

DOCKETED	
Docket Number:	13-AFC-01C
Project Title:	Alamitos Energy Center - Compliance
TN #:	229157
Document Title:	SCAQMD Letter to AES Southland Regarding Title V Facility Permit Revision
Description:	N/A
Filer:	Joe Douglas
Organization:	South Coast Air Quality Management District (SCAQMD)
Submitter Role:	Public
Submission Date:	7/31/2019 11:03:36 AM
Docketed Date:	7/31/2019



South Coast Air Quality Management District

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

July 10, 2019

Stephen O'Kane
Manager, Sustainability and Regulatory Compliance
AES Southland
690 N. Studebaker Road
Long Beach, CA 90803

SUBJECT: RECLAIM/Title V Facility Permit Revision (Facility ID: 115394)

Dear Mr. O'Kane:

Please find attached the revised Title Page, Table of Contents, and Section H of your RECLAIM/Title V Facility Permit. The revised sections reflect the approval of the permit revisions requested in your Application No. 604013. The proposed permit revisions were submitted to EPA for 45-day review on June 28, 2019. The South Coast AQMD requested expedited review of the proposal on or before July 19, 2019, in order to facilitate timely start-up and commissioning of the Auxiliary Boiler. The EPA provided expedited review and ended the review period on July 3, 2019, with no further comments.

This permit amendment includes the modification of the Auxiliary Boiler and the Auxiliary Boiler SCR.

Equipment	Application No.	Device No.	Process/System	Permit Type
Auxiliary Boiler	604014	D181	12 / 1	PC
Auxiliary Boiler SCR	613323	C183	12 / 1	PC

Please review the attached sections carefully. Insert the enclosed sections into your RECLAIM/Title V Facility Permit and discard the earlier versions. Questions concerning changes to your permit should be directed to Ms. Vicky Lee at (909) 396-2284.

Very truly yours,

Bhaskar Chandan, P.E., QEP
Senior Air Quality Engineering Manager
Engineering & Permitting
Energy/Public Services/Waste Management/Terminals

BC:RC:VL
Enclosure: Facility Permit

cc: Gerardo Rios, EPA Region IX (w/ enclosure)
Scott Caso, SCAQMD Compliance (w/ enclosure)



South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

Title Page	
Facility ID:	115394
Revision #:	33
Date:	July 10, 2019

FACILITY PERMIT TO OPERATE


**AES ALAMITOS, LLC
690 N STUDEBAKER RD
LONG BEACH, CA 90803**

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.

Wayne Nastri
Executive Officer

By 
Laki Tisopulos, Ph.D., P.E.
Deputy Executive Officer
Engineering and Permitting



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

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FACILITY PERMIT TO OPERATE AES ALAMITOS, 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 4: INORGANIC CHEMICAL STORAGE					
STORAGE TANK, TANK-1 (COMBINED-CYCLE TURBINES), AQUEOUS AMMONIA 19 PERCENT, 40000 GALS; DIAMETER: 13 FT ; LENGTH: 45 FT A/N: 579167 Permit to Construct Issued: 04/18/17	D163				C157.1, E74.1, E144.1, E193.4, E193.5
STORAGE TANK, TANK-2 (SIMPLE-CYCLE TURBINES), AQUEOUS AMMONIA 19 PERCENT, 40000 GALS; DIAMETER: 13 FT ; LENGTH: 45 FT A/N: 579168 Permit to Construct Issued: 04/18/17	D164				C157.1, E74.1, E144.1, E193.4, E193.5
Process 12: INTERNAL COMBUSTION - POWER GENERATION					
System 1: COMBINED-CYCLE TURBINES (AEC CCGT POWER BLOCK)					

- * (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 12:INTERNAL COMBUSTION - POWER GENERATION					
GAS TURBINE, NO. CCGT-1, COMBINED-CYCLE, NATURAL GAS, GENERAL ELECTRIC, MODEL 7FA.05, 2275 MMBTU/HR HHV AT 28 F, WITH DRY LOW-NOX COMBUSTOR, GE DLN 2.6, WITH A/N: 579142 Permit to Construct Issued: 04/18/17	D165	C169	NOX: MAJOR SOURCE**	CO: 1.5 PPMV NATURAL GAS (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; CO2: 120 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart TTTT, 10-23-2015]; CO2: 1000 LBS/GROSS MWH NATURAL GAS (8) [40CFR 60 Subpart TTTT, 10-23-2015]; NOX: 2 PPMV NATURAL GAS (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]; NOX: 8.35 LBS/MMSCF NATURAL GAS (1A) [RULE 2012, 5-6-2005]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 16.66 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM10: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM10: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM10: 8.5 LBS/HR NATURAL GAS (4) [RULE 1303(b)(2)-Offset, 5-10-1996;	A63.2, A99.1, A99.2, A195.8, A195.9, A195.10, A327.1, B61.1, C1.3, C1.4, D29.2, D29.3, D82.1, D82.2, E74.1, E193.4, E193.5, E193.8, E193.11, E193.12, E193.14, E448.1, I297.1, K40.4

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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Process 12:INTERNAL COMBUSTION - POWER GENERATION					
<p>GENERATOR, NO. CCGT-1, 236.645 MW GROSS AT 28 F</p> <p>HEAT EXCHANGER, HEAT RECOVERY STEAM GENERATOR (HRSG), NO. CCGT-1</p> <p>GENERATOR, STEAM TURBINE GENERATOR (STG), 219.615 MW GROSS AT 28 F, COMMON WITH HRSG NO. CCGT-2</p>				<p><i>RULE 1303(b)(2)-Offset, 12-6-2002]; PM10: 11 LBS/HR (5B) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO2: 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]</i></p>	
CO OXIDATION CATALYST, NO. CCGT-1, SYNERGY CATALYST, 342.5 CU. FT.; WIDTH: 25 FT 9 IN; HEIGHT: 76 FT; LENGTH: 2.1 IN A/N: 579160 Permit to Construct Issued: 04/18/17	C169	D165 C170			E74.1, E193.5

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
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Process 12:INTERNAL COMBUSTION - POWER GENERATION					
SELECTIVE CATALYTIC REDUCTION, NO. CCGT-1, CORMETECH, TITANIUM/ VANADIUM/TUNGSTEN, 1289 CU.FT.; WIDTH: 25 FT 8.5 IN; HEIGHT: 71 FT 7.2 IN; LENGTH: 1 FT 6 IN WITH A/N: 579160 Permit to Construct Issued: 04/18/17 AMMONIA INJECTION, AQUEOUS AMMONIA	C170	C169 S172		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.15, D12.9, D12.10, D12.11, D29.4, E74.1, E193.4, E193.5
STACK, TURBINE NO. CCGT-1, HEIGHT: 140 FT ; DIAMETER: 20 FT A/N: 579142 Permit to Construct Issued: 04/18/17	S172	C170			

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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Process 12: INTERNAL COMBUSTION - POWER GENERATION					
GAS TURBINE, NO. CCGT-2, COMBINED-CYCLE, NATURAL GAS, GENERAL ELECTRIC, MODEL 7FA.05, 2275 MMBTU/HR HHV AT 28 F, WITH DRY LOW-NOX COMBUSTOR, GE DLN 2.6, WITH A/N: 579143 Permit to Construct Issued: 04/18/17	D173	C177	NOX: MAJOR SOURCE**	CO: 1.5 PPMV NATURAL GAS (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; CO2: 120 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart TTTT, 10-23-2015]; CO2: 1000 LBS/GROSS MWH NATURAL GAS (8A) [40CFR 60 Subpart TTTT, 10-23-2015]; NOX: 2 PPMV NATURAL GAS (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]; NOX: 8.35 LBS/MMSCF NATURAL GAS (1A) [RULE 2012, 5-6-2005]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 16.66 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM10: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM10: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM10: 8.5 LBS/HR NATURAL GAS (4) [RULE 1303(b)(2)-Offset, 5-10-1996;	A63.2, A99.1, A99.2, A195.8, A195.9, A195.10, A327.1, B61.1, C1.3, C1.4, D29.2, D29.3, D82.1, D82.2, E74.1, E193.4, E193.5, E193.8, E193.11, E193.12, E193.14, E448.1, I297.2, K40.4

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Process 12:INTERNAL COMBUSTION - POWER GENERATION					
<p>GENERATOR, NO. CCGT-2, 236.645 MW GROSS AT 28 F</p> <p>HEAT EXCHANGER, HEAT RECOVERY STEAM GENERATOR (HRSG), NO. CCGT-2</p> <p>GENERATOR, STEAM TURBINE GENERATOR (STG), 219.615 MW GROSS AT 28 F, COMMON WITH HRSG NO. CCGT-1</p>				<p><i>RULE 1303(b)(2)-Offset, 12-6-2002]; PM10: 11 LBS/HR (5B) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO2: 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]</i></p>	
<p>CO OXIDATION CATALYST, NO. CCGT-2, SYNERGY CATALYST, 342.5 CU. FT.; WIDTH: 25 FT 9 IN; HEIGHT: 76 FT; LENGTH: 2.1 IN A/N: 579161</p> <p>Permit to Construct Issued: 04/18/17</p>	C177	D173 C178			E74.1, E193.5

