AIR QUALITY PROGRAM
836 Fulton Street
Pittsburgh, PA 15233-2124

Title V Operating Permit
& Federally Enforceable State Operating Permit

Issued To: **Springdale Energy, LLC**

Facility: **Springdale Power Station**
198 Butler Street Extension
Springdale, PA 15144

ACHD Permit #: **0580-OP24**

Date of Issuance: **Month 00, 20XX**

Expiration Date: **Month 00, 20XX**

Renewal Date: **expiration date – 6mo.**

Issued By: _____
JoAnn Truchan, P.E.
Program Manager, Engineering

Prepared By: _____
Bernadette Lipari
Air Quality Engineer

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AMENDMENTS:

DATE SECTION(S)

I. CONTACT INFORMATION

Facility Location:
LS Power Development, LLC
198 Butler Street Extension
Springdale Township, PA 15144

Permittee/Owner:
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16150 Main Circle Dr.
Chesterfield, MO 63017

Responsible Official: **Scott Weis**
Title: Assistant Vice President of EHS, LS Power Development, LLC
Company: **Springdale Energy, LLC**
Address: 16150 Main Circle Dr.
Chesterfield, MO 63017
Telephone Number: (314) 795-3037
Fax Number: NA

Facility Contact: **Jamille Ford**
Title: EHS Manager
Telephone Number: (724) 274-3628
Fax Number: N/A
E-mail Address: **jford@springdaleenergy.com**

AGENCY ADDRESSES:

ACHD Engineer: **Bernadette Lipari**
Title: Air Quality Engineer
Telephone Number: 412-578-8142
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ACHD Contact:
Program Manager, Engineering
Allegheny County Health Department
Air Quality Program
836 Fulton Street
Pittsburgh, PA 15233-2124
aqpermits@alleghenycounty.us

EPA Contact:
ECAD – Air Section
Environmental Protection Agency
Four Penn Center
1600 John F. Kennedy Boulevard
Mail Code 3ED21
Philadelphia, PA 19103-2029

II. FACILITY DESCRIPTION

The facility in Springdale Township is a commercial electrical power generation facility. The source is composed of two 48 MWe natural gas and No. 2 fuel oil fired simple cycle combustion turbines (Units 1 and 2) which operate as peaking units and two natural gas-fired, combustion turbines (Units 3 and 4) rated at a nominal 188 MWe (2,094 MMBtu/hr, maximum) each. Units 3 and 4 are operated in combined cycle mode through two heat recovery steam generators (HRSGs) without duct burners, one per unit, with an additional 186 MWe generated by an axial flow steam turbine which utilizes the steam produced by the HRSGs. The combined cycle combustion turbines fire natural gas exclusively and are equipped with dry low-NO_X burners and selective catalytic reduction (SCR) for control of NO_X emissions. The simple cycle combustion turbines fire natural gas and No. 2 fuel oil exclusively and are equipped with water injection for NO_X control and use low sulfur (0.0015% max.) fuel oil for SO_2 control. The steam turbine generator uses steam from the heat recovery steam generators and has no fuel supply and no emissions. Additional emission units consist of one 148,690 gallon per minute cooling tower, a 24,800-gallon aqueous ammonia storage tank, a 400,000 gallon No. 2 fuel storage tank, two 1,250 kW emergency generators, and an emergency fire pump.

The facility is a major source of particulate matter (PM) and particulate matter < 10 microns in diameter (PM_{10}), nitrogen oxides (NO_X), carbon monoxide (CO) and volatile organic compounds (VOC) and a minor source of sulfur dioxide (SO_2) and hazardous air pollutants (HAPs) as defined in section 2101.20 of Article XXI.

The emission units regulated by this permit are summarized in Table II-1:

TABLE II-1: Emission Unit Identification

I.D.	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
AE1	General Electric LM6000PC Simple Cycle Combustion Turbine	Water Injection	424 MMBtu/Hr (nominal)	Natural gas #2 fuel oil	S001
AE2	General Electric LM6000PC Simple Cycle Combustion Turbine	Water Injection	424 MMBtu/Hr (nominal)	Natural gas #2 fuel oil	S002
AE3	Siemens Westinghouse Model 501F	Dry Low/NOx Burners /SCR	2,094 MMBtu[1]/Hr	Natural Gas	S003
AE4	Siemens Westinghouse Model 501F	Dry Low/NOx Burners /SCR	2,094 MMBtu[1]/Hr	Natural Gas	S003
AE5	Steam Turbine Electric Generator	None	186 MW	n/a	n/a
EG01	Caterpillar C32 Backup Emergency Generator	None	1,250 kW	Diesel	EG01
EG02	Caterpillar C32 Backup Emergency Generator	None	1,250 kW	Diesel	EG02
G02	Clarke JDFP-06WA Emergency Fire Pump	None	265 BHP	Diesel	n/a
T-2	Aqueous Ammonia	Vapor Balancing and Bottom Loading	24,800 gallons	Aqueous Ammonia	n/a

I.D.	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
T-3	No. 2 Fuel Storage Tank	None Required	400,000 gallons No. 2 fuel oil	No. 2 Fuel Oil	n/a
CT-2	Cooling Tower	Mist eliminators	148,690 gallons/minute	n/a	S004

DECLARATION OF POLICY

Pollution prevention is recognized as the preferred strategy (over pollution control) for reducing risk to air resources. Accordingly, pollution prevention measures should be integrated into air pollution control programs wherever possible, and the adoption by sources of cost-effective compliance strategies, incorporating pollution prevention, is encouraged. The Department will give expedited consideration to any permit modification request based on pollution prevention principles.

The permittee is subject to the terms and conditions set forth below. These terms and conditions constitute provisions of *Allegheny County Health Department Rules and Regulations, Article XXI Air Pollution Control*. The subject equipment has been conditionally approved for operation. The equipment shall be operated in conformity with the plans, specifications, conditions, and instructions which are part of your application, and may be periodically inspected for compliance by the Department. In the event that the terms and conditions of this permit or the applicable provisions of Article XXI conflict with the application for this permit, these terms and conditions and the applicable provisions of Article XXI shall prevail. Additionally, nothing in this permit relieves the permittee from the obligation to comply with all applicable Federal, State and Local laws and regulations.

III. GENERAL CONDITIONS – Major Source

1. Prohibition of Air Pollution (§2101.11)

a. It shall be a violation of this permit to fail to comply with, or to cause or assist in the violation of, any requirement of this permit, or any order or permit issued pursuant to authority granted by Article XXI. The permittee shall not willfully, negligently, or through the failure to provide and operate necessary control equipment or to take necessary precautions, operate any source of air contaminants in such manner that emissions from such source:
   1) Exceed the amounts permitted by this permit or by any order or permit issued pursuant to Article XXI;
   2) Cause an exceedance of the ambient air quality standards established by Article XXI §2101.10; or
   3) May reasonably be anticipated to endanger the public health, safety, or welfare.

b. It shall be a violation of this permit to operate, or allow to be operated, any source in such manner as to allow the release of air contaminants into the open air or to cause air pollution as defined in Article XXI, except as is explicitly permitted by this permit or Article XXI.

