



South Coast Air Quality Management District

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

October 8, 2010

David Stone
Plant Manager
AES Huntington Beach
21730 Newland Street
Huntington Beach, CA 92646

Subject: RECLAIM/Title V Facility Permit Revision (Facility ID# 115389)

Dear Mr. Stone:

Please find attached the revised Title Page, Table of Contents, Section D and Section H of your RECLAIM/Title V Facility Permit, for equipment located at 21730 Newland St, Huntington Beach 92646. The revised permit reflects approval of the final Permit to Operate for Boilers 1 and 2 and their associated SCRs. The corresponding application numbers are summarized in the table below:

Application	Description	Device ID#	Process/System ID	Permit Type
408723	Boiler #1	D22	1/1	PO
408725	Boiler #2	D25	1/1	PO
372923	SCR #1	C86/C88	1/1	PO
372925	SCR #2	C90/C92	1/1	PO
372930	Urea to Ammonia Reactor	C96	1/1	PO

The above devices are listed in Section D of your Facility Permit. Please review the attached Sections D and H carefully. Insert the enclosed section into your Facility Permit and discard the earlier version. Questions concerning changes to your permit should be directed to Mr. Chris Perri at (909) 396-2696.

Sincerely

Brian L. Yeh
Senior Manager
General Commercial & Energy Team
Engineering & Compliance

cc: Mr. Gerardo Rios
R9AirPermits_sc@epa.gov
Energy Unit files
Records



FACILITY PERMIT TO OPERATE

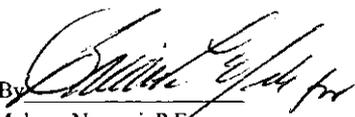
**AES HUNTINGTON BEACH, LLC
21730 NEWLAND ST
HUNTINGTON BEACH, CA 92646**

NOTICE

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

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

Barry R. Wallerstein, D. Env.
EXECUTIVE OFFICER

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



**FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC**

TABLE OF CONTENTS

Section	Description	Revision #	Date Issued
A	Facility Information	10	07/01/2006
B	RECLAIM Annual Emission Allocation	15	07/01/2010
C	Facility Plot Plan	TO BE DEVELOPED	
D	Facility Description and Equipment Specific Conditions	12	10/08/2010
E	Administrative Conditions	8	07/01/2006
F	RECLAIM Monitoring and Source Testing Requirements	8	07/01/2006
G	Recordkeeping and Reporting Requirements for RECLAIM Sources	8	07/01/2006
H	Permit To Construct and Temporary Permit to Operate	17	10/08/2010
I	Compliance Plans & Schedules	6	07/01/2006
J	Air Toxics	5	07/01/2006
K	Title V Administration	5	07/01/2006
Appendix			
A	NOx and SOx Emitting Equipment Exempt From Written Permit Pursuant to Rule 219	7	07/01/2006
B	Rule Emission Limits	5	07/01/2006



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: EXTERNAL COMBUSTION					
System 1: UTILITY BOILERS					
BOILER, NO. 1, NATURAL GAS, BABCOCK & WILCOX, MODEL RB-276, FRONT FIRING, WITH OXYGEN CONTENT CONTROL, 2021 MMBTU/HR WITH A/N: 408723	D22	S24 C86 C88	NOX: MAJOR SOURCE**; SOX: PROCESS UNIT**	CO: 500 PPMV (5) [RULE 1303(b)(2)-Offset, 5-10-1996]; CO: 2000 PPMV (5A) [RULE 407, 4-2-1982]; NOX: 7 PPMV (5) [RULE 2009, 1-7-2005]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 12-7-1995; RULE 2011, 3-16-2001]	A195.5, D28.1, E193.1, K40.1
GENERATOR, 215 MW					
SELECTIVE CATALYTIC REDUCTION, SYSTEM A, SERVING BOILER NO. 1, IN-DUCT TYPE, HALDOR TOPSOE, VANADIUM/TUNGSTEN TITANIUM, 1121 CU.FT.; WIDTH: 26 FT; HEIGHT: 19 FT; LENGTH: 33 FT A/N: 372923	C86	D22		NH3: 10 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	A195.1, D12.3, D12.4, D12.5, D28.3, E179.1, E179.2, E193.1
SELECTIVE CATALYTIC REDUCTION, SYSTEM B, SERVING BOILER NO. 1, IN-DUCT TYPE, HALDOR TOPSOE, VANADIUM/TUNGSTEN TITANIUM, 1121 CU.FT.; WIDTH: 26 FT; HEIGHT: 19 FT; LENGTH: 33 FT A/N: 372923	C88	D22		NH3: 10 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	A195.1, D12.3, D12.4, D12.5, D28.3, E179.1, E179.2, E193.1

