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Document Title:	Petition to Amend - TV Permit Revisions
Description:	N/A
Filer:	Jeff Miller
Organization:	AES
Submitter Role:	Applicant
Submission Date:	6/17/2020 3:04:50 PM
Docketed Date:	6/17/2020

AES Huntington Beach Energy Project
21730 Newland Street
Huntington Beach, CA 92646
562 493 7891

May 20, 2020
Mr. Joseph Douglas
Compliance Project Manager
California Energy Commission
1516 9th Street
Sacramento, CA 95814

Subject: Huntington Beach Energy Project
Petition to Amend to Incorporated Completed Title V Permit Modifications

Dear Mr. Douglas,

AES recently received a revised Title V Permit issued by the South Coast Air Quality Management District. This revision addressed administrative errors and an issue with non-cold start emissions. Please see the attached questionnaire and permit.

Please let me know if you have any questions.

Sincerely,

Jeff Miller, AES Huntington Beach Energy Project

CC: Stephen O'Kane/AES

Mr. Joseph Douglas
May 20, 2020

HUNTINGTON BEACH ENERGY PROJECT
12-AFC-02C
PETITION FOR MODIFICATION

Pursuant to Section 1769 of the California Energy Commission ("CEC") Siting Regulations, AES Huntington Beach Energy, LLC (the "Project Owner") hereby submits this Petition for Modification for Non-Cold Start Emission Limits for the Combined Cycle Gas Turbines (the "Petition") for the Huntington Beach Energy Project, 12-AFC-02C (the "Project").

This Petition requests that the non-cold start up limit be increased as described in the South Coast Air Quality Management District's ("SCAQMD") revised RECLAIM/Title V Facility Permit (the "Title V Permit"), provided in Attachment A to this Petition. While the Title V Permit increases the non-cold start emissions limit, the approved limit is still the lowest limit for any comparable gas turbine in the South Coast Air Basin, and it represents the Best Available Control Technology ("BACT") for these Combined Cycle Gas Turbines ("CCGTs"). Other administrative changes to permit language in conditions C1.7 and F52.1 are also included with this PTA.

As set forth below, the Title V Permit approvals will not have a significant effect on the environment and will not affect the Project's ability to continue to comply with applicable laws, ordinances, regulations, or standards ("LORS").

I. Section 1769(a)(1)(A): Description of the proposed change, including new language for affected conditions of certification.

The Project Owner is submitting this Petition and the approved SCAQMD RECLAIM/Title V Facility Permit to revise the non-cold start nitrogen oxide (NOx) emission limit associated with two CCGTs and administrative changes in conditions C1.7 and F52.1. Consistent with the Commission's Revised Final Decision for the Project, the Project Owner has installed two high efficiency CCGTs. The recently completed commissioning and performance testing of the new plant indicated that the CCGTs can operate within all established emission limits except for the NOx mass emission limit for a non-cold start up.

Specifically, under certain operating conditions outside the control of the Project Owner, mass emissions of NOx may exceed 17 pounds per event, which was the limit established for non-cold start up in the prior air permit and in the Revised Final Decision (see Condition of Certification AQ-24). The Project Owner first became aware of the issue with non-cold start up emissions on January 27, 2020 when performance and emission testing data became available. The Project Owner applied to the SCAQMD requesting that the non-cold start up limit be increased from 17 pounds per event to 32 pounds per event on February 11, 2020. The Project Owner timely provided a copy of this application to the Compliance Project Manager for the Project. The Project Owner also filed for a variance so that the CCGTs could operate during the interim, pending approval of the revised permit. The Project Owner obtained the Title V Permit on April 21, 2020, which increases the allowable NOx emission during a non-cold start, Condition C1.7 and administrative changes correcting the definition of a start as the time since shutdown of the combustion turbine as opposed to the steam turbine

To be consistent with the Title V Permit Condition C1.7, Condition of Certification AQ-24 should be replaced in its entirety to conform to the Title V Permit, as follows:

AQ-24 The operator shall limit the number of start ups to no more than 62 in any one calendar month.

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 ~~steam~~ **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 ~~steam~~ **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 - 17 lbs~~. **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 calculate compliance with the emission limits for CO and NOx after the CEMS certification based upon readings from the SCAQMD certified CEMS..

The operator shall calculate 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..

Verification: The project owner shall provide a table demonstrating compliance with this condition as part of the Quarterly Operation Reports (AQ-SC8). The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

An increase in non-cold start emissions also requires conforming changes to the NOx RECLAIM Trading Credits ("RTC") holding requirements. Accordingly, the Title V Permit increases the RTCs the Project must hold for the first year of operation from 147,093 to 156,093 pounds, per Condition I297.1. To be consistent with the Title V Permit Condition I297.1, Condition of Certification AQ-62 should be conformed, as follows:

AQ-62 This equipment shall not be operated unless the facility holds ~~147,093~~ **156,093** 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.

The combined-cycle turbines are subject to this condition.

Verification: The project owner shall submit to the CPM copies of all RECLAIM reports filed with the District as part of Quarterly Operation Reports (AQ-SC8).

