

DOCKETED

Docket Number:	12-AFC-02C
Project Title:	Huntington Beach Energy Project - Compliance
TN #:	214532
Document Title:	Huntington Beach Energy Project (HBEP) Draft Facility Permit for Final Determination of Compliance (FDOC) Package
Description:	HBEP - Draft Facility Permit for FDOC
Filer:	Catherine Rodriguez
Organization:	South Coast Air Quality Management District
Submitter Role:	Public Agency
Submission Date:	11/18/2016 5:24:48 PM
Docketed Date:	11/18/2016

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, 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 3: Power Generation - Gas Turbines					

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

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

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 3: Power Generation - Gas Turbines					
GAS TURBINE, UNIT NO. 1, COMBINED CYCLE, GE MODEL 7FA.05, NATURAL GAS, 2273 MMBTU/HR AT 32 DEGREES F WITH DRY LOW NOX COMBUSTOR, GE DLN 2.6 WITH A/N:	D115	C120 C121 S123	NOX: MAJOR SOURCE**; SOX: PROCESS UNIT**	CO: 2 PPMV (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; CO2: 1000 LBS/GROSS MWH (8) [40CFR 60 Subpart TTTT, 10-23-2015]; NOX: 2 PPMV (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]; NOX: 15 PPMV (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 16.66 LBS/MMSCF (1) [RULE 2012, 12-4-2015]; PM: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 0.1 GRAINS/SCF (5) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 8.5 LBS/HR (5B) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2) -Offset, 12-6-2002]; PM: 11 LBS/HR (5) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SOX: 0.06 LBS/MMBTU (8) [40CFR 60 Subpart KKKK, 7-6-2006]; SOX: 0.71 LBS/MMSCF (1) [RULE 2011, 12-4-2015]; VOC: 2 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT,	A63.6, A63.7, A99.4, A195.6, A195.7, A195.8, A195.9, A327.1, B61.1, C1.7, C1.8, C1.9, D29.5, D29.6, D29.7, D82.3, D82.4, E193.3, E193.4, E193.5, E193.6, E448.1, I297.1, I298.1, K40.3, K67.5

* (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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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 3: Power Generation - Gas Turbines					
GENERATOR, 236.1 MW GROSS AT 32 DEGREES F GENERATOR, HEAT RECOVERY STEAM TURBINE, STEAM, COMMON WITH GAS TURBINE NO. 2, 221.4 MW GROSS AT 32 DEGREES F				<i>12-6-2002]</i>	
CO OXIDATION CATALYST, BASF, SERVING GAS TURBINE NO. 1, WITH 328.8 CU FT OF TOTAL CATALYST VOLUME A/N:	C120	D115			D12.10, E193.3, E193.4
SELECTIVE CATALYTIC REDUCTION, CORMETECH, TITANIUM/VANADIUM/TUNGSTEN, SERVING UNIT NO 1, 2761 CU FT OF TOTAL CATALYST VOLUME, WIDTH: 1 FT 6 IN; HEIGHT: 71 FT 7.2 IN; LENGTH: 25 FT 8.4 IN WITH A/N: AMMONIA INJECTION, INJECTION GRID	C121	D115		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.10, D12.7, D12.8, D12.9, E193.3, E193.4
STACK, SERVING TURBINE NO. 1, HEIGHT: 150 FT ; DIAMETER: 20 FT A/N:	S123	D115			

* (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.)
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Process 3: Power Generation - Gas Turbines					
GAS TURBINE, UNIT NO. 2, COMBINED CYCLE, GE MODEL 7FA.05, 2273 MMBTU/HR AT 32 DEGREES F WITH DRY LOW NOX COMBUSTOR, GE DLN 2.6 WITH A/N:	D124	C129 C130 S132	NOX: MAJOR SOURCE**; SOX: PROCESS UNIT**	CO: 2 PPMV (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; CO2: 1000 LBS/GROSS MWH (8A) [40CFR 60 Subpart TTTT, 10-23-2015]; NOX: 2 PPMV (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]; NOX: 15 PPMV (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 16.66 LBS/MMSCF (1) [RULE 2012, 12-4-2015]; PM: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 0.01 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM: 11 LBS/HR (5) [RULE 409, 8-7-1981]; PM10: 8.5 LBS/HR (5B) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SOX: 0.06 LBS/MMBTU (8) [40CFR 60 Subpart KKKK, 7-6-2006]; SOX: 0.71 LBS/MMSCF (1) [RULE 2011, 12-4-2015]; VOC: 2 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A63.6, A63.7, A99.4, A195.6, A195.7, A195.8, A195.9, A327.1, B61.1, C1.7, C1.8, C1.9, D29.5, D29.6, D29.7, D82.3, D82.4, E193.3, E193.4, E193.5, E193.6, E448.1, I297.1, I298.1, K40.3, K67.5