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

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



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 1: EXTERNAL COMBUSTION					
BOILER, NO. 2, NATURAL GAS, BABCOCK & WILCOX, MODEL RB-276, WITH OXYGEN CONTENT CONTROL, 2021 MMBTU/HR WITH A/N: 408725	D25	S24 C90 C92	NOX: MAJOR SOURCE**; SOX: PROCESS UNIT**	CO: 500 PPMV (5A) [RULE 1303(b)(2)-Offset, 5-10-1996]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; NOX: 7 PPMV (5) [RULE 2009, 1-7-2005]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 12-7-1995; RULE 2011, 3-16-2001]	A195.5, D28.1, E193.1, K40.1
GENERATOR, 215 MW					
SELECTIVE CATALYTIC REDUCTION, SYSTEM C, SERVING BOILER NO. 2, IN-DUCT TYPE, HALDOR TOPSOE, VANADIUM/TUNGSTEN TITANIUM, 1121 CU.FT.; WIDTH: 26 FT; HEIGHT: 19 FT; LENGTH: 33 FT A/N: 372925	C90	D25		NH3: 10 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	A195.1, D12.3, D12.4, D12.5, D28.3, E179.1, E179.2, E193.1
SELECTIVE CATALYTIC REDUCTION, SYSTEM D, SERVING BOILER NO. 2, IN-DUCT TYPE, HALDOR TOPSOE, VANADIUM/TUNGSTEN TITANIUM, 1121 CU.FT.; WIDTH: 26 FT; HEIGHT: 19 FT; LENGTH: 33 FT A/N: 372925	C92	D25		NH3: 10 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	A195.1, D12.3, D12.4, D12.5, D28.3, E179.1, E179.2, E193.1
STACK, FOR BOILERS NO. 1 AND NO. 2 A/N: 408723	S24	D22 D25			

* (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 HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions ⁺ And Requirements	Conditions
Process 1: EXTERNAL COMBUSTION					
REACTOR, UREA-TO-AMMONIA SYSTEM SERVING SCR SYSTEMS A, B, C, AND D A/N: 372930	D96				E193.1
Process 2: INTERNAL COMBUSTION					
System 3: EMERGENCY FIRE PUMP ENGINES					
INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, LEAN BURN, NO. 1, DIESEL FUEL, CLARKE, MODEL JW6H-UF30, WITH AFTERCOOLER, TURBOCHARGER, 275 BHP A/N: 431599	D113		NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 8.5 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 6.9 GRAM/BHP-HR (4) [RULE 2005, 4-20-2001]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 12-5-2003; RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM10: 0.38 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; ROG: 1 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; SOX: 6.24 LBS/1000 GAL DIESEL (1) [RULE 2011, 12-5-2003; RULE 2011, 5-6-2005]	C1.6, H23.5, I296.1, K67.4

* (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 HUNTINGTON BEACH, LLC**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 2: INTERNAL COMBUSTION					
INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, LEAN BURN, NO. 2, DIESEL FUEL, CLARKE, MODEL JW6H-UF30, WITH AFTERCOOLER, TURBOCHARGER, 275 BHP A/N: 431597	D114		NOX: PROCESS UNIT**, SOX: PROCESS UNIT**	CO: 8.5 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 6.9 GRAM/BHP-HR (4) [RULE 2005, 4-20-2001]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 12-5-2003; RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM10: 0.38 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; ROG: 1 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; SOX: 6.24 LBS/1000 GAL DIESEL (1) [RULE 2011, 12-5-2003; RULE 2011, 5-6-2005]	C1.6, H23.5, I296.1, K67.4
Process 9: R219 EXEMPT EQUIPMENT SUBJECT TO SOURCE-SPECIFIC RULE					
RULE 219 EXEMPT EQUIPMENT, ABRASIVE BLASTING EQUIPMENT, GLOVE-BOX, <= 53 FT3, WITH DUST FILTER	E81			PM: (9) [RULE 1140, 2-1-1980; RULE 1140, 8-2-1985; RULE 404, 2-7-1986; RULE 405, 2-7-1986]	D322.1, D381.1, K67.1
RULE 219 EXEMPT EQUIPMENT, OIL WATER SEPARATORS, GRAVITY-TYPE, < 45 FT2 AIR/LIQUID INTERFACIAL AREA	E82				H23.4
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS	E83			ROG: (9) [RULE 1113, 11-8-1996; RULE 1113, 7-13-2007; RULE 1171, 11-7-2003; RULE 1171, 2-1-2008]	K67.2