Administrative changes to condition F52.1 were also made to the Title V Permit, the regulatory requirements for the permanent shutdown of AES Huntington Beach Unit 2 related to the possible extension of the OTC compliance date for this unit. (See Condition F52.1 in Attachment A.)

II. Section 1769(a)(1)(B): Discussion of the necessity for the change and explanation of why the change should be permitted.

During the permitting of the facility, the Project Owner provided the SCAQMD its best engineering estimates for emissions of NOx, carbon monoxide (CO), volatile organic compound (VOC) during start ups, and the time required to reach Minimum Emission Compliant Load (MECL) and Best Available Control Technology (BACT) levels for these pollutants. Significantly, these emission estimates assumed, consistent with best engineering practices, a constant ramp-up in gas turbine load and fuel flow up to the point the gas turbine and associated SCR system can control emissions down to MECL BACT levels.

During the performance and emission testing of these units, it was discovered that the gas turbines may have to halt the ramp-up to MECL BACT levels while waiting for the electrical generator to synchronize to the electrical grid. The gas turbine must operate at the full-speed, no-load level while waiting for the generator to synchronize with the electrical grid. The gas turbine emits NOx at a relatively high rate when it is operated at full-speed, no-load. Synchronization to the grid can occur within 10 seconds but may also take as long as 5 or 6 minutes, depending on the voltage and frequency of the grid at the time. Because a non-cold start takes 30 minutes or less to complete and get to MECL BACT levels, only one or two minutes at an elevated NOx emission rate will cause an increase to the total NOx mass emissions for a non-cold start.

Because the Project Owner cannot control the time it takes for synchronization to the electrical grid, it is necessary to select a limit based on the maximum emissions associated with non-cold start events that would be reasonably expected to occur. Therefore, the Title V Permit revises the NOx emission limit of 32 pounds per non-cold start event, which still represents a lower emission rate than equivalent CCGTs operating anywhere in the basin. For comparison, there are two installations of comparable turbines in the South Coast Air Basin: the Scattergood facility (facility ID 800075), which has a NOx limit of 50 pounds per non-cold start event, and El Segundo Power (facility ID 115663), which has a NOx limit of 36 pounds per 30-minute fast start. Considering this, the 32 pounds of NOx per non-cold start represents BACT for the Project's CCGTs.

Administrative changes to condition C1.7 and F52.1 are to correct erroneous language in the Title V permit and to align the regulatory requirements of the State Water Resources Board with planned retirements of once-through-cooled generating units.

III. Section 1769(a)(1)(C): A description of any new information or change in circumstances that necessitated the change.

In January 2020, the Project Owner completed the commissioning and equipment performance and emission testing of the new CCGTs at the Huntington Beach facility. Equipment performance and emissions testing indicated that the CCGTs could meet all emission limits for normal operations, start ups and shutdowns, except for the mass emission limit for NOx during a non-cold start up. As described in this Petition, under certain operating conditions outside the control of the Project Owner that primarily depend on the voltage and frequency of the grid at the time, mass emissions of NOx could exceed the former pounds per event limit.

IV. Section 1769(a)(1)(D): An analysis of the effects that the proposed change to the project may have on the environment and proposed measures to mitigate any significant environmental effects.

There is no possibility that the modifications described in the Title V Permit will result in adverse environmental impacts. The Title V Permit actions do not involve a physical modification to the basic equipment or control equipment. Moreover, the Title V Permit amendments do not involve changes to the processes at the facility.

The Title V Permit revisions increase the permitted NOx emissions from two CCGTs during non-cold starts and do not result in emissions increases of any other pollutant. The maximum daily emissions increase associated with the Title V Permit Condition C1.7 limits the Project to two start up events per day.

The Title V Permit does not change the uncontrolled or controlled average hourly emissions, maximum hourly emissions, or maximum daily emissions, the 30-day average emissions, and does not change the maximum time allowed to reach BACT levels during a non-cold or cold start. Because the maximum emissions for each of the hourly, daily and 30-day average periods are due to the cold start operating scenario, not the non-cold start operating scenario, maximum average hourly emissions, maximum hourly emissions, maximum daily emissions, and the 30-day average emissions are not affected.

V. Section 1769(a)(1)(E): An analysis of how the proposed change would affect the project's compliance with applicable laws, ordinances, regulations, and standards.

As discussed in this Petition and Attachment A, the Title V Permit will not impact the Project's ability to comply with all applicable LORS.

VI. Section 1769(a)(1)(F): A discussion of how the proposed change would affect the public.

The Title V Permit will not adversely affect the public. There will be no significant effects and the project will comply with applicable LORS.

VII. Section 1769(a)(1)(G): A list of current assessor's parcel numbers and owners' names and addresses for all parcels within 500 feet of any affected project linears and 1,000 feet of the project site.

Consistent with privacy considerations, a list of current assessor's parcel numbers and owners' names and addresses for all parcels within 500 feet of the project site will upon request be provided directly to the Compliance Project Manager.

VIII. Section 1769(a)(1)(H): A discussion of the potential effect of the proposed change on nearby property owners, residents, and the public.

The Title V Permit will have no potentially significant environmental effects and will be in compliance with all applicable LORS. Therefore, the Title V Permit will have no adverse impacts on property owners, residents, the public, or any parties in the application proceeding.