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

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 3: Power Generation - Gas Turbines					
GENERATOR, 236.1 MW GROSS AT 32 DEGREES F GENERATOR, HEAT RECOVERY STEAM TURBINE, STEAM, COMMON WITH GAS TURBINE NO. 1, 221.4 MW GROSS AT 32 DEGREES F					
CO OXIDATION CATALYST, BASF, SERVING GAS TURBINE NO. 2, WITH 328.8 CU FEET OF TOTAL CATALYST VOLUME A/N:	C129	D124			D12.10, E193.3, E193.4
SELECTIVE CATALYTIC REDUCTION, CORMETECH, TITANIUM/VANADIUM/TUNGSTEN, SERVING UNIT NO. 2, 2761 CU FT OF TOTAL CATALYST VOLUME, WIDTH: 1 FT 6 IN; HEIGHT: 71 FT 7.2 IN; LENGTH: 25 FT 8.4 IN WITH A/N: AMMONIA INJECTION, INJECTION GRID	C130	D124		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.10, D12.7, D12.8, D12.9, E193.3, E193.4
STACK, SERVING UNIT NO. 2, HEIGHT: 150 FT ; DIAMETER: 20 FT A/N:	S132	D124			

- * (1) (1A) (1B) Denotes RECLAIM emission factor
- (3) Denotes RECLAIM concentration limit
- (5) (5A) (5B) Denotes command and control emission limit
- (7) Denotes NSR applicability limit
- (9) See App B for Emission Limits
- (2) (2A) (2B) Denotes RECLAIM emission rate
- (4) Denotes BACT emission limit
- (6) Denotes air toxic control rule limit
- (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 3: Power Generation - Gas Turbines					
GAS TURBINE, UNIT NO. 3 SIMPLE CYCLE, GE MODEL LMS100PB, NATURAL GAS, 885 MMTU/HR AT 65.8 DEGREES F, INTERCOOLED, WITH DRY LOW NOX COMBUSTOR WITH A/N:	D133	C135 C136 S138	NOX: MAJOR SOURCE**; SOX: PROCESS UNIT**	CO: 2 PPMV (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; NOX: 2.5 PPMV (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]; NOX: 15 PPMV (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 25.11 LBS/MMSCF (1) [RULE 2012, 12-4-2015]; PM: 0.01 GRAINS/SCF (5A) [RULE 409, 8-7-1981]; PM: 0.1 GRAINS/SCF (5) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 6.24 LBS/HR (5B) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; PM: 11 LBS/HR (5) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SOX: 0.06 LBS/MMBTU (8) [40CFR 60 Subpart KKKK, 7-6-2006]; SOX: 0.71 LBS/MMSCF (1) [RULE 2011, 12-4-2015]; VOC: 2 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A63.8, A63.9, A99.5, A195.8, A195.11, A195.12, A327.1, B61.1, C1.10, C1.11, C1.12, D29.5, D29.6, D29.7, D82.3, D82.4, E193.3, E193.4, E193.7, E193.8, E448.2, E448.3, I297.2, I298.2, K40.3, K67.6

* (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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 (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (9) See App B for Emission Limits
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 3: Power Generation - Gas Turbines					
GENERATOR, 100.8 MW GROSS AT 65.8 DEGREES F					
CO OXIDATION CATALYST, BASF CAMEL, SERVING GAS TURBINE NO. 3, WITH 165.6 CU FT OF TOTAL CATALYST VOLUME A/N:	C135	D133			D12.17, E193.3, E193.4
SELECTIVE CATALYTIC REDUCTION, CORMETECH CHMT, TITANIUM/VANADIUM/TUNGSTE N, SERVING UNIT NO. 3, WITH 622 CU FT OF TOTAL CATALYST VOLUME, WIDTH: 4 FT 10.8 IN; HEIGHT: 11 FT 6 IN; LENGTH: 11 FT WITH A/N: AMMONIA INJECTION, INJECTION GRID	C136	D133		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.10, D12.11, D12.12, D12.13, E193.3, E193.4
STACK, SERVING UNIT NO. 3, HEIGHT: 80 FT ; DIAMETER: 13 FT 6 IN A/N:	S138	D133			

* (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.)
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 3: Power Generation - Gas Turbines					
CO OXIDATION CATALYST, BASF CAMEL, SERVING GAS TURBINE NO. 4, WITH 165.6 CU FT OF TOTAL CATALYST VOLUME, HEIGHT: 120 FT ; DIAMETER: 18 FT A/N:	C141	D139			D12.17, E193.3, E193.4
SELECTIVE CATALYTIC REDUCTION, CORMETECH CMHT, TITANIUM/VANADIUM/TUNGSTEN, SERVING UNIT NO. 4, WITH 622 CU FT OF TOTAL CATALYST VOLUME, WIDTH: 4 FT 10.8 IN; HEIGHT: 11 FT 6 IN; LENGTH: 11 FT WITH A/N: AMMONIA INJECTION, INJECTION GRID	C142	D139		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.10, D12.11, D12.12, D12.13, E193.3, E193.4
STACK, SERVING UNIT NO. 4, HEIGHT: 80 FT ; DIAMETER: 13 FT 6 IN A/N:	S144	D139			

