| DOCKETED | |
|---|---|
| **Docket Number:** | 12-AFC-02C |
| **Project Title:** | Huntington Beach Energy Project - Compliance |
| **TN #:** | 249545 |
| **Document Title:** | Draft Permit to Operate (PTO) - AES Huntington Beach Energy, LLC Proposed Significant Permit Revision |
| **Description:** | Draft Permit to Operate (PTO) for HBEP's proposed operational hours changes. |
| **Filer:** | Andres Perez |
| **Organization:** | California Energy Commission |
| **Submitter Role:** | Commission Staff |
| **Submission Date:** | 4/4/2023 5:03:31 PM |
| **Docketed Date:** | 4/5/2023 |

# 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.

Wayne Nastri
Executive Officer

By_____
Jason Aspell
Deputy Executive Officer
Engineering and Permitting

# 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: POWER GENERATION - BOILERS** | | | | | |
| BOILER, NO. 2, NATURAL GAS, BABCOCK & WILCOX, MODEL RB-276, WITH FGR, WITH OXYGEN CONTENT CONTROL, 2021 MMBTU/HR WITH A/N:<br><br>GENERATOR, 215 MW | D25 | S24 C90 C92 | NOX: MAJOR SOURCE**; SOX: PROCESS UNIT** | **CO**: 500 PPMV (5A) [**RULE 1303(b)(2)-Offset, 5-10-1996;** *RULE 1303(b)(2)-Offset, 12-6-2002*]; **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, 5-6-2005;** *RULE 2011, 12-4-2015*] | A195.5, C1.15, D29.9, D82.7, E57.4, E193.1, K67.7 |
| 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 WITH A/N: 372925<br><br>AMMONIA INJECTION, GRID C | C90 | D25 | | **NH3**: 10 PPMV (4) [**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*] | 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 WITH A/N: 372925<br><br>AMMONIA INJECTION, GRID D | C92 | D25 | | **NH3**: 10 PPMV (4) [**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*] | 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
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(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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|---|---|---|---|---|---|
| **Process 1: POWER GENERATION - BOILERS** | | | | | |
| STACK, FOR BOILER NO. 2, HEIGHT: 200 FT ; DIAMETER: 27 FT 3 IN<br>A/N: | S24 | D25 | | | |
| REACTOR, UREA-TO-AMMONIA SYSTEM SERVING SCR SYSTEMS C AND D<br>A/N: 372925 | D96 | | | | E193.1 |
| **Process 2: INTERNAL COMBUSTION** | | | | | |
| **System 3: EMERGENCY FIRE PUMP ENGINES** | | | | | |
| INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, LEAN BURN, NO. 1, DIESEL FUEL, JOHN DEERE, MODEL 6081AF001, WITH AFTERCOOLER, TURBOCHARGER, 275 BHP<br>A/N: 576783 | D113 | | NOX: PROCESS UNIT**; SOX: PROCESS UNIT** | **CO**: 8.5 GRAM/BHP-HR (4) [**RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1) -BACT, 12-6-2002*]; **NOX**: 6.9 GRAM/BHP-HR (4) [**RULE 2005, 12-4-2015**]; **NOX**: 469 LBS/1000 GAL DIESEL (1) [**RULE 2012, 12-4-2015**]; **PM**: (9) [**RULE 404, 2-7-1986**]; **PM10**: 0.38 GRAM/BHP-HR (4) [**RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]; **ROG**: 1 GRAM/BHP-HR (4) [**RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]; **SOX**: 6.24 LBS/1000 GAL DIESEL (1) [**RULE 2011, 5-6-2005;** *RULE 2011, 12-4-2015*] | C1.6, E448.4, H23.5, K67.4 |