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
 (5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
 (7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
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** 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 HUNTINGTON BEACH, LLC**

SECTION D: DEVICE ID INDEX

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



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC
SECTION D: DEVICE ID INDEX

Device Index For Section D			
Device ID	Section D Page No.	Process	System
D22	1	1	1
S24	2	1	1
D25	2	1	1
E81	4	9	0
E82	4	9	0
E83	4	9	0
C86	1	1	1
C88	1	1	1
C90	2	1	1
C92	2	1	1
D96	3	1	1
D113	3	2	3
D114	4	2	3



**FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

FACILITY CONDITIONS

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

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

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

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

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	1314



**FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

25	Boiler No. 2	SO2	1126
98	Boiler No. 3	SO2	161
104	Boiler No. 4	SO2	176

- a). The allowance allocation(s) shall apply to calendar years 2000 through 2009.
- 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]

DEVICE CONDITIONS

A. Emission Limits



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

A195.1 The 10 PPMV NH₃ emission limit(s) is averaged over 60 minutes at 3 percent O₂, dry. The operator shall calculate and continuously record the NH₃ slip concentration using the following: $NH_3 \text{ (ppmv)} = [a - (b \cdot c / 1E6)] \cdot 1E6 / b$, where a = NH₃ injection rate (lbs/hr)/17 (lbs/lb-mole), b = dry exhaust gas flow rate (lbs/hr)/29 (lbs/lb-mole), c = change in measured NO_x across the SCR (ppmv). The operator shall install and maintain a NO_x analyzer to measure the SCR inlet NO_x ppmv accurate to +/- 5 percent calibrated at least once every 12 months.

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

[Devices subject to this condition : C86, C88, C90, C92]

A195.5 The 7 PPMV NO_x emission limit(s) is averaged over 720 operating hours, heat input weighted block average, at 3 percent oxygen, dry.



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

The average shall be calculated based on emissions during all boiler operating hours except during:

1. Any District required source test performed without ammonia;
2. Startups defined as whenever the unit is being brought up to normal operating temperature from an inactive status;
3. The exhaust temperature entering the SCR catalyst is less than 525 degrees F;
4. Shutdowns defined as whenever the unit is allowed to cool from a normal operating temperature to inactive status;
5. Calibration and maintenance periods;
6. Part 75 linearity testing;
7. RATA testing;
8. Equipment breakdown periods as defined in Rule 2004; and
9. Periods of zero fuel flow.

The heat input weighted average NO_x concentration shall be calculated using the following equation, or other equivalent equation:

- 1.
2. $PPMV \text{ at } 3 \text{ percent oxygen} = Et/Qt \times K$
3. where,
4. $PPMV \text{ at } 3 \text{ percent oxygen} = \text{Concentration of NO}_x \text{ in PPMV at } 3 \text{ percent oxygen}$
5. $Et = \text{Total reported NO}_x \text{ emissions during the averaging period including emissions reported as a result of missing data procedures pursuant to Rule 2012}$
6. $Qt = \text{Total heat input during the averaging period}$
7. $K = \text{A conversion factor from lbs/MMBtu to PPM, which can be determined using EPA 40 CFR60 Method 19. The default K value is } 819.$

A data acquisition system shall be installed and maintained to continuously calculate



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

and record the NOx ppmv based on the 720 operating hour average.

[RULE 2009, 1-7-2005]

[Devices subject to this condition : D22, D25]

C. Throughput or Operating Parameter Limits

C1.6 The operator shall limit the operating time to no more than 200 hour(s) in any one year.

The 200 hours per year shall include no more than 50 hours in any one year for maintenance and testing purposes.

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

[RULE 1110.1, 10-4-1985; **RULE 1303(b)(1)-Modeling, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 1470, 6-1-2007; RULE 2005, 4-20-2001]**

[Devices subject to this condition : D113, D114]

D. Monitoring/Testing Requirements

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



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

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

The operator shall maintain the temperature between 0 and 1000 deg F for devices C86, C88, C90, and C92, and between 85 to 850 deg F for devices C102 and C108

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C86, C88, C90, C92]

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

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

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

The operator shall maintain the ammonia flow rate between 0 to 650 lbs/hr

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C86, C88, C90, C92]

D12.5 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.