* (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.)
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 3: Power Generation - Gas Turbines					
BOILER, AUXILIARY, RENTECH, MODEL D TYPE, WATER TUBE, NATURAL GAS, WITH LOW NOX BURNER, FLUE GAS RECIRCULATION, 71 MMBTU/HR WITH A/N: BURNER, JZHC/COEN RMB, NATURAL GAS, WITH LOW NOX BURNER, FLUE GAS RECIRCULATION, 71 MMBTU/HR	D145	C147 S149		CO: 50 PPMV NATURAL GAS (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]; CO: 400 PPMV NATURAL GAS (5) [RULE 1146, 11-1-2013]; CO: 2000 PPMV NATURAL GAS (5A) [RULE 407, 4-2-1982]; NOX: 5 PPMV NATURAL GAS (4) [RULE 2005, 12-4-2015]; NOX: 49.18 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 12-4-2015]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 12-4-2015]	A63.10, A195.13, A195.14, B61.1, C1.13, C1.14, D29.6, D29.8, D29.9, D82.5, E193.3, E193.4, I297.3, I298.3, 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
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Process 3: Power Generation - Gas Turbines					
SELECTIVE CATALYTIC REDUCTION, BABCOCK AND WILCOX, VANADIUM, SERVING THE AUXILIARY BOILER, WITH 46 CU FT OF TOTAL CATALYST VOLUME WITH A/N: AMMONIA INJECTION, INJECTION GRID	C147	D145		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.15, D12.14, D12.15, D12.16, E193.3, E193.4
STACK, SERVING THE AUXILIARY BOILER, HEIGHT: 80 FT ; DIAMETER: 3 FT A/N:	S149	D145			
STORAGE TANK, HORIZONTAL, AQUEOUS AMMONIA, 19 PERCENT, 35000 GALS; DIAMETER: 13 FT ; LENGTH: 45 FT A/N:	D150				C157.1, E144.1, E193.3, E193.4
STORAGE TANK, HORIZONTAL, NATURAL GAS, AQUEOUS AMMONIA, 19 PERCENT, 15000 GALS; DIAMETER: 6 FT ; LENGTH: 18 FT A/N:	D151				C157.1, E144.1, E193.3, E193.4
OIL WATER SEPARATOR A/N:	D152				
OIL WATER SEPARATOR, HEAT RECOVERY STEAM A/N:	D153				

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 (2) (2A) (2B) Denotes RECLAIM emission rate
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 (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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 (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
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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 HUNTINGTON BEACH, LLC

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No.	Process	System
D115	3	3	0
C120	3	3	0
C121	3	3	0
S123	3	3	0
D124	5	3	0
C129	5	3	0
C130	5	3	0
S132	5	3	0
D133	7	3	0
C135	7	3	0
C136	7	3	0
S138	7	3	0
D139	8	3	0
C141	9	3	0
C142	9	3	0
S144	9	3	0
D145	10	3	0
C147	11	3	0
S149	11	3	0
D150	11	3	0
D151	11	3	0
D152	11	3	0
D153	11	3	0

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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 100 TONS IN ANY ONE YEAR

For purposes of demonstrating compliance with the 100 tons per year limit the operator shall sum the PM2.5 emissions for each of the sources at this facility by calculating a 12 month rolling average as follows:

Using the calendar monthly fuel use data and following emission factors for each combined cycle turbine $PM_{2.5} = 3.94 \text{ lbs/mmcf}$, for each simple cycle turbine $PM_{2.5} = 7.43 \text{ lbs/mmcf}$, for the auxiliary boiler $PM_{2.5} = 7.54 \text{ lbs/mmcf}$, for Boiler 1 $PM_{2.5} = 1.86 \text{ lbs/mmcf}$, for Boiler 2 $PM_{2.5} = 2.1 \text{ lbs/mmcf}$. For each emergency engine using the rated hp and the calendar monthly hourly usage data and the following emission factor $PM_{2.5} = 0.38 \text{ gr/bhp-hr}$.

The operator may apply to change the factors, via permit application, once a different value is demonstrated, subject to SCAQMD review of testing procedures and protocols.

The operator shall submit written reports of the monthly PM2.5 compliance demonstrations 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 PM2.5 compliance demonstrations shall be maintained on site for at least five years and made available upon SCAQMD request.

[RULE 1325, 12-5-2014]

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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]

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

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

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

purchase records of fuel oil and sulfur content of the fuel

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

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

Device ID	Boiler ID	Contaminant	Tons in any year
22	Boiler No. 1	SO2	1153
25	Boiler No. 2	SO2	970
98	Boiler No. 3	SO2	62
104	Boiler No. 4	SO2	76

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

- 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]

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 Huntington Beach (HB) Boilers 1 and 2 and Redondo Beach (RB) Boiler 7 describing in detail the steps and schedule that will be taken to render the boilers permanently inoperable. The retirement plan shall be submitted to SCAQMD within 60 days after the Permits to Construct are issued for gas turbines CCTG 1, CCTG 2, SCTG 1, and SCTG 2.

AES shall not commence any construction of HB Boilers 1 and 2 and RB Boiler 7 repowering project equipment including gas turbines CCTG 1, CCTG 2, SCTG 1, SCTG 2, Auxiliary Boiler, ammonia storage tanks, or the oil water separators, 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, or by no later than November 1, 2019, AES shall provide SCAQMD with a notarized statement that HB Beach Boiler 1 and RB Boiler 7 are permanently shutdown and that any re start or operation of the units shall require new Permits to Construct and be subject to all requirements of non-attainment new source review and the prevention of significant deterioration program.

Within 30 calendar days of actual shutdown, or by no later than December 31, 2020, AES shall provide SCAQMD with a notarized statement that HB Beach Boiler 2 is permanently shutdown and that any re start or operation of the unit shall require a new Permit to Construct and be subject to all requirements of non-attainment 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 HB Boiler 1 and RB Boiler 7, or advise SCAQMD as soon practicable should AES undertake permanent shutdown prior to November 1, 2019.