IX. Section 1769(a)(1)(I): A discussion of any exemptions from the California Environmental Quality Act, commencing with section 21000 of the Public Resources Code, that the project owner believes may apply to approval of the proposed change.

The modifications in the Title V Permit are categorically exempt from the California Environmental Quality Act ("CEQA") pursuant to Title 14 of the California Code of Regulations as activities that constitute a minor alteration of the existing Project that involves no expansion of an existing use. (14 CCR § 15301.)

CEQA provides an exemption for certain air quality permits: "CEQA does not apply to the issuance, modification, amendment, or renewal of any permit by an air pollution control district or air quality management district pursuant to Title V, as defined in Section 39053.3 of the Health and Safety Code, or pursuant to an air district Title V program established under Sections 42301.10, 42301.11, and 42301.12 of the Health and Safety Code, unless the issuance, modification, amendment, or renewal authorizes a physical or operational change to a source or facility." (14 CCR § 15281.) In this case, there are no physical changes to the Project. Moreover, as discussed above, since the maximum emissions for each of the hourly, daily and 30-day average periods is due to the cold start operating scenario, not the non-cold start operating scenario, maximum average hourly emissions, maximum hourly emissions, maximum daily emissions, and the 30-day average emissions are not affected.

Activities are also exempt from CEQA under the "Common Sense Exemption." "CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA." (14 CCR § 15061(b)(3).) In this case, the Project has been issued the revised Title V Permit and will remain in compliance with applicable LORS and will not result in any significant environmental effects.

Mr. Joseph Douglas
May 20, 2020

ATTACHMENT A

South Coast Air Quality Management District
RECLAIM/Title V Facility Permit Revision

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

April 21, 2020

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

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

Dear Mr. O'Kane:

Please find attached the revised Title Page, Table of Contents, and Section H of your RECLAIM/Title V Facility Permit. The revised sections reflect the approval of the minor permit revision requested in your Application No. 618930 to increase the allowable NOx emissions during a non-cold start, modify the definition of the start up type, and add language that reflects the potential extension of the retirement date for Boiler No. 2. Following are the application numbers:

Equipment	Appl No.	Device ID	Permit Type
CCTG #1	618931	D115	PC
CCTG #2	618932	D124	PC

Please review the attached sections carefully. Insert the enclosed sections into your RECLAIM/Title V Facility Permit and discard the earlier versions. Questions concerning changes to your permit should be directed to Mr. Chris Perri at (909) 396-2696.

Sincerely,

Bhaskar Chandan, P.E., QEP
Senior Air Quality Engineering Manager
Engineering and Permitting

Cc: Gerardo Rios, EPA Region IX
SCAQMD Compliance

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

Title Page
Facility ID: 115389
Revision #: 49
Date: April 21, 2020

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 _____ for
Amir Dejbakhsh
Deputy Executive Officer
Engineering and Permitting

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

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Revision #: 49
Date: April 21, 2020

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

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FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 3: POWER GENERATION - GAS TURBINES					

* (1) (1A) (1B) Denotes RECLAIM emission factor
(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 3: POWER GENERATION - GAS TURBINES					
GAS TURBINE, UNIT NO. 1, COMBINED CYCLE, GE MODEL 7FA.05, NATURAL GAS, 2273 MMBTU/HR AT 32 DEGREES F WITH DRY LOW NOX COMBUSTOR, GE DLN 2.6 WITH A/N: 618931 Permit to Construct Issued: 04/21/20	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]**; **NOX**: 16.66 LBS/MMSCF (1) **[RULE 2012, 5-6-2005; RULE 2012, 12-4-2015]**; **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)**	A63.6, A63.7, A99.4, A195.6, A195.7, A195.8, A195.9, A327.1, B61.1, C1.7, C1.8, C1.9, D29.5, D29.6, D29.7, D82.3, D82.4, E193.3, E193.4, E193.5, E193.6, E448.1, I297.1, I298.1, K40.3, K67.5

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

** 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 3: POWER GENERATION - GAS TURBINES					
GENERATOR, 236.1 MW GROSS AT 32 DEGREES F GENERATOR, HEAT RECOVERY STEAM TURBINE, STEAM, COMMON WITH GAS TURBINE NO. 2, 221.4 MW GROSS AT 32 DEGREES F				**-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]	
CO OXIDATION CATALYST, BASF, SERVING GAS TURBINE NO. 1, WITH 328.8 CU FT OF TOTAL CATALYST VOLUME A/N: 613958 Permit to Construct Issued: 10/04/19	C120	D115			D12.10, E193.3, E193.4
SELECTIVE CATALYTIC REDUCTION, CORMETECH, TITANIUM/VANADIUM/TUNGSTEN, SERVING UNIT NO 1, 2761 CU FT OF TOTAL CATALYST VOL UME, WIDTH: 1 FT 6 IN; HEIGHT: 71 FT 7.2 IN; LENGTH: 25 FT 8.4 IN WITH A/N: 613958 Permit to Construct Issued: 10/04/19 AMMONIA INJECTION, INJECTION GRID	C121	D115		**NH3**: 5 PPMV (4) **[RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]	A195.10, D12.7, D12.8, D12.9, E193.3, E193.4
STACK, SERVING TURBINE NO. 1, HEIGHT: 150 FT ; DIAMETER: 20 FT A/N: 618931 Permit to Construct Issued: 04/21/20	S123	D115			