2. Definitions (§2101.20)

a. Except as specifically provided in this permit, terms used retain the meaning accorded them under the applicable provisions and requirements of Article XXI or the applicable federal or state regulation. Whenever used in this permit, or in any action taken pursuant to this permit, the words and phrases shall have the meanings stated, unless the context clearly indicates otherwise.

b. Unless specified otherwise in this permit or in the applicable regulation, the term "*year*" shall mean any twelve (12) consecutive months.

3. Conditions (§2102.03.c)

It shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02, for any person to fail to comply with any terms or conditions set forth in this permit.

4. Certification (§2102.01)

Any report, or compliance certification submitted under this permit shall contain written certification by a responsible official as to truth, accuracy, and completeness. This certification and any other certification required under this permit shall be signed by a responsible official of the source, and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

5. Transfers (§2102.03.e)

This permit shall not be transferable from one person to another, except in accordance with Article XXI §2102.03.e and in cases of change-in-ownership which are documented to the satisfaction of the Department, and shall be valid only for the specific sources and equipment for which this permit was issued. The transfer of permits in the case of change-in-ownership may be made consistent with the administrative permit amendment procedure of Article XXI §2103.14.b. The required documentation and fee must be received by the Department at least 30 days before the intended transfer date.

6. Term (§2103.12.e, §2103.13.a)

a. This permit shall remain valid for five (5) years from the date of issuance, or such other shorter period if required by the Clean Air Act, unless revoked. The terms and conditions of an expired permit shall automatically continue pending issuance of a new operating permit provided the permittee has submitted a timely and complete application and paid applicable fees required under Article XXI Part C, and the Department through no fault of the permittee is unable to issue or deny a new permit before the expiration of the previous permit.

b. Expiration. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with the requirements of Article XXI Part C.

7. Need to Halt or Reduce Activity Not a Defense (§2103.12.f.2)

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

8. Property Rights (§2103.12.f.4)

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

9. Duty to Provide Information (§2103.12.f.5)

a. The permittee shall furnish to the Department in writing within a reasonable time, any information that the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of any records required to be kept by the permit.

b. Upon cause shown by the permittee the records, reports, or information, or a particular portion thereof, claimed by the permittee to be confidential shall be submitted to the Department in accordance with the requirements of Article XXI, §2101.07.d.4. Information submitted to the Department under a claim of confidentiality, shall be available to the US EPA and the PADEP upon request and without restriction. Upon request of the permittee the confidential information may be submitted to the USEPA and PADEP directly. Emission data or any portions of any draft, proposed, or issued permits shall not be considered confidential.

10. Modification of Section 112(b) Pollutants which are VOCs or PM_{10} (§2103.12.f.7)

Except where precluded under the Clean Air Act or federal regulations promulgated under the Clean Air Act, if this permit limits the emissions of VOCs or PM_{10} but does not limit the emissions of any hazardous air pollutants, the mixture of hazardous air pollutants which are VOCs or PM_{10} can be modified so long as no permit emission limitations are violated. A log of all mixtures and changes shall be kept and reported to the Department with the next report required after each change.

11. Right to Access (§2103.12.h.2)

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized Department and other federal, state, county, and local government representatives to:

a. Enter upon the permittee's premises where a permitted source is located or an emissions-related activity is conducted, or where records are or should be kept under the conditions of the permit;
b. Have access to, copy and remove, at reasonable times, any records that must be kept under the conditions of the permit;
c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
d. As authorized by either Article XXI or the Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

12. Certification of Compliance (§2103.12.h.5,)

a. The permittee shall submit on an annual basis, certification of compliance with all terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification of compliance shall be made consistent with General Condition III.4 above and shall include the following information at a minimum:

1) The identification of each term or condition of the permit that is the basis of the certification;
2) The compliance status;
3) Whether any noncompliance was continuous or intermittent;
4) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with the provisions of this permit; and
5) Such other facts as the Department may require determining the compliance status of the source.

b. All certification of compliance forms must be submitted to the Administrator as well as to the Department by May 31 of each year for the time period. The next report shall be due May 31, 2025 for the time period beginning on the issuance date of this permit through March 31, 2025.

Compliance certifications should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

13. Record Keeping Requirements (§2103.12.j.1)

a. The permittee shall maintain records of required monitoring information that include the following:

1) The date, place as defined in the permit, and time of sampling or measurements;
2) The date(s) analyses were performed;
3) The company or entity that performed the analyses;
4) The analytical techniques or methods used;
5) The results of such analyses; and
6) The operating parameters existing at the time of sampling or measurement.

b. The permittee shall maintain and make available to the Department, upon request, records including computerized records that may be necessary to comply with the reporting and emission statements in Article XXI §2108.01.e. Such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions.

14. Retention of Records (§2103.12.j.2)

The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

15. Reporting Requirements (§2103.12.k)

a. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the Responsible Official.

b. Prompt reporting of deviations from permit requirements is required, including those attributable to upset conditions as defined in this permit and Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

c. All reports submitted to the Department shall comply with the certification requirements of General Condition III.4 above.

d. Semiannual reports required by this permit shall be submitted to the Department as follows:
1) One semiannual report is due by July 31 of each year for the time period beginning January 1 and ending June 30.
2) One semiannual report is due by February 1 of each year for the time period beginning July 1 and ending December 31.

e. Reports should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

16. Severability Requirement (§2103.12.l)

The provisions of this permit are severable, and if any provision of this permit is determined by a court of competent jurisdiction to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

17. Existing Source Reactivations (§2103.13.d)

The permittee shall not reactivate any source that has been out of operation or production for a period of one year or more unless the permittee has submitted a reactivation plan request to, and received a written reactivation plan approval from, the Department. Existing source reactivations shall meet all requirements of Article XXI §2103.13.d.

18. Administrative Permit Amendment Procedures (§2103.14.b)

An administrative permit amendment may be made consistent with the procedures of Article XXI §2103.14.b and §2103.24.b. Administrative permit amendments are not authorized for any amendment precluded by the Clean Air Act or the regulations there under.

19. Revisions and Minor Permit Modification Procedures (§2103.14.c)

Sources may apply for revisions and minor permit modifications on an expedited basis in accordance with Article XXI §2103.14.c and §2103.24.a.

20. Significant Permit Modifications (§2103.14.d)

Significant permit modifications shall meet all requirements of the applicable subparts of Article XXI, Part C, including those for applications, fees, public participation, review by affected States, and review by EPA, as they apply to permit issuance and permit renewal. The approval of a significant permit modification, if the entire permit has been reopened for review, shall commence a new full five (5) year permit term. The Department shall take final action on all such permits within nine (9) months following receipt of a complete application.