AES shall notify SCAQMD 30 days prior to the implementation of the approved retirement plan for permanent shutdown of HB Boiler 2, or advise SCAQMD as soon practicable should AES undertake permanent shutdown prior to December

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

31, 2020.

AES shall cease operation of HB Boiler 1 within 90 calendar days of the first fire of either CCTG 1 or CCTG 2, whichever is earlier. AES shall cease operation of HB Boiler 2 within 90 calendar days of the first fire of either SCTG 1 or SCTG 2, whichever is earlier. AES shall cease operation of RB Boiler 7 prior to the first fire of either CCTG 1 or CCTG 2, whichever is earlier.

At least 6 months prior to November 1, 2019, AES may submit a permit modification application requesting the permission to shutdown a combination of boilers other than HB Boiler 1, HB Boiler 2, and RB Boiler 7 to offset the increases for this project. The other boilers must be located at AES facilities Huntington Beach GS, Redondo Beach GS, or Alamitos GS, and approval of the application must be received prior to any changes being made to the shutdowns outlined in this condition.

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

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

For all circuit breakers at the facility utilizing SF6, the operator shall install, operate, and maintain enclosed-pressure SF6 circuit breakers with a maximum annual leak 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 all records of calibrations shall be maintained on site.

The total CO₂e emissions from all circuit breakers shall not exceed 71.8 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. Records of such calculations shall be maintained on site.

[RULE 1714, 12-10-2012]

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

F52.3 This facility is subject to the applicable requirements of the following rules or regulation(s):

Rule 1304.1 Electric Generating Fee for Use of Offset Exemption

The owner/operator shall submit the annual payment for PM10 and VOC, calculated in accordance with the rule and approved by the Executive Officer, on or before the anniversary date of the commencement of operation. The owner or operator may elect to switch to the single payment option upon submittal of a written request to the Executive Officer.

[RULE 1304.1, 9-6-2013]

DEVICE CONDITIONS

A. Emission Limits

A63.6 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 3090 LBS IN ANY ONE MONTH
CO	Less than or equal to 99076 LBS IN ANY ONE MONTH
VOC	Less than or equal to 14109 LBS IN ANY ONE MONTH

The above limits apply during commissioning. The above limits apply to each turbine

The operator shall calculate compliance with the emission limit(s) by using fuel use data and the following emission factors: VOC: 8.86 lbs/mmcf, PM10: 5.11 lbs/mmcf, and CO: 61.18 lbs/mmcf.

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

[Devices subject to this condition : D115, D124]

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

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

A63.7 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 6324 LBS IN ANY ONE MONTH
CO	Less than or equal to 24720 LBS IN ANY ONE MONTH
VOC	Less than or equal to 7611 LBS IN ANY ONE MONTH

The above limits apply after the equipment is commissioned. The above limits apply to each turbine.

The operator shall calculate compliance with the emission limit(s) by using fuel use data and the following emission factors: VOC: 2.66 lbs/mmcf, PM10: 3.94 lbs/mmcf.

The operator shall calculate compliance with the emission limits for CO after the CO CEMS certification based upon readings from the SCAQMD certified CEMS.

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

[Devices subject to this condition : D115, D124]

A63.8 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 4643 LBS IN ANY ONE MONTH
CO	Less than or equal to 5545 LBS IN ANY ONE MONTH
VOC	Less than or equal to 1972 LBS IN ANY ONE MONTH

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

The above limits apply after the equipment is commissioned. The above limits apply to each turbine.

The operator shall calculate compliance with the emission limit(s) by using fuel use data and the following emission factors: VOC: 2.74 lbs/mmcf, PM10: 7.43 lbs/mmcf.

The operator shall calculate compliance with the emission limits for CO after the CO CEMS certification based upon readings from the SCAQMD certified CEMS.

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

[Devices subject to this condition : D133, D139]

A63.9 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 1747 LBS IN ANY ONE MONTH
CO	Less than or equal to 25449 LBS IN ANY ONE MONTH
VOC	Less than or equal to 836 LBS IN ANY ONE MONTH

The above limits apply during commissioning. The above limits apply to each turbine.

The operator shall calculate compliance with the emission limit(s) by using fuel use data and the following emission factors: VOC: 3.67 lbs/mmcf, PM10: 7.67 lbs/mmcf, and CO: 111.76 lbs/mmcf.

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

[Devices subject to this condition : D133, D139]

A63.10 The operator shall limit emissions from this equipment as follows:

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

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 120 LBS IN ANY ONE MONTH
CO	Less than or equal to 650 LBS IN ANY ONE MONTH
VOC	Less than or equal to 87 LBS IN ANY ONE MONTH

The operator shall calculate compliance with the emission limit(s) by using fuel use data and the following emission factors: VOC: 5.47 lbs/mmcf, PM10: 7.54 lbs/mmcf, CO: 41.9 lbs/mmcf.

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

[Devices subject to this condition : D145]

A99.4 The 16.66 LBS/MMSCF NOX emission limit(s) shall only apply during the first year of operation prior to CEMS certification for reporting NOx emissions..

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D115, D124]

A99.5 The 25.11 LBS/MMCF NOX emission limit(s) shall only apply during the first year of operation prior to CEMS certification for reporting NOx emissions..

[RULE 2012, 12-4-2015]

[Devices subject to this condition : D133, D139]

A195.6 The 2.0 PPMV NOX emission limit(s) is averaged over 60 minutes at 15 percent O2, dry. This limit shall not apply during commissioning, turbine start ups and turbine shutdowns.