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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Process 12: INTERNAL COMBUSTION - POWER GENERATION					
SELECTIVE CATALYTIC REDUCTION, NO. CCGT-2, CORMETECH, TITANIUM/ VANADIUM/TUNGSTEN, 1289 CU.FT.; WIDTH: 25 FT 8.5 IN; HEIGHT: 71 FT 7.2 IN; LENGTH: 1 FT 6 IN WITH A/N: 579161 Permit to Construct Issued: 04/18/17 AMMONIA INJECTION, AQUEOUS AMMONIA	C178	C177 S180		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.15, D12.9, D12.10, D12.11, D29.4, E74.1, E193.4, E193.5
STACK, TURBINE NO. CCGT-2, HEIGHT: 140 FT ; DIAMETER: 20 FT A/N: 579143 Permit to Construct Issued: 04/18/17	S180	C178			

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Process 12: INTERNAL COMBUSTION - POWER GENERATION					
BOILER, AUXILIARY, WATER-TUBE, NATURAL GAS, CLEAVER-BROOKS, MODEL NB-200D-50, WITH LOW NOX BURNER, FLUE GAS RECIRCULATION, 70.8 MMBTU/HR WITH A/N: 604014 Permit to Construct Issued: 07/10/19	D181	C183	NOX: MAJOR SOURCE**	CO: 50 PPMV NATURAL GAS (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 400 PPMV NATURAL GAS (5) [RULE 1146, 11-1-2013; RULE 1146, 12-7-2018]; CO: 2000 PPMV NATURAL GAS (5A) [RULE 407, 4-2-1982]; NOX: 5 PPMV NATURAL GAS (4) [RULE 1146, 11-1-2013; RULE 1146, 12-7-2018; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]; NOX: 38.46 LBS/MMSCF NATURAL GAS (1A) [RULE 2012, 5-6-2005]; NOX: 104.2 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM10: 0.007 LBS/MMBTU NATURAL GAS (4) [RULE 1303(b)(2) -Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; PM10: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]; VOC: 0.005 LBS/MMBTU NATURAL GAS (4) [RULE 1303(b)(2) -Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]	A63.4, A99.5, A99.6, A195.13, A195.14, C1.7, D29.5, D82.3, D82.4, E74.1, E193.4, E193.5, E193.10, H23.7, I297.7, K40.5

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Process 12: INTERNAL COMBUSTION - POWER GENERATION					
BURNER, NATURAL GAS, CB-NATCOM, MODEL P-71-G23-11-16, WITH LOW NOX BURNER, 70.8 MMBTU/HR					
SELECTIVE CATALYTIC REDUCTION, AUXILIARY BOILER, BABCOCK & WILCOX, VANADIUM, 46 CU.FT.; WIDTH: 5 FT 5 IN; HEIGHT: 3 FT 8 IN; LENGTH: 7 FT 3 IN WITH A/N: 613323 Permit to Construct Issued: 07/10/19 AMMONIA INJECTION, AQUEOUS AMMONIA	C183	D181 S211		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.16, D12.15, D12.16, D12.17, D29.7, E74.1, E193.4, E193.5
STACK, AUXILIARY BOILER, HEIGHT: 80 FT ; DIAMETER: 3 FT A/N: 604014 Permit to Construct Issued: 07/10/19	S211	C183			
System 2: SIMPLE-CYCLE TURBINES (AEC SCGT POWER BLOCK)					

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 12:INTERNAL COMBUSTION - POWER GENERATION					
GAS TURBINE, NO. SCGT-1, SIMPLE-CYCLE, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS-100 PB, 882 MMBTU/HR AT 59 DEG F, WITH INTERCOOLER AND DRY LOW-NOX COMBUSTOR WITH A/N: 579145 Permit to Construct Issued: 12/30/17	D185	C187	NOX: MAJOR SOURCE**	CO: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; CO2: 120 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart TTTT, 10-23-2015]; NOX: 2.5 PPMV NATURAL GAS (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]; NOX: 11.21 LBS/MMSCF NATURAL GAS (1A) [RULE 2012, 5-6-2005]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 25.24 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM10: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM10: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM10: 6.23 LBS/HR NATURAL GAS (4) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; PM10: 11 LBS/HR (5B) [RULE 475, 10-8-1976; RULE 475,	A63.3, A99.3, A99.4, A195.10, A195.11, A195.17, A327.1, B61.1, C1.5, C1.6, D29.2, D29.3, D82.1, D82.2, E74.1, E193.4, E193.5, E193.9, E193.13, E193.15, E448.1, I297.3, K40.4

- * (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 AES ALAMITOS, 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 12:INTERNAL COMBUSTION - POWER GENERATION					
GENERATOR, 100.438 MW GROSS AT 59 F				8-7-1978]; SO ₂ : (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO ₂ : 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. SCGT-1, BASF, MODEL CAMET, 165.57 CU. FT.; WIDTH: 2.5 IN; HEIGHT: 22 FT; LENGTH: 36 FT 1.5 IN A/N: 579162 Permit to Construct Issued: 04/18/17	C187	D185 C188			E74.1, E193.5
SELECTIVE CATALYTIC REDUCTION, NO. SCGT-1, CORMETECH, MODEL CMHT, TITANIUM/VANADIUM/ TUNGSTEN, 621.96 CU.FT.; WIDTH: 4 FT 11 IN; HEIGHT: 11 FT ; LENGTH: 11 FT 6 IN WITH A/N: 579162 Permit to Construct Issued: 04/18/17 AMMONIA INJECTION, AQUEOUS AMMONIA	C188	C187 S190		NH ₃ : 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.15, D12.12, D12.13, D12.14, D29.4, E74.1, E193.4, E193.5

- * (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
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FACILITY PERMIT TO OPERATE AES ALAMITOS, 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 12:INTERNAL COMBUSTION - POWER GENERATION					
STACK, TURBINE NO. SCGT-1, HEIGHT: 80 FT ; DIAMETER: 13 FT 6 IN A/N: 579145 Permit to Construct Issued: 12/30/17	S190	C188			

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
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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 12:INTERNAL COMBUSTION - POWER GENERATION					
GAS TURBINE, NO. SCGT-2, SIMPLE-CYCLE, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS-100 PB, 882 MMBTU/HR AT 59 DEG F, WITH INTERCOOLER AND DRY LOW-NOX COMBUSTOR WITH A/N: 579147 Permit to Construct Issued: 01/26/18	D191	C193	NOX: MAJOR SOURCE**	CO: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; CO2: 120 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart TTTT, 10-23-2015]; NOX: 2.5 PPMV NATURAL GAS (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]; NOX: 11.21 LBS/MMSCF NATURAL GAS (1A) [RULE 2012, 5-6-2005]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 25.24 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM10: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM10: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM10: 6.23 LBS/HR NATURAL GAS (4) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; PM10: 11 LBS/HR (5B) [RULE 475, 10-8-1976; RULE 475,	A63.3, A99.3, A99.4, A195.10, A195.11, A195.17, A327.1, B61.1, C1.5, C1.6, D29.2, D29.3, D82.1, D82.2, E74.1, E193.4, E193.5, E193.9, E193.13, E193.15, E448.1, I297.4, K40.4

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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FACILITY PERMIT TO OPERATE AES ALAMITOS, 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 12:INTERNAL COMBUSTION - POWER GENERATION					
GENERATOR, 100.438 MW GROSS AT 59 F				8-7-1978]; SO ₂ : (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO ₂ : 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. SCGT-2, BASF, MODEL CAMET, 165.57 CU. FT.; WIDTH: 2.5 IN; HEIGHT: 22 FT; LENGTH: 36 FT 1.5 IN A/N: 579163 Permit to Construct Issued: 04/18/17	C193	D191 C194			E74.1, E193.5
SELECTIVE CATALYTIC REDUCTION, NO. SCGT-2, CORMETECH, MODEL CMHT, TITANIUM/VANADIUM/ TUNGSTEN, 621.96 CU.FT.; WIDTH: 4 FT 11 IN; HEIGHT: 11 FT ; LENGTH: 11 FT 6 IN WITH A/N: 579163 Permit to Construct Issued: 04/18/17 AMMONIA INJECTION, AQUEOUS AMMONIA	C194	C193 S196		NH ₃ : 5 PPMM (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.15, D12.12, D12.13, D12.14, D29.4, E74.1, E193.4, E193.5

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
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FACILITY PERMIT TO OPERATE AES ALAMITOS, 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 12:INTERNAL COMBUSTION - POWER GENERATION					
STACK, TURBINE NO. SCGT-2, HEIGHT: 80 FT ; DIAMETER: 13 FT 6 IN A/N: 579147 Permit to Construct Issued: 01/26/18	S196	C194			