21. Duty to Comply (§2103.12.f.1)

The permittee shall comply with all permit conditions and all other applicable requirements at all times. Any permit noncompliance constitutes a violation of the Clean Air Act, the Air Pollution Control Act, and Article XXI and is grounds for any and all enforcement action, including, but not limited to, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

22. Renewals (§2103.13.b.)

Renewal of this permit is subject to the same fees and procedural requirements, including those for public participation and affected State and EPA review, that apply to initial permit issuance. The application for renewal shall be submitted at least six (6) months but not more than eighteen (18) months prior to expiration of this permit. The application shall also include submission of a supplemental compliance review as

required by Article XXI §2102.01.

23. Reopenings for Cause (§2103.12.f.3, §2103.25.a)

a. This permit shall be reopened and reissued under any of the following circumstances:

1) Additional requirements under the Clean Air Act become applicable to a major source with a remaining permit term of three (3) or more years. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended solely due to the failure of the Department to act on a permit renewal application in a timely fashion.
2) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.
3) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.
4) The Administrator or the Department determines that this permit must be reissued or revoked to assure compliance with the applicable requirements.

b. This permit may be modified; revoked, reopened, and reissued; or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in this permit.

24. Reopenings for Cause by the EPA (§2103.25.b)

This permit may be modified, reopened and reissued, revoked or terminated for cause by the EPA in accordance with procedures specified in Article XXI §2103.25.b.

25. Annual Operating Permit Maintenance Fee (§2103.40)

In each year during the term of this permit, on or before December 31 of each year for the next calendar year, the permittee shall submit to the Department, in addition to any other applicable administration fees, an Annual Operating Permit Maintenance Fee in accordance with §2103.40. by check or money order payable to the “Allegheny County Air Pollution Control Fund” in the amount specified in the fee schedule applicable at that time.

26. Annual Major Source Emissions Fees Requirements (§2103.41)

No later than September 1 of each year, the permittee shall pay an annual emission fee in accordance with Article XXI §2103.41 for each ton of a regulated pollutant (except for carbon monoxide) actually emitted from the source. The permittee shall not be required to pay an emission fee for emissions of more than 4,000 tons of each regulated pollutant. The emission fee shall be increased in each year after 1995 by the percentage, if any, by which the Consumer Price Index for the most recent calendar year exceeds the Consumer Price Index for the previous calendar year.

27. Other Requirements not Affected (§2104.08, §2105.02)

Compliance with the requirements of this permit shall not in any manner relieve any person from the duty to fully comply with any other applicable Federal, State, or County statute, rule, regulation, or the like, including but not limited to the odor emission standards under Article XXI §2104.04, any applicable NSPSs, NESHAPs, MACTs, or Generally Achievable Control Technology (GACT) standards now or hereafter established by the EPA, and any applicable requirements of BACT or LAER as provided by Article XXI, any condition contained in any applicable Installation or Operating Permit and/or any additional or more stringent requirements contained in an order issued to such person pursuant to Article XXI Part I.

28. Termination of Operation (§2108.01.a)

In the event that operation of any source of air contaminants is permanently terminated, the person responsible for such source shall so report, in writing, to the Department within 60 days of such termination.

29. Tests by the Department (§2108.02.d)

Notwithstanding any tests conducted pursuant to Article XXI §2108.02, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the person responsible for such source or equipment shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.

30. Other Rights and Remedies Preserved (§2109.02.b)

Nothing in this permit shall be construed as impairing any right or remedy now existing or hereafter created in equity, common law or statutory law with respect to air pollution, nor shall any court be deprived of such jurisdiction for the reason that such air pollution constitutes a violation of this permit.

31. Enforcement and Emergency Orders (§2109.03, §2109.05)

a. The person responsible for this source shall be subject to any and all enforcement and emergency orders issued to it by the Department in accordance with Article XXI §2109.03, §2109.04 and §2109.05.

b. Upon request, any person aggrieved by an Enforcement Order or Emergency Order shall be granted a hearing as provided by Article XXI §2109.03.d; provided however, that an Emergency Order shall continue in full force and effect notwithstanding the pendency of any such appeal.

c. Failure to comply with an Enforcement Order or immediately comply with an Emergency Order shall be a violation of this permit thus giving rise to the remedies provided by Article XXI §2109.02.

32. Penalties, Fines, and Interest (§2109.07.a)

A source that fails to pay any fee required under this permit when due shall pay a civil penalty of 50% of the fee amount, plus interest on the fee amount computed in accordance with Article XXI §2109.06.a.4 from the date the fee was required to be paid. In addition, the source may have this permit revoked for failure to pay any fee required.

33. Appeals (§2109.10)

In accordance with State Law and County regulations and ordinances, any person aggrieved by an order or other final action of the Department issued pursuant to Article XXI or any unsuccessful petitioner to the Administrator under Article XXI Part C, Subpart 2, shall have the right to appeal the action to the Director in accordance with the applicable County regulations and ordinances.

34. Risk Management (§2104.08, 40 CFR Part 68)

Should this stationary source, as defined in 40 CFR Part 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in Part 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by General Condition III.12 above.

35. Operational Flexibility (§2103.14.a)

a. The owner or operator shall not make any changes at this source, including trades of increases and decreases in emissions within the permitted source, without first obtaining a permit revision for such changes, unless:

1) The changes do not require an Installation Permit under §2102.04 of this Article or violate the terms of an Operating Permit or an Installation Permit;
2) The permit specifically allows for changes that do not cause specific emissions increases greater than a de minimis emission increase, and the changes do not exceed such emissions increase allowed under the permit, in accordance with General Condition III.36 below;
3) The changes do not violate major source applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements; and
4) By no later than seven (7) days prior to the date on which the implementation of the proposed change is commenced, a written notification is submitted to the Department, for attachment to the Department's copy of the relevant permit, which includes:
   a) A brief description of the change within the permitted source;
   b) The date on which the change will occur;
   c) The pollutants emitted; and
   d) Any change in emissions.

36. De Minimis Emission Increases (§2103.14.e)

a. The Department may allow, as a condition of an Operating Permit, *de minimis* emission increases from a new or existing source up to the amounts authorized in condition III.36.d below.

b. A *de minimis* increase may not occur at a source if it either:
1) Increases the emissions of a pollutant regulated under Section 112 of the Clean Air Act (42 U.S.C.A. §7412) except as authorized in conditions III.36.d.4) and 5) below;
2) Subjects the source to the permit requirements of Article XXI, §§2102.05, 2102.06, or 2102.07 (relating to prevention of significant deterioration of air quality and major new source and major modification review); or

3) Violates an applicable requirement of this Article, the state Air Pollution Control Act, the Clean Air Act, or the regulations promulgated under the Air Pollution Control Act or the Clean Air Act.

c. The permittee shall provide the Department with seven (7) days prior written notice of any *de minimis* emission increase. The notice shall identify and describe the pollutants that will be emitted as a result of the *de minimis* emissions increase and provide emission rates in tons/year and in terms necessary to establish compliance consistent with any applicable requirement. The Department may disapprove or condition the *de minimis* emission increase at any time.