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AES HUNTINGTON BEACH, LLC

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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 Permit to Construct Issued: 04/21/20	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]**; **NOX**: 16.66 LBS/MMSCF (1) **[RULE 2012, 5-6-2005; RULE 2012, 12-4-2015]**; **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)**	A63.6, A63.7, A99.4, A195.6, A195.7, A195.8, A195.9, A327.1, B61.1, C1.7, C1.8, C1.9, D29.5, D29.6, D29.7, D82.3, D82.4, E193.3, E193.4, E193.5, E193.6, E448.1, I297.1, I298.1, K40.3, K67.5

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(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

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CO OXIDATION CATALYST, BASF, SERVING GAS TURBINE NO. 2, WITH 328.8 CU FEET OF TOTAL CATALYST VOLUME A/N: 613960 Permit to Construct Issued: 10/04/19	C129	D124			D12.10, E193.3, E193.4
SELECTIVE CATALYTIC REDUCTION, CORMETECH, TITANIUM/VANADIUM/TUNGSTEN, SERVING UNIT NO. 2, 2761 CU FT OF TOTAL CATALYST VOLUME, WIDTH: 1 FT 6 IN; HEIGHT: 71 FT 7.2 IN; LENGTH: 25 FT 8.4 IN WITH A/N: 613960 Permit to Construct Issued: 10/04/19 AMMONIA INJECTION, INJECTION GRID	C130	D124		**NH3**: 5 PPMV (4) **[RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]	A195.10, D12.7, D12.8, D12.9, E193.3, E193.4
STACK, SERVING UNIT NO. 2, HEIGHT: 150 FT ; DIAMETER: 20 FT A/N: 618932 Permit to Construct Issued: 04/21/20	S132	D124			

* (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 3: POWER GENERATION - GAS TURBINES					
GAS TURBINE, UNIT NO. 3 SIMPLE CYCLE, GE MODEL LMS100PB, NATURAL GAS, 885 MMTU/HR AT 65.8 DEGREES F, INTERCOOLED, WITH DRY LOW NOX COMBUSTOR WITH A/N: 578077 Permit to Construct Issued: 12/30/17	D133	C135 C136 S138	NOX: MAJOR SOURCE**; SOX: PROCESS UNIT**	**CO**: 2 PPMV (4) **[RULE 1703 - PSD Analysis, 10-7-1988]**: **CO**: 2000 PPMV (5) **[RULE 407, 4-2-1982]**; **NOX**: 2.5 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]**; **NOX**: 25.11 LBS/MMSCF (1) **[RULE 2012, 5-6-2005; RULE 2012, 12-4-2015]**; **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**: 6.24 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*]	A63.8, A63.9, A99.5, A195.8, A195.11, A195.12, A327.1, B61.1, C1.10, C1.11, C1.12, D29.5, D29.6, D29.7, D82.3, D82.4, E193.3, E193.4, E193.7, E193.8, E448.2, E448.3, I297.2, I298.2, K40.3, K67.6

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(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 3: POWER GENERATION - GAS TURBINES					
GENERATOR, 100.8 MW GROSS AT 65.8 DEGREES F					
CO OXIDATION CATALYST, BASF CAMET, SERVING GAS TURBINE NO. 3, WITH 165.6 CU FT OF TOTAL CATALYST VOLUME A/N: 578079 Permit to Construct Issued: 04/18/17	C135	D133			D12.17, E193.3, E193.4
SELECTIVE CATALYTIC REDUCTION, CORMETECH CHMT, TITANIUM/VANADIUM/TUNGSTEN, SERVING UNIT NO. 3, WITH 622 CU FT OF TOTAL CATALYST VOLUME, WIDTH: 4 FT 10.8 IN; HEIGHT: 11 FT 6 IN; LENGTH: 11 FT WITH A/N: 578079 Permit to Construct Issued: 04/18/17 AMMONIA INJECTION, INJECTION GRID	C136	D133		**NH3**: 5 PPMV (4) **[RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]	A195.10, D12.11, D12.12, D12.13, E193.3, E193.4
STACK, SERVING UNIT NO. 3, HEIGHT: 80 FT ; DIAMETER: 13 FT 6 IN A/N: 578077 Permit to Construct Issued: 12/30/17	S138	D133			

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(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 3: POWER GENERATION - GAS TURBINES					
GAS TURBINE, UNIT NO. 4, SIMPLE CYCLE, GE MODEL LMS100PB, NATURAL GAS, 885 MMBTU/HR AT 65.8 DEG F, INTERCOOLED, WITH DRY LOW NOX COMBUSTOR WITH A/N: 578078 Permit to Construct Issued: 12/30/17	D139	C141 C142 S144	NOX: MAJOR SOURCE**; SOX: PROCESS UNIT**	**CO**: 2 PPMV (4) **[RULE 1703 - PSD Analysis, 10-7-1988]**; **CO**: 2000 PPMV (5) **[RULE 407, 4-2-1982]**; **NOX**: 2.5 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]**; **NOX**: 25.11 LBS/MMSCF (1) **[RULE 2012, 5-6-2005; RULE 2012, 12-4-2015]**; **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**: 6.24 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*]	A63.8, A63.9, A99.5, A195.8, A195.11, A195.12, A327.1, B61.1, C1.10, C1.11, C1.12, D29.5, D29.6, D29.7, D82.3, D82.4, E193.3, E193.4, E193.7, E193.8, E448.2, E448.3, I297.2, I298.2, K40.3, K67.6