- * (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
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FACILITY PERMIT TO OPERATE AES ALAMITOS, 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 12: INTERNAL COMBUSTION - POWER GENERATION					
GAS TURBINE, NO. SCGT-3, SIMPLE-CYCLE, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS-100 PB, 882 MMBTU/HR AT 59 DEG F, WITH INTERCOOLER AND DRY LOW-NOX COMBUSTOR WITH A/N: 579150 Permit to Construct Issued: 01/26/18	D197	C199	NOX: MAJOR SOURCE**	CO: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; CO2: 120 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart TTTT, 10-23-2015]; NOX: 2.5 PPMV NATURAL GAS (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]; NOX: 11.21 LBS/MMSCF NATURAL GAS (1A) [RULE 2012, 5-6-2005]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 25.24 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM10: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM10: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM10: 6.23 LBS/HR NATURAL GAS (5) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; PM10: 11 LBS/HR (5B) [RULE 475, 10-8-1976; RULE 475,	A63.3, A99.3, A99.4, A195.10, A195.11, A195.17, A327.1, B61.1, C1.5, C1.6, D29.2, D29.3, D82.1, D82.2, E74.1, E193.4, E193.5, E193.9, E193.13, E193.15, E448.1, I297.5, K40.4

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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(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

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FACILITY PERMIT TO OPERATE AES ALAMITOS, 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 12: INTERNAL COMBUSTION - POWER GENERATION					
GENERATOR, 100.438 MW GROSS AT 59 F				8-7-1978]; SO ₂ : (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO ₂ : 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. SCGT-3, BASF, MODEL CAMET, 165.57 CU. FT.; WIDTH: 2.5 IN; HEIGHT: 22 FT; LENGTH: 36 FT 1.5 IN A/N: 579164 Permit to Construct Issued: 04/18/17	C199	D197 C200			E74.1, E193.5
SELECTIVE CATALYTIC REDUCTION, NO. SCGT-3, CORMETECH, MODEL CMHT, TITANIUM/VANADIUM/ TUNGSTEN, 621.96 CU.FT.; WIDTH: 4 FT 11 IN; HEIGHT: 11 FT ; LENGTH: 11 FT 6 IN WITH A/N: 579164 Permit to Construct Issued: 04/18/17 AMMONIA INJECTION, AQUEOUS AMMONIA	C200	C199 S202		NH ₃ : 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.15, D12.12, D12.13, D12.14, D29.4, E74.1, E193.4, E193.5

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
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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 AES ALAMITOS, 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 12:INTERNAL COMBUSTION - POWER GENERATION					
STACK, TURBINE NO. SCGT-3, HEIGHT: 80 FT ; DIAMETER: 13 FT 6 IN A/N: 579150 Permit to Construct Issued: 01/26/18	S202	C200			

- * (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
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 12:INTERNAL COMBUSTION - POWER GENERATION					
GAS TURBINE, NO. SCGT-4, SIMPLE-CYCLE, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS-100 PB, 882 MMBTU/HR AT 59 DEG F, WITH INTERCOOLER AND DRY LOW-NOX COMBUSTOR WITH A/N: 579152 Permit to Construct Issued: 01/26/18	D203	C205	NOX: MAJOR SOURCE**	CO: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; CO2: 120 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart TTTT, 10-23-2015]; NOX: 2.5 PPMV NATURAL GAS (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]; NOX: 11.21 LBS/MMSCF NATURAL GAS (1A) [RULE 2012, 5-6-2005]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 25.24 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM10: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM10: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM10: 6.23 LBS/HR NATURAL GAS (4) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; PM10: 11 LBS/HR (5B) [RULE 475, 10-8-1976; RULE 475,	A63.3, A99.3, A99.4, A195.10, A195.11, A195.17, A327.1, B61.1, C1.5, C1.6, D29.2, D29.3, D82.1, D82.2, E74.1, E193.4, E193.5, E193.9, E193.13, E193.15, E448.1, I297.6, K40.4

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 12:INTERNAL COMBUSTION - POWER GENERATION					
GENERATOR, 100.438 MW GROSS AT 59 F				8-7-1978]; SO ₂ : (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO ₂ : 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. SCGT-4, BASF, MODEL CAMET, 165.57 CU. FT.; WIDTH: 2.5 IN; HEIGHT: 22 FT; LENGTH: 36 FT 1.5 IN A/N: 579165 Permit to Construct Issued: 04/18/17	C205	D203 C206			E74.1, E193.5
SELECTIVE CATALYTIC REDUCTION, NO. SCGT-4, CORMETECH, MODEL CMHT, TITANIUM/VANADIUM/ TUNGSTEN, 621.96 CU.FT.; WIDTH: 4 FT 11 IN; HEIGHT: 11 FT ; LENGTH: 11 FT 6 IN WITH A/N: 579165 Permit to Construct Issued: 04/18/17 AMMONIA INJECTION, AQUEOUS AMMONIA	C206	C205 S208		NH ₃ : 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.15, D12.12, D12.13, D12.14, D29.4, E74.1, E193.4, E193.5

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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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:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 12:INTERNAL COMBUSTION - POWER GENERATION					
STACK, TURBINE NO. SCGT-4, HEIGHT: 80 FT ; DIAMETER: 13 FT 6 IN A/N: 579152 Permit to Construct Issued: 01/26/18	S208	C206			
Process 13:OIL/WATER SEPARATION					
STORAGE TANK, NO. OWS-1 (COMBINED-CYCLE TURBINES), WASTE WATER, ABOVE GROUND, 5000 GALS; DIAMETER: 5 FT 6 IN; LENGTH: 30 FT A/N: 579169 Permit to Construct Issued: 04/18/17	D209				E74.1, E193.4, E193.5, E193.16
STORAGE TANK, NO. OWS-2 (SIMPLE-CYCLE TURBINES), WASTE WATER, ABOVE GROUND, 5000 GALS; DIAMETER: 5 FT 6 IN; LENGTH: 30 FT A/N: 579170 Permit to Construct Issued: 04/18/17	D210				E74.1, E193.4, E193.5, E193.16

- * (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
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FACILITY PERMIT TO OPERATE AES ALAMITOS, 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
AES ALAMITOS, LLC**

SECTION H: DEVICE ID INDEX

Device Index For Section H			
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D185	11	12	2
C187	11	12	2
C188	11	12	2
S190	12	12	2
D191	14	12	2
C193	14	12	2
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D203	20	12	2
C205	20	12	2
C206	20	12	2
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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:

FACILITY CONDITIONS

F2.1 The operator shall limit emissions from this facility as follows:

CONTAMINANT	EMISSIONS LIMIT
PM2.5	Less than 70 TONS IN ANY ONE YEAR



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

The operator shall not operate any of the Boilers Nos. 1, 2, 3, 4, 5, 6 (Devices D39, D42, D45, D48, D51, D3, respectively), Combined-Cycle Turbines Nos. CCGT-1 and CCGT-2 (Devices D165 and D173, respectively), Auxiliary Boiler (Device D181), or Simple-Cycle Turbines Nos. SCGT-1, SCGT-2, SCGT-3, and SCGT-4 (Devices D185, D191, D197, and D203 respectively) unless compliance with the annual emission limit for PM_{2.5} is demonstrated.

Compliance with the annual emission limit shall be based on a 12-month rolling average basis. The operator shall calculate the PM_{2.5} emissions for the facility by summing the PM_{2.5} emissions for each of the sources by using the equation below.

Facility PM_{2.5}, tons/year = (FF1*EF1 + FF2*EF2 + FF3*EF3 + FF4*EF4 + FF5*EF5 + FF6*EF6 + FF7*EF7 + FF8*EF8 + FF9*EF9 + FF10*EF10 + FF11*EF11 + FF12*EF12 + FF13*EF13)/2000

FF1 = Boiler No. 1 monthly fuel usage in mmscf; EF1 = 1.19 lb/mmscf

FF2 = Boiler No. 2 monthly fuel usage in mmscf; EF2 = 1.19 lb/mmscf

FF3 = Boiler No. 3 monthly fuel usage in mmscf; EF3 = 1.19 lb/mmscf

FF4 = Boiler No. 4 monthly fuel usage in mmscf; EF4 = 1.19 lb/mmscf

FF5 = Boiler No. 5 monthly fuel usage in mmscf; EF5 = 1.19 lb/mmscf

FF6 = Boiler No. 6 monthly fuel usage in mmscf; EF6 = 1.19 lb/mmscf

FF7 = Combined-Cycle Turbine No. CCGT-1 monthly fuel usage in mmscf; EF7 = 3.92 lb/mmscf

FF8 = Combined-Cycle Turbine No. CCGT-2 monthly fuel usage in mmscf; EF8 = 3.92 lb/mmscf

FF9 = Auxiliary Boiler monthly fuel usage in mmscf; EF9 = 7.42 lb/mmscf



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

FF10 = Simple-Cycle Turbine No. SCGT-1 monthly fuel usage in mmscf; EF10 = 7.44 lb/mmscf

FF11 = Simple-Cycle Turbine No. SCGT-2 monthly fuel usage in mmscf; EF11 = 7.44 lb/mmscf

FF12 = Simple-Cycle Turbine No. SCGT-3 monthly fuel usage in mmscf; EF12 = 7.44 lb/mmscf

FF13 = Simple-Cycle Turbine No. SCGT-4 monthly fuel usage in mmscf; EF13 = 7.44 lb/mmscf

Any changes to these emission factors must be approved in advance by the South Coast AQMD in writing and be based on unit specific source tests performed using South Coast AQMD-approved testing protocol.

