

South Coast Air Quality Management District

Statement of Basis

Proposed Title V Renewal Permit

Facility Name:	AES Huntington Beach
Facility ID:	115389
SIC Code:	4911
Equipment Location:	21730 Newland St Huntington Beach, CA 92646
Application #(s):	580245
Application Submittal Date(s):	12/08/15
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1. Introduction and Scope of Permit

Title V is a national operating permit program for air pollution sources. Facilities subject to Title V must obtain a Title V permit and comply with specific Title V procedures to modify the permit. This permit replaces the facility's other existing permits. Title V does not necessarily include any new requirements for reducing emissions. It does, however, include new permitting, noticing, record keeping, and reporting requirements.

Pursuant to Title V of the federal Clean Air Act and AQMD Rule 3004(f), a Title V permit shall expire five years after the date of issuance, unless such permit has been renewed. Accordingly, each facility is required to submit a Title V renewal application and request that the AQMD renew their Title V permit. The proposed permit incorporates updates to the facility information provided in the facility's Title V renewal application and all rules and regulations that are currently applicable to the facility.

The AQMD implements Title V through Regulation XXX – Title V Permits, adopted by the AQMD Governing Board in order to comply with EPA's requirement that local air permitting authorities develop a Title V program. Regulation XXX was developed with the participation of the public and affected facilities through a series of public workshops, working group meetings, public hearings and other meetings.

The Title V major source threshold for a particular pollutant depends on the attainment status of the pollutant. NO₂, SO₂, and CO are in attainment with federal standards. The status for PM-10 is attainment at the federal level, but remains nonattainment at the state level. The status for

ozone is currently extreme nonattainment. For the South Coast Air Basin (SOCAB) the threshold levels are as follows:

Pollutant	SOCAB Major Source Thresholds
VOC	10
NOx	10
SOx	100
CO	50
PM-10	70
Single HAP	10
Combination of HAPS	25

A Title V permit is proposed to be issued to cover the operations of AES Huntington Beach, located at 21730 Newland Avenue, Huntington Beach. This facility is subject to Title V requirements because it is a major source of one or more criteria pollutants.

2. Facility Description

This is an existing facility that is in the business of producing electrical power for the California energy market. This facility operates 2 gas-fired utility boiler/steam turbine generators, both units are equipped with SCRs. There are also two diesel-fueled fire pump engines, and one 30,000 gallon urea storage tank. The approximate total facility generating capacity is 450 MWs. Under Rule 2009, the boilers are subject to a BARCT limit of 7 ppm NOx at 3% O2. The facility is in the processes of obtaining SCAQMD permits and a CEC license to repower the boilers with a combined cycle/simple cycle turbine generating plant with a capacity of about 900 MWs. The current schedule for beginning construction on the new units is 1st quarter 2017, with the combined cycle units coming on line in the 4th quarter 2019.

3. Construction and Permitting History

The facility was originally constructed in the late 1950's, and consisted of 4 utility boiler/steam turbine generators, as well as a set of 8 Pratt & Whitney turbine engines. Original permits for the boilers were issued by the Orange County APCD in 1959. Urea injection systems were installed on Boilers 1 and 2 in the early 1990's. The controls were later removed because of ineffectiveness and corrosion problems. The facility also went through an ownership change in 1998 from SCE to its current owner – AES. Boilers 3 and 4 were taken out of service in 1995, but later retooled, re-permitted, and brought back on line in 2001. Since the issuance of the last Title V permit renewal, there has been only 1 revision to the permit. In 2011, there was an administrative revision to remove Boilers 3 and 4 from the permit. The boilers and their control systems were sold to Edison Mission Huntington Beach, LLC, which obtained a separate permit for the equipment. Boilers 3 and 4 were subsequently shutdown to provide offset credits for the Walnut Creek power project (Walnut Creek is not owned or operated by AES). There is also an open administrative revision request to update the make and model of the 2 emergency fire pump engines.

4. Regulatory Applicability Determinations

Applicable legal requirements for this facility are required to be identified in the Title V permit (for example, Section D, E, and H of the proposed Title V permit). Applicability determinations (i.e., determinations made by the District with respect to what legal requirements apply to a specific piece of equipment, process, or operation) can be found in the Engineering Evaluations.