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(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
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|---|---|---|---|---|---|
| **Process 2: INTERNAL COMBUSTION** | | | | | |
| INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, LEAN BURN, NO. 2, DIESEL FUEL, JOHN DEERE, MODEL 6081AF001, WITH AFTERCOOLER, TURBOCHARGER, 275 BHP<br>A/N: 576784 | D114 | | NOX: PROCESS UNIT**; SOX: PROCESS UNIT** | **CO**: 8.5 GRAM/BHP-HR (4) [**RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1) -BACT, 12-6-2002*]; **NOX**: 6.9 GRAM/BHP-HR (4) [**RULE 2005, 12-4-2015**]; **NOX**: 469 LBS/1000 GAL DIESEL (1) [**RULE 2012, 12-4-2015**]; **PM**: (9) [**RULE 404, 2-7-1986**]; **PM10**: 0.38 GRAM/BHP-HR (4) [**RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]; **ROG**: 1 GRAM/BHP-HR (4) [**RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]; **SOX**: 6.24 LBS/1000 GAL DIESEL (1) [**RULE 2011, 5-6-2005;** *RULE 2011, 12-4-2015*] | C1.6, E448.4, H23.5, K67.4 |
| **Process 3: POWER GENERATION - GAS TURBINES** | | | | | |

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|---|---|---|---|---|---|
| **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<br>A/N: 618931<br><br>GENERATOR, 236.1 MW GROSS AT 32 DEGREES F | D115 | C120 C121 S123 | NOX: MAJOR SOURCE**; SOX: PROCESS UNIT** | **CO**: 1.5 PPMV (4) [**RULE 1703 - PSD Analysis, 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 - PSD Analysis, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015**]; **NOX**: 15 PPMV (8) [**40CFR 60 Subpart KKKK, 7-6-2006**]; **PM**: 0.01 GRAINS/SCF (5B) [**RULE 475, 10-8-1976;** *RULE 475, 8-7-1978*]; **PM**: 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]; **PM**: 11 LBS/HR (5A) [**RULE 475, 10-8-1976;** *RULE 475, 8-7-1978*]; **PM10**: 8.5 LBS/HR (5C) [**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, 5-6-2005;** *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*] | A63.7, A195.6, A195.7, A195.8, A195.9, A327.1, B61.1, C1.7, C1.8, C1.9, D29.6, D29.7, D82.3, D82.4, E57.2, E193.4, E193.6, E448.1, I297.1, I298.1, K67.5 |

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(9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements

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

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions* And Requirements | Conditions |
|---|---|---|---|---|---|
| **Process 3: POWER GENERATION - GAS TURBINES** | | | | | |
| GENERATOR, HEAT RECOVERY STEAM<br><br>TURBINE, STEAM, COMMON WITH GAS TURBINE NO. 2, 221.4 MW GROSS AT 32 DEGREES F | | | | | |
| CO OXIDATION CATALYST, BASF, SERVING GAS TURBINE NO. 1, WITH 328.8 CU FT OF TOTAL CATALYST VOLUME<br>A/N: 613958 | C120 | D115 | | | D12.10, E193.4 |
| SELECTIVE CATALYTIC REDUCTION, CORMETECH, TITANIUM/VANADIUM/TUNGSTEN, SERVING UNIT NO 1, 2761 CU FT OF TOTAL CATALYST VOL UME, WIDTH: 1 FT 6 IN; HEIGHT: 71 FT 7.2 IN; LENGTH: 25 FT 8.4 IN WITH<br>A/N: 613958<br><br>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, E193.4 |
| STACK, SERVING TURBINE NO. 1, HEIGHT: 150 FT ; DIAMETER: 20 FT<br>A/N: 618931 | S123 | D115 | | | |

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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: 618932<br><br>GENERATOR, 236.1 MW GROSS AT 32 DEGREES F | D124 | C129 C130 S132 | NOX: MAJOR SOURCE**; SOX: PROCESS UNIT** | **CO**: 1.5 PPMV (4) [**RULE 1703 - PSD Analysis, 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 - PSD Analysis, 10-7-1988; RULE 2005, 6-3-2011; RULE 2005, 12-4-2015**]; **NOX**: 15 PPMV (8) [**40CFR 60 Subpart KKKK, 7-6-2006**]; **PM**: 0.01 GRAINS/SCF (5B) [**RULE 475, 10-8-1976;** *RULE 475, 8-7-1978*]; **PM**: 0.1 GRAINS/SCF (5) [**RULE 409, 8-7-1981**]; **PM**: 11 LBS/HR (5A) [**RULE 475, 10-8-1976;** *RULE 475, 8-7-1978*]; **PM10**: 8.5 LBS/HR (5C) [**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, 5-6-2005;** *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*] | A63.7, A195.6, A195.7, A195.8, A195.9, A327.1, B61.1, C1.7, C1.8, C1.9, D29.6, D29.7, D82.3, D82.4, E57.2, E193.4, E193.6, E448.1, I297.4, I298.4, K67.5 |

