



South Coast Air Quality Management District

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

September 19, 2008

Mr. Donal O'Callaghan
Director of Light & Power
City of Vernon, Utilities Department
4305 Santa Fe Avenue
Vernon, CA 90058

SUBJECT: RECLAIM/Title V Facility Permit, City of Vernon, Light and Power, Facility ID 14502

Dear Mr. O'Callaghan:

The South Coast Air Quality Management District (AQMD) has received and reviewed your Title V permit application, A/N 486717, for the administrative type permit revision.

The modification under this administrative revision required to change the heat input rates of both the combustion turbine generators and the duct burners based on the High Heating Values rather than the original listing at Lower Heating Values. The following applications were filed for the equipment rating change and are approved for the permit to operate.

Application No.	Equipment Description	Devices	Process/System
486719	Combustion Turbine # 1	D27	1/3
486421	Combustion Turbine # 2	D36	1/4
486717	RECLAIM/Title V Permit Revision	---	---

Please review revised Section D of the Facility Permit carefully, insert it into your Facility Permit and discard any earlier version. If you have any questions regarding changes to your Facility Permit, please contact Mr. Chandrashekhar S. Bhatt at (909) 396-2653.

Sincerely,

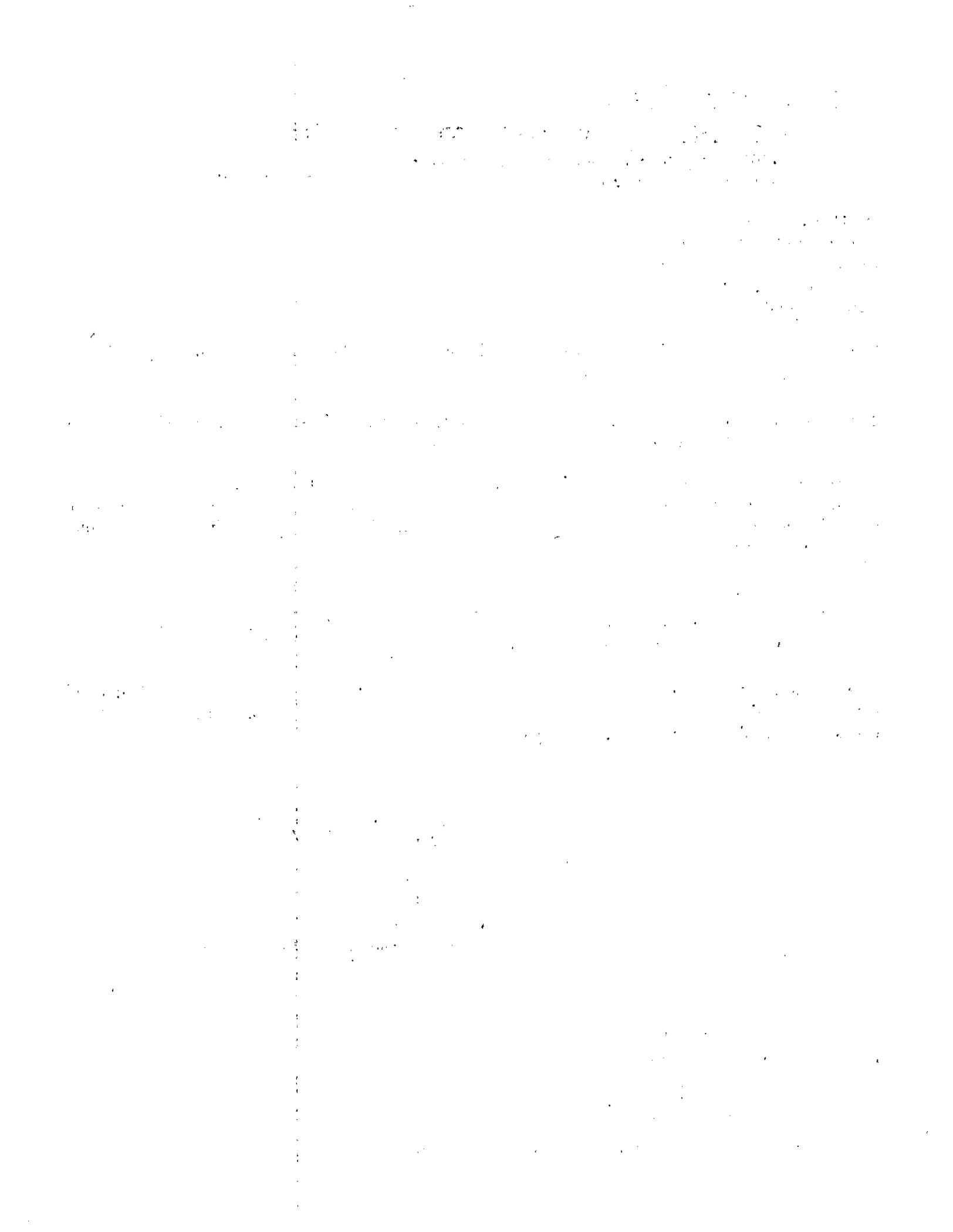
Michael D. Mills, P. E.
Senior Manager
General Commercial and Energy
Engineering and Compliance Division

MM:JTY:csb

Enclosure: Facility Permit, Section D
CC: Gerardo Rios, EPA
Chris Davis, CEC
Ed Pupka, Compliance, AQMD
AQMD Energy Unit File

c:\mgs-pwr-plant-486717,719,721-CTG-DB-admin-correct-po-recl-tv-covr-ltr.doc

Cleaning the air that we breathe.





FACILITY PERMIT TO OPERATE

**VERNON CITY, LIGHT & POWER DEPT
4963 SOTO ST
VERNON, CA 90058**

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein, D. Env.
EXECUTIVE OFFICER

By Mike Mills for
Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering & Compliance



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765





**FACILITY PERMIT TO OPERATE
VERNON CITY, LIGHT & POWER DEPT**

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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 1 : INTERNAL COMBUSTION					
System 1 : ELECTRIC GENERATION, GAS TURBINE					
GAS TURBINE, PEAKING UNIT, FUEL OIL NO. 2, NATURAL GAS, MODEL 571-KA, WITH STEAM OR WATER INJECTION, 69.12 MMBTU/HR WITH A/N: 211682	D1		NOX: PROCESS UNIT**	CO: 2000 PPMV (5A) [RULE 407,4-2-1982] ; CO: 150 PPMV FUEL OIL (5) [RULE 1303(b)(2)-Offset,5-10-1996] ; CO: 248 PPMV NATURAL GAS (5) [RULE 1303(b)(2)-Offset,5-10-1996] NOX: 20.06 LBS/1000 GAL FUEL OIL 2 (1) [RULE 2012,3-16-2001;RULE 2012,5-6-2005] ; NOX: 91.09 LBS/MMSCF NATURAL GAS (1) [RULE 2012,12-7-1995] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] ; SO2: 500 PPMV FUEL OIL (5) [RULE 407,4-2-1982]	A63.1, A63.2, A99.1, A99.2, B75.1, C1.1, C1.2, C4.1, C10.1, C10.2, D28.1, E51.1, E179.1, E179.2, E179.3, H23.1, H116.1
GENERATOR, NO. 6, 6000 KW					
GAS TURBINE, PEAKING UNIT, FUEL OIL NO. 2, NATURAL GAS, MODEL 571-KA, WITH STEAM OR WATER INJECTION, 69.12 MMBTU/HR WITH A/N: 211683	D2		NOX: PROCESS UNIT**	CO: 2000 PPMV (5A) [RULE 407,4-2-1982] ; CO: 150 PPMV FUEL OIL (5) [RULE 1303(b)(2)-Offset,5-10-1996] ; CO: 248 PPMV NATURAL GAS (5) [RULE 1303(b)(2)-Offset,5-10-1996]	A63.1, A63.2, A99.1, A99.2, B75.1, C1.1, C1.2, C4.1, C10.1, C10.2, D28.1, E51.1, E179.1, E179.2,

* (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.



