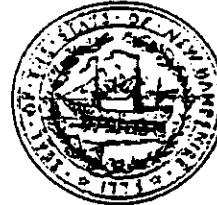




UNITED STATES  
Environmental Protection Agency  
Region I  
Air Permits Program



STATE OF NEW HAMPSHIRE  
Department of Environmental Services  
Air Resources Division

## Temporary Permit And Prevention of Significant Deterioration Permit

State Permit No: **FP-T-0037**  
EPA PSD Permit No: **045-121NH11**  
County: **Rockingham**  
Date Issued: **April 26, 1999**

This certifies that:

**AES Londonderry, L.L.C.**

has been granted a **Joint Federal Prevention of Significant Deterioration (PSD) and a State of New Hampshire Temporary Permit for a 720 MW Combustion Turbine Facility**

The New Hampshire Department of Environmental Services (DES) has an United States Environmental Protection Agency (EPA) approved nonattainment New Source Review (NSR) permit program and herein issues the LAEF and offset provision regarding the nonattainment pollutant NO<sub>x</sub>. In addition, New Hampshire has EPA-approved procedures to ensure new construction or modification of stationary sources do not violate control strategies or interfere with attainment or maintenance standards. These procedures authorize the DES to regulate non-significant increases for all criteria and regulated pollutants. New Hampshire does not, however, have full authority to issue PSD permits. EPA has partially delegated the PSD program to New Hampshire, allowing the state to do the administrative and technical work on the permit, but has retained the authority for EPA to make the final decision and issue the final permit. Consequently, EPA herein issues the permit provisions regarding BACT for attainment pollutants such as carbon monoxide, sulfur dioxide and particulate matter. Rather than issuing to the source two different permit (PSD and nonattainment NSR), EPA and the New Hampshire DES have arranged the issuance of this joint permit that clearly delineates the EPA and the DES provisions.

The joint PSD/Temporary permit is for a facility which emits air pollutants into the ambient air as set forth in equipment registration forms (ARD 1-6), filed with this Division under the date of July 6, 1998 in accordance with RSA 125-C of the New Hampshire Laws. The PSD provisions of this permit are effective indefinitely or until such time that the facility applies and receives a temporary permit or PSD permit that modifies the terms and conditions of this permit. The Temporary Permit provisions are valid until **October 31, 2000**. Request for permit renewal prior to the expiration of this Temporary Permit is subject to Division requirements and must be accompanied by the appropriate permit application forms.

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**SEE ATTACHED SHEETS FOR ADDITIONAL PERMIT CONDITIONS**

The owner or operator of the devices covered by this permit shall submit a written request for a permit amendment to the Director at least 90 days prior to the implementation of any proposed change to the physical structure or operation of the devices covered by this permit which increases the amount of a specific air pollutant emitted by such devices or which results in the emission of any additional air pollutant. The change shall not take place until a new permit application is submitted and acted upon by the Director pursuant to Env-A 600.

Any unavoidable malfunction, breakdown, or upset of the devices, which results in emissions greater than those stipulated in this permit, must be reported to the Division within 8 working hours of the occurrence.

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New Hampshire Department of Environmental Services Signature Page

Kenneth A. Colburn

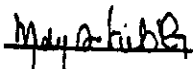
Kenneth A. Colburn  
Director, Air Resources Division

Authority for Sections I  
through IV, Inclusive and  
Sections VI through XXIII, Inclusive

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**U.S. Environmental Protection Agency, Region I Signature Page**



John P. DeVillars  
Regional Administrator  
EPA Region I

For Section I through III, Inclusive and  
Section IVB, V, IX through XV, Inclusive,  
and XVII through XXIII, Inclusive

**AES Londonderry L.L.C.**  
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**This permit is valid provided the facility is operated in accordance with all the legally enforceable conditions specified below:**