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|---|---|---|---|---|---|
| **Process 3: POWER GENERATION - GAS TURBINES** | | | | | |
| GENERATOR, HEAT RECOVERY STEAM<br><br>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<br>A/N: 613960 | C129 | D124 | | | D12.10, 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<br>A/N: 613960<br><br>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, E193.4 |
| STACK, SERVING UNIT NO. 2, HEIGHT: 150 FT ; DIAMETER: 20 FT<br>A/N: 618932 | S132 | D124 | | | |

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| **Process 3: POWER GENERATION - GAS TURBINES** | | | | | |
| BOILER, AUXILIARY, CLEAVER BROOKS, MODEL NB-200D-50, WATER TUBE, NATURAL GAS, WITH LOW NOX BURNER, FLUE GAS RECIRCULATION, 71 MMBTU/HR WITH<br>A/N: 613957<br><br>BURNER, P-71-G23-11-16, 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**]; **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, D82.5, D82.6, E57.3, E193.4, I297.3, I298.3 |
| SELECTIVE CATALYTIC REDUCTION, BABCOCK AND WILCOX, VANADIUM, SERVING THE AUXILIARY BOILER, WITH 46 CU FT OF TOTAL CATALYST VOLUME WITH<br>A/N: 613956<br><br>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, E193.4 |
| STACK, SERVING THE AUXILIARY BOILER, HEIGHT: 80 FT ; DIAMETER: 3 FT<br>A/N: 613957 | S149 | D145 | | | |
| **Process 4: AMMONIA STORAGE** | | | | | |

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|---|---|---|---|---|---|
| **Process 4: AMMONIA STORAGE** | | | | | |
| STORAGE TANK, NO. 1, HORIZONTAL, AQUEOUS AMMONIA, 19 PERCENT, 22290 GALS; DIAMETER: 10 FT ; LENGTH: 36 FT<br>A/N: 604032 | D150 | | | | C157.1, E144.1, E193.4 |
| **Process 6: INORGANIC CHEMICAL STORAGE** | | | | | |
| STORAGE TANK, FIXED ROOF, NO. 1, UREA, 30000 GALS<br>A/N: 543867 | D97 | | | | E193.1 |
| **Process 9: R219 EXEMPT EQUIPMENT SUBJECT TO SOURCE-SPECIFIC RUL** | | | | | |
| 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, 6-3-2011;** *RULE 1113, 9-6-2013;* **RULE 1171, 2-1-2008;** *RULE 1171, 5-1-2009*] | K67.2 |
| **Process 10: WASTEWATER TREATMENT** | | | | | |
| OIL WATER SEPARATOR, NO. 1<br>A/N: 578085 | D152 | | | | |

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(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: 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 | | | |
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| **Device ID** | **Section D Page No.** | **Process** | **System** |
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| D25 | 1 | 1 | 0 |
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# 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

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

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

For purposes of demonstrating compliance with the 70 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 PM2.5 = 3.94 lbs/mmcf, for the auxiliary boiler PM2.5 = 7.54 lbs/mmcf, for Boiler 2 PM2.5 = 2.1 lbs/mmcf. For each emergency engine using the rated hp and the calendar monthly hourly usage data and the following emission factor PM2.5 = 0.38 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**]

# 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:**

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 |

# 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:**

| | | | |
|---|---|---|---|
| 104 | Boiler No. 4 | SO2 | 76 |

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**]

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

# 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:**

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**]

F67.1 The facility operator shall comply with all terms and conditions specified below.