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Process 1 : INTERNAL COMBUSTION					
GENERATOR, NO. 7, 6000 KW				NOX: 20.06 LBS/1000 GAL FUEL OIL 2 (1) [RULE 2012,12-7-1995;RULE 2012,4-9-1999] ; NOX: 91.09 LBS/MMSCF NATURAL GAS (1) [RULE 2012,12-7-1995 RULE 2012,4-9-1999] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] ; SO2: 500 PPMV FUEL OIL (5) [RULE 407,4-2-1982]	E179.3, H23.1, H116.1
System 2 : ELECTRIC GENERATION, EMERGENCY INTERNAL COMBUSTION ENGINE					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, HAMILTON-M.A.N., MODEL DZ8, 7000 HP WITH A/N: 394158 GENERATOR, NO. 1, 6000 KW	D3		NOX: PROCESS UNIT**	NOX: 294.35 LBS/1000 GAL DIESEL (1) [RULE 2012,3-16-2001,RULE 2012,5-6-2005]	B61.1, C1.3, D12.2, E193.1, K48.2, K67.2
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, HAMILTON-M.A.N., MODEL DZ8, 7000 HP WITH A/N: 394159 GENERATOR, NO. 2, 6000 KW	D4		NOX: PROCESS UNIT**	NOX: 294.35 LBS/1000 GAL DIESEL (1) [RULE 2012,12-7-1995;RULE 2012,4-9-1999]	B61.1, C1.3, D12.2, E193.1, K48.2, K67.2

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Process 1 : INTERNAL COMBUSTION					
INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, DIESEL FUEL, HAMILTON-M.A.N., MODEL DZ8, 7000 HP WITH A/N: 394160 GENERATOR, NO. 3, 6000 KW	D5		NOX: PROCESS UNIT**	NOX: 294.35 LBS/1000 GAL DIESEL (1) [RULE 2012,12-7-1995;RULE 2012,4-9-1999]	B61.1, C1.3, D12.2, E193.1, K48.2, K67.2
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, HAMILTON-M.A.N., MODEL DZ8, 7000 HP WITH A/N: 394161 GENERATOR, NO. 4, 6000 KW	D6		NOX: PROCESS UNIT**	NOX: 294.35 LBS/1000 GAL DIESEL (1) [RULE 2012,12-7-1995;RULE 2012,4-9-1999]	B61.1, C1.3, D12.2, E193.1, K48.2, K67.2
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, HAMILTON-M.A.N., MODEL DZ8, 7000 HP WITH A/N: 394162 GENERATOR, NO. 5, 6000 KW	D7		NOX: PROCESS UNIT**	NOX: 294.35 LBS/1000 GAL DIESEL (1) [RULE 2012,12-7-1995;RULE 2012,4-9-1999]	B61.1, C1.3, D12.2, E193.1, K48.2, K67.2
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, GENERAC, MODEL 12.0DTA, WITH AFTERCOOLER, TURBOCHARGER, 354 BHP WITH A/N: 363050 GENERATOR, 230 KW	D25		NOX: PROCESS UNIT**	NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012,12-7-1995;RULE 2012,4-9-1999]	C1.3, D12.2, K48.2, K67.2

- * (1)(1A)(1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5)(5A)(5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
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Process 1 : INTERNAL COMBUSTION					
System 3 : ELECTRIC GENERATION, GAS TURBINE (MGS POWER ISLAND No. 1)					
GAS TURBINE, NO.1, NATURAL GAS, ALSTOM, MODEL GTX100, @38 DEGREES F, HHV, 454.05 MMBTU/HR WITH A/N: 486719	D27	C32 C33	NOX: MAJOR SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407,4-2-1982] ; CO: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002] NOX: 110 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,3-6-1981] ; NOX: 2 PPMV NATURAL GAS (4) [RULE 2005,4-20-2001] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] PM: 0.01 GRAINS/SCF (5A) [RULE 475,10-8-1976;RULE 475,8-7-1978] ; PM: 11 LBS/HR (5B) [RULE 475,10-8-1976;RULE 475,8-7-1978] SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ; SOX: 150 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,3-6-1981]	A63.3, A99.3, A99.4, A195.1, A195.2, A195.3, A327.1, C1.4, D12.3, D29.2, D82.1, D82.2, E57.1, E193.1, I296.1, K40.1

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1 : INTERNAL COMBUSTION					
GENERATOR, CTG NO. 1, 44.2 MW HEAT EXCHANGER, HRSG NO. 1 GENERATOR, STEAM TURBINE GENERATOR, COMMON WITH HRSG NO. 2				SOX: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ; VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)- BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	
BURNER, DUCT BURNER, NATURAL GAS, SERVING HRSG NO. 1, 81.2 MMBTU/HR A/N: 486719	D31	C32 C33	NOX: MAJOR SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407,4-2-1982] ; CO: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5- 10-1996;RULE 1303(a)(1)- BACT,12-6-2002] NOX: 110 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,3-6-1981] ; NOX: 2 PPMV NATURAL GAS (4) [RULE 2005,4-20-2001] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981]	A63.3, A99.3, A99.4, A195.1, A195.2, A195.3, A327.1, C1.4, D12.3, D29.2, D82.1, D82.2, E57.1, E193.1, I296.1, K40.1, K67.4

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Process 1 : INTERNAL COMBUSTION					
				<p>PM: 0.01 GRAINS/SCF (5A) [RULE 475,10-8-1976;RULE 475,8-7-1978] ; PM: 11 LBS/HR (5B) [RULE 475,10-8-1976;RULE 475,8-7-1978]</p> <p>SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ; SOX: 150 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,3-6-1981]</p> <p>VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]</p>	
CO OXIDATION CATALYST, NO.1, EMERACHEM, METAL MONOLITH, SERVING TURBINE NO.1, VOLUME 63 CU. FT. A/N: 394166	C32	D27 D31			
SELECTIVE CATALYTIC REDUCTION, NO. 1, SERVING TURBINE NO. 1, 537.1 CU.FT.; WIDTH: 10 FT 11 IN; HEIGHT: 47 FT 7 IN; LENGTH: 3 FT 6 IN WITH AMMONIA INJECTION A/N: 394166	C33	D27 D31		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	A195.4, D12.4, D12.5, D12.6, D29.3, E179.4, E179.5, E193.1

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Process 1 : INTERNAL COMBUSTION					
STACK, NO. 1, SERVING TURBINE NO. 1, HEIGHT: 110 FT; DIAMETER: 12 FT A/N: 486719	D35				
System 4 : ELECTRIC GENERATION, GAS TURBINE (MGS POWER ISLAND No. 2)					
GAS TURBINE, NO. 2, NATURAL GAS, ALSTOM, MODEL GTX100, @38 DEGREES F, HHV, 454.05 MMBTU/HR; WITH A/N: 486721	D36	C40 C41	NOX: MAJOR SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407,4-2-1982] ; CO: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002] NOX: 110 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,3-6-1981] ; NOX: 2 PPMV NATURAL GAS (4) [RULE 2005,4-20-2001] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] PM: 0.01 GRAINS/SCF (5A) [RULE 475,10-8-1976;RULE 475,8-7-1978] ; PM: 11 LBS/HR (5B) [RULE 475,10-8-1976;RULE 475,8-7-1978] SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ; SOX: 150 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,3-6-1981]	A63.3, A99.3, A99.4, A195.1, A195.2, A195.3, A327.1, C1.4, D12.3, D29.2, D82.1, D82.2, E57.1, E193.1, I296.1, K40.1

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1 : INTERNAL COMBUSTION					
GENERATOR, CTG NO. 2, 44.2 MW HEAT EXCHANGER, HRSG NO. 2				VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	
BURNER, DUCT BURNER, NATURAL GAS, SERVING HRSG NO. 2, 81.2 MMBTU/HR A/N: 486721	D39	C40 C41	NOX: MAJOR SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407,4-2-1982] ; CO: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002] NOX: 110 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,3-6-1981] ; NOX: 2 PPMV NATURAL GAS (4) [RULE 2005,4-20-2001] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] PM: 0.01 GRAINS/SCF (5A) [RULE 475,10-8-1976;RULE 475,8-7-1978] ; PM: 11 LBS/HR (5B) [RULE 475,10-8-1976;RULE 475,8-7-1978]	A63.3, A99.3, A99.4, A195.1, A195.2, A195.3, A327.1, C1.4, D12.3, D29.2, D82.1, D82.2, E57.1, E193.1, I296.1, K40.1, K67.4

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Process 1 : INTERNAL COMBUSTION					
				SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ; SOX: 150 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,3-6-1981] 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, EMERACHEM, METAL MONOLITH, SERVING TURBINE NO.2, VOLUME 63 CU. FT. A/N: 394167	C40	D36 D39			
SELECTIVE CATALYTIC REDUCTION; NO. 2, SERVING TURBINE NO. 2, 537.1 CU.FT.; WIDTH: 10 FT 11 IN; HEIGHT: 47 FT 7 IN; LENGTH: 3 FT 6 IN WITH AMMONIA INJECTION A/N: 394167	C41	D36 D39		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	A195.4, D12.4, D12.5, D12.6, D29.3, E179.4, E179.5, E193.1
STACK, NO. 2, SERVING TURBINE NO. 2, HEIGHT: 110 FT; DIAMETER: 12 FT A/N: 486721	D43				

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Process 1 : INTERNAL COMBUSTION					
System 5 : FIRE WATER PUMP DRIVER					
INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, DIESEL FUEL, DEUTZ, MODEL BF6M2012, FIRE WATER PUMP DRIVER, WITH AFTERCOOLER, TURBOCHARGER, 173 BHP A/N: 438859	D48		NOX: PROCESS UNIT**	CO: 0.4 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002] ; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012,12-5-2003 RULE 2012,1-7-2005] ; NOX: 3.9 GRAM/BHP-HR DIESEL (4) [RULE 2005,4-20-2001] ; PM10: 0.09 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT,5-10-1996 RULE 1303(a)(1)-BACT,12-6-2002] ; VOC: 0.1 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	B61.2, C1.5, D12.2, E193.1, I296.1, K48.1, K67.2
Process 4 : INORGANIC CHEMICAL STORAGE					
TANK, AQUEOUS AMMONIA, AMMONIA, 19% SOLUTION WITH VAPOR RETURN LINE, 8800 GALS; DIAMETER: 10 FT; HEIGHT: 15 FT A/N: 394157	D44				C157.1, E144.1, E193.1
Process 5 : OIL WATER SEPARATION					
OIL WATER SEPARATOR A/N: 394163	D45				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
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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 6 : Rule 219 Exempt Equipment Subject to Source Specific Rules					
RULE 219 EXEMPT EQUIPMENT, ARCHITECTURAL COATING	E47			ROG: (9) [RULE 1113,5-14- 1999;RULE 1171,10-8-1999]	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
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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
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SECTION D: DEVICE ID INDEX