d. Except as provided in condition III.36.e below, the maximum *de minimis* emission rate increases, as measured in tons/year, that may be authorized in the permit during the term of the permit are:

1) Four tons of carbon monoxide from an emissions unit during the term of the permit and 20 tons of carbon monoxide at the source during the term of the permit;
2) One ton of NO_X from an emissions unit during the term of the permit and 5 tons of NO_X at the source during the term of the permit;
3) One and six-tenths tons of oxides of sulfur from an emissions unit during the term of the permit and 8.0 tons of oxides of sulfur at the source during the term of the permit;
4) Six-tenths of a ton of PM_{10} from an emissions unit during the term of the permit and 3.0 tons of PM_{10} at the source during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act, the regulations thereunder, or Article XXI; and
5) One ton of VOC's from an emissions unit during the term of the permit and 5 tons of VOC's at the source during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act, the regulations thereunder, or Article XXI.

e. The Department may allow, as a condition of an operating permit, installation of the minor sources exempted under §2102.04.a.5 of Article XXI.

f. *De minimis* emission threshold levels cannot be met by offsetting emission increases with emission decreases at the same emissions unit.

37. Permit Shield (§2103.22)

a. The permittee's compliance with the conditions of this permit shall be deemed compliance with all major source applicable requirements as of the date of permit issuance, provided that:

1) Such major source applicable requirements are included and are specifically identified in the permit; or

2) The Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

b. Nothing in Article XXI §2103.22.e or the Title V Permit shall alter or affect the following:

1) The provisions of Section 303 of the Clean Air Act and the provisions of Article XXI regarding emergency orders, including the authority of the Administrator and the Department under such

provisions;

2) The liability of any person who owns, operates, or allows to be operated, a source in violation of any major source applicable requirements prior to or at the time of permit issuance;
3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; or
4) The ability of the EPA or the County to obtain information from the permittee pursuant to Section 114 of the Clean Air Act, the provisions of Article XXI and State law.

c. Unless precluded by the Clean Air Act or regulations therein, final action by the Department on administrative amendments, minor and significant permit modifications, and operational flexibility changes shall be covered by the permit shield provided such amendments, modifications and changes meet the relevant requirements of Article XXI.

d. The permit shield authorized under Article XXI §2103.22 is in effect for the permit terms and conditions as identified in this permit.

38. Circumvention (§2101.14)

For purposes of determining compliance with the provisions of this permit and Article XXI, no credit shall be given to any person for any device or technique, including but not limited to the operation of any source with unnecessary amounts of air, the combining of separate sources except as specifically permitted by Article XXI and the Department, the use of stacks exceeding Good Engineering Practice height as defined by regulations promulgated by the US EPA at 40 CFR §§51.100 and 51.110 and Subpart I, and other dispersion techniques, which without reducing the amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise violate the provisions of this Article; except that, for purposes of determining compliance with Article §2104.04 concerning odors, credit for such devices or techniques, except for the use of a masking agent, may be given.

39. Duty to Supplement and Correct Relevant Facts (§2103.11.d.2)

a. The permittee shall provide additional information as necessary to address requirements that become applicable to the source after the date it files a complete application but prior to the Department taking action on the permit application.

b. The permittee shall provide supplementary fact or corrected information upon becoming aware that incorrect information has been submitted or relevant facts were not submitted.

c. Except as otherwise required by this permit and Article XXI, the Clean Air Act, or the regulations thereunder, the permittee shall submit additional information as necessary to address changes occurring at the source after the date it files a complete application but prior to the Department taking action on the permit application.

d. The applicant shall submit information requested by the Department which is reasonably necessary to evaluate the permit application.

40. Effect (§2102.03.g.)

a. Except as specifically otherwise provided under Article XXI, Part C, issuance of a permit pursuant to Article XXI Part B or Part C shall not in any manner relieve any person of the duty to fully comply with the requirements of this permit, Article XXI or any other provision of law, nor shall

it in any manner preclude or affect the right of the Department to initiate any enforcement action whatsoever for violations of this permit or Article XXI, whether occurring before or after the issuance of such permit. Further, except as specifically otherwise provided under Article XXI Part C the issuance of a permit shall not be a defense to any nuisance action, nor shall such permit be construed as a certificate of compliance with the requirements of this permit or Article XXI.

41. Installation Permits (§2102.04.a.1.)

It shall be a violation of this permit giving rise to the remedies set forth in Article XXI Part I for any person to install, modify, replace, reconstruct, or reactivate any source or air pollution control equipment which would require an installation permit or permit modification in accordance with Article XXI Part B or Part C.

IV. SITE LEVEL TERMS AND CONDITIONS

1. Reporting of Upset Conditions (§2103.12.k.2)

The permittee shall promptly report all deviations from permit requirements, including those attributable to upset conditions as defined in Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

2. Visible Emissions (§2104.01.a)

Except as provided for by Article XXI §2108.01.d pertaining to a cold start, no person shall operate, or allow to be operated, any source in such manner that the opacity of visible emissions from a flue or process fugitive emissions from such source, excluding uncombined water:

a. Equal or exceed an opacity of 20% for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or,

b. Equal or exceed an opacity of 60% at any time.

3. Odor Emissions (§2104.04) *(County-only enforceable)*

No person shall operate, or allow to be operated, any source in such manner that emissions of malodorous matter from such source are perceptible beyond the property line of such source. In addition, the Department may pursue the remedies provided by §2109.02 for any violation of this Section.

4. Materials Handling (§2104.05)

The permittee shall not conduct, or allow to be conducted, any materials handling operation in such manner that emissions from such operation are visible at or beyond the property line.

5. Operation and Maintenance (§2105.03)

All air pollution control equipment required by this permit or any order under Article XXI, and all equivalent compliance techniques approved by the Department, shall be properly installed, maintained, and operated consistently with good air pollution control practice.

6. Open Burning (§2105.50)

No person shall conduct, or allow to be conducted, the open burning of any material, except where the Department has issued an Open Burning Permit to such person in accordance with Article XXI §2105.50 or where the open burning is conducted solely for the purpose of non-commercial preparation of food for human consumption, recreation, light, ornament, or provision of warmth for outside workers, and in a manner which contributes a negligible amount of air contaminants.