Continuous operation of monitoring systems not subject to a specific regulation or rule with provisions for monitor outages are not required when necessary calibration, maintenance or repair activities are performed in accordance with manufacturer's recommendation. The operator shall take all reasonable actions to minimize the time required to perform such activities. In no event shall any such activities exceed 96 consecutive hours for any one calibration, maintenance, or repair episode.

The operator shall notify the Executive Officer within 24 hours of the start of a calibration, maintenance, or repair activity, if the activity is expected to last more than 24 consecutive hours.

[**RULE 204, 10-8-1993**]

**DEVICE CONDITIONS**

# 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:**

### A. Emission Limits

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 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, CO: 15.18 lbs/mmscf during normal operation 325 lbs for a cold start and 137 lbs for a non cold start

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]

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

| 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 |

# 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 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.

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 : D145]

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: NH3 (ppmv) = [a-(b*c/1E6]*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 NOx across the SCR (ppmvd). The operator shall install and maintain a NOx analyzer to measure the SCR inlet NOx 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 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 : C90, C92]

# 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:**

A195.5 The 7 PPMV NOX emission limit(s) is averaged over 720 operating hours and is a heat input weighted average with consecutive, non-overlapping averaging periods, as detailed below.

A data acquisition system shall be installed and maintained to continuously record the raw data necessary to calculate the heat input weighted average NOx concentration (ppmv) and to calculate and record the heat input weighted average NOx concentration for each averaging period.

The average shall be calculated based on emissions during all boiler operating hours, except startups, shutdowns, CEMS calibration and maintenance periods, Part 75 linearity testing, RATA testing, equipment breakdown periods as defined in Rule 2004, and periods of zero fuel flow.

Startups are defined as whenever the unit is being brought up to normal operating temperature from an inactive status, and the exhaust temperature entering the SCR catalyst is less than 525 degrees F.

Shutdowns are defined as whenever the unit is allowed to cool from a normal operating temperature to inactive status and the exhaust temperature entering the SCR catalyst is less than 525 degrees F.

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

1. PPMV(3% O2) = (Et/Qt)*K; where PPMV(3% O2) = the concentration of NOx in PPMV corrected to 3% O2; K = a conversion factor from lbs/MMBtu to PPM, which can be determined using EPA 40CFR60 Method 19 (the default value of K is 819); Et = total reported NOx emissions during the averaging period including emissions reported as a result of missing data procedures pursuant to Rule 2012; and Qt = Total heat input during the averaging period.

[RULE 2009, 1-7-2005]

# 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 : D25]

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 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]

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 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 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]

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**]

# 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 : 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:.

# 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:**

NH3 (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 NOx across the SCR (ppmvd at 15% O2)

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

The 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.

The SCAQMD may require the installation of a CEMS designed to monitor ammonia concentration if the SCAQMD determines that a commercially available CEMS has been proven to be accurate and reliable and that an adequate Quality Assurance/Quality Control (QA/QC) protocol has been established. The SCAQMD or other agency must establish an SCAQMD approved QA/QC protocol prior to the ammonia CEMS becoming a requirement..

In the event that an ammonia CEMS is installed, the ammonia slip calculation and annual ammonia slip testing requirement shall no longer be required..

[**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 D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Devices subject to this condition : C121, C130]

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.

# 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:**

NH3 (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 NOx across the SCR (ppmvd at 3% O2)

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

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

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

The SCAQMD may require the installation of a CEMS designed to monitor ammonia concentration if the SCAQMD determines that a commercially available CEMS has been proven to be accurate and reliable and that an adequate Quality Assurance/Quality Control (QA/QC) protocol has been established. The SCAQMD or other agency must establish an SCAQMD approved QA/QC protocol prior to the ammonia CEMS becoming a requirement..

In the event that an ammonia CEMS is installed, the ammonia slip calculation and annual ammonia slip testing requirement shall no longer be required..