Device Index For Section D			
Device ID	Section D Page No.	Process	System
D1	1	1	1
D2	1	1	1
D3	2	1	2
D4	2	1	2
D5	3	1	2
D6	3	1	2
D7	3	1	2
D25	3	1	2
D27	4	1	3
D31	5	1	3
C32	6	1	3
C33	6	1	3
D35	7	1	3
D36	7	1	4
D39	8	1	4
C40	9	1	4
C41	9	1	4
D43	9	1	4
D44	10	4	0
D45	10	5	0
E47	11	6	0
D48	10	1	5



**FACILITY PERMIT TO OPERATE
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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]

F14.1 The operator shall not use diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[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 431.2, 9-15-2000]

F14.2 The operator shall not use diesel fuel containing sulfur compounds in excess of 0.05 percent by weight.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

F16.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Purchase records of fuel oil and sulfur content of the fuel

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]



**FACILITY PERMIT TO OPERATE
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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

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

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 242 LBS IN ANY ONE DAY
PM	Less than or equal to 6 LBS IN ANY ONE DAY
ROG	Less than or equal to 28 LBS IN ANY ONE DAY

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

[Devices subject to this condition : D1, D2]



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

A63.2 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 159 LBS IN ANY ONE DAY
PM	Less than or equal to 16 LBS IN ANY ONE DAY
ROG	Less than or equal to 38 LBS IN ANY ONE DAY
SOX	Less than or equal to 16 LBS IN ANY ONE DAY

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

[Devices subject to this condition : D1, D2]

A63.3 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than 7633 LBS IN ANY ONE MONTH
PM10	Less than 4876 LBS IN ANY ONE MONTH
VOC	Less than 3236 LBS IN ANY ONE MONTH
SOX	Less than 214 LBS IN ANY ONE MONTH

For the purposes of this condition, the limit(s) shall be based on the total combined emissions from equipment D27, D36 (both gas turbines) and D31, D39 (both duct burners).

The operator shall calculate the emission limit(s) for CO, after the CO CEMS certification, based on the readings from the certified CO CEMS. In the event CO CEMS is not operating, or the emissions exceed the valid upper range of the analyzer, the emissions shall be calculated in accordance with the approved CEMS plan

The operator shall calculate the emission limit(s) by using monthly fuel use data and the following emission factors: PM10 7.397 lbs/mmcf, VOC 1.63 lbs/mmcf and SOx 0.28 lb/mmcf

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

[Devices subject to this condition : D27, D31, D36, D39]



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

A99.1 The 248 PPM CO emission limit(s) shall not apply when the turbine is in start-up mode or in shutdown mode.

[RULE 429, 12-21-1990]

[Devices subject to this condition: D1, D2]

A99.2 The 150 PPM CO emission limit(s) shall not apply when the turbine is in start-up mode or in shutdown mode.

[RULE 429, 12-21-1990]

[Devices subject to this condition : D1, D2]

A99.3 The 2 PPM NOX emission limit(s) shall not apply during turbine startups and shutdowns. The startups shall not exceed 2 hours per startup and the number of startup shall not exceed one per day; Shutdowns shall not exceed 30 minutes per shutdown and the number of shutdown shall not exceed one per day. Written records of startups and shutdowns shall be kept and made available to AQMD.

[RULE 2005, 4-20-2001]

[Devices subject to this condition : D27, D31, D36, D39]

A99.4 The 2 PPM CO emission limit(s) shall not apply during turbine startups and shutdowns. The startups shall not exceed 2 hours per startup and the number of startup shall not exceed one per day; Shutdowns shall not exceed 30 minutes per shutdown and the number of shutdown shall not exceed one per day. Written records of startups and shutdowns shall be kept and made available to AQMD.

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

[Devices subject to this condition : D27, D31, D36, D39]

A195.1 The 2 PPMV NOX emission limit(s) is averaged over 1 hour at 15 percent oxygen, dry basis.

[RULE 2005, 4-20-2001]

[Devices subject to this condition : D27, D31, D36, D39]



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

A195.2 The 2 PPMV CO emission limit(s) is averaged over 3 hours at 15 percent oxygen, dry basis.

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

[Devices subject to this condition : D27, D31, D36, D39]

A195.3 The 2 PPMV VOC emission limit(s) is averaged over 1 hour at 15 percent oxygen, dry basis.

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

[Devices subject to this condition : D27, D31, D36, D39]

A195.4 The 5 PPMV NH₃ emission limit(s) is averaged over 1 hour at 15 percent oxygen, dry basis. The operator shall calculate and continuously record the ammonia slip concentration using the following:

$$\text{NH}_3 \text{ (ppmv)} = [a - (b \cdot c / 1000000) * (1000000 / b)], \text{ where.}$$

a = ammonia injection rate (lbs/hr)/17 (lbs/lb-mole).

b = dry exhaust gas flow rate (lbs/hr)/29 (lbs/lb-mole).

c = change in measured NO_x concentration across SCR (ppmv, dry basis).

The operator shall install and maintain a NO_x analyzer to measure the SCR inlet NO_x ppmv accurate to plus or minus 5 percent and calibrated at least once every 12 months. The NO_x analyzer shall be installed and operated within 90 days of initial startup.

The calculated NH₃ value may not be used for compliance determination without corroborative data using an approved reference method for determination of ammonia.

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

[Devices subject to this condition : C33, C41]

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 : D27, D31, D36, D39]



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

B. Material/Fuel Type Limits

B61.1 The operator shall not use engine cylinder lubricating oil containing the following specified compounds:

Compound	weight percent
Ash content greater than	.038

[RULE 401, 3-2-1984; RULE 401, 9-11-1998]

[Devices subject to this condition : D3, D4, D5, D6, D7]

B61.2 The operator shall only use diesel fuel containing the following specified compounds:

Compound	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 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1470, 4-2-2004]

[Devices subject to this condition : D48]

B75.1 The operator shall not use fuel oil in this equipment except under the following circumstance(s):

Natural gas curtailment

Maintenance testing

source emissions testing

[RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D1, D2]



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

C. Throughput or Operating Parameter Limits

C1.1 The operator shall limit the duration of startup to no more than 25 minute(s).

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

[Devices subject to this condition : D1, D2]

C1.2 The operator shall limit the duration of shutdown to no more than 25 minute(s).

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

[Devices subject to this condition : D1, D2]

C1.3 The operator shall limit the operating time to no more than 199 hour(s) in any one year.

[RULE 1110.2, 2-1-2008; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 2012, 5-6-2005]

[Devices subject to this condition : D3, D4, D5, D6, D7, D25]

C1.4 The operator shall limit the fuel usage to no more than 330 MM cubic feet in any one calendar month.

The purpose(s) of this condition is to ensure that the total PM10 emissions shall not exceed 2,438 lbs/month per turbine.

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

[Devices subject to this condition : D27, D31, D36, D39]



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

C1.5 The operator shall limit the operating time to no more than 199 hour(s) in any one year.

Operations for maintenance and testing as defined in Rule 1470 shall not exceed 50 hours in any one calendar year. The total annual operating time includes all operations including maintenance and testing.

[RULE 1110.2, 2-1-2008; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996**; RULE 1470, 6-1-2007;
RULE 2012, 5-6-2005]

[Devices subject to this condition : D48]

C4.1 The operator shall limit the load to no less than 69.12 MM Btu per hour.

For the purpose of this condition, load shall be defined as maximum continuous load, except during periods of start-up.

For the purpose of this condition, load shall be defined as maximum continuous load, except during periods of shutdown.

For the purpose of this condition, load shall be defined as maximum continuous load, except when performance tests are being conducted, not to exceed two hours per month.

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

[Devices subject to this condition : D1, D2]

C10.1 The operator shall use this equipment in such a manner that the water-to-fuel-ratio being monitored, as indicated below, is maintained between 0.71 and 0.77 to 1 ratio.

To comply with this condition, the operator shall install and maintain a(n) flow meter to accurately indicate the water-to-fuel ratio in the gas turbine.

The operator shall automatically regulate the water injection system by a fully modulated control system.

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

[Devices subject to this condition : D1, D2]



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

- C10.2 The operator shall use this equipment in such a manner that the water-to-fuel ratio being monitored, as indicated below, is maintained between 1.05 and 1.15 to 1 ratio.

To comply with this condition, the operator shall install and maintain a(n) flow meter to accurately indicate the water-to-fuel ratio in the gas turbine.

The operator shall automatically regulate the water to fuel ratio by a fully modulated control system.