[RULE 1703 - PSD Analysis, 10-7-1988; RULE 2005, 6-3-2011]

[Devices subject to this condition : D115, D124]

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

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

A195.7 The 1.5 PPMV CO emission limit(s) is averaged over 60 minutes at 15 percent O₂, dry. This limit shall not apply during commissioning, turbine start ups and turbine shutdowns.

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

[Devices subject to this condition : D115, D124]

A195.8 The 2.0 PPMV VOC emission limit(s) is averaged over 60 minutes at 15 percent O₂, dry. This limit shall not apply during commissioning, turbine start ups and turbine shutdowns.

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

[Devices subject to this condition : D115, D124, D133, D139]

A195.9 The 1000 LBS/MW-HR CO₂ emission limit(s) is averaged over over a rolling 12 operating month basis. The limit shall only apply if the turbine supplies more than 1,519,500 MWh net electrical output to a utility distribution system over a rolling 12 operating month basis and a 3 year rolling average basis..

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

[Devices subject to this condition : D115, D124]

A195.10 The 5 PPMV NH₃ emission limit(s) is averaged over 60 minutes at 15% O₂, dry basis. The operator shall calculate and continuously record the NH₃ slip concentration using the following:.

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

$$\text{NH}_3 \text{ (ppmv)} = [a-b*(c*1.2)/1E+06]*1E+06/b.$$

where

1. a = NH₃ injection rate (lbs/hr)/17(lb/lb-mol)
2. b = dry exhaust gas flow rate (scf/hr)/385.3 scf/lb-mol)
3. 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 plus or minus 5 percent calibrated at least once every twelve months. The NO_x analyzer shall be installed and operated within 90 days of initial start-up..

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..

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

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

[Devices subject to this condition : C121, C130, C136, C142]

A195.11 The 2.5 PPMV NO_x emission limit(s) is averaged over 60 minutes at 15 percent O₂, dry. This limit shall not apply during commissioning, turbine start ups and turbine shutdowns..

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

[Devices subject to this condition : D133, D139]

A195.12 The 2.0 PPMV CO emission limit(s) is averaged over 60 minutes at 15 percent O₂, dry. This limit shall not apply during commissioning, turbine start ups and turbine shutdowns..

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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]

[Devices subject to this condition : D133, D139]

A195.13 The 5.0 PPMV NOX emission limit(s) is averaged over 60 minutes at 3 percent O₂, dry. This limit shall not apply during boiler start ups..

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D145]

A195.14 The 50.0 PPMV CO emission limit(s) is averaged over 60 minutes at 3 percent O₂, dry. This limit shall not apply during boiler start ups..

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988]

[Devices subject to this condition : D145]

A195.15 The 5 PPMV NH₃ emission limit(s) is averaged over 60 minutes at 3% O₂, dry basis. The operator shall calculate and continuously record the NH₃ slip concentration using the following.

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

$$\text{NH}_3 \text{ (ppmv)} = [a-b*(c*1.2)/1E+06]*1E+06/b.$$

where,

1. a = NH₃ injection rate (lbs/hr)/17(lb/lb-mol)
2. b = dry exhaust gas flow rate (scf/hr)/385.3 scf/lb-mol)
3. c = change in measured NO_x across the SCR (ppmvd at 3% O₂)

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

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

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

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

[Devices subject to this condition : C147]

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 : D115, D124, D133, D139]

B. Material/Fuel Type Limits

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

B61.1 The operator shall not use natural gas containing the following specified compounds:

Compound	grain per 100 scf
H2S greater than	.25

This concentration limit is an annual average based on monthly sample 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(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D115, D124, D133, D139, D145]

C. Throughput or Operating Parameter Limits

C1.7 The operator shall limit the number of start-ups to no more than 62 in any one calendar month.

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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:

The number of cold start ups shall not exceed 15 per month, the number of warm start ups shall not exceed 12 per month, and the number of hot start ups shall not exceed 35 per month. Additionally, the number of cold start ups shall not exceed 80 per year, the number of warm start ups shall not exceed 88 per year, and the number of hot start ups shall not exceed 332 per year..

For the purposes of this condition: A cold start up is defined as a start up which occurs after the steam turbine has been shutdown for 48 hours or more. A cold start up shall not exceed 60 minutes..

Emissions during the 60 minutes that includes a cold start up shall not exceed the following: NOx - 61 lbs., CO - 325 lbs., VOC - 36 lbs..

A warm start up is defined as a start up which occurs after the steam turbine has been shutdown for 9 - 48 hours. A warm start up shall not exceed 30 minutes. Emissions during the 30 minutes that includes a warm start up shall not exceed the following: NOx - 17 lbs., CO - 137 lbs., VOC -25 lbs..

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

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

[RULE 2005, 6-3-2011]

[Devices subject to this condition : D115, D124]

- C1.8 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:

Additionally, the number of shutdowns shall not exceed 500 per year..

Shutdown time shall not exceed 30 minutes per shutdown. Emissions during the 30 minutes that includes a shutdown shall not exceed the following: NOx - 10 lbs., CO - 133 lbs., VOC - 32 lbs..

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

[RULE 2005, 6-3-2011]

[Devices subject to this condition : D115, D124]

C1.9 The operator shall limit the operating time to no more than 6640 hour(s) in any one year.