AES Alamitos, LLC shall submit written reports of the monthly PM_{2.5} compliance demonstration required by this condition. The report submittal shall be included with the semi-annual Title V report as required under Rule 3004(a)(4) (f). Records of the monthly PM_{2.5} compliance demonstration shall be maintained on site for at least five years and made available upon South Coast AQMD request.

For the purpose of this condition, any one year shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12-month period beginning on the first day of each calendar month.

[RULE 1325, 11-4-2016; RULE 1325, 1-4-2019]



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

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]

F18.1 Acid Rain SO₂ Allowance Allocation for affected units are as follows:

Device ID	Boiler ID	Contaminant	Tons in any year
39	Unit 1	SO ₂	2703
42	Unit 2	SO ₂	17
45	Unit 3	SO ₂	81
48	Unit 4	SO ₂	541
51	Unit 5	SO ₂	3866
3	Unit 6	SO ₂	936

a). The allowance allocation(s) shall apply to calendar years 2010 and beyond.

b). The number of allowances allocated to Phase II affected units by U.S. EPA may change in a 1998 revision to 40CFR73 Tables 2,3, and 4. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (see 40 CFR 72.84)

[40CFR 73 Subpart B, 1-11-1993]



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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]

F52.1 This facility is subject to the applicable requirements of the following rules or regulation(s):



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

The facility shall submit a detailed retirement plan for the permanent shutdown of Boilers Nos. 1, 2, 6 and 3 (Devices D39, D42, D3, and D45, respectively), describing in detail the steps and schedule that will be taken to render Boilers Nos. 1, 2, 6, and 3 permanently inoperable.

The retirement plan shall be submitted to SCAQMD within 60 days after Permits to Construct for Combined-Cycle Turbines Nos. CCGT-1 and CCGT-2 (Devices D165 and D173, respectively), common Steam Turbine Generator, and Simple-Cycle Turbines Nos. SCGT-1, SCGT-2, SCGT-3, and SCGT-4 (Devices D185, D191, D197, and D203 respectively) are issued.

AES shall not commence any construction of the Alamitos Energy Project including Gas Turbines Nos. CCGT-1, CCGT-2, SCGT-1, SCGT-2, SCGT-3, and SCGT-4, unless the retirement plan is approved in writing by SCAQMD. If SCAQMD notifies AES that the plan is not approvable, AES shall submit a revised plan addressing SCAQMD's concerns within 30 days.

Within 30 calendar days of actual shutdown but no later than December 29, 2019, AES shall provide SCAQMD with a notarized statement that Boilers Nos. 1, 2, and 6 are permanently shut down and that any re-start or operation of the boilers shall require new Permits to Construct and be subject to all requirements of Nonattainment New Source Review and the Prevention Of Significant Deterioration Program.

AES shall notify SCAQMD 30 days prior to the implementation of the approved retirement plan for permanent shutdown of Boilers Nos. 1, 2, and 6, or advise SCAQMD as soon as practicable should AES undertake permanent shutdown prior to December 29, 2019.

AES shall cease operation of Boilers Nos. 1, 2, and 6 within 90 calendar days of the first fire of Gas Turbines No. CCGT-1 or CCGT-2, whichever is earlier.

Within 30 calendar days of actual shutdown but no later than December 31, 2020, AES shall provide SCAQMD with a notarized statement that Boiler No. 3 is permanently shut down and that any re-start or operation of the boiler shall require a new Permit to Construct and be subject to all requirements of



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

Nonattainment New Source Review and the Prevention Of Significant Deterioration Program.

AES shall notify SCAQMD 30 days prior to the implementation of the approved retirement plan for permanent shutdown of Boiler No. 3, or advise SCAQMD as soon as practicable should AES undertake permanent shutdown prior to December 31, 2020.

AES shall cease operation of Boiler No. 3 within 90 calendar days of the first fire of Gas Turbines No. SCGT-1, SCGT-2, SCGT-3, or SCGT-4, whichever is earliest.

[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 1313(d), 12-7-1995]

F52.2 This facility is subject to the applicable requirements of the following rules or regulation(s):



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

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

For all circuit breakers at the facility utilizing SF₆, including the circuit breakers serving Combined-Cycle Turbines Nos. CCGT-1 and CCGT-2; common Steam Turbine Generator; and Simple-Cycle Turbines Nos. SCGT-1, SCGT-2, SCGT-3, and SCGT-4, the operator shall install, operate, and maintain enclosed-pressure SF₆ circuit breakers with a maximum annual leakage rate of 0.5 percent by weight. The circuit breakers shall be equipped with a 10 percent by weight leak detection system.

The leak detection system shall be calibrated in accordance with manufacturer's specifications. The manufacturer's specifications and records of all calibrations shall be maintained on site.

The total CO₂e emissions from all circuit breakers shall not exceed 74.55 tons per calendar year.

The operator shall calculate the SF₆ emissions due to leakage from the circuit breakers by using the mass balance in equation DD-1 at 40 CFR Part 98, Subpart DD, on an annual basis.

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD.

[RULE 1714, 12-10-2012]

DEVICE CONDITIONS

A. Emission Limits

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

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

CO	Less than or equal to 95023 LBS IN ANY CALENDAR MONTH
VOC	Less than or equal to 13314 LBS IN ANY CALENDAR MONTH
PM10	Less than or equal to 6324 LBS IN ANY CALENDAR MONTH
SOX	Less than or equal to 3616 LBS IN ANY CALENDAR MONTH
CO	Less than or equal to 180544 LBS IN ANY ONE YEAR
VOC	Less than or equal to 52668 LBS IN ANY ONE YEAR
PM10	Less than or equal to 39440 LBS IN ANY ONE YEAR
SOX	Less than or equal to 7435 LBS IN ANY ONE YEAR



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

For the purposes of this condition, the above emission limits shall be based on the emissions from a single turbine.

The turbine shall not commence with normal operation until the commissioning process has been completed. Normal operation commences when the turbine is able to supply electrical energy to the power grid as required under contract with the relevant entities. The SCAQMD shall be notified in writing once the commissioning process for each turbine is completed.

Normal operation may commence in the same calendar month as the completion of the commissioning process provided the turbine is in compliance with the above emission limits.

The operator shall calculate the monthly emissions for CO, VOC, PM10, and SOx using the equation below.

Monthly Emissions, lb/month = (Monthly fuel usage in mmscf/month) * (Emission factors indicated below)

The following emission factors shall be used to demonstrate compliance with the monthly emission limits.

For commissioning, the emission factors shall be as follows: CO, 61.18 lb/mmcf; VOC, 8.86 lb/mmcf; PM10, 5.11 lb/mmcf; and SOx, 2.92 lb/mmcf.

For normal operation, the emission factors shall be as follows: CO, 15.28 lb/mmcf; VOC, 4.70 lb/mmcf; PM10, 3.92 lb/mmcf; and SOx, 2.24 lb/mmcf.

For a month during which both commissioning and normal operation take place, the monthly emissions shall be the sum of the commissioning emissions and the normal operation emissions.

Compliance with the annual emission limits shall be based on a 12-operating month-rolling-average basis, following completion of the commissioning period.

The emission factors for the monthly emission limits shall be the same as the



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

emission factors used to demonstrate compliance with the annual emission limits, except the annual emission factor for SO_x is 0.75 lb/mmcf.

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD. The records shall include, but not be limited to, natural gas usage in a calendar month and automated monthly and annual calculated emissions.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; **RULE 1303(a)(1)-BACT, 12-6-2002**; **RULE 1304.1, 9-6-2013**; **RULE 1703(a)(2) - PSD-BACT, 10-7-1988**]

[Devices subject to this condition : D165, D173]

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

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 8594 LBS IN ANY CALENDAR MONTH
VOC	Less than or equal to 1973 LBS IN ANY CALENDAR MONTH
PM10	Less than or equal to 4638 LBS IN ANY CALENDAR MONTH
SOX	Less than or equal to 1207 LBS IN ANY CALENDAR MONTH
CO	Less than or equal to 29730 LBS IN ANY ONE YEAR
VOC	Less than or equal to 7510 LBS IN ANY ONE YEAR
PM10	Less than or equal to 14695 LBS IN ANY ONE YEAR
SOX	Less than or equal to 1275 LBS IN ANY ONE YEAR



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

For the purposes of this condition, the above emission limits shall be based on the emissions from a single turbine.