7. Shutdown of Control Equipment (§2108.01.b)

a. In the event any air pollution control equipment is shut down for reasons other than a breakdown, the person responsible for such equipment shall report, in writing, to the Department the intent to shut down such equipment at least 24 hours prior to the planned shutdown. Notwithstanding the submission of such report, the equipment shall not be shut down until the approval of the

Department is obtained; provided, however, that no such report shall be required if the source(s) served by such air pollution control equipment is also shut down at all times that such equipment is shut down.

b. The Department shall act on all requested shutdowns as promptly as possible. If the Department does not take action on such requests within ten (10) calendar days of receipt of the notice, the request shall be deemed denied, and upon request, the owner or operator of the affected source shall have a right to appeal in accordance with the provisions of Article XI.

c. The prior report required by Site Level Condition IV.7.a above shall include:

1) Identification of the specific equipment to be shut down, its location and permit number (if permitted), together with an identification of the source(s) affected;
2) The reasons for the shutdown;
3) The expected length of time that the equipment will be out of service;
4) Identification of the nature and quantity of emissions likely to occur during the shutdown;
5) Measures, including extra labor and equipment, which will be taken to minimize the length of the shutdown, the amount of air contaminants emitted, or the ambient effects of the emissions;
6) Measures which will be taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impracticable to shut down or curtail the affected source(s) during the shutdown; and
7) Such other information as may be required by the Department.

d. Written notice required by this condition should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

8. Breakdowns (§2108.01.c)

a. In the event that any air pollution control equipment, process equipment, or other source of air contaminants breaks down in such manner as to have a substantial likelihood of causing the emission of air contaminants in violation of this permit, or of causing the emission into the open air of potentially toxic or hazardous materials, the person responsible for such equipment or source shall immediately, but in no event later than sixty (60) minutes after the commencement of the breakdown, notify the Department of such breakdown and shall, as expeditiously as possible but in no event later than seven (7) days after the original notification, provide written notice to the Department.

b. To the maximum extent possible, all oral and written notices required shall include all pertinent facts, including:

1) Identification of the specific equipment which has broken down, its location and permit number (if permitted), together with an identification of all related devices, equipment, and other sources which will be affected.
2) The nature and probable cause of the breakdown.
3) The expected length of time that the equipment will be inoperable or that the emissions will continue.
4) Identification of the specific material(s) which are being, or are likely to be emitted, together with a statement concerning its toxic qualities, including its qualities as an irritant, and its potential for causing illness, disability, or mortality.

5) The estimated quantity of each material being or likely to be emitted.
6) Measures, including extra labor and equipment, taken or to be taken to minimize the length of the breakdown, the amount of air contaminants emitted, or the ambient effects of the emissions, together with an implementation schedule.
7) Measures being taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impractical to shut down the source(s), or any part thereof, during the breakdown.

c. Notices required shall be updated, in writing, as needed to advise the Department of changes in the information contained therein. In addition, any changes concerning potentially toxic or hazardous emissions shall be reported immediately. All additional information requested by the Department shall be submitted as expeditiously as practicable.

d. Unless otherwise directed by the Department, the Department shall be notified whenever the condition causing the breakdown is corrected or the equipment or other source is placed back in operation by no later than 9:00 AM on the next County business day. Within seven (7) days thereafter, written notice shall be submitted pursuant to Paragraphs a and b above.

e. Breakdown reporting shall not apply to breakdowns of air pollution control equipment which occur during the initial startup of said equipment, provided that emissions resulting from the breakdown are of the same nature and quantity as the emissions occurring prior to startup of the air pollution control equipment.

f. In no case shall the reporting of a breakdown prevent prosecution for any violation of this permit or Article XXI.

g. Written notice required by this condition should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

9. Cold Start (§2108.01.d)

In the event of a cold start on any fuel-burning or combustion equipment, except stationary internal combustion engines and combustion turbines used by utilities to meet peak load demands, the person responsible for such equipment shall report in writing to the Department the intent to perform such cold start at least 24 hours prior to the planned cold start. Such report shall identify the equipment and fuel(s) involved and shall include the expected time and duration of the startup. Upon written application from the person responsible for fuel-burning or combustion equipment which is routinely used to meet peak load demands and which is shown by experience not to be excessively emissive during a cold start, the Department may waive these requirements and may instead require periodic reports listing all cold starts which occurred during the report period. The Department shall make such waiver in writing, specifying such terms and conditions as are appropriate to achieve the purposes of Article XXI. Such waiver may be terminated by the Department at any time by written notice to the applicant. Cold start notifications should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

10. Emissions Inventory Statements (§2108.01.e & g)

a. Emissions inventory statements in accordance with Article XXI §2108.01.e shall be submitted to the Department by March 15 of each year for the preceding calendar year. The Department may require more frequent submittals if the Department determines that more frequent submissions are

required by the EPA or that analysis of the data on a more frequent basis is necessary to implement the requirements of Article XXI or the Clean Air Act.

b. The failure to submit any report or update within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

11. Monitoring of Malodorous Matter Beyond Facility Boundaries (§2104.04)

The permittee shall take all reasonable action as may be necessary to prevent malodorous matter from becoming perceptible beyond facility boundaries. Further, the permittee shall perform such observations as may be deemed necessary along facility boundaries to insure that malodorous matter beyond the facility boundary in accordance with Article XXI §2107.13 is not perceptible and record all findings and corrective action measures taken.

12. Orders (§2108.01.f)

In addition to meeting the requirements of General Condition III.28 and Site Level Conditions IV.7 through IV.10 above, inclusive, the person responsible for any source shall, upon order by the Department, report to the Department such information as the Department may require in order to assess the actual and potential contribution of the source to air quality. The order shall specify a reasonable time in which to make such a report.

13. Violations (§2108.01.g)

The failure to submit any report or update thereof required by General Condition III.28 and Site Level Conditions IV.7 through IV.12 above, inclusive, within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

14. Emissions Testing (§2108.02)

a. **Orders:** The person responsible for any source shall, upon order by the Department, conduct, or cause to be conducted, such emissions tests as specified by the Department within such reasonable time as is specified by the Department. Test results shall be submitted in writing to the Department within 20 days after completion of the tests, unless a different period is specified in the Department's order. Emissions testing shall comply with all applicable requirements of Article XXI §2108.02.e.

b. **Tests by the Department:** Notwithstanding any tests conducted pursuant to this permit, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the permittee shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.

c. **Testing Requirements:** No later than 45 days prior to conducting any tests required by this permit, the person responsible for the affected source shall submit for the Department's approval a written test protocol explaining the intended testing plan, including any deviations from standard testing procedures, the proposed operating conditions of the source during the test, calibration data for specific test equipment and a demonstration that the tests will be conducted under the direct

supervision of persons qualified by training and experience satisfactory to the Department to conduct such tests. In addition, at least 30 days prior to conducting such tests, the person responsible shall notify the Department in writing of the time(s) and date(s) on which the tests will be conducted and shall allow Department personnel to observe such tests, record data, provide pre-weighed filters, analyze samples in a County laboratory and to take samples for independent analysis. Test results shall be comprehensively and accurately reported in the units of measurement specified by the applicable emission limitations of this permit.

d. Test methods and procedures shall conform to the applicable reference method set forth in this permit or Article XXI Part G, or where those methods are not applicable, to an alternative sampling and testing procedure approved by the Department consistent with Article XXI §2108.02.e.2.

e. **Violations:** The failure to perform tests as required by this permit or an order of the Department, the failure to submit test results within the time specified, the knowing submission of false information, the willful failure to submit complete results, or the refusal to allow the Department, upon presentation of a search warrant, to conduct tests, shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

15. Abrasive Blasting (§2105.51)

a. Except where such blasting is a part of a process requiring an operating permit , no person shall conduct or allow to be conducted, abrasive blasting or power tool cleaning of any surface, structure, or part thereof, which has a total area greater than 1,000 square feet unless such abrasive blasting complies with all applicable requirements of Article XXI §2105.51.

b. In addition to complying with all applicable provisions of §2105.51, no person shall conduct, or allow to be conducted, abrasive blasting of any surface unless such abrasive blasting also complies with all other applicable requirements of Article XXI unless such requirements are specifically addressed by §2105.51.