The limit includes baseload operation as well as start ups and shutdowns. The limit does not apply to the calendar year in which the units are commissioned..

Combined Cycle Turbines No. 1 and No. 2 shall not simultaneously operate at minimum load for more than 20 consecutive hours (approximately 44% of full load rating)..

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

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

[Devices subject to this condition : D115, D124]

C1.10 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:

Additionally, the number of start ups shall not exceed 350 per year..

A start up shall not exceed 30 minutes. Emissions during the 30 minutes that includes a start up shall not exceed the following: NOx - 16.6 lbs., CO - 15.4 lbs., VOC - 2.8 lbs..

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

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

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D133, D139]

- C1.11 The operator shall limit the number of shut-downs to no more than 62 in any one calendar month.

Additionally, the number of shutdowns shall not exceed 350 per year..

Shutdown time shall not exceed 13 minutes per shutdown. Emissions during the 13 minutes that includes a shutdown shall not exceed the following: NOx - 3.12 lbs., CO - 28.1 lbs., VOC - 3.06 lbs..

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

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D133, D139]

- C1.12 The operator shall limit the operating time to no more than 2001 hour(s) in any one year.

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

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

The limit includes baseload operation as well as start ups and shutdowns. The limit does not apply to the calendar year in which the units are commissioned..

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

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D133, D139]

C1.13 The operator shall limit the number of start-ups to no more than 10 in any one month.

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

The number of cold start ups shall not exceed 2 per month, the number of warm start ups shall not exceed 4 per month, and the number of hot start ups shall not exceed 4 per month. Additionally, the number of cold start ups shall not exceed 24 per year, the number of warm start ups shall not exceed 48 per year, and the number of hot start ups shall not exceed 48 per year..

For the purposes of this condition: A cold start up is defined as a start up which occurs after the boiler shutdown for 48 hours or more. A cold start up shall not exceed 170 minutes. Emissions during the 170 minutes that includes a cold start up shall not exceed the following: NOx - 4.22 lbs., CO - 4.34 lbs., VOC - 1.05 lbs..

A warm start up is defined as a start up which occurs after the boiler has been shutdown for 9 - 48 hours. A warm start up shall not exceed 85 minutes. Emissions during the 85 minutes that includes a warm start up shall not exceed the following: NOx - 2.11 lbs., CO - 2.17 lbs., VOC -0.52 lbs..

A hot start up is defined as a start up which occurs after the boiler has been shutdown for less than 9 hours. A hot start up shall not exceed 25 minutes. Emissions during the 25 minutes that includes a hot start up shall not exceed the following: NOx - 0.62 lbs., CO - 0.64 lbs., VOC - 0.15 lbs..

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

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

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D145]

C1.14 The operator shall limit the heat input to no more than 189155 MM Btu in any one year.

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

The limit includes normal operation as well as start ups and shutdowns. The heat input shall be calculated using the fuel use data and a natural gas HHV of 1,050 btu/mmcf.

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

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D145]

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]

[Devices subject to this condition : D150, D151]

D. Monitoring/Testing Requirements

D12.7 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia.

The operator shall also install and maintain a device to continuously record the ammonia flow rate. Continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour. The flow meter shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months. The injected ammonia rate shall be maintained within 44.0 lbs/hr and 242.0 lbs/hr except during start ups and shutdowns

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

[Devices subject to this condition : C121, C130]

D12.8 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.

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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 exhaust temperature. Continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour. The temperature gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months. The exhaust temp at the inlet of the SCR shall be maintained between 570-692 deg F except during start up and shutdowns

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

[Devices subject to this condition : C121, C130]

- D12.9 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column.

The operator shall also install and maintain a device to continuously record the differential pressure. Continuous monitoring 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 differential pressure shall not exceed 1.6 inches WC.

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

[Devices subject to this condition : C121, C130]

- 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 CO Catalyst.

The operator shall also install and maintain a device to continuously record the exhaust temperature. Continuously record shall be defined as recording at least once every hour and shall be calculated based on 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 temp at the CO Catalyst inlet shall be maintained at a minimum of 570 deg F except during start up and shutdowns

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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : C120, C129]

- D12.11 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia..

The operator shall also install and maintain a device to continuously record the ammonia flow rate. Continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour. The flow meter shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months. The injected ammonia rate shall be maintained within 110 lbs/hr and 180 lbs/hr except during start ups and shutdowns

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

[Devices subject to this condition : C136, C142]

- D12.12 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 exhaust temperature. Continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour. The temperature gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months. The exhaust temp at the inlet of the SCR shall be maintained between 500-870 deg F except during start up and shutdowns

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

[Devices subject to this condition : C136, C142]

- D12.13 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column.

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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 differential pressure. Continuous monitoring 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 differential pressure shall not exceed 3.0 inches WC.

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

[Devices subject to this condition : C136, C142]

- D12.14 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the the total hourly throughput of injected ammonia..

The operator shall also install and maintain a device to continuously record the ammonia flow rate. Continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour. The flow meter shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months. The injected ammonia rate shall be maintained within 1.0 lbs/hr and 3.9 lbs/hr except during start ups and shutdowns

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

[Devices subject to this condition : C147]

- D12.15 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the the exhaust at the inlet to the SCR reactor.