The turbine shall not commence with normal operation until the commissioning process has been completed. Normal operation commences when the turbine is able to supply electrical energy to the power grid as required under contract with the relevant entities. The SCAQMD shall be notified in writing once the commissioning process for each turbine is completed.

Normal operation may commence in the same calendar month as the completion of the commissioning process provided the turbine is in compliance with the above emission limits.

The operator shall calculate the monthly emissions for CO, VOC, PM10, and SOx using the equation below.

Monthly Emissions, lb/month = (Monthly fuel usage in mmscf/month) * (Emission factors indicated below)

The following emission factors shall be used to demonstrate compliance with the monthly emission limits.

For commissioning, the emission factors shall be as follows: CO, 112.03 lb/mmcf; VOC, 3.69 lb/mmcf; PM10, 2.00 lb/mmcf; and SOx, 7.69 lb/mmcf.

For normal operation, the emission factors shall be as follows: CO, 8.84 lb/mmcf; VOC, 3.17 lb/mmcf; PM10, 7.44 lb/mmcf; and SOx, 1.94 lb/mmcf.

For a month during which both commissioning and normal operation take place, the monthly emissions shall be the sum of the commissioning emissions and the normal operation emissions.

Compliance with the annual emission limits shall be based on a 12-operating month-rolling-average basis, following completion of the commissioning period.

The emission factors for the monthly emission limits shall be the same as the



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

emission factors used to demonstrate compliance with the annual emission limits, except the annual emission factor for SO_x is 0.65 lb/mmcf.

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD. The records shall include, but not be limited to, natural gas usage in a calendar month and automated monthly and annual calculated emissions.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; **RULE 1303(a)(1)-BACT, 12-6-2002**; **RULE 1304.1, 9-6-2013**; **RULE 1703(a)(2) - PSD-BACT, 10-7-1988**]

[Devices subject to this condition : D185, D191, D197, D203]

A63.4 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 605 LBS IN ANY CALENDAR MONTH
VOC	Less than or equal to 102 LBS IN ANY CALENDAR MONTH
PM10	Less than or equal to 113.5 LBS IN ANY CALENDAR MONTH
PM2.5	Less than or equal to 113.5 LBS IN ANY CALENDAR MONTH
SOX	Less than or equal to 32 LBS IN ANY CALENDAR MONTH



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

The boiler shall not commence with normal operation until the commissioning process has been completed. The South Coast AQMD shall be notified in writing once the commissioning process for the boiler is completed.

Normal operation may commence in the same calendar month as the completion of the commissioning process provided the boiler is in compliance with the above emission limits.

The operator shall calculate the monthly emissions for CO, VOC, PM10/PM2.5, and SOx using the equation below.

Monthly Emissions, lb/month = (Monthly fuel usage in mmscf/month) * (Emission factors indicated below)

The following emission factors shall be used to demonstrate compliance with the monthly emission limits.

For commissioning, the emission factors shall be as follows: CO, 107.16 lb/mmcf; VOC, 115.56 lb/mmcf; PM10/PM2.5, 7.42 lb/mmcf; and SOx, 2.08 lb/mmcf.

For normal operation, the emission factors shall be as follows: VOC, 6.67 lb/mmcf; PM10/PM2.5, 7.42 lb/mmcf; and SOx, 2.08 lb/mmcf.

For normal operation, the CO emissions shall be measured with certified CO CEMS. For the interim period after commissioning but prior to CEMS certification, and in the event of CEMS failure subsequent to CEMS certification, the emission factor shall be CO, 39.55 lb/mmcf.

For a month during which both commissioning and normal operation take place, the monthly emissions shall be the sum of the commissioning emissions and the normal operation emissions.

The operator shall maintain records in a manner approved by the South Coast AQMD to demonstrate compliance with this condition and the records shall be made available to South Coast AQMD personnel upon request. The records shall



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

include, but not be limited to, natural gas usage in a calendar month.

[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(a)(2) - PSD-BACT, 10-7-1988]

[Devices subject to this condition : D181]

- A99.1 The 16.66 LBS/MMSCF NOX emission limit(s) shall only apply during the turbine commissioning period to report RECLAIM emissions, not to exceed one year after start of unit operations.

The operator shall maintain records of natural gas usage for this period.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D165, D173]

- A99.2 The 8.35 LBS/MMSCF NOX emission limit(s) shall only apply during the interim period after commissioning but prior to CEMS certification to report RECLAIM emissions, not to exceed one year after start of unit operations.

The operator shall maintain records of natural gas usage for this period.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D165, D173]

- A99.3 The 25.24 LBS/MMSCF NOX emission limit(s) shall only apply during the turbine commissioning period to report RECLAIM emissions, not to exceed one year after start of unit operations.

The operator shall maintain records of natural gas usage for this period.

[RULE 2012, 5-6-2005]



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

[Devices subject to this condition : D185, D191, D197, D203]

- A99.4 The 11.21 LBS/MMSCF NOX emission limit(s) shall only apply during the interim period after commissioning but prior to CEMS certification to report RECLAIM emissions, not to exceed one year after start of unit operations.

The operator shall maintain records of natural gas usage for this period.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D185, D191, D197, D203]

- A99.5 The 38.46 LBS/MMSCF NOX emission limit(s) shall only apply during the interim period prior to CEMS certification to report RECLAIM emissions, not to exceed one year after start of unit operation.

The operator shall maintain records of natural gas usage for this period.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D181]

- A99.6 The 104.20 LBS/MMSCF NOX emission limit(s) shall only apply during the boiler commissioning period to report RECLAIM emissions, not to exceed one year after start of unit operations.

The operator shall maintain records of natural gas usage for this period.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D181]

- A195.8 The 2.0 PPMV NOX emission limit(s) is averaged over over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to turbine commissioning, startup, and shutdown periods.



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

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D165, D173]

A195.9 The 1.5 PPMV CO emission limit(s) is averaged over over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to turbine commissioning, startup, and shutdown periods.

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

[Devices subject to this condition : D165, D173]

A195.10 The 2.0 PPMV VOC emission limit(s) is averaged over over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to turbine commissioning, startup, and shutdown periods.

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

[Devices subject to this condition : D165, D173, D185, D191, D197, D203]

A195.11 The 2.5 PPMV NOX emission limit(s) is averaged over over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to turbine commissioning, startup, and shutdown periods.

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D185, D191, D197, D203]

A195.13 The 5.0 PPMV NOX emission limit(s) is averaged over over 1 hour, dry basis at 3 percent oxygen. This limit shall not apply to boiler commissioning and startup periods.

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]

[Devices subject to this condition : D181]



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

A195.14 The 50.0 PPMV CO emission limit(s) is averaged over over 1 hour, dry basis at 3 percent oxygen. This limit shall not apply to boiler commissioning and startup periods..

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

[Devices subject to this condition : D181]

A195.15 The 5.0 PPMV NH₃ emission limit(s) is averaged over 1 hour, dry basis at 15 percent oxygen.

The operator shall calculate and continuously record the NH₃ slip concentration using the following equation:

$$\text{NH}_3 \text{ (ppmvd)} = [a - b * (c * 1.2) / 1,000,000] * 1,000,000 / b, \text{ where:}$$

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 NO_x across the SCR (ppmvd at 15% O₂)

The operator shall install and maintain a NO_x analyzer to measure the SCR inlet NO_x ppmv accurate to within plus or minus 5 percent calibrated at least once every 12 months. The operator shall use the method described above or another alternative method approved by the Executive Officer.

The ammonia slip calculation procedure shall be in effect no later than 90 days after initial startup of the turbine.

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]

[Devices subject to this condition : C170, C178, C188, C194, C200, C206]



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

A195.16 The 5.0 PPMV NH₃ emission limit(s) is averaged over 1 hour, dry basis at 3 percent oxygen.

The operator shall calculate and continuously record the NH₃ slip concentration using the following equation:

$$\text{NH}_3 \text{ (ppmvd)} = [a - b * (c * 1.2) / 1,000,000] * 1,000,000 / b, \text{ where:}$$

$a = \text{NH}_3 \text{ injection rate (lb/hr)} / 17 \text{ (lb/lb-mol)}$

$b = \text{dry exhaust gas flow rate (scf/hr)} / 385.3 \text{ scf/lb-mol}$

$c = \text{change in measured NO}_x \text{ across the SCR (ppmvd at 3\% O}_2\text{)}$

The operator shall install and maintain a NO_x analyzer to measure the SCR inlet NO_x ppmv accurate to within plus or minus 5 percent calibrated at least once every 12 months. The operator shall use the method described above or another alternative method approved by the Executive Officer.