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(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 3: POWER GENERATION - GAS TURBINES					
GENERATOR, 100.8 MW GROSS AT 65.8 DEG F					
CO OXIDATION CATALYST, BASF CAMET, SERVING GAS TURBINE NO. 4, WITH 165.6 CU FT OF TOTAL CATALYST VOLUME A/N: 578080 Permit to Construct Issued: 04/18/17	C141	D139			D12.17, E193.3, E193.4
SELECTIVE CATALYTIC REDUCTION, CORMETECH CMHT, TITANIUM/VANADIUM/TUNGSTEN, SERVING UNIT NO. 4, WITH 622 CU FT OF TOTAL CATALYST VOLUME, WIDTH: 4 FT 10.8 IN; HEIGHT: 11 FT 6 IN; LENGTH: 11 FT WITH A/N: 578080 Permit to Construct Issued: 04/18/17 AMMONIA INJECTION, INJECTION GRID	C142	D139		**NH3**: 5 PPMV (4) **[RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]	A195.10, D12.11, D12.12, D12.13, E193.3, E193.4
STACK, SERVING UNIT NO. 4, HEIGHT: 80 FT ; DIAMETER: 13 FT 6 IN A/N: 578078 Permit to Construct Issued: 12/30/17	S144	D139			

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(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 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 A/N: 613957 Permit to Construct Issued: 07/12/19 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]**; **NOX**: 49.18 LBS/MMSCF NATURAL GAS (1) **[RULE 2012, 12-4-2015]**; **PM**: 0.1 GRAINS/SCF (5) **[RULE 409, 8-7-1981]**; **SOX**: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 12-4-2015]	A63.10, A63.11, A99.6, A195.13, A195.14, B61.1, C1.13, C1.14, D29.6, D29.8, D82.5, D82.6, E193.3, E193.4, I297.3, I298.3, K40.4

* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit (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 3: POWER GENERATION - GAS TURBINES					
SELECTIVE CATALYTIC REDUCTION, BABCOCK AND WILCOX, VANADIUM, SERVING THE AUXILIARY BOILER, WITH 46 CU FT OF TOTAL CATALYST VOLUME WITH A/N: 613956 Permit to Construct Issued: 10/04/19 AMMONIA INJECTION, INJECTION GRID	C147	D145		**NH3**: 5 PPMV (4) **[RULE 1303(a)(1)-BACT, 5-10-1996;** *RULE 1303(a)(1)-BACT, 12-6-2002*]	A195.15, D12.14, D12.15, D12.16, E193.3, E193.4
STACK, SERVING THE AUXILIARY BOILER, HEIGHT: 80 FT ; DIAMETER: 3 FT A/N: 613957 Permit to Construct Issued: 07/12/19	S149	D145			
Process 4: AMMONIA STORAGE					
STORAGE TANK, NO. 1, HORIZONTAL, AQUEOUS AMMONIA, 19 PERCENT, 22290 GALS; DIAMETER: 10 FT ; LENGTH: 36 FT A/N: 604032 Permit to Construct Issued: 02/13/19	D150				C157.1, E144.1, E193.3, E193.4
STORAGE TANK, NO. 2, HORIZONTAL, NATURAL GAS, AQUEOUS AMMONIA, 19 PERCENT, 15000 GALS; DIAMETER: 6 FT ; LENGTH: 18 FT A/N: 578084 Permit to Construct Issued: 04/17/17	D151				C157.1, E144.1, E193.3, E193.4
Process 10:WASTEWATER TREATMENT					

* (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 10:WASTEWATER TREATMENT					
OIL WATER SEPARATOR, NO. 1 A/N: 578085 Permit to Construct Issued: 04/18/17	D152				
OIL WATER SEPARATOR, NO. 2 A/N: 578086 Permit to Construct Issued: 04/17/17	D153				

* (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**
D115	3	3	0
C120	3	3	0
C121	3	3	0
S123	3	3	0
D124	5	3	0
C129	5	3	0
C130	5	3	0
S132	5	3	0
D133	7	3	0
C135	7	3	0
C136	7	3	0
S138	7	3	0
D139	9	3	0
C141	9	3	0
C142	9	3	0
S144	9	3	0
D145	10	3	0
C147	11	3	0
S149	11	3	0
D150	11	4	0
D151	11	4	0
D152	12	10	0
D153	12	10	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

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

CONTAMINANT	EMISSIONS LIMIT
PM2.5	Less than 100 TONS IN ANY ONE YEAR

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

Using the calendar monthly fuel use data and following emission factors for each combined cycle turbine PM2.5 = 3.94 lbs/mmcf., for each simple cycle turbine PM2.5 = 7.43 lbs/mmcf, for the auxiliary boiler PM2.5 = 7.54 lbs/mmcf, for Boiler 1 PM2.5 = 1.86 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 H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

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

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

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

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

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

purchase records of fuel oil and sulfur content of the fuel

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

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

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

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 2010 and beyond.