The operator shall also install and maintain a device to continuously record the exhaust temperature. Continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour. The temperature gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months. The exhaust temperature shall be maintained between 406-636 deg F except during start ups and shutdowns

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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : C147]

D12.16 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the the SCR catalyst bed in inches of water column.

The operator shall also install and maintain a device to continuously record the differential pressure. Continuous monitoring 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 differential pressure shall not exceed 2.0 inches WC.

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

[Devices subject to this condition : C147]

D12.17 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the CO Catalyst.

The operator shall also install and maintain a device to continuously record the exhaust temperature. Continuously record shall be defined as recording at least once every hour and shall be calculated based on 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 temp at the CO Catalyst inlet shall be maintained at a minimum of 500 deg F except during start up and shutdowns

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

[Devices subject to this condition : C135, C141]

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 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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

The test shall be conducted when this equipment is operating at 3 load conditions, including within 5 percent of maximum, within 5 percent of minimum, and one intermediate load.

For natural gas fired turbines only, for the purpose of demonstrating compliance with BACT 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 unmodified EPA Method TO-12 (with pre-concentration) or 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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The use of this 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 ROG 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 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1703 - PSD Analysis, 10-7-1988; RULE 2005, 6-3-2011]

[Devices subject to this condition : D115, D124, D133, D139]

D29.6 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR serving this equipment

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

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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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**]

[Devices subject to this condition : D115, D124, D133, D139, D145]

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
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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The test shall be conducted at least once every three years

The test shall be conducted and the results submitted to the SCAQMD 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 heat input.

For natural gas fired turbines only, for the purpose of demonstrating compliance with BACT as determined by SCAQMD, the 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 unmodified EPA Method TO-12 (with pre-concentration) or 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 then 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 ROG 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.

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 475, 10-8-1976; RULE 475, 8-7-1978]

[Devices subject to this condition : D115, D124, D133, D139]

D29.8 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
PM emissions	District method 5.1	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
PM2.5	EPA Method 201A and 202	District-approved averaging time	Outlet of the SCR serving this equipment

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The test shall be conducted after SCAQMD approval of the source test protocol, but no later than 180 days after initial start-up. 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, 50 percent, and minimum load.

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

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

The test protocol shall include the proposed operating conditions of the boiler 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.

[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 : D145]

D29.9 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
CO emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The test shall be conducted at least once every three years, or in accordance with the schedule specified in Rule 1146.

The test shall be conducted and the results submitted to the SCAQMD 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.

In addition to the Method 100.1 test, the operator shall also perform periodic CO emissions tests on the boiler with a portable analyzer in accordance with the schedule and specifications outlined in Rule 1146.

[RULE 1146, 11-1-2013]

[Devices subject to this condition : D145]

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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

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

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

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

CO Emission Rate, lbs/hr = $K * C_{co} * F_d [20.9 / (20.9\% - \%O_2 d)] [(Q_g * HHV) / 10E6]$,
where

1. $K = 7.267 * 10^{-8}$ (lbs/scf)/ppm
2. C_{co} = Average of 4 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}
5. Q_g = Fuel gas usage during the hour, scf/hr
6. HHV = Gross high heating value of the fuel gas, BTU/scf

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

[Devices subject to this condition : D115, D124, D133, D139]

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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

NOx concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis. The CEMS shall be installed and operating no later than 90 days after initial startup of the turbine, in accordance with 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 requirements of Rule 2012(h)(2) and 2012(h)(3)

[RULE 1703 - PSD Analysis, 10-7-1988; RULE 2005, 6-3-2011; RULE 2012, 5-6-2005]

[Devices subject to this condition : D115, D124, D133, D139]

D82.5 The operator shall install and maintain a CEMS to measure the following parameters:

NOx 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 startup of the boiler, in accordance with 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 combined cycle turbine commissioning and boiler construction period. During the interim period between the initial start up and the provisional certification date of the CEMS, the operator shall comply with the 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, 12-4-2015]

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : D145]

E. Equipment Operation/Construction Requirements

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

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

[Devices subject to this condition : D150, D151]

E193.3 The operator shall install this equipment according to the following requirements:

The Permit to Construct listed in Section H shall expire one year from the Permit to Construct issuance date, unless a Permit to Construct 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 D150, and oil water separator D152) 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 D151, and oil water separator D153) shall commence within 18 months of June 30, 2022 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**]

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : D115, C120, C121, D124, C129, C130, D133, C135, C136, D139, C141, C142, D145, C147, D150, D151]

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

In accordance with all mitigation measures stipulated in the final California Energy Commission decision for the 12-AFC-02C project.

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D115, C120, C121, D124, C129, C130, D133, C135, C136, D139, C141, C142, D145, C147, D150, D151]

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

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

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

The operator shall provide SCAQMD with written notification of the initial start up date. Written records of commissioning, start ups, and shutdowns shall be maintained and be made available upon request from SCAQMD.

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

[Devices subject to this condition : D115, D124]

- E193.6 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, 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:

$$\text{CO}_2 = 60.009 * \text{FF}$$

Where, CO₂ is in tons 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 on a 12-month rolling average. The CO₂ emissions from this equipment shall not exceed 873,035 tons per year per turbine on a 12-month rolling average basis. The calendar annual average CO₂ emissions shall not exceed 967.6 pounds per net MW-hour.

The operator shall maintain records in a manner approved by the SCAQMD to demonstrate compliance with this condition. The records shall be made available to SCAQMD upon request.