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

[Devices subject to this condition : D1, D2]

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

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

[Devices subject to this condition : D44]

D. Monitoring/Testing Requirements

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

[RULE 1110.2, 11-14-1997; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 2012, 12-7-1995; RULE 2012, 3-16-2001; RULE 2012, 5-11-2001]

[Devices subject to this condition : D3, D4, D5, D6, D7, D25, D48]

- D12.3 The operator shall install and maintain a(n) non-resettable totalizing fuel flow meter to accurately indicate the fuel usage of the turbine.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[Devices subject to this condition : D27, D31, D36, D39]



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

D12.4 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia (NH₃).

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[Devices subject to this condition : C33, C41]

D12.5 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature of the exhaust at the inlet to the SCR reactor.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[Devices subject to this condition : C33, C41]

D12.6 The operator shall install and maintain a(n) pressure gauge to accurately indicate the pressure across the SCR catalyst bed in inches of water column.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 4-20-2001]

[Devices subject to this condition : C33, C41]

D28.1 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted at least once every five years.

The test shall be conducted to determine the CO emissions at the outlet.

The test shall be conducted to determine the CO emissions using approved District portable analyzer measured over a 15 minute averaging time period.

The test shall be conducted to determine the CO emissions using approved District method measured over a 60 minute averaging time period.

The test shall be conducted to demonstrate compliance with Rule 407 and Rule 1303 emissions limits.

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

[Devices subject to this condition : D1, D2]



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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
PM emissions	Approved District method	District-approved averaging time	Outlet of the SCR serving this equipment
VOC	Approved District method	1 hour	Outlet of the SCR serving this equipment
SOX emissions	Approved District method	District-approved averaging time	Fuel Sample

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

The test shall be conducted and the results submitted to the District within 60 days after the test date. 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 to demonstrate compliance with the Rule 1303 concentration and/or monthly emissions limits.

The test shall be conducted 1) when the gas turbine and the duct burner are operating simultaneously at 100 percent of maximum heat input and 2) when the gas turbine is operating alone at 100 percent of maximum heat input.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit. For natural gas fired turbines only, this shall be demonstrated by the following test method:

- a) Stack gas samples are extracted into Summa canisters, maintaining a final canister pressure between 400 - 500 mm Hg absolute
- b) Pressurization of Summa canisters is done with zero gas analyzed/certified to containing less than 0.05 ppmv total hydrocarbons as carbon
- c) Analysis of Summa canisters is per EPA Method TO-12 (with pre-concentration) and the temperature of the Summa canisters when extracting samples for analysis is not to be below 70 degrees F

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



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Devices subject to this condition : D27, D31, D36, D39]

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

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration and/or monthly emissions limits.

The test shall be conducted at least once every calendar quarter for the first year and annually thereafter.

The test shall be conducted and the results submitted to the District within 60 days after the test date. The District shall be notified of the date and time of the test at least 10 days prior to the test.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 4-20-2001]

[Devices subject to this condition : C33, C41]



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

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

The CEMS shall be installed and operated to measure CO concentration over a 15 minutes averaging time period

[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 : D27, D31, D36, D39]

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.

[RULE 2012, 5-11-2001]

[Devices subject to this condition : D27, D31, D36, D39]

E. Equipment Operation/Construction Requirements



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

E51.1 The following condition number(s) shall not apply if all of the requirements stated below are met:

Condition Number C 10- 1

Requirement number 1: during startup

Condition Number C 10- 2

Requirement number 2: during shutdown

[RULE 429, 12-21-1990]

[Devices subject to this condition : D1, D2]

E57.1 The operator shall vent this equipment to CO oxidation/SCR control system whenever the turbine is in operation.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 4-20-2001**]

[Devices subject to this condition : D27, D31, D36, D39]

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 : D44]

E179.1 For the purpose of the following condition number(s), maintenance testing shall be defined as oil burner testing not to exceed two hours per month.

Condition Number B 75- 1

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

[Devices subject to this condition : D1, D2]



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SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

E179.2 For the purpose of the following condition number(s), use shall be defined as the burning of natural gas.

Condition Number C 10- 1

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

[Devices subject to this condition : D1, D2]

E179.3 For the purpose of the following condition number(s), use shall be defined as the burning of fuel oil no. 2.

Condition Number C 10- 2

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

[Devices subject to this condition : D1, D2]

E179.4 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- 3

Condition Number D 12- 4

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 4-20-2001**]

[Devices subject to this condition : C33, C41]

E179.5 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 month.

Condition Number D 12- 5

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 4-20-2001**]

[Devices subject to this condition : C33, C41]



**FACILITY PERMIT TO OPERATE
VERNON CITY, LIGHT & POWER DEPT**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

In accordance with all mitigation measures stipulated in the *Final Energy Commission Decision* for 01-AFC-025 project

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D3, D4, D5, D6, D7, D27, D31, C33, D36, D39, C41, D44, D45, D48]

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	GG
SOX	40CFR60, SUBPART	GG

[40CFR 60 Subpart A, 4-9-1993; 40CFR 60 Subpart GG, 3-6-1981]

[Devices subject to this condition : D1, D2]

H116.1 The operator shall utilize the gas turbine according to the schedule below in order to comply with the fuel oil and natural gas usage requirements whenever there is an involuntary gas interruption. The allowable use of each fuel shall be such that the summation of the usage of each fuel to its solo allowable use for each fuel is less than 1.0 as determined by the following formula: Hours of natural gas useage per day divided by 6 hours plus hours of fuel oil useage per day divided by 5 hours shall b e less than or equal to 1.0.

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

[Devices subject to this condition : D1, D2]

I. Administrative



**FACILITY PERMIT TO OPERATE
VERNON CITY, LIGHT & POWER DEPT**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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.

[RULE 2005, 4-20-2001]

[Devices subject to this condition : D27, D31, D36, D39, D48]

K. Record Keeping/Reporting

- 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 (lbs/hr), and lbs/MM Cubic Feet. 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.

Source test results shall also include turbine fuel flow rate 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, 4-20-2001]

[Devices subject to this condition : D27, D31, D36, D39]



**FACILITY PERMIT TO OPERATE
VERNON CITY, LIGHT & POWER DEPT**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

K48.1 The operator shall maintain records in a manner approved by the District, to demonstrate compliance with the following condition number(s):

Condition Number C 1- 5

Condition Number D 12- 2

[RULE 1110.2, 11-14-1997; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996]

[Devices subject to this condition : D48]

K48.2 The operator shall maintain records in a manner approved by the District, to demonstrate compliance with the following condition number(s):

Condition Number C 1- 3

Condition Number D 12- 2

[RULE 1110.2, 11-14-1997; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996]

[Devices subject to this condition : D3, D4, D5, D6, D7, D25]

K67.1 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 : E47]



**FACILITY PERMIT TO OPERATE
VERNON CITY, LIGHT & POWER DEPT**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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 hour and the reason for operation

Maintenance and testing hours of operation

Hours of operation for emission testing to show rule compliance

Initial Start-up hours (commissioning hours)

Other operating hours

Hours of operation to comply with NFPA

[RULE 1110.2, 11-14-1997; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996**; RULE 1470, 3-4-2005]

[Devices subject to this condition : D3, D4, D5, D6, D7, D25, D48]

K67.4 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

operational status of the duct burner and its fuel usage

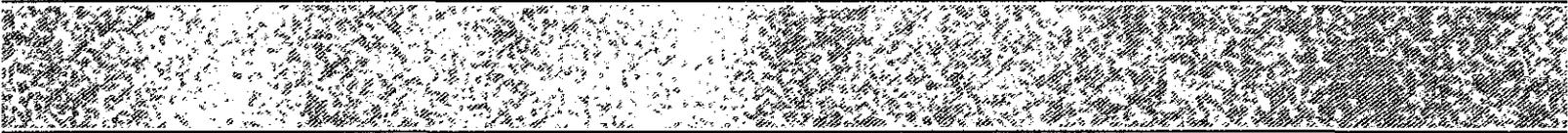
[**RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002; **RULE 2005, 4-20-2001**; **RULE 2012, 12-7-1995**; RULE 2012, 3-16-2001]

[Devices subject to this condition : D31, D39]



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

AQMD



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Equipment Specifications: There is no change in equipment specifications.

The revised heat in put ratings of the CTGs and DBs are shown above on Pages 2-5.

EMISSION CALCULATIONS:

There will be no change in emissions of either criteria or toxic air pollutants due to the proposed changes in permit units' heat input rates. The existing permit describes the maximum heat ratings of two CTGs and two DBs incorrectly [CTGs' heat input included the DBs' heat input and the DBs' heat rating is shown at lower heating value]. The correct heat ratings of CTGs and DBs are shown below:

As per the original applications (A/N 394164 and 394165) of the MGS project the CTGs and DBs heat ratings were listed as 520.62 mmbtu/hr for the max. load operation @65°F ambient condition and 73.4 mmbtu/hr respectively. CTGs heat rating included the DBs heat input (please see the copy of the eng. evaluation of 12-12-2002). DBs heat rating of 73.4 mmbtu/hr is as per the lower heating value (LHV) [please see Scenario S13 data for reference].