- I. The owner or operator of the facility as specified by this permit shall be subject to the New Hampshire Code of Administrative Rules and Federal rules governing the permitting of major stationary sources of air pollution as codified in 40 CFR 52.21 and 40 CFR Part 124.
- II. All equipment, facilities and systems installed and used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible to minimize air pollutant emissions.
- III. **General Operating Limitations and Conditions:**
  - A. The AES Londonderry ("AES") Facility shall consist of the following major components: Westinghouse 501G Combustion Turbine #1, Westinghouse 501G Combustion Turbine #2, Heat Recovery Steam Generators ("HRSGs"), Steam Turbine, Selective Catalytic Reduction Systems ("SCRs"), Cooling Tower and Fuel Oil Storage Tanks.
  - B. Combustion Turbines #1 and #2 shall each be limited to 2,849 MM BTU/hour gross heat input while firing natural gas or 2,834 MM BTU/hour gross heat input while firing low sulfur distillate fuel oil.
  - C. The combustion of supplemental fuel in the HRSGs shall be prohibited.
  - D. Combustion Turbine #1 and #2 shall not fire natural gas and fuel oil simultaneously except during periods of transition from one fuel to the other. Such transition periods shall, to the extent practical, be minimized.
  - E. The sulfur content of natural gas shall be limited at all times to a maximum sulfur content of 0.8 grains/100 SCF. Monitoring of sulfur content and fuel quality of the natural gas shall be conducted in accordance with the provisions of 40 CFR 60.334 (Subpart GG).
  - F. The sulfur content of distillate fuel oil shall be limited at all times to a maximum sulfur content of 0.05 percent by weight. Monitoring of sulfur content in the fuel oil shall be conducted in accordance with the provisions of 40 CFR 60.334 (Subpart GG).
  - G. The combustion of low sulfur distillate fuel oil in Combustion Turbine #1 and #2 combined shall be limited to 29,150,000 gallons during any 12 consecutive month period.
  - H. The hours of operation for this facility shall be unrestricted.
  - I. AES shall establish and maintain a program of best management practices for the minimization of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust.
  - J. AES shall submit upon request by DES a copy of the program required by Condition III.I. above.

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- K. AES shall develop and submit to DES for review and approval a catalyst management plan for the SCR systems. Such plan shall be submitted to DES no later than 180 days prior to the start-up of the facility. Minimum elements of the plan shall include:
1. Schedule of planned maintenance;
  2. Expected minimum catalyst life;
  3. Detailed monitoring plans, i.e. pressure drop, ammonia flow, ammonia to fuel flow ratios, temperatures, etc.
- L. AES shall at all times operate the SCR systems to reduce NOx emissions from Combustion Turbine #1 and #2, except during periods of start-up or shutdown.
- M. AES shall, to the extent practical, minimize emissions from Combustion Turbine #1 and #2 during start-up, shutdown or during initial combustion turbine commissioning.
- N. Combustion Turbine start-up shall be defined as the period of time from initiation of turbine firing until steady state load operation is achieved. Each start-up shall be achieved as soon as practical and in no case shall exceed 180 minutes.
- O. AES shall maintain records of each Combustion Turbine start-up and shall include a written explanation of each start-up that exceeds 180 minutes in duration.
- P. Combustion Turbine shutdown shall be defined as the period from steady state operation to cessation of fuel combustion in the Turbine. Each shutdown period shall be achieved as soon as practical and in no case shall exceed 60 minutes.
- Q. AES shall maintain records of each Combustion Turbine shutdown and shall include a written explanation of each shutdown that exceeds 60 minutes in duration.
- R. AES shall submit an application for an initial Title V Operating Permit within 12 months of the commencement of operation in accordance with Part Env-A 609.05(e)(3).
- S. AES shall provide written notification to DES of the commencement of construction of this facility within 15 days after such date.
- T. AES shall provide written notification to DES of the anticipated date of initial start-up of this facility no later than 30 days prior to such date.
- U. AES shall provide written notification to DES of the actual start-up date of the facility no later than 15 days after such date.
- V. The Cooling Tower shall be equipped with High Efficiency Drift Eliminators to minimize water drift losses and plume visibility.
- W. Drift from the Cooling Tower shall be limited to 0.0005% of circulating water.