The following summarizes the key rules that apply to the major equipment at this site:

Utility Boilers

401 – Visible Emissions

402 – Nuisance

407 – Liquid and Gaseous Air Contaminants (CO and SO_x)

409 – Combustion Contaminants (PM)

Regulation XIII – BACT (NO_x, CO, ROG, PM₁₀, SO_x)

Rule 2009.1 – BARCT (NO_x)

2011 – SO_x RECLAIM (monitoring, record keeping, and reporting of SO_x, SO_x cap)

2012 – NO_x RECLAIM (monitoring, record keeping, and reporting of NO_x, NO_x cap)

Regulation XXX – Title V

40CFR Part 72 – Acid Rain (SO₂)

Emergency Engines

401 – Visible Emissions

402 - Nuisance

431.2 – Sulfur Content of Liquid Fuels (SO_x)

Regulation XIII – BACT (NO_x, CO, ROG, PM₁₀, SO_x)

Rule 1470 – Air Toxic Control Measure (PM₁₀)

2012 – NO_x RECLAIM

Regulation XXX – Title V

The facility is not a major source of HAPs and there are no area source MACT standards which apply to the equipment at this facility. Total potential HAP emissions are approximately 1 tpy, and there is no single HAP over 600 lbs/yr. 40 CFR Parts 72-78 (Acid Rain) requirements apply to the boilers. Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64 do not apply to Boilers 1 and 2 because the boilers use continuous emissions monitors for NO_x, and there is no control equipment for CO, PM₁₀, VOC, or SO_x. 40CFR 60 Subpart Da NSPS does not apply to Boilers 1 and 2 because of their construction date.

The permit terms and conditions may be found in Section D of the Title V permit.

5. Monitoring and Operational Requirements

Applicable monitoring and operational requirements for which the facility is required to comply are identified in the Title V permit (for example, Section D, F, and J, and Appendix B). Discussion of any applicable monitoring and operational requirements can be found in the Engineering Evaluations. All periodic monitoring requirements were developed using strict

adherence to the following applicable guidance documents: SCAQMD Periodic Monitoring Guidelines for Title V Facilities (November 1997), CAPCOA/CARB/EPA region IX Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP (June 1999), and CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources (July 2001).

Under the RECLAIM program, the boilers are required to maintain a CEMS for NOx emissions, and report daily mass emissions through the RTU, as well as measure the exhaust temperature into the SCR, the ammonia injection rate and exhaust O2. As part of the CEMS, the boilers are also required to be equipped with fuel flow meters. Under the Acid Rain provisions, the plant is required to monitor SO2 emissions through use of fuel gas meters and gas constituent analysis (use of emission factors for reporting emissions is also acceptable in certain cases).

6. Permit Features

Permit Shield

A permit shield is an optional part of a Title V permit that gives the facility explicit protection from requirements that may be incorrectly specified in the permit. A permit shield is a provision in a permit that states that compliance with the conditions contained in the permit shall be deemed compliance with all identified regulatory requirements. To incorporate a permit shield into the Title V permit involves submission of applications for change of conditions for each equipment affected by the permit shield. Permit shields are addressed in Rule 3004 (c). This facility has not applied for a permit shield.

Streamlining Requirements

Some emission units may be subject to multiple requirements which are closely related or redundant. The conditions may be streamlined to simplify the permit conditions and compliance. Emission limits, work practice standards, and monitoring, recordkeeping, and reporting requirements may be streamlined. Compliance with a streamlined condition will be deemed compliance with the underlying requirements whether or not the emission unit is actually in compliance with the specific underlying requirement. This facility has not applied for any streamlined conditions.

7. Summary of Emissions and Health Risks

Criteria Pollutant Emissions (tons/year)
Annual Reported Emissions for Reporting Period 2015

Pollutant	Emissions (tons/year)
NOx	30.288
CO	353.972
VOC	4.815
PM	7.474
SOx	2.434

**Toxic Air Contaminants Emissions (TAC)
Annual Reported Emissions for Reporting Period 2015**

The Following TACs Were Reported	Emissions (lbs/yr)
1,3 Butadiene	0.294
Ammonia	10,894
Benzene	13.389
Formaldehyde	29.013
Naphthalene	2.292
Polynuclear aromatic hydrocarbons (PAHs)	0.784

Health Risk from Toxic Air Contaminants

The facility is subject to review by the Air Toxics Information and Assessment Act (AB2588). The final Facility Health Risk was approved in 1999 with the following risk factors:

Cancer Risk	0.11 in one million
Acute Hazard Index	0.00
Chronic Hazard Index	0.00

8. Compliance History

As noted, the facility has been in constant operation since the 1950's. The facility has been subject to both self-reporting requirements and AQMD inspections. The facility has had no citizen complaints filed, 0 Notices to Comply issued, and 2 Notices of Violation issued in the last two calendar years.

9. Compliance Certification

By virtue of the Title V permit application and renewal of this permit, the reporting frequency for compliance certification for the facility shall be annual.