The ammonia slip calculation procedure shall be in effect no later than 90 days after initial startup of the boiler.

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**]

[Devices subject to this condition : C183]

A195.17 The 2.0 PPMV CO emission limit(s) is averaged over over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to turbine commissioning, startup, and shutdown periods.

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



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

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

[Devices subject to this condition : D185, D191, D197, D203]

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 : D165, D173, D185, D191, D197, D203]

B. Material/Fuel Type Limits

B61.1 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. Gaseous fuel samples shall be tested using District Method 307-91 for total sulfur calculated as H2S.

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

[Devices subject to this condition : D165, D173, D185, D191, D197, D203]

C. Throughput or Operating Parameter Limits

C1.3 The operator shall limit the number of start-ups to no more than 62 in any one calendar month.



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

The number of cold startups shall not exceed 15 in any calendar month, with no more than 2 startups in any one day.

The number of cold startups shall not exceed 80 in any calendar year, and the total number of startups shall not exceed 500 in any calendar year.

For the purposes of this condition, a cold startup is defined as a startup which occurs after the combustion turbine has been shut down for 48 hours or more. A cold startup shall not exceed 60 minutes. The NO_x emissions from a cold startup shall not exceed 61 lbs. The CO emissions from a cold startup shall not exceed 325 lbs. The VOC emissions from a cold startup shall not exceed 36 lbs.

For the purposes of this condition, a non-cold startup is defined as a startup which occurs after the combustion turbine has been shut down less than 48 hours. A non-cold startup shall not exceed 30 minutes. The NO_x emissions from a non-cold startup shall not exceed 17 lbs. The CO emissions from a non-cold startup shall not exceed 137 lbs. The VOC emissions from a non-cold startup shall not exceed 25 lbs.

The beginning of startup occurs at initial fire in the combustor and the end of startup occurs when the BACT levels are achieved. If during startup the process is aborted the process will count as one startup.

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D165, D173]

- C1.4 The operator shall limit the number of shut-downs to no more than 62 in any one calendar month.



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

The number of shutdowns shall not exceed 500 in any calendar year.

Each shutdown shall not exceed 30 minutes. The NO_x emissions from a shutdown event shall not exceed 10 lbs. The CO emissions from a shutdown event shall not exceed 133 lbs. The VOC emissions from a shutdown event shall not exceed 32 lbs.

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D165, D173]

- C1.5 The operator shall limit the number of start-ups to no more than 62 in any one calendar month.

The number of startups shall not exceed 2 startups in any one day. The number of startups shall not exceed 500 in any calendar year.

A startup shall not exceed 30 minutes. The NO_x emissions from a startup shall not exceed 16.6 lbs. The CO emissions from a startup shall not exceed 15.4 lbs. The VOC emissions from a startup shall not exceed 2.80 lbs.

The beginning of startup occurs at initial fire in the combustor and the end of startup occurs when the BACT levels are achieved. If during startup the process is aborted the process will count as one startup.

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD.



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

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D185, D191, D197, D203]

- C1.6 The operator shall limit the number of shut-downs to no more than 62 in any one calendar month.

The number of shutdowns shall not exceed 500 in any calendar year.

Each shutdown shall not exceed 13 minutes. The NO_x emissions from a shutdown event shall not exceed 3.12 lbs. The CO emissions from a shutdown event shall not exceed 28.1 lbs. The VOC emissions from a shutdown event shall not exceed 3.06 lbs..

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D185, D191, D197, D203]

- C1.7 The operator shall limit the number of start-ups to no more than 10 in any one calendar month.



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

The number of cold startups shall not exceed 2 in any calendar month, the number of warm startups shall not exceed 4 in any calendar month, and the number of hot starts shall not exceed 4 in any calendar month, with no more than 1 startup in any one day.

The number of cold startups shall not exceed 24 in any calendar year, the number of warm startups shall not exceed 48 in any calendar year, and the number of hot startups shall not exceed 48 in any calendar year.

For the purposes of this condition, a cold startup is defined as a startup which occurs after the auxiliary boiler has been shut down for 48 hours or more. A cold startup shall not exceed 170 minutes. The NOx emissions from a cold startup shall not exceed 4.22 lbs.

For the purposes of this condition, a warm startup is defined as a startup which occurs after the auxiliary boiler has been shut down 10 hours or more but less than 48 hours. A warm startup shall not exceed 85 minutes. The NOx emissions from a warm startup shall not exceed 2.11 lbs.

For the purposes of this condition, a hot startup is defined as a startup which occurs after the auxiliary boiler has been shut down for less than 10 hours. A hot startup shall not exceed 25 minutes. The NOx emissions from a hot startup shall not exceed 0.62 lbs.

The operator shall maintain records in a manner approved by the South Coast AQMD, to demonstrate compliance with this condition and the records shall be made available to South Coast AQMD personnel upon request.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]

[Devices subject to this condition : D181]

C157.1 The operator shall install and maintain a pressure relief valve set at 50 psig.

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



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

[Devices subject to this condition : D163, D164]

D. Monitoring/Testing Requirements

D12.9 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. Continuously record shall be defined as measuring at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

The flow meter shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The operator shall maintain the ammonia injection rate between 44 and 242 pounds per hour, except during startups and shutdowns.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : C170, C178]

D12.10 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. Continuously record shall be defined as measuring at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

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

The exhaust temperature at the inlet of the SCR/CO catalyst shall be maintained between 570 degrees F and 692 degrees F, except during startups and shutdowns.



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

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : C170, C178]

- D12.11 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches water column.

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

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

The pressure differential shall not exceed 1.6 inches water column.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : C170, C178]

- D12.12 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).



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

The operator shall also install and maintain a device to continuously record the parameter being measured. Continuously record shall be defined as measuring at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

The flow meter shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The operator shall maintain the ammonia injection rate between 110 and 180 pounds per hour, except during startups and shutdowns.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : C188, C194, C200, C206]

- D12.13 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. Continuously record shall be defined as measuring at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

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

The exhaust temperature at the inlet of the SCR/CO catalyst shall be maintained between 500 degrees F and 870 degrees F, except during startups and shutdowns.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : C188, C194, C200, C206]



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

D12.14 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches water column.

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

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

The pressure differential shall not exceed 3.0 inches water column.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : C188, C194, C200, C206]

D12.15 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. Continuously record shall be defined as measuring at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

The flow meter shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The operator shall maintain the ammonia injection rate between 0.3 and 3.9 pounds per hour.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]

[Devices subject to this condition : C183]



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

D12.16 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. Continuously record shall be defined as measuring at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

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

The exhaust temperature at the inlet of the SCR/CO catalyst shall be maintained between 415 degrees F and 628 degrees F, except during startups and shutdowns.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]

[Devices subject to this condition : C183]

D12.17 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches water column.

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

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

The pressure differential shall not exceed 2.0 inches water column.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]

[Devices subject to this condition : C183]



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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
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
SOX emissions	AQMD Laboratory Method 307-91	District-approved averaging time	Fuel Sample
VOC emissions	District Method 25.3 Modified	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	EPA Method 201A/District Method 5.1	District-approved averaging time	Outlet of the SCR serving this equipment
PM2.5	EPA Method 201A and 202	District-approved averaging time	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



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

The test shall be conducted after District approval of the source test protocol, but no later than 180 days after initial 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 to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, the combined-cycle turbine and steam turbine generating output in MW-gross and MW-net, and the simple-cycle turbine generating output in MW-gross and MW-net.

The test shall be conducted in accordance with a District approved source test protocol. The protocol shall be submitted to the SCAQMD engineer no later than 90 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 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 sampling time for PM and PM_{2.5} tests shall be 4 hours or longer as necessary to obtain a measureable amount of sample.

The tests shall be conducted when the combined-cycle turbine is operating at loads of 45, 75, and 100 percent of maximum load, and the simple-cycle turbine is operating at loads of 50, 75, and 100 percent of maximum load.

For natural gas fired turbines only, for the purpose of demonstrating compliance with VOC BACT limits as determined by SCAQMD, the operator shall use SCAQMD Method 25.3 modified as follows:

- a) Triplicate stack gas samples extracted directly into Summa canisters, maintaining a final canister pressure between 400-500 mm Hg absolute,
- b) Pressurization of the Summa canisters with zero gas analyzed/certified to less than 0.05 ppmv total hydrocarbons as carbon, and



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

c) Analysis of Summa canisters per the canister analysis portion of AQMD Method 25.3 with a minimum detection limit of 0.3 ppmv or less and reported to two significant figures. The temperature of the Summa canisters when extracting the samples for analysis shall not be below 70 F.

The use of this modified method for VOC compliance determination does not mean that it is more accurate than unmodified 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 BACT level of 2.0 ppmv VOC calculated as carbon for natural gas fired turbines.