The new owner of the MGS has requested that the CTGs heat rating shall not include the DBs' heat input and heat ratings of CTGs and DBs shall be as per the higher heating value (HHV). The correct values are calculated below:

As per Scenario S13 [100% load, 38°F ambient temp., DB on and evaporative cooler off] the highest fuel usage [CTG's fuel usage = 410.34 mmbtu/hr LHV, DB's fuel usage = 73.4 mmbtu/hr LHV (see the copy of the applicant's data in this folder)].

The corrected rating of each CTG at HHV = $410.34 \times 1018 \text{ (HHV)}/920 \text{ (LHV)} = \mathbf{454.05 \text{ mmbtu/hr}}$.

The corrected rating of each DB at HHV = $73.4 \times 1018/920 = \mathbf{81.2 \text{ mmbtu/hr}}$

Total Fuel usage = $454.05 + 81.2 = \mathbf{535.27 \text{ mmbtu/hr}}$

The original permit evaluation for modeling, offsets and toxic analysis was done using the Scenario 13 fuel usage and/or commissioning period data being the worst case. Thus, these admin. corrections of the CTGs' and DBs' heat rating have no impact on permit unit's emissions and no further emission analysis is required.

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RULES EVALUATION:

Malburg Generating Station is subject to several SCAQMD, State of California and Federal rules and regulations to operate the new power plant. The following is the compliance verification of each applicable rule.

Part 1. SCAQMD REGULATIONS.

CEQA: Applicant has submitted a proper 400-CEQA Form, and as this is a significant project, it has gone through a full CEQA review by CEC during AFC process. The proposed admin. changes of equipment ratings do not trigger CEQA reevaluation.

Rule 212: Installation of two new turbines at City of Vernon facility is considered a significant project under this rule as the turbines' emissions [CO, NOX, PM₁₀ and VOC] exceed the daily maximum specified in subdivision (g). The AQMD had fully evaluated the requirements of this rule during the original P/C (PDOC) evaluation and since the proposed changes of equipment ratings have no impacts on the project's emissions, no further evaluation is necessary.

Rule 218: Continuous Emission Monitoring:- The City of Vernon project has installed the CO CEMS to verify CO emissions meet the hourly concentration limits for BACT and monthly mass limits for Rule 1303 offsets. The CO CEMS complies with the requirements of Rule 218. In accordance with subdivision (e) & (f), the applicant retains the records and complies with the reporting requirements.

Rule 401: **Visible Emissions**:- Under normal operating conditions of the turbines, visible emissions are not expected.

Rule 402: **Nuisance**:- Nuisance problems are not expected under normal operation of the turbines.

Rule 407: Liquid and Gaseous Air Contaminants: The proposed admin. changes of equipment ratings do not impact CO and SOx emissions. Rule compliance is expected as per the original P/C evaluation.

Rule 409: Combustion Contaminants: This rule limits the PM emissions from combustion contaminants to be at 0.1 gr/scf. The proposed admin corrections have no impact on PM emissions.

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Rule 431.1: Sulfur Content of Natural Gas:- MGS turbines/HRSGs will use commercial grade natural gas, which has an average sulfur content of 4 ppm and will thus meet the rule requirements.

Rule 431.2: Sulfur Content of Liquid Fuels:- The rule requires that the any stationary sources in the District shall not burn or purchase any liquid fuel with sulfur content of more than 500 ppm by weight. The facility will comply with the rule requirements as per the original P/C evaluation.

Rule 474: Fuel Burning Equipment NOx Requirements:- Since this facility is in NOx RECLAIM program, it is exempt from this Rule limit as per Rule 2001, Table 1.

Rule 475: Electric Power Generating Equipment:- This rule applies to electric power generating equipment greater than 10MW installed after May 7, 1976. The rule requires that the combustion contaminants (combustion contaminants are defined as particulate matter in AQMD Regulation 1) shall not exceed 11 lb/hr or 0.01 gr/scf. Compliance is demonstrated if either the mass limit or the concentration limit is met. Compliance with these requirements is expected as per the original P/C evaluation.

Regulation IX: Standard of Performance for New Stationary Sources (NSPS):- These requirements are discussed under federal regulations.

Rule 1135: Emissions of NOx from Electric Power Generating Systems:- As this facility is a RECLAIM facility, compliance with this rule is not required as per R-2001, Table 1.

Regulation XIII:- New Source Review: [BACT, Offset, Modeling]:

The proposed equipment rating changes of CTGs and DBs will not impact any of the criteria pollutants' emissions. Thus, NSR is no triggered.

Rule 1401 New Source Review of Toxic Air Contaminants:- This rule specifies limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic hazard index (HI) from new permit units, relocations, or modifications to the existing permits units which emit toxic air contaminants (TAC). Since the proposed admin. corrections do not have any impact on emissions of TAC, no further evaluation is required.

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REG. XVII Prevention of Significant Deterioration

The proposed admin. corrections of the CTGs and DBs' heat input rates do not impact any criteria pollutants emissions. Thus, PSD analysis is not triggered.

RECLAIM, Regulation XX

Rule- 2001: **Applicability:-** This facility is duly entered into RECLAIM universe and has been placed in Cycle 2. The facility is compliant with all applicable RECLAIM rules and other applicable rules and regulations of the District.

Rule 2002: **Allocation for NOx (RTCs):-** This facility's NOx allocations were established in 1994 as per the requirements of this rule. City of Vernon had bought the needed NOx RTCs for the operation of the MGS project. The proposed change of equipment ratings has no impact on the originally evaluated NOx RTC requirements.

Rule 2004: **Requirements:-** The facility will continue to follow the rule requirements of permits, allocations, reporting, variances and breakdowns.

Rule 2005: **New Source Review for RECLAIM:-** There is no change in NOx emissions due to the proposed change of equipment ratings and thus, NSR is not triggered.

Rule 2012: **Monitoring, Reporting and Recordkeeping for NOx:-** The MGS power plant facility has two gas turbines, which are by rule definition, classified as major sources. Thus, each turbine will require certified continuous emission monitoring system (CEMS), a totalizing fuel meter and NOx mass emissions must be reported through an RTU on a daily basis along with daily status codes to the District's central station. The City continues to comply with this requirement.

Reg. XXX - Title V: The City of Vernon has been issued a Title V permit and is subject to Title V requirements. The proposed changes of CTGs and DBs heat input ratings is considered administrative type permit revision per R-3000 (b)(1)(A). Applicant has submitted permit revision application (A/N 486417) as per requirement of R-3003 (b)(2). Since the proposed alteration is classified as an admin. permit revision, public participation is not required (exempt per R-3006 (b)). The proposed permit revision does not require EPA's 45-day review as per R-3003 (j)(1)(A).

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PART 2 State Regulations

California Environmental Quality Act (CEQA):- This combined cycle power plant requires certification by the California Energy Commission (CEC). CEC has completed the requirements of CEQA analysis and the proposed modification does not trigger further CEQA analysis as there is no change in emissions.

PART 3 Federal Regulations

Since the proposed equipment ratings change has no impact on any criteria or toxic air contaminants, MGS project will continue to meet the requirements of all applicable federal regulations as shown on the original P/C evaluation.

Public Notice Requirements

The proposed alteration is not subject to public notice requirements of R-212, as the MGS is not located within 1000 feet from the outer boundary of a school and there is no increase in emissions.

DISCUSSION/RECOMMENDATION:

AQMD had issued the Preliminary Determination of Compliance (PDOC) for the MGS project on August 9, 2002 based on the complete engineering evaluation and verification of all applicable rules and regulations. The Final Determination of Compliance (FDOC) was issued on December 12, 2002 after verification of required offsets for CO, PM₁₀ and VOC, completion of public notice period, resolution of comments received and EPA review. Upon CEC certification, the District issued the Permit to Construct for the MGs project on May 27, 2003:

The City was issued permit to operate on January 16, 2008 after verification of all permit conditions and source test results. The proposed equipment heat input ratings change complies with all applicable rules and regulations of the South Coast AQMD. A revised Title V permit is recommended. There is no need for any additional conditions and the MGS equipment will continue to operate in compliance with the original conditions listed below:

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CONDITIONS:

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 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 Ringlemann 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, 9/11/1998]

F14-1. The operator shall not use diesel oil containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[Rule 1303 (a)(1)-BACT, 5-10-1996 (device D46); Rule 1303 (b)(2)-offsets, 5-10-1996; (devices D3 -D7)]

F16-1. The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Purchase records of fuel oil and sulfur content of the fuel

[Rule 431.2, 9/15/2000; Rule 1303 (b)(2)-offsets, 5-10-1996, Rule 1303 (a)(1)-BACT, 5-10-1996]

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

a). The operator shall comply with the accidental release prevention requirements pursuant to 40CFR 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 admission of a risk management plan (RMP).

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

[40CFR68 - Accident Release Prevention]

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Device Conditions

A. Emission Limits

A63.3 The operator shall limit the emissions from this equipment as follows:

Contaminant	Emissions Limit
CO	7,633 lbs in any one month
PM ₁₀	4,876 lbs in any one month
VOC	3,236 lbs in any one month
SO _x	214 lbs in any one month

For the purpose of this condition, the limit(s) shall be based on the total combined emissions from the both the turbines and duct burners (devices D27, D31, D36 and D39).