16. Asbestos Abatement (§2105.62, §2105.63)

In the event of removal, encasement, or encapsulation of Asbestos-Containing Material (ACM) at a facility or in the event of the demolition of any facility, the permittee shall comply with all applicable provisions of Article XXI §2105.62 and §2105.63.

17. Protection of Stratospheric Ozone (40 CFR Part 82)

a. Permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
   1) All containers in which a Class I or Class II substance is stored or transported, all products containing a Class I substance, and all products directly manufactured with a process that uses a Class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106;
   2) The placement of the required warning statement must comply with the requirements pursuant to §82.108;
   3) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110; and
   4) No person may modify, remove or interfere with the required warning statement except as described in §82.112.

b. Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F:
   1) Persons opening appliances for maintenance, service, repair or disposal must comply with the prohibitions and required practices pursuant to §82.154 and §82.156;
   2) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158;
   3) Persons maintaining, servicing, repairing or disposing of appliances, must be certified by an approved technician certification program pursuant to §82.161;
   4) Persons disposing of small appliances, motor vehicle air conditioners (MVAC) and MVAC-like appliances, must comply with the record keeping requirements pursuant to §82.166;
   5) Owners of commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156; and
   6) Owners or operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

c. If the permittee manufactures, transforms, destroys, imports or exports a Class I or Class II substance, the Permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A (Production and Consumption Controls).

d. If the permittee performs a service on a motor vehicle that involves an ozone-depleting substance, refrigerant or regulated substitute substance in the MVAC, the Permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B (Servicing of Motor Vehicle Air Conditioners).

e. The permittee may switch from any ozone-depleting substance to any alternative that is listed as acceptable in the Significant New Alternatives Policy (SNAP) program promulgated pursuant to 40 CFR Part 82, Subpart G.

18. Volatile Organic Compound Storage Tanks (§2105.12.a)

No person shall place or store, or allow to be placed or stored, a volatile organic compound having a vapor pressure of 1.5 psia or greater under actual storage conditions in any aboveground stationary storage tank having a capacity equal to or greater than 2,000 gallons but less than or equal to 40,000 gallons, unless there is in operation on such tank pressure relief valves which are set to release at the higher of 0.7 psig of pressure or 0.3 psig of vacuum or at the highest possible pressure and vacuum in accordance with State or local fire codes, National Fire Prevention Association guidelines, or other national consensus standard approved in writing by the Department. Petroleum liquid storage vessels that are used to store produced crude oil and condensate prior to lease custody transfer are exempt from these requirements.

19. Fugitive Emissions (§2105.49)

The person responsible for a source of fugitive emissions, in addition to complying with all other applicable provisions of this permit shall take all reasonable actions to prevent fugitive air contaminants from becoming airborne. Such actions may include, but are not limited to:

a. The use of asphalt, oil, water, or suitable chemicals for dust control;
b. The paving and maintenance of roadways, parking lots and the like;
c. The prompt removal of earth or other material which has been deposited by leaks from transport, erosion or other means;

d. The adoption of work or other practices to minimize emissions;
e. Enclosure of the source; and
f. The proper hooding, venting, and collection of fugitive emissions.

20. Episode Plans (§2106.01 and Article XXI Part F)

The permittee shall upon written request of the Department, submit a source curtailment plan, consistent with good industrial practice and safe operating procedures, designed to reduce emissions of air contaminants during air pollution episodes. Such plans shall meet the requirements of Article XXI §2106.02 and Article XXI Part F.

21. Acid Rain Program (§2103.22.j) (40 CFR 72 through 40 CFR 78)

Pursuant to §2103.22 (Standard Acid Deposition Control Requirements), the Permittee shall comply with all provisions of the Acid Rain permit issued for this source, and any other applicable requirements contained in 40 CFR 72 through 40 CFR 78. The Acid Rain permit for this source is attached to this permit as Appendix A, and is incorporated by reference.

Emissions exceeding any allowances that the Permittee lawfully holds under the Title IV Acid Rain Program of the Clean Air Act are prohibited, subject to the following limitations: (§2103.22.j.7)

a. No revision of this permit shall be required for increases in emissions that are authorized by allowances acquired under the Title IV Acid Rain Program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the Permittee. The Permittee may not use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act.

22. NO_X Annual Emissions Requirements (40 CFR Section 97.106 - Standard Requirements)

a. Permit requirements.
1) The CAIR designated representative shall: (§97.106(a)(1)(i) & (ii))
   a) Submit to the PADEP a complete CAIR permit application under §97.122 in accordance with the deadlines specified in §97.121;
   b) Provide a copy of the CAIR permit application to the Department; (§2103.12.h) and
   c) Submit in a timely manner any supplemental information that the PADEP or the Department determines is necessary in order to review a CAIR permit application and issue or deny a CAIR permit.
2) The owner or operator shall have a CAIR permit issued by the PADEP under 40 CFR Part 97 Subpart CC for the source and operate the source and the unit in compliance with such CAIR permit. (§97.106(a)(2))

b. Monitoring, reporting, and recordkeeping requirements. (§97.106(b)(1) & (2))
1) The owners and operators, and the CAIR designated representative, shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 97 Subpart HH.
2) The emissions measurements recorded and reported in accordance with 40 CFR Part 97 Subpart HH shall be used to determine compliance by each CAIR NO_X source with the CAIR NO_X

emissions limitation under Condition IV.22.c below.

c. Nitrogen oxides emission requirements. (§97.106(c)(1) – (c)(7))

1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_X source and each CAIR NO_X unit at the source shall hold, in the source's compliance account, CAIR NO_X allowances available for compliance deductions for the control period under §97.154(a) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_X Units at the source, as determined in accordance with 40 CFR Part 97 Subpart HH.
2) A CAIR NO_X unit shall be subject to the requirements under Condition IV.22.c.1) above for the control period starting on the later of January 1, 2009 or the deadline for meeting the unit's monitor certification requirements under §97.170(b)(1), (2), or (5) and for each control period thereafter.
3) A CAIR NO_X allowance shall not be deducted, for compliance with the requirements under Condition IV.22.c.1) above, for a control period in a calendar year before the year for which the CAIR NO_X allowance was allocated.
4) CAIR NO_X allowances shall be held in, deducted from, or transferred into or among CAIR NO_X Allowance Tracking System accounts in accordance with 40 CFR Part 97 Subparts EE, FF, GG, and II.
5) A CAIR NO_X allowance is a limited authorization to emit one ton of nitrogen oxides in accordance with the CAIR NO_X Annual Trading Program. No provision of the CAIR NO_X Annual Trading Program, the CAIR permit application, the CAIR permit, or an exemption under §97.105 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
6) A CAIR NO_X allowance does not constitute a property right.
7) Upon recordation by the Administrator under 40 CFR Part 97 Subpart EE, FF, GG, or II, every allocation, transfer, or deduction of a CAIR NO_X allowance to or from a CAIR NO_X source's compliance account is incorporated automatically in any CAIR permit of the source.