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

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

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

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

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

[40CFR 68 - Accidental Release Prevention, 5-24-1996]

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

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

AES shall not commence any construction of HB Boilers 1 and 2 and RB Boiler 7 repowering project equipment including gas turbines CCTG 1, CCTG 2, SCTG 1, SCTG 2, Auxiliary Boiler, ammonia storage tanks, or the oil water separators, unless the retirement plan is approved in writing by SCAQMD. If SCAQMD notifies AES that the plan is not approvable, AES shall submit a revised plan addressing SCAQMD's concerns within 30 days.

Within 30 calendar days of actual shutdown, or by no later than January 15, 2020, AES shall provide SCAQMD with a notarized statement that HB Beach Boiler 1 and RB Boiler 7 are permanently shutdown and that any re start or operation of the units shall require new Permits to Construct and be subject to all requirements of non-attainment new source review and the prevention of significant deterioration program.

Within 30 calendar days of actual shutdown, or by no later than December 31, 2020 (unless the December 31, 2020 Once-Through Cooling Policy compliance date is extended by SWRCB). AES shall provide SCAQMD with a notarized statement that HB Beach Boiler 2 is permanently shutdown and that any re start or operation of the unit shall require a new Permit to Construct and be subject to all requirements of non-attainment new source review and the prevention of significant deterioration program.

In the event that the State Water Resources Control Board (SWRCB) extends the December 31, 2020 Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling Policy) compliance date for Boiler 2, AES shall:

(1) Notify South Coast AQMD within 3 months of the approval of an extension, and (2) Within 30 calendar days of actual shutdown of HB Boiler 2, provide South

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Coast AQMD with a notarized statement that HB Boiler 2 is permanently shut down and that any re-start or operation of the boiler shall require a new Permit to Construct and be subject to all requirements of Nonattainment New Source Review and the Prevention of Significant Deterioration Program.

AES shall notify SCAQMD 30 days prior to the implementation of the approved retirement plan for permanent shutdown of HB Boiler 1 and RB Boiler 7, or advise SCAQMD as soon practicable should AES undertake permanent shutdown prior to January 15, 2020.

AES shall notify SCAQMD 30 days prior to the implementation of the approved retirement plan for permanent shutdown of HB Boiler 2, or advise SCAQMD as soon practicable should AES undertake permanent shutdown more than 30 days prior to December 31, 2020 (or other date as modified by the SWRCB).

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

At least 6 months prior to January 15, 2020, AES may submit a permit modification application requesting the permission to shutdown a combination of boilers other than HB Boiler 1, HB Boiler 2, and RB Boiler 7 to offset the increases for this project. The other boilers must be located at AES facilities Huntington Beach GS, Redondo Beach GS, or Alamitos GS, and approval of the application must be received prior to any changes being made to the shutdowns outlined in this condition.

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

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

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:

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]

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

Rule 1304.1 Electric Generating Fee for Use of Offset Exemption

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

[RULE 1304.1, 9-6-2013]

DEVICE CONDITIONS

A. Emission Limits

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

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

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 5406 LBS IN ANY ONE MONTH
CO	Less than or equal to 99076 LBS IN ANY ONE MONTH
VOC	Less than or equal to 14109 LBS IN ANY ONE MONTH

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

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

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

[Devices subject to this condition : D115, D124]

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

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

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

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

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : D115, D124]

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

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

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

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

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

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

[Devices subject to this condition : D133, D139]

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

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

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

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

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

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

[Devices subject to this condition : D133, D139]

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

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

The above limits apply in the month when post commissioning operation begins and every month thereafter. During the month when post commissioning operation begins any emissions from commissioning activities shall be calculated using the factors in condition A63.11 and added to the emissions from post commissioning operation calculated using the factors in this condition. Total emissions shall not exceed the limits in this condition

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]

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : D145]

A63.11 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 27 LBS IN ANY ONE MONTH
CO	Less than or equal to 152 LBS IN ANY ONE MONTH
VOC	Less than or equal to 20 LBS IN ANY ONE MONTH

The above limits apply during commissioning. These limits are superseded by the limits in condition A63.10 in the month when post commissioning operation begins.

The operator shall calculate compliance with the emission limit(s) by using fuel use data and the following emission factors: VOC: 5.5 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]

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

[**RULE 2012, 5-6-2005**]

[Devices subject to this condition : D115, D124]

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

[**RULE 2012, 12-4-2015**]

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : D133, D139]

A99.6 The 49.18 LBS/MMSCF NOX emission limit(s) shall only apply during the first year of operation prior to CEMS certification for reporting NOx emissions.

[RULE 2012, 5-6-2005; RULE 2012, 2-5-2016]

[Devices subject to this condition : D145]

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

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

[Devices subject to this condition : D115, D124]

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

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

[Devices subject to this condition : D115, D124]

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

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

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

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

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : D115, D124]

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

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.