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- X. Fuel oil combustion shall be further restricted than the level indicated under condition III.G. if VOC emissions determined by compliance tests demonstrate that VOC emissions exceed the limits of Condition IV. A. or IV. B. Fuel oil and natural gas combustion shall be curtailed, to ensure that VOC emissions are less than 50 tons during any consecutive 12 month period, in accordance with the following equation:

$$\text{VOC emissions} = (X_{\text{gas}}Q_{\text{gas}} + X_{\text{oil}}Q_{\text{oil}})(1/2000) < 49 \text{ tons/year}$$

Where:

- $X_{\text{gas}}$  = VOC emission rate in lb/MMBTU for natural gas combustion
- $X_{\text{oil}}$  = VOC emission rate in lb/MMBTU for fuel oil combustion
- $Q_{\text{gas}}$  = Total heat input in MMBTU from natural gas combustion
- $Q_{\text{oil}}$  = Total heat input in MMBTU from fuel oil combustion
- 1/2000 = Conversion factor from lb to tons

- Y. The ability of DES to take enforcement action on any violation of Condition IV.A or IV.B shall not be superseded any provision of Condition X. Likewise, AES shall not claim as justification or defense any provision of Condition X. for any violation of Condition IV.A or IV.B.
- Z. During any period of transition between gas and fuel oil the emission limits for fuel oil firing shall apply.
- AA. Within one year of startup of this facility, AES shall propose and DES shall establish emission limits for CO, NOx and opacity during periods of startup and shutdown.
- BB. Within one year of startup of this facility, AES shall propose and DES shall establish a maximum fuel change over period. The change over time period shall be based on specific criteria including but not limited to turbine ramp rate, combustor temperature and unit stability.
- CC. This permit maybe reissued in accordance with the provisions of Env-A 607.09 *Permit Reissuance*.
- DD. Ammonia injection into the catalyst bed shall be initiated only when the bed temperature meets the minimum manufacture's recommendation. This minimum temperature shall be established in accordance with Condition III.M.

**IV. State Implementation Plan (SIP) Limitations:**

- A. Nonattainment Emission Limitations: Emissions of Nonattainment regulated air pollutants from each Combustion Turbine and shall be limited in accordance with Table 1. below:

**Table 1. Nonattainment Emission Performance Standards**

Pollutant	Emission Limitation	Control Technology BACT/LAER	Averaging Time
Nitrogen Oxides (Gas Firing)	2.5 ppmdv @ 15 % O2	Low NOx Burner with SCR LAER	3 hour block average

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Pollutant	Emission Limitation	Control Technology BACT/LAER	Averaging Time
Nitrogen Oxides (Oil Firing)	9.0 ppmdv @ 15 % O2	Low NOx Burner with Water Injection and SCR LAER	1 hour block average

B. Minor Source Limitations: Emissions of minor source regulated air pollutants from each Combustion Turbine shall be limited in accordance with Table 2. below:

**Table 2. SIP Performance Standards**

Pollutant	Emission Limitation	Control Technology BACT/LAER	Averaging Time
Volatile Organic Compounds (Natural Gas)	0.0013 lb/MM BTU	Good Combustion Practices N/A	1 hour block average
Volatile Organic Compounds (Fuel Oil)	0.0095 lb/MM BTU	Good Combustion Practices N/A	1 hour block average
Opacity	20 %	Good Combustion Practices N/A	6 minute block average
Ammonia (See Condition C. Below)	10 ppmdv @ 15 % O2	N/A	24 hour block average

C. The ammonia limitation of B. above shall be reviewed by DES after one year of commercial operation. After completion of this review, DES may establish a new lower Ammonia Slip limitation for the facility.

V. **Prevention of Significant Deterioration (PSD) Emission Limitations:**

A. Emissions of PSD regulated air pollutants from each Combustion Turbine and shall be limited in accordance with Table 3. below:

**Table 3. PSD Emission Performance Standards**

Pollutant	Emission Limitation	Control Technology BACT/LAER	Averaging Time
Sulfur Dioxide (Gas Firing)	0.0023 lb/MM BTU	Low Sulfur Fuels BACT	3 hour rolling
Sulfur Dioxide (Oil Firing)	0.052 lb/MM BTU	Low Sulfur Fuels BACT	3 hour rolling
Carbon Monoxide (Gas Firing) @ All Loads	15 ppmdv @ 15 % O2	Low NOx Burner with Good Combustion Practices BACT	1 hour block average



