

## STATEMENT OF BASIS

10/20/09

AES Red Oak is located at 832 Red Oak Lane, Sayreville Boro, Middlesex Country, Sayreville, NJ 08872 and consists of 3 combined cycle combustion turbines with heat recovery steam generators; Each unit produces 183 MW of electricity for a total plant capacity of 549 MW. AES Red Oak is owned and operated by AES Red Oak L.L.C.

The DEP has assigned facility identification number 18195 to AES Red Oak. This statement of basis is for permit activity number BOP090002.

The facility is classified as a major facility based on its potential to emit 292.4 tons of NO<sub>x</sub>, 704.8 tons of CO, 102.9 tons of VOC, 104.1 tons of SO<sub>2</sub>, 345.1 tons of TSP, 345.1 tons of PM-10, 347 tons of NH<sub>3</sub> and 63.60 tons of H<sub>2</sub>SO<sub>4</sub> to the atmosphere.

This permit does not allow hazardous air pollutant to be emitted above the reporting threshold.

The equipment that emits air contaminants from this facility include: three Siemens Westinghouse Power Corporation 501F combined cycle combustion turbines each operating in conjunction with a heat recovery steam generator, and utilizing Dry Low NO<sub>x</sub> combusters and Selective Catalytic Reduction for NO<sub>x</sub> control and Oxidation Catalyst for CO control. Other equipment at this facility includes a 16 MMBtu/hr non-utility boiler and a ten cell cooling tower.

The Responsible Official at the facility has certified that the facility currently meets all applicable requirements of the Federal Clean Air Act and the New Jersey Air Pollution Control Act. Based on this certification, and the Department's evaluation of the information included in the facility's application, the Department has concluded that this air pollution control operating permit should be approved. Prior to the expiration of the Operating Permit's five-year term, the facility will be required to apply for a renewal, at which time the Department will evaluate the facility and issue a public notice with its findings.

The operating permit includes monitoring, recordkeeping and reporting requirements that are sufficient to demonstrate the facility's compliance with the applicable requirements consistent with the following:

1. Provisions to implement the testing and monitoring requirements of N.J.A.C. 7:27-22.18, the recordkeeping and reporting requirements of N.J.A.C. 7:27-22.19, and all emissions monitoring and analysis procedures or compliance assurance methods required under the applicable requirements, including any procedures and methods promulgated pursuant to 40 CFR 64; and
2. Where the applicable requirement does not require direct periodic monitoring of emissions, the Department requires periodic monitoring of surrogate parameters sufficient to yield reliable data from the relevant time period that are representative of the facility's compliance with the permit. Such monitoring requirements include monitoring of fuel consumption.

The conditions of approval for this operating permit are based on conditions of approval in all preconstruction permits for equipment at this facility, and on applicable requirements in state and federal air pollution control rules. Pursuant to N.J.A.C. 7:27-22.33, all preconstruction permits issued to this facility have been incorporated in this operating permit. Each condition in the permit includes the citation of the applicable requirement on which the condition is based. Please refer to the attached explanation sheet for the structure and configuration of conditions of approval, included in the Facility Specific Requirements section of this permit.

FACILITY NAME (FACILITY ID NUMBER)

BOP050001

Activity Number  
(assigned by the  
Department)

**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Emission unit number  
(assigned by the  
facility)

Brief description of emission unit

Emission Unit: U1 25 MM BTU/hour Boiler burning Fuel Oil and Natural Gas

Operating Scenario: OS Summary OR OSXX Boiler burning Fuel Oil

OSXX denotes the operating scenario number and lists the rules and requirements that apply to a particular scenario. An operating scenario represents various ways (or scenarios) a piece of equipment can operate.

OS Summary lists all rules and requirements that apply to an emission unit, regardless of operating scenarios. Emission unit may contain one or more pieces of equipment and the corresponding operating scenarios

Records to be kept

Submittal requirement

Monitoring method to ensure compliance

Actions to be taken by the facility

Item Number

Description of applicable requirement

Air contaminants

| Ref.# | Applicable Requirement  | Monitoring Requirement   | Recordkeeping Requirement                                   | Submittal/Action Requirement   |
|-------|---|--|---|--|
| 1     | Conduct a comprehensive stack test at emission point PTXX at least 18 months prior to the expiration of the approved operating permit to demonstrate compliance with the <u>CO, NOx, TSP and VOC</u> emission limits.[N.J.A.C. 7:27-22.16(e)] | Other: <u>Stack emission testing</u> . Stack test shall be conducted for CO, NOx, TSP, and VOC emissions (add language as needed). Based on any 60 minute period. [N.J.A.C. 7:27-22.16(e)] | Other: <u>Stack test results</u> . [N.J.A.C. 7:27-22.16(e)] | Stack Test - <u>Submit a protocol, conduct stack tests, submit results</u> : As per the approved schedule. <u>Submit a stack test protocol to the Bureau of Technical Services (BTS)</u> at PO Box 437, Trenton, NJ 08625 at least 30 months prior to the expiration of the approved operating permit. [N.J.A.C. 7:27-22.18(e)] and [N.J.A.C. 7:27-22.18(h)] |

Rule citation (subchapter, section, and paragraph) for the applicable requirement

Rule citation for the monitoring requirement

Rule citation for the recordkeeping requirement

Rule citations for the submittal/action requirement