 Day Average[12] (lb/day)
PM10	5,000	35,500	0.00050	0.4439	1,539.60	128.30	4

[11] PM10 emissions (lb/year) divided by 12
[12] PM10 emissions (lb/month) divided by 30

Appendix F - VALLE DEL SOL ENERGY, LLC
NOx RTC Calculations

		A/N 450931
BY KLC	DATE 2/8/06	

Data:
Operating Schedule (1st Year):
Startups = 350 hours/year
Shutdowns = 350 hours/year
Normal Operations = 2,634 hours/year
Commissioning Period =134 hours

Operating Condition 100	Hours per Year	NOx (lb/hr)	NOx (lb/year) per device	NOx (lb/year) cumulative
CTGs				
Startup	350	10.42	3,647.00	18,235.00
Shutdown	350	11.00	3,850.00	19,250.00
Normal Operation	2,634	8.21	21,625.14	108,125.70
Commissioning	134	71.21	9,542.14	47,710.70
CTG Totals	3,468		38,664.28	193,321.40
Emergency Fire Pump	199	10.54	2,097.46	2,097.46
Total 1st Year Emissions (lb/year)			40,761.74	195,418.86
Offset Ratio			1.00	1.00
1st year RTCs (lb/year)			**40,761.74**	**195,418.86**
2nd year RTCs (lb/year)			**32,319.74**	**153,208.86**

Appendix G - VALLE DEL SOL ENERGY, LLC
Emission Factors[1]

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Total Annual Hours of Operation = 3,468 hours
Total Hours of Commissioning = 134 hours
Total Hours During Non-Commissioning = 3,334 hours

Fuel Consumption During the Commissioning Period

Commissioning Schedule	Hours per Phase	Heat Input (MMBTU/hr)	Fuel Heating Value (BTU/scf)	Fuel Consumption (MMscf/hr)	Fuel Consumption per Phase (MMscf)	Cumulative Fuel Cons. during Comm. (MMscf)
Phase 1	20	750	1,050	0.7143	14.2857	14.2857
Phase 2	14	900	1,050	0.8571	12.0000	26.2857
Phase 3	24	2500	1,050	2.3810	57.1429	83.4286
Phase 4	12	4,503	1,050	4.2886	51.4629	134.8914
Phase 5	24	3,500	1,050	3.3333	80.0000	214.8914
Phase 6	40	4,503	1,050	4.2886	171.5429	386.4343

Commissioning Period Emission Factor

Commissioning Schedule	Fuel Consumption per Phase (MMscf)	NOx Emissions per Phase (lb)	CO Emissions per Phase (lb)	NOx EF lb/mmscf	CO EF lb/mmscf
Phase 1	14.2857	9,100	5,500		
Phase 2	12.0000	6,930	4,200		
Phase 3	57.1429	21,000	20,160		
Phase 4	51.4629	4,860	15,300		
Phase 5	80.0000	4,200	1,080		
Phase 6	171.5429	1,620	2,400		
TOTALS	386.4343	47,710	48,640	**123.46**	**125.87**

[1] The heat input values, fuel consumptions, and emissions during each phase of commissioning are for all five CTGs

Appendix G - VALLE DEL SOL ENERGY, LLC
Emission Factors[2]

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Annual fuel consumption (AFC) during non-commissioning is calculated as follows:
AFC = (5 CTGs)(891.7 MMBTU/hr)(1 scf/1,050 BTU)(3,334 hr/yr) = 14,156.7 MMscf/yr

Emissions During the Non-Commissioning Period

Total NOx Emissions (lb/yr)	Total CO Emissions (lb/yr)	Total SOx Emissions (lb/yr)	AFC (MMscf/yr)	NOx EF lb/mmscf	CO EF lb/mmscf
145,610	242,740	10,508	14,156.7	10.29	17.15

[2] The total NOx, CO and SOx emissions as well as the AFC are for all 5 CTGs

Emission Factor Determination for Condition A63.1 & A63.2

PM10 EF lb/MMBTU	SOx EF gr/100 scf	VOC EF lb/MMBTU	Grains/lb	Heat Content BTU/scf	PM10 lb/mmscf	SOx lb/mmscf	VOC lb/mmscf
0.0066	0.250	0.0019	7,000	1,050	6.93	0.7143	1.9950