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Pollutant	Emission Limitation	Control Technology BACT/LAER	Averaging Time
Carbon Monoxide (Oil Firing) @ 95 to 100 % Load	50 ppmdv @ 15 % O <sub>2</sub>	Low NO <sub>x</sub> Burner with Good Combustion Practices BACT	1 hour block average
TSP/PM-10 (Gas Firing)	0.004 lb/MM BTU	Low Sulfur Fuels BACT	1 hour block average
TSP/PM-10 (Oil Firing)	0.02 lb/MM BTU	Low Sulfur Fuels BACT	1 hour block average
Opacity	20 %	Good Combustion Practices N/A	6 minute block average
Nitrogen Oxides (Gas Firing)	2.5 ppmdv @ 15 % O <sub>2</sub>	Low NO <sub>x</sub> Burner with SCR BACT	3 hour block average
Nitrogen Oxides (Oil Firing)	9.0 ppmdv @ 15 % O <sub>2</sub>	Low NO <sub>x</sub> Burner with Water Injection and SCR BACT	1 hour block average

**VI. Maximum Hourly and 12 Month Rolling Emission Limitations:**

- A. Maximum hourly emissions of regulated pollutants from each Combustion Turbine shall be limited as specified in Table 4. below:

**Table 4. Maximum Hourly Emission Rates**

Pollutant	Maximum Rate lb/hr on Natural Gas	Maximum Rate lb/hr on Fuel Oil
Nitrogen Oxides	26.5	99.2
Sulfur Dioxide	6.6	147.9
Carbon Monoxide	95.7	335.2
Particulate Matter (TSP/PM-10)	11.4	56.7
Volatile Organic Compounds	3.7	26.8
Ammonia <sup>2</sup>	38.8	40.8

1 - 3 Hour Average

2 - Subject to Revision in Accordance with Condition IV.C.

- B. Maximum 12 month rolling emissions of regulated pollutants from Combustion Turbine #1 and Combustion Turbine #2 combined shall be limited as specified in Table 5. below:

**Table 5. Maximum 12 Month Rolling Emissions**

Pollutant	Maximum Rate TPY on Natural Gas	Maximum Rate TPY on Fuel Oil	Maximum Rate TPY Combined Fuels
Nitrogen Oxides	189.8	71.4	264.2 <sup>4</sup>
Sulfur Dioxide	47.0	106.5	153.5
Carbon Monoxide	687.4	241.4	928.8
Particulate Matter (TSP/PM-10)	81.8	40.8	128.7 <sup>5</sup>
Volatile Organic Compounds	26.2	19.3	49.0 <sup>6</sup>
Ammonia <sup>3</sup>	277.9	29.4	307.3

1 - Assumes that the facility operates up to 8760 hr/yr on natural gas.

2 - Assume that the facility operates up to 720 hr/yr on fuel oil.

3 - Subject to Revision in Accordance with Condition IV.C.

4 - Includes 3.0 TPY from Miscellaneous Sources

5 - Includes 6.1 TPY from Miscellaneous Sources

6 - Includes 3.5 TPY from Miscellaneous Sources

**VII. Emission Offset Requirements:**

- A. AES shall prior to commencing operation demonstrate that NOx offsets have been obtained in a ratio of 1.2 to 1.0. Such emission offsets shall be real, surplus, quantifiable, permanent and federally enforceable and shall be certified by DES in accordance with all applicable state and federal regulations.
- B. NOx Budget Allowances obtained in accordance with Condition VIII. of this permit may be used as Emission Offsets at a 1.0 to 1.0 ratio (i.e. one ton of NOx allowances shall equal one ton of NOx emission offset), however the overall emission offset ratio must remain at 1.2 to 1.0 in accordance with A. above.

**VIII. NOx Budget Allowances:**

- A. AES shall comply with the applicable requirements of Chapter Env-A 3200 *NOx Budget Trading Program*.
- B. AES shall obtain sufficient NOx Budget Allowances to cover all ozone season (May 1 through September 30 of each calendar year) NOx emissions.
- C. AES may utilize NOx Budget allowances to satisfy the Emission Offset Requirements of Condition VII. above.

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**IX. New Source Performance Standards (NSPS):**

- A. AES shall comply with all applicable requirements of 40 CFR Part 60 Subpart A *General Provisions*.
- B. AES shall comply with all applicable requirements of 40 CFR Part 60 Subpart GG *Standards of Performance for Stationary Gas Turbines*.
- C. AES shall comply with all applicable requirements of 40 CFR Part 60 Subpart Kb *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*.