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

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

The operator shall maintain the differential pressure between 0 and 10 in. H₂O for devices C86, C88, C90, and C92, and between 0 and 5 in. H₂O for devices C102 and C108

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C86, C88, C90, C92]

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

The test shall be conducted at least annually.

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

The test shall be conducted to determine compliance with the CO emissions by either: (a) conducting a source test using District method 100.1 measured over a 30 minute averaging time, or (b) using a portable analyzer and a District-approved test method.

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

The test shall be conducted when the equipment is operating under normal conditions. No test shall be required in any one year for which the equipment is not in operation.

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



FACILITY PERMIT TO OPERATE AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Devices subject to this condition : D22, D25]

D28.3 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine the NH₃ emissions using District Methods 207.1 and 5.3, or EPA Method 17 measured over a 60 minute averaging time period. The NO_x concentration, as determined by reading the CEMS, shall be simultaneously recorded during the test. If the CEMS is inoperable, a test shall be conducted to determine the NO_x emissions using District Method 100.1 measured over a 60 minute averaging time period.

The District shall be notified of the date and time of the test at least 7 days prior to the test.

The test shall be conducted and the results submitted to the District within 45 days after the test date.

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

The test shall be conducted during NH₃ injection periods, at least quarterly during the first 12 months of operation of the SCR, and at least annually thereafter.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1401, 3-17-2000]

[Devices subject to this condition : C86, C88, C90, C92]

D322.1 The operator shall perform annual inspection of the equipment and filter media for leaks, broken or torn filter media, and improperly installed filter media.

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



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Devices subject to this condition : E81]

D381.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on an annual basis, at least, unless the equipment did not operate during the entire annual period. The routine annual inspection shall be conducted while the equipment is in operation and during daylight hours. If any visible emissions (not including condensed water vapor) are detected, the operator shall take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions; and
- 3). Date and time visible emission was abated.

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

[Devices subject to this condition : E81]

E. Equipment Operation/Construction Requirements

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



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Condition Number D 12- 4

Condition Number A 195- 1

Condition Number D 12- 3

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C86, C88, C90, C92]

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

Condition Number D 12- 5

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C86, C88, C90, C92]

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

In accordance with the Negative Declaration (SCH #2000111004) that was prepared for this project by the City of Huntington Beach Planning Department.

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D22, D25, C86, C88, C90, C92, D96]

H. Applicable Rules



**FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

Contaminant	Rule	Rule/Subpart
VOC	District Rule	464

[RULE 464, 12-7-1990]

[Devices subject to this condition : E82]

H23.5 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
PM10	District Rule	1470

[RULE 1470, 6-1-2007]

[Devices subject to this condition : D113, D114]

I. Administrative

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

[RULE 2005, 5-6-2005]



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Devices subject to this condition : D113, D114]

K. Record Keeping/Reporting

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

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

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

Emission data shall be expressed in terms of concentration (ppmv), corrected to 3 percent oxygen, dry basis.

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

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

Emission data shall be expressed in terms of lbs/MM cubic feet.

Source test results shall also include fuel flow rate (CFH) and generator output (MW) under which the test was conducted.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1401, 3-17-2000; RULE 2012, 5-6-2005**]

[Devices subject to this condition : D22, D25]



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

the name of the person performing the inspection and/or maintenance of the dust collector

the date, time and results of the inspection

the date, time and description of any maintenance or repairs resulting from the inspection

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

[Devices subject to this condition : E81]

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

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

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

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

[Devices subject to this condition : E83]



FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

An engine operating log listing on a monthly basis the emergency use hours of operation, maintenance and testing hours of operation, and any other hours of use with a description of the reason for operation. Additionally, each time the engine is started manually, the log shall include the date of operation and the timer reading in hours at the beginning and end of operation

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

[Devices subject to this condition : D113, D114]



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 1: EXTERNAL COMBUSTION					
System 1: UTILITY BOILERS					