[RULE 1714, 12-10-2012]

[Devices subject to this condition : D115, D124]

E193.7 The operator shall install this equipment according to the following requirements:

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, 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 operation for each turbine from the date of initial turbine start up. Total commissioning hours without control shall not exceed 4 hours of operation for each turbine.

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

The operator shall provide SCAQMD with written notification of the initial start up date. Written records of commissioning, start ups, and shutdowns shall be maintained and be made available upon request from SCAQMD.

[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 : D133, D139]

E193.8 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, 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:

$$\text{CO}_2 = 60.009 * \text{FF}$$

Where, CO₂ is in tons 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 on a 12-month rolling average. The CO₂ emissions from this equipment shall not exceed 103,576 tons per year per turbine on a 12-month rolling average basis. The calendar annual average CO₂ emissions shall not exceed 1378.0 pounds per net MW-hour.

The operator shall maintain records in a manner approved by the SCAQMD to demonstrate compliance with this condition. The records shall be made available to SCAQMD upon request.

[RULE 1714, 12-10-2012]

[Devices subject to this condition : D133, D139]

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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The total electricity output on a gross basis from combined cycle turbines devices D115 and D124, and their common steam turbine shall not exceed 693.8 MW.

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 serving 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, 12-4-2015]

[Devices subject to this condition : D115, D124]

E448.2 The operator shall comply with the following requirements:

The total electricity output on a gross basis from simple cycle turbines devices D133 and D139 shall not exceed 201.6 MW.

The gross electrical output shall be measured at the single generator serving 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.

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : D133, D139]

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

This equipment shall not supply more than 43 percent of its potential electrical output or more than 376,200 MWh net electrical output to a utility distribution system on a 12 operating month rolling average and a 3 year rolling average basis

The operator shall record and maintain written records of the amount of electricity supplied to the utility distribution system expressed as a percentage of the total potential electrical output of the turbine and shall make the records available to the Executive Officer upon request.

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

[Devices subject to this condition : D133, D139]

I. Administrative

I297.1 This equipment shall not be operated unless the facility holds 147093 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, 12-4-2015]

[Devices subject to this condition : D115, D124]

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

I297.2 This equipment shall not be operated unless the facility holds 26970 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, 12-4-2015]

[Devices subject to this condition : D133, D139]

I297.3 This equipment shall not be operated unless the facility holds 1313 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 : D145]

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

I298.1 This equipment shall not be operated unless the facility holds 14803 pounds of SO_x RTCs in its allocation account to offset the annual emissions increase for the first year of operation. The RTCs held to satisfy the first year of operation portion of this condition may be transferred only after one year from the initial start of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the start of operation, the facility holds 9960 pounds of SO_x RTCs valid during that compliance year. RTCs held to satisfy the compliance year portion of this condition may be transferred only after the compliance year for which the RTCs are held. If the initial or annual 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]

[Devices subject to this condition : D115, D124]

I298.2 This equipment shall not be operated unless the facility holds 1660 pounds of SO_x RTCs in its allocation account to offset the annual emissions increase for the first year of operation. The RTCs held to satisfy the first year of operation portion of this condition may be transferred only after one year from the initial start of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the start of operation, the facility holds 1201 pounds of SO_x RTCs valid during that compliance year. RTCs held to satisfy the compliance year portion of this condition may be transferred only after the compliance year for which the RTCs are held. If the initial or annual 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]

[Devices subject to this condition : D133, D139]

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

I298.3 This equipment shall not be operated unless the facility holds 382 pounds of SO_x RTCs in its allocation account to offset the annual emissions increase for the first year of operation. The RTCs held to satisfy the first year of operation portion of this condition may be transferred only after one year from the initial start of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the start of operation, the facility holds 382 pounds of SO_x RTCs valid during that compliance year. RTCs held to satisfy the compliance year portion of this condition may be transferred only after the compliance year for which the RTCs are held. If the initial or annual 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 : D145]

K. Record Keeping/Reporting

K40.3 The operator shall provide to the District a source test report in accordance with the following specifications:

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Source test results shall be submitted to the District no later than 60 days after the source tests required under conditions D29.5, D29.6, and D29.7 are conducted

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

All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute. All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen

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

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

[Devices subject to this condition : D115, D124, D133, D139]

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

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Source test results shall be submitted to the District no later than 60 days after the source tests required under conditions D29.6 D29.8 and D29.9 are conducted.

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

All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute. All moisture concentration shall be expressed in terms of percent corrected to 3 percent oxygen.

Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), and the flue gas temperature 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]

[Devices subject to this condition : D145]

K67.5 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Commissioning hours and type of control and fuel use

Date, time, and duration of each start-up and shutdown, and the type of start up (cold or non-cold)

In addition to the requirements of a certified CEMS, natural gas fuel use records shall be kept during and after the commissioning period and prior to CEMS certification

Minute by minute data (NO₂ and O₂ concentration and fuel flow rate at a minimum) for each turbine start up

Total annual power output in MWh

FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : D115, D124]

K67.6 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Commissioning hours and type of control and fuel use

Date, time, and duration of each start-up and shutdown

In addition to the requirements of a certified CEMS, natural gas fuel use records shall be kept during and after the commissioning period and prior to CEMS certification

Minute by minute data (NO₂ and O₂ concentration and fuel flow rate at a minimum) for each turbine start up

Total annual power output in MWh

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

[Devices subject to this condition : D133, D139]