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

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

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

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

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

[Devices subject to this condition : D133, D139]

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

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

[Devices subject to this condition : D133, D139]

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

[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 or commissioning..

[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.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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..

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

[Devices subject to this condition : C147]

A327.1 For the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

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

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

B. Material/Fuel Type Limits

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

Compound	grain per 100 scf
H2S greater than	.25

This concentration limit is an annual average based on monthly sample of natural gas composition or gas supplier documentation. Gaseous fuel samples shall be tested using District Method 307-91 for total sulfur calculated as H2S

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

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

C. Throughput or Operating Parameter Limits

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

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The number of cold start ups shall not exceed 15 per month, the number of 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 calculate compliance with the emission limits for CO and NOx after the CEMS certification based upon readings from the SCAQMD certified CEMS..

The operator shall calculate 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
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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

The operator shall calculate 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 6640 hour(s) in any one year.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

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

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

[Devices subject to this condition : D115, D124]

C1.10 The operator shall limit the number of start-ups to no more than 62 in any one calendar month.

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

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

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

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

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D133, D139]

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

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

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

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D133, D139]

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

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

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

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D133, D139]

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

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The number of cold start ups shall not exceed 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 121408 MM Btu in any one year.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

Beginning 12 months after the date of first fire and every year thereafter, the operator shall limit the heat input to no more than 189,155 mmbtu per year. The limit includes normal operation as well as start ups and shutdowns. The heat input shall be calculated using the fuel use data and a natural gas HHV of 1,050 btu/mmcf..

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

[**RULE 2005, 12-4-2015**]

[Devices subject to this condition : D145]

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

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

[Devices subject to this condition : D150, D151]

D. Monitoring/Testing Requirements

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

The operator shall also install and maintain a device to continuously record the ammonia flow rate. Continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour. The flow meter shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months. The injected ammonia rate shall be maintained within 20.0 lbs/hr and 242.0 lbs/hr except during start ups and shutdowns

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : 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.

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.

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 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]

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

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

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

[Devices subject to this condition : C136, C142]

D12.12 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor..

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

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : C136, C142]

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

The operator shall also install and maintain a device to continuously record the differential pressure. Continuous monitoring shall be defined as measuring at least once every month and shall be calculated based upon the average of the continuous monitoring for that month. The pressure gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months. The differential pressure shall not exceed 3.0 inches WC.

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

[Devices subject to this condition : C136, C142]

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

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

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The 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]

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

The operator shall also install and maintain a device to continuously record the exhaust temperature. Continuously record shall be defined as recording at least once every hour and shall be calculated based on the average of the continuous monitoring for that hour. The temperature gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months. The exhaust temp at the CO Catalyst inlet shall be maintained at a minimum of 500 deg F except during start up and shutdowns

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : C135, C141]

D29.5 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
CO emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
SOX emissions	AQMD Laboratory Method 307-91	District-approved averaging time	Fuel sample
VOC emissions	District Method 25.3 Modified	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	EPA Method 201A/District Method 5.1	District-approved averaging time	Outlet of the SCR serving this equipment
PM2.5	EPA Method 201A and 202	District-approved averaging time	Outlet of the SCR serving this equipment
NH3 emissions	District method 207.1	1 hour	Outlet of the SCR serving this equipment

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

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

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

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

a) Triplicate stack gas samples extracted directly into Summa canisters, maintaining a final canister pressure between 400-500 mm Hg absolute,

b) Pressurization of the Summa canisters with zero gas analyzed/certified to less than 0.05 ppmv total hydrocarbons as carbon, and

c) Analysis of Summa canisters per 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

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

mean that it is more accurate then unmodified AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval, except for the determination of compliance with the BACT level of 2.0 ppmv ROG calculated as carbon for natural gas fired turbines.

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

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

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

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

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

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

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

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

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

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

D29.7 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
SOX emissions	AQMD Laboratory Method 307-91	District-approved averaging time	Fuel Sample
VOC emissions	District Method 25.3 Modified	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	EPA Method 201A/District Method 5.1	District-approved averaging time	Outlet of the SCR serving this equipment

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The test shall be conducted at least once every three years

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

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

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

a) Triplicate stack gas samples extracted directly into Summa canisters, maintaining a final canister pressure between 400-500 mm Hg absolute,

b) Pressurization of the Summa canisters with zero gas analyzed/certified to less than 0.05 ppmv total hydrocarbons as carbon, and

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

The use of this modified method for VOC compliance determination does not mean that it is more accurate then unmodified AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval, except for the determination of compliance with the BACT level of 2.0 ppmv ROG calculated as carbon for natural gas fired turbines.

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

[**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]

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

D29.8 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
CO emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
VOC emissions	District Method 25.3	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	District method 5.1	District-approved averaging time	Outlet of the SCR serving this equipment
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR serving this equipment
PM2.5	EPA Method 201A and 202	District-approved averaging time	Outlet of the SCR serving this equipment

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

The test shall be conducted when this equipment is operating at 100 percent, 50 percent, and minimum load.