* (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 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 1: EXTERNAL COMBUSTION					
BOILER, NO. 3, NATURAL GAS, BABCOCK & WILCOX, WITH FLUE GAS RECIRCULATION, 2088 MMBTU/HR WITH A/N: 427061 Permit to Construct Issued: 07/27/04	D98	CI01	NOX: MAJOR SOURCE**; SOX: PROCESS UNIT**	CO: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; NOX: 0.2 LBS/MMBTU (8) [40CFR 60 Subpart Da, 2-27-2006]; NOX: 5 PPMV (4) [RULE 2005, 4-9-1999]; NOX: 74.86 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]; PM: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 0.03 LBS/MMBTU (8) [40CFR 60 Subpart Da, 10-4-1991]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; PM: 11 LBS/HR (5B) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SO2: 0.2 LBS/MMBTU (8) [40CFR 60 Subpart Da, 2-27-2006]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 12-7-1995; RULE 2011, 3-16-2001]	A63.1, A63.2, A99.1, A99.2, A99.3, A195.2, A195.3, A327.1, C1.5, D29.1, D29.2, D82.1, D82.2, D372.1, E57.1, E193.2, K40.2, K67.3
BURNER, NATURAL GAS, TODD, MODEL DYNASWIRL-750 LN, WITH LOW NOX BURNER, 24 TOTAL; 2088 MMBTU/HR					

* (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 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 1: EXTERNAL COMBUSTION					
GENERATOR, 225 MW					
CO OXIDATION CATALYST, NO. 3, 300 CUBIC FEET OF TOTAL CATALYST VOLUME A/N: 409468 Permit to Construct Issued: 02/04/03	C101	D98 C102			
SELECTIVE CATALYTIC REDUCTION, NO. 3, VANADIUM/TITANIUM OXIDE, 1554 CU.FT.; WIDTH: 32 FT ; HEIGHT: 11 FT 3 IN; LENGTH: 32 FT 2 IN WITH A/N: 409468 Permit to Construct Issued: 02/04/03	C102	C101 S110		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	A195.4, D12.3, D12.5, D12.6, D29.3, E73.1, E179.2, E179.3, K40.2
AMMONIA INJECTION, INJECTION GRID					

* (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 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 1: EXTERNAL COMBUSTION					
CO OXIDATION CATALYST, NO. 4, 300 CUBIC FEET OF TOTAL CATALYST VOLUME A/N: 409470 Permit to Construct Issued: 02/04/03	C107	D104 C108			
SELECTIVE CATALYTIC REDUCTION, NO. 4, VANADIUM/TITANIUM OXIDE, 1554 CU.FT.; WIDTH: 32 FT ; HEIGHT: 11 FT 3 IN; LENGTH: 32 FT 2 IN WITH A/N: 409470 Permit to Construct Issued: 02/04/03 AMMONIA INJECTION, INJECTION GRID	C108	C107 S110		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]	A195.4, D12.3, D12.5, D12.6, D29.3, E73.1, E179.2, E179.3, K40.2
STACK, SERVING BOILERS 3 AND 4 A/N: 427061 Permit to Construct Issued: 07/27/04	S110	C102 C108			
Process 5: UREA TO AMMONIA GENERATION SYSTEM					
REACTOR, NO. R-104, UREA, UREA TO AMMONIA SYSTEM SERVING SCR NOS. 3 AND 4 A/N: 377759 Permit to Construct Issued: 05/30/01	D111				
STORAGE TANK, FIXED ROOF, NO. T-104, 40 PERCENT UREA, REACTOR FEED TANK, HEIGHT: 16 FT 6 IN; DIAMETER: 12 FT A/N: 377759 Permit to Construct Issued: 05/30/01	D112				

* (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 HUNTINGTON BEACH, 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 HUNTINGTON BEACH, LLC**

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No.	Process	System
D98	3	1	1
C101	3	1	1
C102	3	1	1
D104	4	1	1
C107	5	1	1
C108	5	1	1
S110	5	1	1
D111	5	5	0
D112	5	5	0



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:

FACILITY CONDITIONS

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

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

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

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

F14.1 The operator shall not 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	1314
25	Boiler No. 2	SO2	1126
98	Boiler No. 3	SO2	161
104	Boiler No. 4	SO2	176



**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:

- a). The allowance allocation(s) shall apply to calendar years 2000 through 2009.
- 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]

DEVICE CONDITIONS

A. Emission Limits

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

CONTAMINANT	EMISSIONS LIMIT
VOC	Less than or equal to 1354 LBS IN ANY 30-DAY PERIOD
PM10	Less than or equal to 1202 LBS IN ANY 30-DAY PERIOD



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 calculate the emission limit(s) using monthly fuel use data, and the following emission factors: VOC: 0.93 lbs/mmscf; and PM10: 0.82 lbs/mmscf.

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

[Devices subject to this condition : D98, D104]

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

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 374 LBS IN ANY ONE DAY

The operator shall calculate the emission limit(s) , prior to the CO CEMS certification, based on the higher of 5 ppmv (corrected to 3 percent oxygen, dry basis) CO concentration limit or the latest source test results, during steady state operation. Each start up emissions will constitute 107 lbs of CO emissions.