[**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 D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[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]

### B. Material/Fuel Type Limits

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, D145]

### 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.

# 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 200 hours per year shall include no more than 30 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 1110.2, 2-1-2008;** RULE 1110.2 , 12-4-2015; **RULE 1303(b)(1)-Modeling, 5-10-1996;** RULE 1303(b)(1)-Modeling, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996;** RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1470, 5-4-2012; **RULE 2005, 5-6-2005; RULE 2005, 12-4-2015**]

[Devices subject to this condition : D113, D114]

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

# 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 number of cold start ups shall not exceed 15 per month, the number of non-cold start ups shall not exceed 47 per month...

Daily Start Up Limit - The number of start ups shall not exceed 2 per day.

Annual Start Up Limit - The number of cold start ups shall not exceed 80 per year, and the number of non-cold starts ups shall not exceed 420 per year..

For the purposes of this condition: A cold start up is defined as a start up which occurs after the combustion 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 non-cold start up is defined as a start up which occurs after the combustion turbine has been shutdown for less than 48 hours. A non-cold start up shall not exceed 30 minutes. Emissions during the 30 minutes that includes a non-cold start up shall not exceed the following: NOx - 32 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 for both NOx and CO based on minute data. If during start up the process is aborted the process will count as one start up..

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

The operator shall verify compliance with the VOC emission limits by using fuel use data and an emission factor of 18 lbs/mmcf for a cold start and 25 lbs/mmscf during a non cold start..

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

# 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:**

[**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.

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 verify compliance with the emission limits for CO and NOx after the CEMS certification based upon readings from the SCAQMD certified CEMS..

The operator shall verify compliance with the VOC emission limits by using fuel use data and an emission factor of 32 lbs/mmcf..

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 7640 hour(s) in any one year.

# 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 limit includes baseload operation as well as start ups and shutdowns..

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

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]

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

# 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 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 the170 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.

# 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 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]

C1.15 The operator shall limit the heat input to no more than 4,248,950 MM Btu in any one year.

The calendar year heat input shall be calculated using the natural gas usage data and a natural gas HHV of 1,050 btu/mmcf.

[**RULE 1325, 1-4-2019**]

[Devices subject to this condition : D25]

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]

### 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 intlet 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 at 1000 deg F or less

[**RULE 2012, 2-5-2016**]

[Devices subject to this condition : 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 at 1000 lbs/hr or less

[**RULE 2012, 2-5-2016**]

[Devices subject to this condition : 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 at 10 in. H2O or less

[**RULE 2012, 2-5-2016**]

[Devices subject to this condition : C90, C92]

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 20.0 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.

# 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 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 450-800 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.

# 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 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 450 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 : C120, C129]

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 0.3 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.

# 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 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]

[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]

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

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# 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 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.

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

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 NOx 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 NOx emissions using District Method 100.1 measured over a 60 minute averaging time period.

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

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 that the NOx concentration during the source test does not exceed the limit in condition A195.5 averaged over the full duration of the test and corrected to 3% O2 dry.

[**RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1401, 6-5-2015]

[Devices subject to this condition : C90, C92]

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 | 1 hour | Outlet of the SCR serving this equipment |

# 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 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. If the results of any calendar year test show non-compliance with the limit, then quarterly tests must be conducted and at least 4 consecutive tests must show compliance with the limit before calendar year testing can resume.

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 in accordance with an AQMD approved test protocol.

The protocol shall be submitted to the AQMD engineer no later than 60 days before the proposed test date and shall be approved by the AQMD before the test commences, unless otherwise specified by the Executive Officer. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

Emission data shall be expressed in terms of concentration (ppmv) corrected to 15 percent oxygen (dry basis) and mass rate (lb/hr). 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.

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

# 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:**

concentration limit

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

[Devices subject to this condition : D115, D124, 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 D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

**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.

The test shall be conducted in accordance with an AQMD approved test protocol.

The protocol shall be submitted to the AQMD engineer no later than 60 days before the proposed test date and shall be approved by the AQMD before the test commences, unless otherwise specified by the Executive Officer. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

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 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

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

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

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.

Source test results shall be submitted to the District no later than 60 days after the source test was conducted. Emission data shall be expressed in terms of concentration (ppmv) corrected to 15 percent oxygen (dry basis), mass rate (lb/hr), and lb/MMCF. In addition, solid PM emissions shall also be reported in terms of grains per DSCF corrected to 3 percent oxygen (dry basis) and corrected to 12 percent CO2 (dry basis).