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

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

The test protocol shall include the proposed operating conditions of the boiler during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

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

[Devices subject to this condition : D145]

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

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 15 percent oxygen on a dry basis. The CEMS shall be installed and operating no later than 90 days after initial startup of the turbine, in accordance with approved SCAQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from SCAQMD

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

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

CO Emission Rate, lbs/hr = K*Cco*Fd[20.9/(20.9%-%O2 d)][(Qg*HHV)/10E6], where

1. K = 7.267*10-8 (lbs/scf)/ppm
2. Cco = Average of 4 consecutive 15 min. 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**]

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

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

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

NOx concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis. The CEMS shall be installed and operating no later than 90 days after initial startup of the turbine, in accordance with approved SCAQMD REG XX CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from SCAQMD

Rule 2012 provisional RATA testing shall be completed and submitted to the SCAQMD within 90 days of the conclusion of the turbine commissioning period. During the interim period between the initial start up and the provisional certification date of the CEMS, the operator shall comply with the requirements of Rule 2012(h)(2) and 2012(h)(3)

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

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

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

NOx concentration in ppmv

Concentrations shall be corrected to 3 percent oxygen on a dry basis. The CEMS shall be installed and operating no later than 90 days after initial startup of the boiler, in accordance with approved SCAQMD REG XX CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from SCAQMD.

Rule 2012 provisional RATA testing shall be completed and submitted to the SCAQMD within 90 days of the conclusion of the combined cycle turbine commissioning and boiler construction period. During the interim period between the initial start up and the provisional certification date of the CEMS, the operator shall comply with the requirements of Rule 2012(h)(2) and 2012(h)(3).

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AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : D145]

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

CO concentration in ppmv

Concentrations shall be corrected to 3 percent oxygen on a dry basis. The CEMS shall be installed and operating no later than 90 days after initial startup of the boiler, in accordance with approved Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from SCAQMD.

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

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

CO Emission Rate, lbs/hr = K*Cco*Fd[20.9/(20.9%-%O2d)] [(Qg*HHV)/10E6], where

1. K = 7.267*10-8 (lbs/scf)/ppm
2. Cco = Average of 4 consecutive 15 min. 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]

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[Devices subject to this condition : D145]

E. Equipment Operation/Construction Requirements

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

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

[Devices subject to this condition : D150, D151]

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

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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 Permit to Construct listed in Section H shall expire one year from the Permit to Construct issuance date, unless a Permit to Construct extension has been granted by the Executive Officer or unless the equipment has been constructed and the operator has notified the Executive Officer prior to the operation of the equipment

Construction of Phase 1 of the project (defined as the combined cycle turbines and associated control equipment, the auxiliary boiler and associated control equipment, storage tank D150, and oil water separator D152) shall commence within 18 months from the date of the Permit to Construct, unless an extension is granted by the permitting authority.

Construction of Phase 2 of the project (defined as the simple cycle turbines and associated control equipment, storage tank D151, and oil water separator D153) shall commence within 18 months of June 30, 2022 unless an extension is granted by the permitting authority.

Construction shall not be discontinued for a period of 18 months or more at any time after construction of Phase I begins.

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

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

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

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

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

[CA PRC CEQA, 11-23-1970]

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

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

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

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

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

[Devices subject to this condition : D115, D124]

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

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

$CO2 = 60.009 * FF$

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

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

[RULE 1714, 12-10-2012]

[Devices subject to this condition : D115, D124]

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

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

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

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

[Devices subject to this condition : D133, D139]

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

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

$CO2 = 60.009 * FF$

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

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

[RULE 1714, 12-10-2012]

[Devices subject to this condition : D133, D139]

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

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

The gross electrical output shall be measured at the single generator serving each of the combined cycle turbines, 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]

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

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

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

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

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SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[**RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 2005, 6-3-2011; RULE 2005, 12-4-2015**]

[Devices subject to this condition : D133, D139]

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

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

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

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

[Devices subject to this condition : D133, D139]

I. Administrative

I297.1 This equipment shall not be operated unless the facility holds 156093 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[**RULE 2005, 12-4-2015**]

[Devices subject to this condition : D115, D124]

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AES HUNTINGTON BEACH, LLC

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

I297.2 This equipment shall not be operated unless the facility holds 26970 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

[RULE 2005, 12-4-2015]

[Devices subject to this condition : D133, D139]

I297.3 This equipment shall not be operated unless the facility holds 1313 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.

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

[Devices subject to this condition : D145]

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

I298.1 This equipment shall not be operated unless the facility holds 14803 pounds of 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 9960 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, D124]

I298.2 This equipment shall not be operated unless the facility holds 1660 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 1201 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 : D133, D139]

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

K. Record Keeping/Reporting

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

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

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

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

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

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

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

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

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

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

Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), and the flue gas temperatureunder which the test was conducted.

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

[Devices subject to this condition : D145]

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

Commissioning hours and type of control and fuel use

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

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

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

Total annual power output in MWh

FACILITY PERMIT TO OPERATE
AES HUNTINGTON BEACH, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

[Devices subject to this condition : D115, D124]

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

Commissioning hours and type of control and fuel use

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

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

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

Total annual power output in MWh

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

[Devices subject to this condition : D133, D139]