For the purposes of this condition, the limit(s) shall be based on the total combined emissions from Boiler Unit 3 (device ID 98) and Boiler Unit 4 (device ID 104).

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

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

[Devices subject to this condition : D98, D104]



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:

A99.1 The 74.86 LBS/MMSCF NOX emission limit(s) shall only apply during the interim reporting period to report RECLAIM emissions and shall apply during the boiler commissioning period. The interim reporting period, which is defined as the period between the initial startup of the major NOx source and the provisional approval (certification) of the CEMS, shall not exceed 12 months from the initial startup date.

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D98, D104]

A99.2 The 5 PPM NOX emission limit(s) shall not apply during startups, shutdowns, any District required source test without ammonia injection as specified in the Facility Permit, or during the commissioning period. The commissioning period shall not exceed 30 operating days from the date of initial start-up. The operator shall provide the AQMD with written notification of the initial start-up date. No more than 1 boilers shall be in start-up mode at any one time. This emission limit shall apply upon provisional approval (certification) of the CEMS.

[RULE 2005, 5-6-2005]

[Devices subject to this condition : D98, D104]

A99.3 The 5 PPM CO emission limit(s) shall not apply during startup or during the commissioning period. The commissioning period shall not exceed 30 operating days from the date of initial start-up. The operator shall provide the AQMD with written notification of the initial start-up date. No more than 1 boiler shall be in start-up mode at any one time. This emission limit shall apply upon provisional approval (certification) of the CEMS.

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

[Devices subject to this condition : D98, D104]

A195.2 The 5 PPMV NOX emission limit(s) is averaged over the following:



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:

1 hour, at 3 percent oxygen, dry, based on a source test conducted in accordance with District Method 100.1 as required in device condition D29.1 or any other source test conducted as required by other rules and regulations; and

24 hours, heat input weighted average, at 3 percent oxygen, dry, based on data measured by the CEMS. At no time shall the emissions exceed 38.4 lbs/hr based on 1-hour averaging as measured by the CEMS. The facility shall notify the District at 'energy_compliance@aqmd.gov' if emissions greater than 5 ppmv, averaged over 1 hour, based on data measured by the CEMS, occurs.

The average(s) as measured by the CEMS shall be calculated based on emissions during all boiler operating hours except during:

1. Any District required source test performed without ammonia;
2. The exhaust temperature entering the SCR catalyst is less than 525 degrees F;
3. Calibration and maintenance periods;
4. Part 75 linearity testing;
5. RATA testing;
6. Equipment breakdown periods as defined in Rule 2004; and
7. Periods of zero fuel flow.

The heat input weighted average NO_x concentration shall be calculated using the following equation, or other equivalent equation:

1. PPMV at 3 percent oxygen = $E_t/Q_t \times K$
2. where,
3. PPMV at 3 percent oxygen = Concentration of NO_x in PPMV at 3 percent oxygen
4. E_t = Total reported NO_x emissions during the averaging period including emissions reported as a result of missing data procedures pursuant to Rule 2012
5. Q_t = Total heat input during the averaging period
6. K = A conversion factor from lbs/MMBtu to PPM, which can be determined



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:

using EPA 40 CFR60 Method 19.

A data acquisition system shall be installed and maintained to continuously calculate and record the NO_x ppmv based on the 24 hour average. The 24 hour time period shall be defined as a calendar day.

[RULE 2005, 5-6-2005]

[Devices subject to this condition : D98, D104]

A195.3 The 5 PPMV CO emission limit(s) is averaged over a 1 hour average, at 3 percent oxygen, dry.

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

[Devices subject to this condition : D98, D104]

A195.4 The 5 PPMV NH₃ emission limit(s) is averaged over 60 minutes at 3 percent O₂, dry. The operator shall calculate and continuously record the NH₃ slip concentration using the following: $NH_3 \text{ (ppmv)} = [a - (b \cdot c / 1E6)] \cdot 1E6 / b$, where a = NH₃ injection rate (lbs/hr)/17 (lbs/lb-mole), b = dry exhaust gas flow rate (lbs/hr)/29 (lbs/lb-mole), c = change in measured NO_x across the SCR (ppmvd). The operator shall install and maintain a NO_x analyzer to measure the SCR inlet NO_x ppmv accurate to +/- 5 percent calibrated at least once every 12 months.

The determination of ammonia slip based on the above formula shall be adjusted with correction factors. The operator shall determine a equipment-specific procedure for the correction of the formula by comparing the results of the formula with the actual ammonia slip measurement during the performance testing. New correction factors and any changes to the factors are subject to AQMD approval.