d. Excess emissions requirements. (40 CFR §97.106(d))

1) If a CAIR NO_X source emits nitrogen oxides during any control period in excess of the CAIR NOx emissions limitation, then:
   a) The owners and operators of the source and each CAIR NO_X Unit at the source shall surrender the CAIR NO_X allowances required for deduction under §97.154(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law; and
   b) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97 Subpart AA, the Clean Air Act, and applicable State law.

e. Recordkeeping and reporting requirements (40 CFR §97.106(e))

1) Unless otherwise provided, the owners and operators of the CAIR NOx source and each CAIR NO_X Unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the PADEP, the Department or the Administrator.
   a) The certificate of representation under §97.113 for the CAIR designated representative for the source and each CAIR NO_X unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such

documents are superseded because of the submission of a new certificate of representation under §97.113 changing the CAIR designated representative.

b) All emissions monitoring information, in accordance with 40 CFR Part 97 Subpart HH, provided that to the extent that 40 CFR Part 97 Subpart HH provides for a 3-year period for recordkeeping, the 3-year period shall apply.

c) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_X Annual Trading Program.

d) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_X Annual Trading Program or to demonstrate compliance with the requirements of the CAIR NO_X Annual Trading Program.

2) The CAIR designated representative shall submit the reports required under the CAIR NO_X Annual Trading Program, including those under 40 CFR Part 97 Subpart HH.

f. Liability (40 CFR §97.106(f))

1) Each CAIR NO_X source and each CAIR NO_X Unit shall meet the requirements of the CAIR NO_X Annual Trading Program.

2) Any provision of the CAIR NO_X Annual Trading Program that applies to a CAIR NO_X source or the CAIR designated representative of a CAIR NO_X source shall also apply to the owners and operators of such source and of the CAIR NO_X Units at the source.

3) Any provision of the CAIR NO_X Annual Trading Program that applies to a CAIR NO_X Unit or the CAIR designated representative of a CAIR NO_X Unit shall also apply to the owners and operators of such unit.

g. Effect on other authorities. No provision of the CAIR NO_X Annual Trading Program, a CAIR permit application, a CAIR permit, or an exemption under §97.105 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_X source or CAIR NO_X Unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act. (40 CFR §97.106(g))

23. SO_2 Annual Emissions Requirements (40 CFR Section 97.206 - Standard Requirements)

a. Permit requirements.

1) The CAIR designated representative shall:

a) Submit to the PADEP a complete CAIR permit application under §97.222 in accordance with the deadlines specified in §97.221; and

b) Submit in a timely manner any supplemental information that the PADEP determines is necessary in order to review a CAIR permit application and issue or deny a CAIR permit.

2) The owners and operators of each CAIR SO_2 source shall have a CAIR permit issued by the permitting authority under 40 CFR Part 97 Subpart CCC for the source and operate the source and the unit in compliance with such CAIR permit.

b. Monitoring, reporting, and recordkeeping requirements

1) The owners and operators, and the CAIR designated representative, of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 97 Subpart HHH .

2) The emissions measurements recorded and reported in accordance 40 CFR Part 97 Subpart HHH shall be used to determine compliance by each CAIR SO_2 source with the CAIR SO_2 emissions limitation under Condition IV.23.c below.

c. Sulfur dioxide emission requirements

1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall hold, in the source's compliance account, a tonnage equivalent in CAIR SO2 allowances available for compliance deductions for the control period, as determined in accordance with §97.254(a) and (b), not less than the tons of total sulfur dioxide emissions for the control period from all CAIR SO_2 units at the source, as determined in accordance with 40 CFR Part 97 Subpart HHH .
2) A CAIR SO_2 unit shall be subject to the requirements under Condition IV.23.c.1) above for the control period starting on the later of January 1, 2010 or the deadline for meeting the unit(s) monitor certification requirements under §97.270(b)(1),(2), or (5) and for each control period thereafter.
3) A CAIR SO_2 allowance shall not be deducted, for compliance with the requirements under Condition IV.23.c.1) above, for a control period in a calendar year before the year for which the CAIR SO_2 allowance was allocated.
4) CAIR SO_2 allowances shall be held in, deducted from, or transferred into or among CAIR SO_2 allowance Tracking System accounts in accordance with 40 CFR Part 97 Subparts FFF, GGG, and III .
5) A CAIR SO_2 allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO_2 Trading Program. No provision of the CAIR SO_2 Trading Program, the CAIR permit application, the CAIR permit, or an exemption under §97.205 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
6) A CAIR SO_2 allowance does not constitute a property right.
7) Upon recordation by the Administrator under 40 CFR Part 97 Subparts FFF, GGG, or III, every allocation, transfer, or deduction of a CAIR SO_2 allowance to or from a CAIR SO_2 source's compliance account is incorporated automatically in any CAIR permit of the source.

d. Excess emissions requirements. If a CAIR SO_2 source emits sulfur dioxide during any control period in excess of the CAIR SO_2 emissions limitation, then:

1) The owners and operators of the source and each CAIR SO_2 unit at the source shall surrender the CAIR SO_2 allowances required for deduction under §97.254(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law; and
2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97 Subpart AAA, the Clean Air Act, and applicable State law.

e. Recordkeeping and reporting requirements.

1) Unless otherwise provided, the owners and operators of the CAIR SO_2 source and each CAIR SO_2 unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the PADEP, the Department or the Administrator. (§2103.12.h)
   a) The certificate of representation under §97.213 for the CAIR designated representative for the source and each CAIR SO_2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under §97.213 changing the CAIR designated representative.
   b) All emissions monitoring information, in accordance with 40 CFR Part 97 Subpart HHH,

provided that to the extent that 40 CFR Part 97 Subpart HHH provides for a 3-year period for recordkeeping, the 3-year period shall apply.

c) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR SO_2 Trading Program.

d) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR SO_2 Trading Program or to demonstrate compliance with the requirements of the CAIR SO_2 Trading Program.

2) The CAIR designated representative of a CAIR SO_2 source and each CAIR SO_2 unit at the source shall submit the reports required under the CAIR SO_2 Trading Program, including those under 40 CFR Part 97 Subpart HHH.

f. Liability.

1) Each CAIR SO_2 source and each CAIR SO_2 unit shall meet the requirements of the CAIR SO_2 Trading Program.