The operator shall calculate the emission limit(s) for CO during commissioning period, using fuel consumption data and the following emission factors: 37.56 lb/mmscf

The operator shall calculate the emission limit(s) for CO after commissioning period and prior to the CO CEMS certification, using fuel consumption data and the following emission factors: 23.80 lbs/startup and 4.65-lb/mmscf

The operator shall calculate the emission limit(s) for CO after the CO CEMS certification, based on readings from the certified CEMS. In the event the CO CEMS is not operating or the emissions exceed the valid upper range of the analyzer, the emissions shall be calculated in accordance with the approved CEMS plan.

The operator shall calculate the emission limit(s) by using the monthly fuel use data and the following emission factors:- PM10: 7.397 lb/mmscf, VOC: 1.63 lb/mmscf & SO_x: 0.28 lb/mmscf.

[Rule 1303 (b)(2) offset, 5/10/1996]

[Devices D27, D31, D36, D39]

Note:- the CO emission factors for the commissioning and interim periods are changed as per applicant's request (A/Nos. 443084-085).

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- A99.3 The 2 ppm NO_x emission limit shall not apply during turbine commissioning, start-up and shutdown. The commissioning period shall not exceed 573 operating hours from the initial start-up. Following commissioning, start-ups shall not exceed 2 hours and the number of start-ups shall not exceed one per day. Following commissioning, shutdowns shall not exceed 30 minutes and the number of shutdowns shall not exceed one per day. The operator shall provide the AQMD with the written notification of the initial start-up date. Written records of commissioning, start-ups and shutdowns shall be kept and made available to AQMD.
[Rule 2005, 4/9/1999, Rule 2005, 4/20/2001] [Devices D27, D31, D36, D39]
- A99.4 The 2 ppm CO emission limit shall not apply during turbine commissioning, start-up and shutdown. The commissioning period shall not exceed 573 operating hours from the initial start-up. Following commissioning, start-ups shall not exceed 2 hours and the number of start-ups shall not exceed one per day. Following commissioning, shutdowns shall not exceed 30 minutes and the number of shutdowns shall not exceed one per day. The operator shall provide the AQMD with the written notification of the initial start-up date. Written records of commissioning, start-ups and shutdowns shall be kept and made available to AQMD.
[Rule 1303 (b)(2) - offset, 5/10/1996]
[Devices D27, D31, D36, D39]
- A99.5 The 80.13 lb/mmscf NO_x emission limit(s) shall only apply during interim period to report RECLAIM emissions. The interim period shall not exceed 12 months from the initial start-up date.
[Rule 2012, 12/7/1995; Rule 2012, 5/11/2001]
[Devices D27, D31, D36, D39]
- A195.1 The 2 PPM NO_x emissions limit(s) are averaged over 1 hour at 15 percent oxygen, dry basis.
[Rule 2005, 4/9/1999; Rule 2005, 5/11/2001]
[Devices D27, D31, D36, D39]
- A195.2 The 2 ppm CO emission limit(s) are averaged over 3 hours at 15 percent oxygen, dry basis.
[Rule 1303 (a)(1)- BACT, 5/10/1996]
[Devices D27, D31, D36, D39]

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A195.3 The 2 ppm ROG emission limit(s) are averaged over 1 hour at 15 percent oxygen, dry basis.

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

[Devices D27, D31, D36, D39]

A195.4 The 5 ppm NH₃ emission limit(s) are averaged over 60 minutes at 15 percent oxygen, dry basis. The operator shall calculate and continuously record the ammonia slip concentration using the following:

$NH_3 \text{ (ppmv)} = [a - (b \cdot c / 1000000) \cdot (1000000 / b)]$, where

a = ammonia injection rate (lbs/hr)/17 (lbs/lb-mole)

b = dry exhaust gas flow rate (lbs/hr)/29 (lbs/lb-mole)

c = change in measured NO_x across the SCR (ppmv dry basis)

The operator shall install and maintain a NO_x analyzer to measure the SCR inlet NO_x ppmv accurate to plus or minus 5 percent and calibrated at least once every 12 months. The NO_x analyzer shall be installed and operated within 90 days of initial start-up.

The calculated NH₃ may not be used for compliance determination without corroborative data using an approved reference method for determination of ammonia.

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

[Devices C33, C41]

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 emission limits at the same time.

[Rule 475, 10/8/1976; Rule 475, 8/7/1978]

[Devices D27, D31, D36, D39]

B. Material/Fuel Type Limits

B61.1 The operator shall not use engine cylinder lubricating oil containing the following specified compounds:

Compound		Weight percent
Ash Content	Greater than	0.038

[Rule 401, 3-2-1984; Rule 401, 9-11-1998]

[Devices D3, D4, D5, D6, D7]

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C. Throughput or Operating Parameter Limits

- C1.3 The operator shall limit the operating time to no more than 199 hours in any one year.
 [Rule 1110.2, 11-14-1997; Rule 1304 (a) (4)- modeling & offset exemption, 6-14-1996; Rule 2012, 12-7-1995, Rule 2012, 5-11-2001]
 [Devices D3, D4, D5, D6, D7, D25, D46]
- C1.4 The operator shall limit the fuel usage to no more than 330 MM cubic feet per month.
 The purpose of this condition is to ensure that the total PM₁₀ emissions shall not exceed 2,438 lbs/month per turbine
 [Rule 1303 (b)(2) offsets, 5-10-1996] [Devices D27, D31, D36, D39]
- C157.1 The operator shall install and maintain a pressure relief valve set at 25 psig.
 [Rule 1303 (a)(1)- BACT, 5-10-1996]
 [Device D44]

D. Monitoring/Testing Requirements

- D12.2 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.
 [Rule 1110.2, 11-14-1997; Rule 1304 (a)(4)- Modeling and Offset Exemption, 6-14-1996; Rule 2012, 12-7-1995; Rule 2012, 5-11-2001].
 [Devices D3, D4, D5, D6, D7, D46]
- D12.3 The operator shall install and maintain a(n) non-resettable totalizing fuel meter to accurately indicate the fuel usage of the turbines.
 [Rule 1303 (b)(2) offsets, 5-10-1996; Rule 2005, 4-9-1999; Rule 2005, 5-11-2001]
 [Devices D27, D31, D36, D39]

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D12.4 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia (NH₃).

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.

[[Rule 1303 (a)(1)- BACT, 5/10/1996; Rule 2005, 4/9/1999; Rule 2005, 5/11/2001]

[Devices C33, C41]

D12.5 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 12 months.

[[Rule 1303 (a)(1)- BACT, 5/10/1996; Rule 2005, 4/9/1999; Rule 2005, 5/11/2001]

[Devices C33, C41]

D12.6 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.

[[Rule 1303 (a)(1)- BACT, 5/10/1996; Rule 2005, 4/9/1999; Rule 2005, 5/11/2001]

[Devices C33, C41]

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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
CO Emissions	District Method 100.1	1 hour	Outlet of SCR
NOx Emissions	District Method 100.1	1 hour	Outlet of SCR
PM Emissions	Approved District Method	District approved averaging time	Outlet of SCR
VOC Emissions	Approved District Method	1 hour	Outlet of SCR
SOx Emissions	Approved District Method	District approved averaging time	Fuel Sample
NH ₃ Emissions	District Method 207.1 and 5.3 or EPA Method 17	1 hour	Outlet of SCR

The test (s) shall be conducted after approval of the source test protocol, but no later than 180 days after initial start up.

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

The test shall be conducted in accordance with a District approved source 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 turbines during the test the identity of 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 with and without duct burner firing when this equipment is operating at 100 percent of maximum load and also when this equipment is operating without duct burner firing at 75 and 50 percent of maximum load for the NOx, CO, VOC and ammonia tests. For all other pollutants, the test shall be conducted with and without the duct burner firing at 100% load only. *(note:- condition language has been changed as shown per applicant's request)*

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit. For natural gas fired turbines only, this shall be demonstrated by the following test method: a) Stack gas samples are extracted into Summa canisters, maintaining a final canister pressure between 400 - 500 mm Hg absolute, b) Pressurization of Summa canisters is done with zero gas analyzed/certified to containing less than 0.05 ppmv total hydrocarbons as carbon, and c) Analysis of Summa canisters is per EPA Method TO-12 (with pre-concentration) and the temperature of the Summa canisters when extracting samples for analysis is not to be below 70 degrees F. Because the BACT level was set using data derived from various source test methods, this alternate method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results must be reported with two significant digits.

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D29.1 The District shall be notified of the date and time of the test at least 10 days prior to the test.

[Rule 1303 (a)(1) - BACT, 5-10-1996; Rule 1303 (b)(2) – Offsets, 5-10-1996; Rule 2005, 4-9-1999; Rule 2005, 4-20-2001]

[Devices D27, D31, D36, D39]

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
VOC Emissions	Approved District Method	1 hour	Outlet of SCR
SOx Emissions	Approved District Method	District approved averaging time	Fuel Sample
PM Emissions	Approved District Method	District approved averaging time	Outlet of SCR

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

The test shall be conducted and the results submitted to the District within 60 days after the test date. 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 demonstrate compliance with the Rule 1303 concentration and/or monthly emissions limits.