The above formula (or modified version) shall not be used to demonstrate compliance with the NH₃ emission limit until it is approved by the AQMD.

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



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 : C102, C108]

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 : D98, D104]

C. Throughput or Operating Parameter Limits

C1.5 The operator shall limit the natural gas fuel usage to no more than 34864 MM cubic feet per year.

This limit shall be based on the total combined limit for equipment devices D98 and D104.

The purpose(s) of this condition is to insure the facility does not exceed the 1st year RTCs provided for the project. This condition shall apply during the 1st 12 months of operation, commencing with the initial operation of the first boiler (Devices D98 or D104). This condition shall not apply if the operator demonstrates to the satisfaction of the AQMD that the total NOx emissions from units D98 and 104 do not exceed 283,937 pounds during this period.

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

[Devices subject to this condition : D98, D104]

D. Monitoring/Testing Requirements

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



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

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

The operator shall maintain the temperature between 0 and 1000 deg F for devices C86, C88, C90, and C92, and between 85 to 850 deg F for devices C102 and C108

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C102, C108]

D12.5 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column.

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

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

The operator shall maintain the differential pressure between 0 and 10 in. H₂O for devices C86, C88, C90, and C92, and between 0 and 5 in. H₂O for devices C102 and C108

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C102, C108]

D12.6 The operator shall install and maintain a(n) continuous monitoring system to accurately indicate the ammonia injection rate or the total mass flow rate of the ammonia injection system.



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

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

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C102, C108]

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

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	District method 100.1	1 hour	Outlet of the SCR
CO emissions	District method 100.1	1 hour	Outlet of the SCR
SOX emissions	District method 6.1	1 hour	Outlet of the SCR
ROG emissions	Approved District method	1 hour	Outlet of the SCR
PM emissions	District method 5.2	1 hour	Outlet of the SCR
NH3 emissions	District method 207.1 and 5.3 or EPA method	1 hour	Outlet of the SCR



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:

During the source test(s), the facility permit holder shall also measure the oxygen levels in the exhaust, flue flow rate(CFH), the flue gas rate, flue gas temperature, and the generator output (MW).

The test(s) shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.

In addition to the source test requirements of Section E of this facility permit, the facility permit holder shall submit the protocol to the AQMD engineer no later than 45 days prior to the proposed test date, and notify the District of the date and time of the test at least 10 days prior to the test.

The test shall be conducted with and without ammonia injection when this equipment is operating at loads of 100, 75, and 50 percent and the minimum load at which ammonia injection occurs during the NOx and PM tests. NH3 tests shall be conducted at all loads above during NH3 injection only. For all other pollutants, the test shall be conducted at 100 percent load with NH3 injection only.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1401, 8-18-2000; RULE 2011, 5-6-2005; RULE 2012, 5-6-2005]

[Devices subject to this condition : D98, D104]

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

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
CO emissions	District method 100.1, or approved District portable analyzer and test method	30 minutes	Outlet of the SCR



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(s) shall be conducted at least annually.

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

The test shall be conducted when the equipment is operating under normal conditions. However, no test shall be required in any one year if the equipment is not in operation.

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

[Devices subject to this condition : D98, D104]

D29.3 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District method 207.1 and 5.3 or EPA method	1 hour	Outlet



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 and the results submitted to the District within 45 days after the test date.

In addition to the source test requirements of Section E of this facility permit, notify the District of the date and time of the test at least 10 days prior to the test.

The test shall be conducted within 90 cumulative days of SCR operation since the most recent valid ammonia slip test of this equipment. If two consecutive valid tests demonstrate compliance with the ammonia slip limit, the test may be conducted within 180 cumulative operating days of the SCR since the most recent valid ammonia slip test of this equipment.

If the test conducted within the 180 cumulative SCR operating days demonstrates non-compliance with the ammonia slip limit, the testing frequency shall revert back to the 90 cumulative SCR operating days testing schedule.

After 365 cumulative days of SCR operation since initial commercial operation, the operator may, in lieu of conducting the ammonia slip testing once every 180 operating days, conduct the ammonia slip test once every calendar year.

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

During the source test(s), the facility permit holder shall also record the NO_x concentration, as determined by simultaneous reading the certified CEMS. If the CEMS is inoperable, a test shall be conducted to determine the simultaneous NO_x emissions using District Method 100.1 or other approved method measured over a 60 minute averaging time period.