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

[Devices subject to this condition : D115, D124]

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 |
|---|---|---|---|

# 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:**

| | | | |
|---|---|---|---|
| CO emissions | Approved District method | 30 minutes | Outlet of the SCR serving this equipment |

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.

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, mass rate in terms of lbs/hr and lbs/mmscf. All moisture concentration shall be expressed in terms of percent corrected to 3 percent oxygen.

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(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 : 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:**

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

CO concentration in ppmv

The CEMS shall be installed and operated in accordance with an approved Rule 218 CEMS plan application

The CEMS shall measure the CO concentration at least once per minute. Concentrations shall be corrected to 15 percent oxygen on a dry basis.

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*Cco*Fd[20.9/(20.9%-%O2 d)][(Qg*HHV)/10E6], where

1. K = 7.267*10-8 (lbs/scf)/ppm
2. Cco = average CO concentrations, ppm
3. Fd = 8710 dscf/MMBTU natural gas
4. %O2, d = Hourly average % by volume O2 dry, corresponding to Cco
5. Qg = 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; RULE 218, 5-14-1999;** RULE 218, 3-5-2021; **RULE 218.1, 5-14-1999;** RULE 218.1, 5-4-2012]

[Devices subject to this condition : D115, D124]

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

# 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:**

NOx concentration in ppmv and O2 in percent

The CEMS shall be installed and operated in accordance with approved SCAQMD REG XX CEMS plan application.

The CEMS shall measure the NOx concentration at least once per minute. Concentrations shall be corrected to 15 percent oxygen on a dry basis.

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

[**RULE 1703 - PSD Analysis, 10-7-1988; RULE 2005, 6-3-2011; RULE 2012, 2-5-2016; 40CFR Part 75-Acid Rain CEM, 1-18-2012**]

[Devices subject to this condition : D115, D124]

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

NOx concentration in ppmv

The CEMS shall be installed and operated in accordance with approved SCAQMD REG XX CEMS plan application..

The CEMS shall measure the NOx concentration at least once per minute. Concentrations shall be corrected to 3 percent oxygen on a dry basis.

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

[**RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015; RULE 2012, 2-5-2016**]

[Devices subject to this condition : D145]

# 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:**

D82.6 The operator shall install and maintain a CEMS to measure the following parameters:

CO concentration in ppmv

The CEMS shall be installed and operatied in accordance with approved Rule 218 CEMS plan application.

The CEMS shall measure the CO concentration over a 15 minute averaging time period. Concentrations shall be corrected to 3 percent oxygen on a dry basis.

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*Cco*Fd[20.9/(20.9%-%O2d)] [(Qg*HHV)/10E6], where

1. K = 7.267*10-8 (lbs/scf)/ppm
2. Cco = Average CO concentrations, ppm
3. Fd = 8710 dscf/MMBTU natural gas
4. %O2, d = Hourly average % by volume O2 dry, corresponding to Cco
5. Qg = 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 218, 5-14-1999;** RULE 218, 3-5-2021; **RULE 218.1, 5-14-1999;** RULE 218.1, 5-4-2012]

[Devices subject to this condition : D145]

D82.7 The operator shall install and maintain a CEMS to measure the following parameters:

# 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:**

NOX concentration in ppmv

The CEMS shall measure the NOx concentration at least once per minute

Concentrations shall be corrected to 3 percent oxygen on a dry basis. The CEMS shall be installed and operated in accordance with approved SCAQMD REG XX CEMS plan application.

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

[**RULE 1135, 7-19-1991;** RULE 1135, 1-7-2022; **RULE 2012, 2-5-2016**]

[Devices subject to this condition : D25]

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**]

[Devices subject to this condition : E81]

# 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:**

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

E57.2 The operator shall vent this equipment to to the SCR and the oxidation catalysts whenever turbine is in operation..