The test shall be conducted 1) when the gas turbine and the duct burners are operating simultaneously at 100 percent of maximum heat input and 2) when the gas turbine is operating alone at 100 percent of maximum heat input.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit. For natural gas fired turbines only, this shall be demonstrated by the following test method: a) Stack gas samples are extracted into Summa canisters, maintaining a final canister pressure between 400 - 500 mm Hg absolute, b) Pressurization of Summa canisters is done with zero gas analyzed/certified to containing less than 0.05 ppmv total hydrocarbons as carbon, and c) Analysis of Summa canisters is per EPA Method TO-12 (with pre-concentration) and the temperature of the Summa canisters when extracting samples for analysis is not to be below 70 degrees F. Because the BACT level was set using data derived from various source test methods, this alternate method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results must be reported with two significant digits.

[Rule 1303 (a)(1) - BACT, 5-10-1996; Rule 1303 (b)(2) – Offsets, 5-10-1996]

[Devices D27, D31, D36, D39]

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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
NH ₃ Emissions	District Method 207.1 and 5.3 or EPA Method 17	1 hour	Outlet of SCR

The test shall be conducted and the results submitted to the District within 60 days after the test date. 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 demonstrate compliance with the Rule 1303 concentration limit.

The test shall be conducted at least quarterly during the first twelve months of operation and at least annually thereafter. The NO_x concentration, as determined by the certified CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable or not yet certified, a test shall be conducted to determine the NO_x emissions using District Method 100.1 measured over a 60-minute averaging period.

[Rule 1303(a)(1)-BACT; 5-10-1996, Rule 2005, 4-9-1999; Rule 2005, 4-20-2001]

[Devices C33, C41]

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

The CEMS shall be installed and operated 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.

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

The CEMS shall be installed and operating no later than 90 days after initial start-up of the turbine.

[Rule 1303 (a)(1)-BACT], 5-101996; Rule 1303 (b)(2)- offset, 5-101996; Rule 218, 5-14-1999]

[Devices D27, D31, D36, D39]

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

NOx concentration in ppmv

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

The CEMS shall be installed and operating no later than 12 months after the 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 Rule 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.

[Rule 2012, 12-7-1995; Rule 2012, 5-11-2001]

[Devices D27, D31, D36, D39]

E Equipment Operation/Construction Requirements

E57.1 The operator shall vent this equipment to the CO oxidation/SCR control system whenever the turbines are in operation.

[Rule R-1303 (a)(1)-BACT, 5-10-1996; Rule 2005, 4-9-1999; Rule 2005, 4-20-2001]

[Devices D27, D31, D36, D39]

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

[Rule R-1303 (a)(1)-BACT, 5-10-1996] [Device D44]

E179.4 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 D12.3

Condition Number D 12.4

[Rule R-1303 (a)(1)-BACT, 5-10-1996; Rule 2005, 4-9-1999; Rule 2005, 4-20-2001]

[Devices C33, C41]

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E179.5 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 month.

Condition Number D12.5

[Rule R-1303 (a)(1)-BACT, 5-10-1996; Rule 2005, 4-9-1999; Rule 2005, 4-20-2001]

[Devices C33; C41]

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 Energy Commission Decision for 01-AFC-25 project.

[CA PRC CEQA, 11-23-1970]

[D3, D4, D5, D6, D7, D27, D31, C32, C33, D36, D39, C40 C41, D44, D45, D46]

E193.2 The operator shall upon completion of construction, operate this equipment according to the following specifications:

The operator shall install, operate and maintain the oxidation catalyst during all operation period including commissioning.

[Rule 1303 (b)(2) offsets, 5-10-1996]

[D27, D31, C32, C33, D36, D39, C40, C41]

I. Administrative

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 hold sufficient RTCs in an amount equal to the annual emission increase.

[Rule 2005, 4-9-1999; Rule 2005, 4-20-2001] [Devices D27, D31, D36, D39, D46]

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K. Record keeping/Reporting

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.

Emissions data shall be expressed in terms of concentration (ppmv), corrected to 15 percent oxygen, dry basis.

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

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

Emissions data shall be expressed in terms of mass rate (lb/hr), and lbs/mm cubic feet. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

Source test results shall also include turbine fuel flow rate under which the test was conducted.

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

[Rule 1303 (a)(1) – BACT, 5-10-1996; Rule 1303 (b)(2) – offsets, 5-10-1996; Rule 2005 4-9-1999; Rule 2005, 4-20-2001]

[Device D27, D31, D36, D39]

K48.1 The operator shall maintain records in a manner approved by the District, to demonstrate compliance with the following condition number(s):

- Condition Number C1.3
- Condition Number D12.2

[RULE 1110.2, 11-14-1997; RULE 1304(a)-Modeling and Offset Exemption]
[Devices D3, D4, D5, D6, D7, D25, D46]

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K67.1 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 coatings 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 for low-solids coatings, (c) VOC content as applied in g/l of coating, less, water and exempt solvent, for other coatings.

[Rule 1113, 5-14-1999; Rule 1113, 7-20-2001; Rule 1171, 6-13-1997; Rule 1171, 10-8-1999]
[Device E47]

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameters or items:

Date of operation, the elapsed time, in hour and the reason for operation.

[Rule 1110.2, 11-14-1997; Rule 1304 (a) - modeling and offset exemption, 6-14-1996]
[Devices D3, D4, D5, D6, D7, D25, D46]

K67.3 The operator shall keep records, in a manner approved by the District, for the following parameters or items:

Natural gas fuel use during the commissioning period.

[Rule 2012, 12-7-1995; Rule 2012 5-11-2001]
[Devices D27, D31, D36, D39]

K67.4 The operator shall keep records, in a manner approved by the District, for the following parameters or items:

Operational status of the Duct Burner and its fuel usage.

[Rule 1303 (b) (2); Rule 2012, 12-7-1995; Rule 2012 5-11-2001]
[Devices D27, D31, D36, D39]

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BACKGROUND:

The City of Vernon operates an electric generation facility and currently holds an AQMD Cycle 2 NOx RECLAIM facility permit. At present, the City operates 2, natural gas fueled, peaking turbines [each rated @ 5.5 MW and installed in 1988] and 5, diesel fueled I. C. engines [each rated for 3.5 MW, installed in 1933 and operates to provide emergency power]. In order to provide an efficient, cost effective, and reliable source of electricity to the City's customers and to the Southern California area, the City of Vernon had proposed to construct and operate the new Malburg Generating Station (MGS): Permits to construct were issued to this new power plant on May 27, 2003.

MGS is a 134 MW (net power output at annual average temperature of 65°F & 50% relative humidity) power plant. This power plant consists of (1) two combined cycle, natural gas fueled combustion turbine generators (CTGs), which are rated at 42.5 MW each @ 65°F (gross power output), (2) two heat recovery steam generators {HRSGs} with a common steam turbine generator (STG) [nominally rated for 55 MW] and (3) a cooling tower. The net power output from this plant [two CTGs and the steam turbine generator] is 134 MW. For the criteria pollutants' emission control, this plant has associated air pollution control equipment [Selective Catalyst Reduction (SCR), CO oxidation catalyst and ammonia storage tank. MGS started operation in September 2005.

The City recently sold this MGS power plant to Bicent (California) Malburg LLC. After the sale of this power plant in April 2008, the new owner (Bicent) pointed out that the maximum heat ratings of the MGS' two CTGs (D27, D36) and the two duct burners (D31, D39) are not correctly listed in the permit. The existing permit shows the maximum heat input of each CTG to be 520.62 which incorrectly includes the maximum heat input of the duct burner. Also, each duct burner's maximum heat rating of 73.4 mm btu/hr is as per the lower heating value (LHV) and not per the higher heating value (HHV).

Thus, Bicent has requested the City to amend the Facility Permit by correcting the max. heat input of the CTGs and DBs. The City of Verno has therefore filed the above applications [A/Nos. 486717, 719, 721] for the administrative permit revision of the MGS power plant' Title V permit. These Class III applications were filed on August 21, 08 and were deemed complete on August 27, 2008. The City has requested expedited permit processing, as per R-301 (u) as Bicent's change of ownership applications are held up.

PROCESS DESCRIPTION:

There is no change in process due the proposed administrative changes of the CTGs and DBs heat raings. All plant equipment will operate as per the original P/C evaluation [A/Nos. 394157-168].

The project equipment operates for on an average of 24 hrs/day and 7 days/wk, throughout the year.

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Section D continued....