For purposes of this condition, an alternative test method may be allowed for any of the above pollutants upon concurrence by EPA, CARB, and SCAQMD.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D165, D173, D185, D191, D197, D203]

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	District-approved averaging time	Fuel Sample
VOC emissions	District Method 25.3 Modified	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	EPA Method 201A/District Method 5.1	District-approved averaging time	Outlet of the SCR serving this equipment



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

The test(s) 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 SCAQMD shall be notified of the date and time of the test at least 10 days prior to the test.

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

For natural gas fired turbines only, for the purpose of demonstrating compliance with VOC BACT limits as determined by SCAQMD, the operator shall use SCAQMD Method 25.3 modified as follows:

- a) Triplicate stack gas samples extracted directly into Summa canisters, maintaining a final canister pressure between 400-500 mm Hg absolute,
- b) Pressurization of the Summa canisters with zero gas analyzed/certified to less than 0.05 ppmv total hydrocarbons as carbon, and
- c) Analysis of Summa canisters per the canister analysis portion of AQMD Method 25.3 with a minimum detection limit of 0.3 ppmv or less and reported to two significant figures. The temperature of the Summa canisters when extracting the samples for analysis shall not be below 70 F.

The use of this modified method for VOC compliance determination does not mean that it is more accurate than unmodified 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 BACT level of 2.0 ppmv VOC calculated as carbon for natural gas fired turbines.

For purposes of this condition, an alternative test method may be allowed for any of the above pollutants upon concurrence by EPA, CARB, and SCAQMD.

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



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

[Devices subject to this condition : D165, D173, D185, D191, D197, D203]

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
NH3 emissions	District method 207.1	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted and the results submitted to the South Coast AQMD within 60 days after the test date. The South Coast 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 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 South Coast AQMD 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, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C170, C178, C188, C194, C200, C206]

D29.5 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
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The operator shall comply with the terms and conditions set forth below:

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
SOX emissions	AQMD Laboratory Method 307-91	District-approved averaging time	Fuel Sample
VOC emissions	District Method 25.3	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	EPA Method 201A/District Method 5.1	District-approved averaging time	Outlet of the SCR serving this equipment
PM2.5	EPA Method 201A and 202	District-approved averaging time	Outlet of the SCR serving this equipment
NH3 emissions	District method 207.1	1 hour	Outlet of the SCR serving this equipment



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

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

For each firing rate, the following operating data shall be included: (1) the exhaust flow rates, in actual cubic feet per minute (acfm), (2) the firing rates in Btu/hour, (3) the exhaust temperature, in degrees F, (4) the oxygen content of the exhaust gases, in percent, and (5) the fuel flow rate.

The test shall be conducted in accordance with a South Coast AQMD approved source test protocol. The protocol shall be submitted to the South Coast AQMD engineer no later than 90 days before the proposed test date and shall be approved by the South Coast AQMD before the test commences.

The test protocol shall include the identity of the testing lab, confirmation that the test lab is approved under the South Coast AQMD Laboratory Approval Program for the required test method for the CO pollutant, a statement from the testing lab certifying that it meets the criteria of Rule 304 (no conflict of interest), and a description of all sampling and analytical procedures.

The sampling facilities shall comply with the South Coast AQMD Guidelines for Construction of Sampling and Testing Facilities, pursuant to Rule 217.

The sampling time for the PM10 and PM2.5 tests shall be 1 hour or longer as necessary to obtain a measureable amount of sample.

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

[RULE 1146, 11-1-2013; RULE 1146, 12-7-2018; 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(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]

[Devices subject to this condition : D181]



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

D29.7 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	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted and the results submitted to the South Coast AQMD within 60 days after the test date. The South Coast 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 quarterly to demonstrate compliance with the ammonia emission limit during the first 12 months of unit operation and thereafter, except that source tests may be conducted annually within 12 months thereafter when four consecutive quarterly source tests demonstrate compliance with the ammonia emission limit. If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the ammonia emissions limits prior to resuming annual source tests.

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 South Coast AQMD 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 1146, 11-1-2013; RULE 1146, 12-7-2018; RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C183]

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



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

CO concentration in ppmv.

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

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

The CEMS shall be installed and operating no later than 90 days after initial start-up of the turbine, and in accordance with an approved SCAQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from SCAQMD.

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, lbs/hr = $K * C_{co} * F_d [20.9 / (20.9\% - \%O_2 d)] [(Q_g * HHV) / 10E+06]$, where:

1. $K = 7.267 * 10E-08$ (lb/scf)/ppm
2. C_{co} = Average of four consecutive 15 min. average CO concentrations, ppm
3. $F_d = 8710$ dscf/MMBTU natural gas
4. $\%O_2 d$ = Hourly average % by volume O₂ dry, corresponding to C_{co}
- Q_g = Fuel gas usage during the hour, scf/hr
6. HHV = Gross high heating value of fuel gas, BTU/scf

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

[Devices subject to this condition : D165, D173, D185, D191, D197, D203]



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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:

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

NO_x 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 in accordance with an approved SCAQMD REG XX CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from SCAQMD.

Rule 2012 provisional RATA testing shall be completed and submitted to the SCAQMD within 90 days of the conclusion of the turbine commissioning period. 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).

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015; RULE 2012, 5-6-2005]

[Devices subject to this condition : D165, D173, D185, D191, D197, D203]

D82.3 The operator shall install and maintain a CEMS to measure the following parameters:



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

NO_x concentration in ppmv.

Concentrations shall be corrected to 3 percent oxygen on a dry basis.

The CEMS shall be installed and operating no later than 90 days after initial start-up of the auxiliary boiler, and in accordance with an approved South Coast AQMD REG XX CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from South Coast AQMD.

Rule 2012 provisional RATA testing shall be completed and submitted to the South Coast AQMD within 90 days of the conclusion of the boiler commissioning period. 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).

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015; RULE 2012, 5-6-2005]

[Devices subject to this condition : D181]

D82.4 The operator shall install and maintain a CEMS to measure the following parameters:

CO concentration in ppmv.

Concentrations shall be corrected to 3 percent oxygen on a dry basis.

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

The CEMS shall be installed and operating no later than 90 days after initial start-up of the turbine, and in accordance with an approved South Coast AQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from South Coast AQMD.

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



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

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

[Devices subject to this condition : D181]

E. Equipment Operation/Construction Requirements

- E74.1 Notwithstanding the requirements of Section E conditions, the Operator may commence the construction of Phase II of this project if all the following condition(s) are met:

The BACT/LAER determination for the Phase II of this project shall be reviewed and modified (by South Coast AQMD) as appropriate at the latest reasonable time which occurs no later than 18 months prior to the commencement of construction of Phase II of the project.

[40CFR 52.21 - PSD, 6-19-1978]

[Devices subject to this condition : D163, D164, D165, C169, C170, D173, C177, C178, D181, C183, D185, C187, C188, D191, C193, C194, D197, C199, C200, D203, C205, C206, D209, D210]

- 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 : D163, D164]

- E193.4 The operator shall upon completion of construction, operate and maintain this equipment according to the following requirements:

In accordance with all air quality mitigation measures stipulated in the final California Energy Commission decision for the 13-AFC-01 project.

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D163, D164, D165, C170, D173, C178, D181, C183, D185, C188, D191, C194, D197, C200, D203, C206, D209, D210]



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

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

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

The Permit to Construct shall expire one year from the issuance date, unless an extension has been granted by the Executive Officer or unless the equipment has been constructed and the operator has notified the Executive Officer prior to the operation of the equipment.

Construction of Phase 1 of the project (defined as the combined cycle turbines and associated control equipment, the auxiliary boiler and associated control equipment, storage tank D163, and oil water separator D209) shall commence within 18 months from the date of the Permit to Construct, unless an extension is granted by the Permitting Authority.

Construction of Phase 2 of the project (defined as the simple cycle turbines and associated control equipment, storage tank D164, and oil water separator D210) shall commence within 18 months of May 31, 2020 unless an extension is granted by the Permitting Authority.

Construction shall not be discontinued for a period of 18 months or more at any time during Phase 1 or Phase 2.

[RULE 205, 1-5-1990; 40CFR 52.21 - PSD, 6-19-1978]

[Devices subject to this condition : D163, D164, D165, C169, C170, D173, C177, C178, D181, C183, D185, C187, C188, D191, C193, C194, D197, C199, C200, D203, C205, C206, D209, D210]

E193.8 The operator shall operate and maintain this equipment according to the following requirements:



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

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

Total commissioning hours shall not exceed 996 hours of fired operation for each turbine from the date of initial turbine start-up. Of the 996 hours, commissioning hours without control shall not exceed 216 hours.

Two turbines may be commissioned at the same time.

The operator shall vent this equipment to the CO oxidation catalyst and SCR control system whenever the turbine is in operation after commissioning is completed.