Ammonia injection shall begin after the SCR inlet temperature reaches between 400 Deg F and 570 deg F if the injection of ammonia will not result in ammonia emissions in excess of the ammonia slip concentration limit.

# 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:**

[**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]

E57.3 The operator shall vent this equipment to to the SCR whenever the boiler is in operation.

[**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]

E57.4 The operator shall vent this equipment to the SCR whenever the boiler is in operation.

Ammonia injection shall commence once the temperature in the exhaust reaches 525 deg F.

The operator may choose to not inject ammonia during boiler start up when the exhaust temperature is below 525 deg F.

[**RULE 1135, 7-19-1991;** RULE 1135, 1-7-2022; RULE 429.2, 1-7-2022]

[Devices subject to this condition : D25]

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]

# 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:**

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

Condition Number D 12- 4

Condition Number A 195- 1

Condition Number D 12- 3

[**RULE 2012, 2-5-2016**]

[Devices subject to this condition : 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, 2-5-2016**]

[Devices subject to this condition : 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 : D25, C90, C92, D96, D97]

# 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:**

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, D145, C147, D150]

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

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:

$CO2 = 60.009 * FF$

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 1,004,516 tons per year per turbine on a 12-month rolling average basis. The calendar annual average CO2 emissions shall not exceed 951.8 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.

# 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:**

[**RULE 1714, 12-10-2012**]

[Devices subject to this condition : D115, D124]

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

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, and the single generator serving the common steam turbine. 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]

E448.4 The operator shall comply with the following requirements:

Beginning May 3, 2013, the engine oil and filter shall be changed every 500 hours of operation or annually whichever comes first, or in accordance with an oil analysis program as specified in 40 CFR 63.6625(j). The engine hoses and belts shall be inspected every 500 hours or annually whichever comes first, and the engine air filter shall be inspected every 1000 hours or annually whichever comes first.

# 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:**

[**40CFR 63 Subpart ZZZZ, 1-30-2013**]

[Devices subject to this condition : D113, D114]

## H. Applicable Rules

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 |
|---|---|---|
| Sulfur compounds | District Rule | 431.2 |
| PM10 | District Rule | 1470 |

[RULE 1470, 5-4-2012]

[Devices subject to this condition : D113, D114]

## I. Administrative

# 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:**

I297.1 This equipment shall not be operated unless the facility holds 16800 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]

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]

I297.4 This equipment shall not be operated unless the facility holds 16800 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.

# 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:**

[**RULE 2005, 12-4-2015;** RULE 2005, 11-5-2021]

[Devices subject to this condition : D124]

I298.1 This equipment shall not be operated unless the facility holds 11460 pounds of SOx 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 11460 pounds of SOx 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]

# 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:**

I298.3 This equipment shall not be operated unless the facility holds 382 pounds of SOx 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 SOx 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]

I298.4 This equipment shall not be operated unless the facility holds 11460 pounds of SOx 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 11460 pounds of SOx 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.

# 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:**

[**RULE 2005, 12-4-2015;** RULE 2005, 11-5-2021]

[Devices subject to this condition : D124]

### K. Record Keeping/Reporting

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):

# 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:**

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]

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.

The log shall also list the date and engine operating hours at the time of each oil and filter change, and each inspection of the belts, hoses, and air cleaner.

The log shall be kept for a minimum of five calendar years prior to the current year and be made available to District personnel upon request. The total hours of operation for the previous calendar year shall be recorded sometime during the first 15 days of January of each year

# 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:**

[RULE 1110.2 , 12-4-2015; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996;** RULE 1470, 5-4-2012]

[Devices subject to this condition : D113, D114]

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

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

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

Total annual power output in MWh, gross and net, total hours of operation and fuel consumption.

[**RULE 1135, 7-19-1991;** RULE 1135, 11-2-2018; **RULE 1303(b)(2)-Offset, 5-10-1996;** RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D115, D124]

K67.7 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

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

Total annual power output in MWh, gross and net, total hours of operation and fuel consumption

This condition becomes effective beginning January 1, 2024

[**RULE 1135, 7-19-1991;** RULE 1135, 1-7-2022]

# 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 : D25]