The test shall be conducted during NH₃ injection periods.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1401, 8-18-2000]

[Devices subject to this condition : C102, C108]

D82.1 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:

CO concentration in ppmv

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

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

The CEMS shall be installed and operated in accordance with an approved AQMD Rule 218 CEMS plan application. The facility permit holder shall submit to the Executive Officer an application for CO CEMS as required by this condition within 30 days of the final permit issuance. The CO CEMS shall be installed and operated within 3 months after the initial start-up (first firing) of the boilers. The operator shall not install the CEMS prior to receiving initial approval from AQMD.

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

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

[Devices subject to this condition : D98, D104]

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

NOX concentration in ppmv

The CEMS shall be installed and operating no later than 12 months after the initial start-up of the boiler. 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 Rules 2012(h)(2) & (h)(3). Within 2 weeks of the boiler start-up date, the operator shall provide written notification to the District of the exact start-up date. An application for the NOx CEMS shall be submitted within 30 days of the final permit issuance.

[RULE 2012, 5-6-2005]



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 : D98, D104]

D372.1 The operator shall determine compliance with the particulate matter (PM) emission limit by conducting a source test at the outlet of the exhaust stack annually using AQMD Method 5.1. Each test shall include:

(a) One test using natural gas operating at minimum load under normal operating conditions, if natural gas is burned more than 120 consecutive hours or 200 hours accumulated over any 12 consecutive months. The test shall be conducted no later than six months after the time limit has been exceeded;

(b) One test using natural gas operating at maximum load under normal operating conditions, if natural gas is burned more than 120 consecutive hours or 200 hours accumulated over any 12 consecutive months. The test shall be conducted no later than six months after the time limit has been exceeded;

(c) One test using fuel oil operating at maximum load under normal operating conditions, if fuel oil is burned more than 120 consecutive hours or 200 hours accumulated over any twelve consecutive months. The test shall be conducted no later than six months after the time limit has been exceeded.

The annual source test frequency will be reduced to at least once every five years for each fuel type under the highest emitting load if three consecutive annual tests show compliance with either the concentration limit or the mass emission limit.

No test shall be required in any one year for which the equipment is not in operation.

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

[Devices subject to this condition : D98, D104]

E. Equipment Operation/Construction 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:

E57.1 The operator shall vent this equipment to the SCR and CO controls whenever the boilers are in operation. This condition shall not apply during the first boiler startup (commissioning) after refurbishment before catalyst installation.

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

[Devices subject to this condition : D98, D104]

E73.1 Notwithstanding the requirements of Section E conditions, the operator is not required to use ammonia injection if:

The outlet exhaust temperature of the SCR reactor is below 525 degrees F; or

A District required source test is conducted where ammonia is not to be injected.

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

[Devices subject to this condition : C102, C108]

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

Condition Number D 12- 5

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C102, C108]

E179.3 For the purpose of the following condition number(s), continuous recording shall be defined as recording at least once every hour and shall be calculated based upon average of the continuous monitoring for that hour.



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:

Condition Number D 12- 3

Condition Number D 12- 6

Condition Number A 195- 4

[RULE 2012, 5-6-2005]

[Devices subject to this condition : C102, C108]

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

The project owner shall use only pipeline quality natural gas to fuel Units 3 and 4 and the total sulfur content of the fuel to be limited to 0.25 grain/100 scf, expressed as H₂S. [CEC AQ-2]

The initial commissioning of the Unit 3 and Unit 4 boilers shall not be performed concurrently, initial commissioning shall be limited to 48 hours for each boiler, and the input heat rate during initial commissioning of each boiler shall be limited to a total of 120 MMBtu/hr. [CEC AQ-6]

The Unit 3 and Unit 4 boilers shall not be operated in start-up mode concurrently, each start-up (not including initial commissioning) shall be limited to 12 hours for each boiler, and the heat rate during initial commissioning of each boiler shall be limited to a total of 120 MMBtu/hr until the SCR is operational. [CEC AQ-7]

[RULE 118, 12-7-1995]

[Devices subject to this condition : D98, D104]

K. Record Keeping/Reporting

K40.2 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 test was conducted.

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

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

All moisture concentration shall be expressed in terms of percent corrected to 3 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(b)(2)-Offset, 5-10-1996; RULE 1401, 8-18-2000; RULE 2011, 5-6-2005; RULE 2012, 5-6-2005]

[Devices subject to this condition : D98, C102, D104, C108]

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

Fuel use and hours of operation during the commissioning period.

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

[Devices subject to this condition : D98, D104]