**X. Federal Acid Rain Requirements:**

- A. In accordance with 40 CFR Part 72, *Federal Acid Rain Requirements*, AES shall be designated as a Phase II New Affected Unit, effective January 1, 2000, or within 90 days after commencement of commercial operation, whichever is later.
- B. AES shall submit a Phase II Acid Rain Application as soon as practical and in accordance with 40 CFR 72.
- C. AES shall acquire SO<sub>2</sub> allowances in the amount of one allowance for each ton of SO<sub>2</sub> emitted in accordance with 40 CFR Part 72.
- D. AES shall install, maintain and operate continuous emission monitoring systems that meet the applicable requirements of 40 CFR Part 75.
- E. AES shall comply with all applicable requirements of 40 CFR Part 72, 73, 75, 77 and 78.

**XI. Federal Accidental Release Requirements:**

- A. AES shall comply with all applicable requirements of 40 CFR Part 68, including the General Duty Provisions of the Federal Accidental Release Program.
- B. If AES is subject to 40 CFR 68, it shall submit, in accordance with 40 CFR 68.10, a Risk Management Plan no later than the latest of the following dates:
  - 1. June 21, 1999;
  - 2. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130; or
  - 3. The date on which a regulated substance is first present above a threshold quantity in a process.

**XII. Continuous Emission and Periodic Monitoring Requirements:**

- A. AES shall install and maintain continuous monitoring equipment for the following pollutants or

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operational parameters:

Pollutant/Operational Parameter	Averaging Time
Fuel Flow	Continuous
Exhaust Flow	Continuous
Ambient Temperature	Continuous
Opacity	6 minute block
NOx	3 hour block
SO <sub>2</sub> *	1 hour block
CO	1 hour block
O <sub>2</sub>	1 hour block
Ammonia	24 hour block

\* If required by 40 CFR Part 75

- B. For each required emission or operational monitor AES shall submit to DES for review and approval a plan detailing monitor specifications, monitor location, operation and calibration procedures and quality assurance procedures no later than 180 days prior to the anticipated start-up of the facility. Such plan shall include at a minimum the following:
1. A complete description of the emission monitoring system including, but not limited to :
    - a. The CEM system vendor, including the company name, address and phone number;
    - b. The manufacturer, model number, measurement method employed, and range of each of the major components or analyzers being used;
    - c. A description of the sample gas conditioning system;
    - d. A description and diagram showing the location of the monitoring system, including sampling probes, sample lines, conditioning system, analyzers and data acquisition system;
    - e. A description of the data acquisition system including sampling frequency, and data averaging methods;
  2. The mathematical equation used by the data acquisition system, including the value and derivation of any constants, to calculate the emissions in terms of the applicable emission standards;

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3. A description of the instrument calibration methods, including the frequency of calibration checks and manual calibrations, and path of the sample gas through the system;
  4. The means used by the data acquisition system of determining and reporting periods of excess emissions, monitor downtime and out-of-control periods;
  5. A description of the means used to provide for short-term and long-term data storage; and
  6. A description of all quality assurance/control procedures to be followed on the CEM system.
- C. AES shall not commence the installation of any emission or operational monitoring system until DES has issued a written approval of the plan submitted in accordance with Condition B. above. AES shall not commence operation of this facility until all approved monitoring systems have been installed.
- D. AES shall ensure that all CEMs and recording equipment comply with the monitoring specifications in 40 CFR Part 60.13 and 40 CFR Part 60 Appendices B. And F., all applicable portions of 40 CFR Parts 72 and 75, 40 CFR Part 52.1020(c)(24) and Part Env-A 805 *Continuous Emission Monitoring*.
- E. AES shall comply with all applicable monitoring requirements of 40 CFR Part 60 Subpart GG *Standards of Performance for Stationary Gas Turbines*.
- F. DES shall establish catalyst management monitoring requirements based upon review of the catalyst management plans submitted in accordance with Condition III.K.