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD. The records shall include, but not be limited to, the total number of commissioning hours, number of commissioning hours without control, and natural gas fuel usage.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D165, D173]

E193.9 The operator shall operate and maintain this equipment according to the following requirements:



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Total commissioning hours shall not exceed 280 hours of fired operation for each turbine from the date of initial turbine start-up. Of the 280 hours, commissioning hours without control shall not exceed 4 hours.

Four turbines may be commissioned at the same time.

The operator shall vent this equipment to the CO oxidation catalyst and SCR control system whenever the turbine is in operation after commissioning is completed.

The operator shall provide the SCAQMD with written notification of the initial startup date. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition and the records shall be made available to District personnel upon request. The records shall include, but not be limited to, the total number of commissioning hours, number of commissioning hours without control, and natural gas fuel usage.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D185, D191, D197, D203]

E193.10 The operator shall operate and maintain this equipment according to the following requirements:



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

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

The total commissioning period shall not exceed 100 hours of fired operation for the auxiliary boiler from the date of initial boiler start-up.

The operator shall vent this equipment to the SCR control system whenever the auxiliary boiler is in operation after commissioning is completed.

The operator shall provide the South Coast AQMD with written notification of the initial startup date. The operator shall maintain records in a manner approved by the South Coast AQMD to demonstrate compliance with this condition and the records shall be made available to South Coast AQMD personnel upon request. The records shall include, but not be limited to, the number of commissioning hours and natural gas fuel usage.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]

[Devices subject to this condition : D181]

E193.11 The operator shall upon completion of construction, operate and maintain this equipment according to the following requirements:

The 1000 lbs per gross megawatt-hours CO₂ emission limit (inclusive of degradation) shall only apply if this turbine supplies greater than 1,481,141 MWh-net electrical output to a utility power distribution system on both a 12-operating-month and a 3-year rolling average basis.

Compliance with the 1000 lbs per gross megawatt-hours CO₂ emission limit (inclusive of degradation) shall be determined on a 12-operating-month rolling average basis.

This turbine shall be operated in compliance with all applicable requirements of 40 CFR 60 Subpart TTTT.

[40CFR 60 Subpart TTTT, 10-23-2015]

[Devices subject to this condition : D165, D173]



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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:

E193.12 The operator shall upon completion of construction, operate and maintain this equipment according to the following requirements:

The 120 lbs/MMBtu CO₂ emission limit shall only apply if this turbine supplies no more than 1,481,141 MWh-net electrical output to a utility power distribution system on either a 12-operating-month or a 3-year rolling average basis.

Compliance with the 120 lbs/MMBtu CO₂ emission limit shall be determined on a 12-operating-month rolling average basis.

This turbine shall be operated in compliance with all applicable requirements of 40 CFR 60 Subpart TTTT.

[40CFR 60 Subpart TTTT, 10-23-2015]

[Devices subject to this condition : D165, D173]

E193.13 The operator shall upon completion of construction, operate and maintain this equipment according to the following requirements:

The 120 lbs/MMBtu CO₂ emission limit for non-base load turbines shall apply.

Compliance with the 120 lbs/MMBtu CO₂ emission limit shall be determined on a 12-operating-month rolling average basis.

This turbine shall be operated in compliance with all applicable requirements of 40 CFR 60 Subpart TTTT, including applicable requirements for recordkeeping and reporting.

[40CFR 60 Subpart TTTT, 10-23-2015]

[Devices subject to this condition : D185, D191, D197, D203]

E193.14 The operator shall upon completion of construction, operate and maintain this equipment according to the following requirements:



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

The operator shall record the total net power generated in a calendar month in megawatt-hours.

The operator shall calculate and record greenhouse gas emissions for each calendar month using the following formula:

$$\text{GHG} = 61.41 * \text{FF}$$

Where GHG is the greenhouse gas emissions in tons of CO₂ and FF is the monthly fuel usage in millions standard cubic feet.

The operator shall calculate and record the CO₂ emissions in pounds per net megawatt-hour based on a 12-month rolling average. The CO₂ emissions from this equipment shall not exceed 610,480 tons per year per turbine on a 12-month rolling average basis. The calendar annual average CO₂ emissions shall not exceed 937.88 lbs per gross megawatt-hours (inclusive of equipment degradation).

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD.

[RULE 1714, 12-10-2012]

[Devices subject to this condition : D165, D173]

E193.15 The operator shall upon completion of construction, operate and maintain this equipment according to the following requirements:



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The operator shall record the total net power generated in a calendar month in megawatt-hours.

The operator shall calculate and record greenhouse gas emissions for each calendar month using the following formula:

$$\text{GHG} = 61.41 * \text{FF}$$

Where GHG is the greenhouse gas emissions in tons of CO₂ and FF is the monthly fuel usage in millions standard cubic feet.

The operator shall calculate and record the CO₂ emissions in pounds per net megawatt-hour based on a 12-month rolling average. The CO₂ emissions from this equipment shall not exceed 120,765 tons per year per turbine on a 12-month rolling average basis. The calendar annual average CO₂ emissions shall not exceed 1356.03 lbs per gross megawatt-hours (inclusive of equipment degradation).

The operator shall maintain records to demonstrate compliance with this condition and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD.

[RULE 1714, 12-10-2012]

[Devices subject to this condition : D185, D191, D197, D203]

E193.16 The operator shall construct, operate, and maintain this equipment according to the following requirements:

The equipment shall be equipped with a fixed cover to minimize VOC emissions.

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

[Devices subject to this condition : D209, D210]



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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:

E448.1 The operator shall comply with the following requirements:

The total electrical output on a gross basis from Combined-Cycle Turbines Nos. CCGT-1 and CCGT-2 (Devices D165 and D173, respectively), common Steam Turbine Generator, and Simple-Cycle Turbines Nos. SCGT-1, SCGT-2, SCGT-3, and SCGT-4 (Device D185, D191, D197, and D203, respectively) shall not exceed 1094.7 MW-gross at 59 deg F.

The gross electrical output shall be measured at the single generator serving each of the combined-cycle turbines, the single generator serving the common steam turbine, and the single generator servicing each of the simple-cycle turbines. The monitoring equipment shall meet ANSI Standard No. C12 or equivalent, and have an accuracy of +/- 0.2 percent. The gross electrical output from the generators shall be recorded at the CEMS DAS over a 15-minute averaging time period.

The operator shall record and maintain written records of the maximum amount of electricity produced from this equipment and shall make such records available to the Executive Officer upon request. The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D165, D173, D185, D191, D197, D203]

H. Applicable Rules

H23.7 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
CO	District Rule	1146
NOX	District Rule	1146
NOX	District Rule	1100



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

[RULE 1100, 12-7-2018; **RULE 1146, 11-1-2013**; RULE 1146, 12-7-2018]

[Devices subject to this condition : D181]

I. Administrative

- I297.1 This equipment shall not be operated unless the facility holds 108377 pounds of NO_x RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[**RULE 2005, 6-3-2011**; **RULE 2005, 12-4-2015**]

[Devices subject to this condition : D165]

- I297.2 This equipment shall not be operated unless the facility holds 108377 pounds of NO_x RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[**RULE 2005, 6-3-2011**; **RULE 2005, 12-4-2015**]

[Devices subject to this condition : D173]



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

- I297.3 This equipment shall not be operated unless the facility holds 68575 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D185]

- I297.4 This equipment shall not be operated unless the facility holds 68575 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D191]

- I297.5 This equipment shall not be operated unless the facility holds 68575 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D197]



FACILITY PERMIT TO OPERATE AES ALAMITOS, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

I297.6 This equipment shall not be operated unless the facility holds 68575 pounds of NO_x RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D203]

I297.7 This equipment shall not be operated unless the facility holds 1351 pounds of NO_x RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D181]

K. Record Keeping/Reporting

K40.4 The operator shall provide to the District a source test report in accordance with the following specifications:



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

Source test results shall be submitted to the District no later than 90 days after the source tests required by conditions D29.2, D29.3, and D29.4 are conducted.

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

All exhaust flow rates 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, the 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 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015]

[Devices subject to this condition : D165, D173, D185, D191, D197, D203]

- K40.5 The operator shall provide to the District a source test report in accordance with the following specifications:



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

Source test results shall be submitted to the South Coast AQMD no later than 90 days after the source tests required by conditions D29.5 and D29.7 are conducted.

Emission data shall be expressed in terms of concentration (ppmv), corrected to 3 percent oxygen (dry basis), mass rate (lbs/hr), lbs/MM cubic feet, and lbs/MMBtu. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

All moisture concentration shall be expressed in terms of percent corrected to 3 percent oxygen.

Source test results shall also include, for each firing rate, the following operating data: (1) the exhaust flow rates, in actual cubic feet per minute (acfm), (2) the firing rates in Btu/hour, (3) the exhaust temperature, in degrees F, (4) the oxygen content of the exhaust gases, in percent, and (5) the fuel flow rate.

[RULE 1146, 11-1-2013; RULE 1146, 12-7-2018; 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(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]

[Devices subject to this condition : D181]