Equipment	ID No.	Connected To	RECLAIM Source Type/Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 3: Electric Generation, Gas Turbine (MGS Power Island No. 2)					
Burner, Duct, Natural Gas, 73.4 81.2 mmbtu/hr (HHV), located in the HRSG #2 A/N 443085 486721	D39	C40, C41	NOx: Major Source	NOx: 2 ppmv Natural Gas (4) [Rule 2005, 4-9-1999; Rule 2005, 4-20, 2001]; NOx: 110 ppm Natural Gas (8) [40CFR 60 Subpart GG, 3-6-1981]; NOx: 80.13 lb/mmcf Natural Gas (1) [Rule-2012]; CO: 2PPMV Natural Gas (4) [Rule 1303(a)(1)-BACT, 5-10-1996], CO: 2000 ppmv Natural Gas (5) [Rule 407, 4-2-1982]; PM: 0.1 Gr/scf (5) [Rule 409, 8-7-1981]; PM: 11 lb/hr (5) [Rule 475]; PM: 0.01Gr/scf (5A) [Rule 475], VOC: 2 ppmv Natural Gas (4) [Rule 1303(a)(1)- BACT, 5-10-1996], SOx: 150 ppmv Natural Gas (8) [40 CFR 60 Subpart GG, 3-6-1981], SO2: (9) [40CFR 72 – Acid Rain Provision, 11-24-1997]	A63.3, A99.3, A99.4, A99.5, A195.1, A195.2, A195.3, A327.1, C1.4, D12.3, D29.1, D29.2, D82.1, D82.2, E57.1, E193.1, I296.1, K40:1, K67.3, K67.4
CO Oxidation Catalyst, Serving Turbine #2, Emerchem, Metal Monolith, with 63 ft ³ of catalyst volume, A/N 394167	C40	D36, D39			
Selective Catalytic Reduction, Serving Turbine #2, Mitsubishi/Cormetech, Homogeneous Honeycomb (Titanium Dioxide), Ammonia Injection Grid A/N 394167	C41 (B42)	D36, D39		NH ₃ : 5 ppmv (4) [Rule 1303 (a)(1) BACT]	A195.4, D12.4, D12.5, D12.6, D29.3, E179.4, E179.5, E193.1
Stack, for Turbine #2, 12' Dia. x 110' Height, A/N 443085 486721	S43				

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Section D continued...

Equipment	ID No.	Connected To	RECLAIM Source Type/Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 4: Electric Generation, Gas Turbine (MGS Power Island No. 2)					
Turbine, Gas, No.2, Natural Gas Alstom, Model GTX100, Combined Cycle, with Dry Low NOx Combustor, 520.62 454.05 (HHV) mmbtu/hr @38°F (includes duct burner @ 73.4 mmbtu/hr)	D36	C40, C41	NOx: Major Source	NOx: 2 ppmv Natural Gas (4) [Rule 2005, 4-9-1999; Rule 2005, 4-20, 2001]; NOx: 110 ppm Natural Gas (8) [40CFR 60 Subpart GG, 3-6-1981]; NOx: 80.13 lb/mmcf Natural Gas (1) [Rule-2012]; CO: 2PPMV Natural Gas (4) [Rule 1303(a)(1)-BACT, 5-10-1996], CO: 2000 ppmv Natural Gas (5) [Rule 407, 4-2-1982]; PM: 0.1 Gr/scf (5) [Rule 409, 8-7-1981, PM: 11 lb/hr (5) [Rule 475]; PM: 0.01Gr/scf (5A) [Rule 475], VOC: 2 ppmv Natural Gas (4) [Rule 1303(a)(1)- BACT, 5-10-1996], SOx: 150 ppmv Natural Gas (8) [40 CFR 60 Subpart GG, 3-6-1981], SO2: (9) [40CFR 72 - Acid Rain Provision, 11-24-1997]	A63.3, A99.3, A99.4, A99.5, A195.1, A195.2, A195.3, A327.1, C1.4, D12.3, D29.1, D29.2, D82.1, D82.2, E57.1, E193.1, I296.1, K40.1, K67.3, K67.4
Generator, CTG#2, 44.2 MW (max. output @ 38°F)	(B37)				
Heat Recovery Steam Generator, HRSG #2	(B38)				
Steam Turbine Generator, 55 MW (common with HRSG #1)	(B30)				
A/N: 443085 486721					

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Section D continued

Equipment	ID No.	Connected To	RECLAIM Source Type/Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 3: Electric Generation, Gas Turbine (MGS Power Island No. 1)					
Burner, Duct, Natural Gas, 73-4 <u>81.2</u> mmbtu/hr (HHV), located in the HRSG #1 A/N 443084 486719	D31	C32, C33	NOx: Major Source	NOx: 2 ppmv Natural Gas (4) [Rule 2005, 4-9-1999; Rule 2005, 4-20, 2001]; NOx: 110 ppm Natural Gas (8) [40CFR 60 Subpart GG, 3-6-1981]; NOx: 80.13 lb/mmcf Natural Gas (1) [Rule-2012; CO: 2PPMV Natural Gas (4) [Rule 1303(a)(1)-BACT, 5-10-1996], CO: 2000 ppmv Natural Gas (5) [Rule 407, 4-2-1982]; PM: 0.1 Gr/scf (5) [Rule 409, 8-7-1981]; PM: 11 lb/hr (5) [Rule 475]; PM: 0.01Gr/scf (5A) [Rule 475], VOC: 2 ppmv Natural Gas (4) [Rule 1303(a)(1)- BACT, 5-10-1996], SOx: 150 ppmv Natural Gas (8) [40 CFR 60 Subpart GG, 3-6-1981], SO2: (9) [40CFR 72 – Acid Rain Provision, 11-24-1997]	A63.3, A99.3, A99.4, A99.5, A195.1, A195.2, A195.3, A327.1, C1.4, D12.3, D29.1, D29.2, D82.1, D82.2, E57.1, E193.1, I296.1, K40.1, K67.3, K67.4
CO Oxidation Catalyst, Serving Turbine #1, Emerchem, Metal Monolith, with 63 ft ³ of catalyst volume, A/N 394166	C32	D27, D31			
Selective Catalytic Reduction, Serving Turbine #1, Mitsubishi/Cormetech, Homogeneous Honeycomb (Titanium Dioxide), Ammonia Injection Grid A/N 394166	C33 (B34)	D27, D31		NH ₃ : 5 ppmv (4) [Rule 1303 (a)(1) BACT]	A195.4, D12.4, D12.5, D12.6, D29.3, E179.4, E179.5, E193.1
Stack, for Turbine #1, 12' Dia. x 110' Height, A/N 443084, 486719	S35				

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Section D:- Permit to Operate

Equipment	ID No.	Connected To	RECLAIM Source Type/Monitoring Unit	Emissions And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
System 3: Electric Generation, Gas Turbine (MGS Power Island No. 1)					
Turbine, Gas, No.1, Natural Gas Alstom, Model GTX100, Combined Cycle, with Dry Low NOx Combustor, 520.62 454.05 (HHV) mmbtu/hr @38°F (includes duet burner @ 73.4 mmbtu/hr)	D27	C32, C33	NOx: Major Source	NOx: 2 ppmv Natural Gas (4) [Rule 2005, 4-9-1999; Rule 2005, 4-20, 2001]; NOx: 110 ppm Natural Gas (8) [40CFR 60 Subpart GG, 3-6-1981]; NOx: 80.13 lb/mcf Natural Gas (1) [Rule-2012; CO: 2PPMV Natural Gas (4) [Rule 1303(a)(1)-BACT, 5-10-1996], CO: 2000 ppmv Natural Gas (5) [Rule 407, 4-2-1982]; PM: 0.1 Gr/scf (5) [Rule 409, 8-7-1981]; PM: 11 lb/hr (5) [Rule 475]; PM: 0.01Gr/scf (5A) [Rule 475], VOC: 2 ppmv Natural Gas (4) [Rule 1303(a)(1)- BACT, 5-10-1996], SOx: 150 ppmv Natural Gas (8) [40 CFR 60 Subpart GG, 3-6-1981], SO2: (9) [40CFR 72 – Acid Rain Provision, 11-24-1997]	A63.3, A99.3, A99.4, A99.5, A195.1, A195.2, A195.3, A327.1, C1.4, D12.3, D29.1, D29.2, D82.1, D82.2, E57.1, E193.1, I296.1, K40.1, K67.3, K67.4
Generator, CTG#1, 44.2 MW (max. output @ 38°F)	(B28)				
Heat Recovery Steam Generator, HRSG #1	(B29)				
Steam Turbine Generator, 55 MW (common with HRSG #2)	(B30)				
A/N: 443084 486719					

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PERMIT TO OPERATE

OWNER/OPERATOR: Vernon City, Light & Power Dept.

CONTACT: Dr. Krishna Nand

COMPANY ID: 014502

EQUIPMENT LOCATION: 4963 Soto Street, Vernon, CA 90058-2901

EQUIPMENT DESCRIPTION: A/Nos.: -486717, 486719 and 486721

A/Nos. 486719, 486721

Change 1) the maximum fired duty of the two combined cycle combustion gas turbines (CTGs, D27 and D36), [Alstom, Model GTX 100, natural gas fired] from 520.62 mm btu/hr heat input @65°F (which includes duct burner rated @73.4 mmbtu/hr) to 454.05 mm btu/hr @38°F and 2) the maximum fired duty of the two duct burners (D31, D39) from 73.4 mm btu/hr to 81.2 mm btu/hr (HHV)

A/N 486717

Title V/RECLAIM Permit Revision