**XIII. Stack Criteria:**

- A. The emission exhaust stacks for the following devices at the AES facility shall meet the following criteria:

<b>Emissions Device</b>	<b>Minimum Stack Height (Feet)</b>	<b>Maximum Stack Diameter (Feet)</b>
Combustion Turbine #1*	132	20.67
Combustion Turbine #2*	132	20.67
Cooling Tower Exhaust Fans	58	36

\* Separate Stacks

- B. Each of the aforementioned exhaust stacks shall have an unobstructed, vertical discharge to the ambient air.

**XIV. Performance Testing:**

- A. AES shall conduct an initial performance test as specified in this section within 60 days of achieving maximum operation of this facility but no later than 180 days after initial start-up of this facility.
- B. Testing shall be conducted and the results reported in accordance with 40 CFR 60, Sections 60.8 (a), (b), (d), (e), and (f), Appendix A, the Division's Policy "Procedures and Minimum Requirements for Stack Tests". The following test methods or Division approved alternatives shall be used:
1. Compliance testing for stack flow, moisture, oxygen and carbon dioxide shall be conducted using EPA Methods 1 through 4;
  2. Compliance testing for NO<sub>x</sub> shall be conducted using EPA Method 20;
  3. Compliance testing for CO shall be conducted using EPA Method 10;
  4. Compliance testing for VOCs shall be conducted using EPA Method 18 for methane and Method 25A for total gaseous organic concentration;
  5. Visual emissions testing for opacity shall be conducted using EPA Method 9;
  6. Compliance testing for TSP/PM-10 shall be conducted using EPA Method 201; and
  7. Compliance testing for Ammonia shall be conducted using a DES approved method;
  8. Compliance testing for Drift rate from the Cooling Tower shall be conducted using a DES approved method.
- C. Compliance testing shall be planned and carried out in accordance with the following schedule:
1. At least 30 days prior to the commencement of testing, AES shall submit to the Division a pretest report presenting the following information:
    - a. Calibration methods and sample data sheets;
    - b. Description of the test methods to be used;
    - c. Pre-test preparation procedures;
    - d. Sample collection and analysis methods;
    - e. Process data to be collected; and
    - f. Complete test program description.
  2. At least 15 days prior to the test date, AES and any contractor that AES retains for performance of the test, shall participate in a pretest conference with a Division representative.
  3. Emission testing shall be carried out under the observation of a Division representative.
  4. Within 30 days after completion of testing, AES shall submit a test report to the Division.

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- D. Any compliance stack test results determined following 40 CFR 60 paragraph 60.8, which show violations of any permit requirement shall be considered violations of this permit.

**XV. Recordkeeping and Reporting Requirements:**

- A. AES shall maintain records of each fuel oil shipment received by the facility. The shipping receipt for each fuel oil delivery to the facility shall certify the type of fuel in the shipment and the weight percent sulfur in the fuel. The shipping receipt shall also include the name of the oil supplier, the sulfur content of the fuel oil and the method used to determine the sulfur content of the oil.
- B. AES shall record, maintain and report all information required by 40 CFR Part 60 Subpart GG *Standards of Performance for Stationary Gas Turbines* and 40 CFR Part 60 Subpart Kb *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.*
- C. AES shall maintain records of all items required to be recorded in accordance with Section XII. of this permit.
- D. AES shall maintain records of the following information by device on a 24-hour calendar day basis:
1. Hours of operation, including any startup, shutdown, or malfunction;
  2. The total daily fuel consumption by device (in cubic feet for natural gas and in gallons for fuel oil).
  3. The total daily amount of ammonia, in gallons, used in the SCR Systems.
  4. The running totals of D.2. and D.3. above for the previous thirty-day period.
- E. AES shall submit a monthly report containing all information required under Condition D.4. above for the previous calendar month and the previous 11 calendar months. Such monthly reports shall be submitted to DES at the address stated below no later than 30 days following the end of each calendar month.

New Hampshire Department of Environmental Services  
Air Resources Division  
64 North Main Street  
P.O. Box 2033  
Concord, NH 03302-2033  
ATTN: Compliance Bureau

- F. AES shall submit quarterly excess emission reports in accordance with 40 CFR Part 75 and Part Env-A 805. Such reports shall include all excess emissions and daily averages for all monitored pollutants or operational parameters and shall be submitted to the address specified in Condition E. above. All reported daily averages shall be provided in an electronic spreadsheet-compatible

format.

- G. Billing tickets from the natural gas supplier for each month shall be kept on file in a form suitable for inspection and shall be made available to the Division upon request. Each billing ticket shall indicate the name, address and telephone number of the natural gas supplier and the quantity of natural gas used.
- H. AES shall be subject to the NOx recordkeeping and reporting requirements of Chapter Env-A 900.
- I. Copies of all records shall be retained by the owner or operator for a minimum of five years and shall be made available to the Director and EPA upon request. However, these records shall not be discarded, removed or destroyed thereafter without the express written approval of the Director in accordance with Env-A 900.

**XVI. Emission-Based Fee Requirements:**

- A. The facility shall pay an emission-based fee annually as calculated each calendar year pursuant to Env-A 704.03 for all devices emitting a regulated air pollutant
- B. The facility shall determine the total actual annual emissions from all devices emitting a regulated air pollutant for each calendar year in accordance with the methods specified in Env-A 620.
- C. The facility shall calculate the annual emission-based fee for each calendar year in accordance with the procedures specified in Env-A 704.03 and the following equation:

$$FEE = E * DPT * CPI_m * ISF$$

Where:

- FEE = The annual emission-based fee for each calendar year as specified in Env-A 704.
- E = The emission-based multiplier is based on the calculation of total annual emissions as specified in Env-A 704.02 and the provisions specified in Env-A 704.03(a).
- DPT = The dollar per ton fee the Division has specified in Env-A 704.03(b).
- CPI<sub>m</sub> = The Consumer Price Index Multiplier as calculated in Env-A 704.03(c).
- ISF = The Inventory Stabilization Factor as specified in Env-A 704.03(d).

- D. The facility shall contact the Division each calendar year for the value of the Inventory Stabilization Factor.
- E. The facility shall contact the Division each calendar year for the value of the Consumer Price Index Multiplier.
- F. The facility shall submit, to the Division, payment of the emission-based fee and a summary of the calculations referenced in Conditions XIV.B. and XIV.C. of this permit for each calendar year by October 15<sup>th</sup> of the following calendar year in accordance with Env-A 704.04. The emission-based fee and summary of the calculations shall be submitted to the following address:



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New Hampshire Department of Environmental Services  
Air Resources Division  
64 North Main Street  
P.O. Box 2033  
Concord, NH 03302-2033  
ATTN: Emissions Inventory

- G. The Division shall notify the facility of any under payments or over payments of the annual emission-based fee in accordance with Env-A 704.05.

**XVII. Malfunction:**

The Division shall be notified by telephone or FAX within 8 working hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in this permit. In addition, the Division shall be notified in writing within 15 (fifteen) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed, and the corrective actions taken to restore normal operations. Compliance with this malfunction notification provision shall not excuse, or otherwise constitute a defense to, any violation of this permit or of any laws or regulations, which such a malfunction may cause. All notifications, whether by telephone, FAX or in writing, shall be sent directly to the Air Resources Division, Compliance Bureau at the following:

New Hampshire Department of Environmental Services  
Air Resources Division  
64 North Main Street  
P.O. Box 2033  
Concord, NH 03302-2033  
ATTN: Compliance Bureau  
(603) 271-1370

**XVIII. Cooling Water Treatment, Testing and Monitoring Requirements:**

- A. Cooling Water supplied from the effluent from the Manchester Waste Water Treatment Plant ("WWTP") shall be treated in the following manner:
1. AES shall monitor total residual chlorine continuously at the terminal point of the cooling water pipeline on the AES site.
  2. AES shall adjust the chlorination at the WWTP to maintain the total chlorine residual of 1.0 mg/l at the terminal point of the cooling water pipeline.
  3. AES shall continuously monitor turbidity at the inlet to the pretreatment clarifier.
  4. AES will chlorinate the WWTP effluent at the inlet to the on-site-clarifier. AES shall monitor the free chlorine residual continuously in the cooling tower basin to maintain a free chlorine residual of 0.5 mg/l in the cooling tower basin.
  5. AES shall continuously monitor pH of water in the cooling tower basin.

AES Londonderry L.L.C.  
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EPA PSD Permit # 045-121NH11

6. AES shall maintain the pH of water in the cooling tower basin within the range of 6.8 to 8.5.
  7. AES shall continuously monitor turbidity in the effluent from the multimedia filter.
  8. AES shall by-pass the treated effluent to the cooling tower if turbidity exceeds 5 NTU.
- B. AES shall perform weekly sampling for fecal coliform bacteria at the multimedia filter discharge.
- C. AES shall perform quarterly testing of WWTP effluent at the inlet of the pretreatment clarifier for metals and volatile organic compounds. Analytical tests conducted for the metals shall include the following at a minimum: Antimony, Arsenic, Cadmium, Copper, Chromium, Lead, Mercury, Nickel, Silver and Zinc. Analytical tests for volatile organic compounds shall include the following compounds at a minimum: Benzene, Carbon Disulfide, Chloroform, Tetrachloroethylene, Toluene, 1,1,1 Trichloroethane, Fluorene, Nitrobenzene, Phenol, Bis(2-ethylexyl)phthalate, Xylene, 1,2,4/1,3,5-Trimethylbenzene, Chloromethane, Chloroethane, 1,1 Dichloroethane, Carbon Tetrachloride, Dibutyl Phthalate, Dioctyl Phthalate, and Bromoform. AES may propose alternatives to this testing requirement. Such alternatives shall not be implemented until DES issues a written approval of the proposal.
- D. AES shall perform semi-annual testing of the Cooling Tower Blowdown for metals listed in Condition C.
- E. Results of the above analytical analyses shall be submitted to DES within 30 days of AES receiving the results.
- F. At least 30 days prior to the commencement of conducting the analyses required in Condition C. Above, AES shall submit to DES, for review and approval, the proposed tests methods that AES will utilize.
- G. After conducting a minimum of 4 sets of analyses as required by condition C. And 2 sets of analyses as required by condition D., AES may propose an alternative testing schedule. An alternative testing schedule shall not be implemented by AES until DES has issued a written approval of the alternative testing schedule.
- H. The initial tests required by condition C. And D. Shall be performed no later than 30 days after the commencement of operation.
- I. AES shall maintain records sufficient to determine compliance with each Condition A. Through H. Above. Such records shall be made available for inspection upon request by DES.

**XIX. Inspection and Entry:**

Pursuant to Env-A 614.01 and Section 114 of the Clean Air Act, EPA and DES personnel shall be granted access to the facility covered by this Permit, in accordance with RSA 125-C:6,VII for the purposes of: inspecting the proposed or permitted site; investigating a complaint; and assuring compliance with any applicable requirement or state requirement found in the NH Rules Governing the Control of Air Pollution and/or conditions of any Permit issued pursuant to Chapter Env-A 600.

**XX. Enforcement:**

AES shall comply with all terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation of RSA 125-C:15 and the Clean Air Act, and, as to the conditions in this permit which are federally enforceable, a violation of the Clean Air Act, 42 U.S.C. section 7401 et seq., is grounds for enforcement action, for permit termination or revocation, or for denial of an operating permit renewal application by the Division and/or EPA. Noncompliance may also be grounds for assessment of administrative, civil or criminal penalties in accordance with RSA 125-C:15 and Sections 113 and 120 of the Clean Air Act. This Permit does not relieve the Permittee from the obligation to comply with any other provisions of RSA 125-C, the New Hampshire Rules Governing the Control of Air Pollution, or the Clean Air Act, or to obtain any other necessary authorizations from other governmental agencies, or to comply with all other applicable Federal, State, or Local rules and regulations, not addressed in this Permit.

**XXI. Duty To Provide Information**

In accordance to RSA 125-C and Section 114 of the Clean Air Act, AES shall upon the DES's or EPA's written request, furnish within a reasonable time, any information necessary for determining whether cause exists for modifying, revoking and reissuing, or terminating the Permit, or to determine compliance with the Permit. Upon request, the Permittee shall furnish to the DES or EPA copies of records that the Permittee is required to retain by this Permit. The Permittee may make a claim of confidentiality as to any information submitted pursuant to this condition in accordance with Part Env-A 103 at the time such information is submitted to the DES. The DES shall evaluate such requests in accordance with the provisions of Part Env-A 103.

**XXII. Severability Clause**

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not be affected thereby.

**XXIII. Property Rights**

This Permit does not convey any property rights of any sort, or any exclusive privilege.