2) Any provision of the CAIR SO_2 Trading Program that applies to a CAIR SO_2 source or the CAIR designated representative of a CAIR SO_2 source shall also apply to the owners and operators of such source and of the CAIR SO_2 units at the source.

3) Any provision of the CAIR SO_2 Trading Program that applies to a CAIR S SO_2 O2 unit or the CAIR designated representative of a CAIR SO_2 unit shall also apply to the owners and operators of such unit.

g. Effect on other authorities. No provision of the CAIR SO_2 Trading Program, a CAIR permit application, a CAIR permit, or an exemption under §97.205 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR SO_2 source or CAIR SO_2 unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

24. NO_X Ozone Season Emission Requirements (40 CFR Section 97.306 - Standard Requirements)

a. Permit requirements.

1) The CAIR designated representative shall:

a) Submit to the PADEP a complete CAIR permit application under §97.322 in accordance with the deadlines specified in §97.321; and

b) Submit in a timely manner any supplemental information that the PADEP determines is necessary in order to review a CAIR permit application and issue or deny a CAIR permit.

2) The owners and operators shall have a CAIR permit issued by the PADEP under 40 CFR Part 97 Subpart CCCC for the source and operate the source and the unit in compliance with such CAIR permit.

3) Except as provided in 40 CFR Part 97 Subpart IIII, the owners and operators of a CAIR NO_X Ozone Season source that is not otherwise required to have a title V operating permit and each CAIR NO_X Ozone Season unit that is not otherwise required to have a title V operating permit are not required to submit a CAIR permit application, and to have a CAIR permit, under 40 CFR Part 97 Subpart CCCC for such CAIR NO_X Ozone Season source and such CAIR NO_X Ozone Season unit.

b. Monitoring, reporting, and recordkeeping requirements.

1) The owners and operators, and the CAIR designated representative, of each CAIR NO_X Ozone Season source and each CAIR NO_X Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 97 Subpart HHHH.

2) The emissions measurements recorded and reported in accordance with 40 CFR Part 97 Subpart

HHHH shall be used to determine compliance by each CAIR NO_X Ozone Season source with the CAIR NO_X Ozone Season emissions limitation under Condition IV.24.c below.

c. Nitrogen oxides ozone season emission requirements.

1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_X Ozone Season source and each CAIR NO_X Ozone Season unit at the source shall hold, in the source's compliance account, CAIR NO_X Ozone Season allowances available for compliance deductions for the control period under §97.354(a) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_X Ozone Season units at the source, as determined in accordance with 40 CFR Part 97 Subpart HHHH
2) A CAIR NO_X Ozone Season unit shall be subject to the requirements under Condition IV.24.c.1) above for the control period starting on the later of May 1, 2009 or the deadline for meeting the unit's monitor certification requirements under 40 CFR §97.370(b)(1), (2), (3), or (7) and for each control period thereafter.
3) A CAIR NO_X Ozone Season allowance shall not be deducted, for compliance with the requirements under Condition IV.24.c.1) above, for a control period in a calendar year before the year for which the CAIR NO_X Ozone Season allowance was allocated.
4) CAIR NO_X Ozone Season allowances shall be held in, deducted from, or transferred into or among CAIR NO_X Ozone Season Allowance Tracking System accounts in accordance with 40 CFR Part 97 Subparts EEEE, FFFF, GGGG, and IIII.
5) A CAIR NO_X Ozone Season allowance is a limited authorization to emit one ton of nitrogen oxides in accordance with the CAIR NO_X Ozone Season Trading Program. No provision of the CAIR NO_X Ozone Season Trading Program, the CAIR permit application, the CAIR permit, or an exemption under §97.305 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
6) A CAIR NO_X Ozone Season allowance does not constitute a property right.
7) Upon recordation by the Administrator under 40 CFR Part 97 Subparts EEEE, FFFF, GGGG, or IIII, every allocation, transfer, or deduction of a CAIR NO_X Ozone Season allowance to or from a CAIR NO_X Ozone Season source's compliance account is incorporated automatically in any CAIR permit of the source.

d. Excess emissions requirements. If a CAIR NO_X Ozone Season source emits nitrogen oxides during any control period in excess of the CAIR NO_X Ozone Season emissions limitation, then:

1) The owners and operators of the source and each CAIR NO_X Ozone Season unit at the source shall surrender the CAIR NO_X Ozone Season allowances required for deduction under §97.354(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law; and
2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97 Subpart AAAA, the Clean Air Act, and applicable State law.

e. Recordkeeping and reporting requirements.

1) Unless otherwise provided, the owners and operators of the CAIR NO_X Ozone Season source and each CAIR NO_X Ozone Season unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the PaDEP or the Administrator.
    c) The certificate of representation under §97.313 for the CAIR designated representative for the source and each CAIR NO_X Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that

the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under §97.313 changing the CAIR designated representative.

d) All emissions monitoring information, in accordance with 40 CFR Part 97 Subpart HHHH, provided that to the extent that 40 CFR Part 97 Subpart HHHH provides for a 3-year period for recordkeeping, the 3-year period shall apply.

e) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_X Ozone Season Trading Program.

f) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_X Ozone Season Trading Program or to demonstrate compliance with the requirements of the CAIR NO_X Ozone Season Trading Program.

2) The CAIR designated representative of a CAIR NO_X Ozone Season source and each CAIR NO_X Ozone Season unit at the source shall submit the reports required under the CAIR NO_X Ozone Season Trading Program, including those under 40 CFR Part 97 Subpart HHHH.

f. Liability.

1) Each CAIR NO_X Ozone Season source and each CAIR NO_X Ozone Season unit shall meet the requirements of the CAIR NO_X Ozone Season Trading Program.

2) Any provision of the CAIR NO_X Ozone Season Trading Program that applies to a CAIR NO_X Ozone Season source or the CAIR designated representative of a CAIR NO_X Ozone Season source shall also apply to the owners and operators of such source and of the CAIR NO_X Ozone Season units at the source.

3) Any provision of the CAIR NO_X Ozone Season Trading Program that applies to a CAIR NO_X Ozone Season unit or the CAIR designated representative of a CAIR NO_X Ozone Season unit shall also apply to the owners and operators of such unit.

g. Effect on other authorities. No provision of the CAIR NO_X Ozone Season Trading Program, a CAIR permit application, a CAIR permit, or an exemption under §97.305 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_X Ozone Season source or CAIR NO_X Ozone Season unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act

25. State Requirements:

Standard Requirements

In addition to the Federal requirements of 40 CFR Part 97, all units that meet the applicability requirements in 25 PA Code §145.203 shall meet any applicable requirement of 25 PA Code §§145.204, 145.205, 145.212, 145.213, 145.221, 145.222, and 145.223.

a. §145.204. Incorporation of Federal regulations by reference.

1) Except as otherwise specified in PA Code §145.204, the provisions of the CAIR NO_X Annual Trading Program, found in 40 CFR Part 96 (relating to NO_X budget trading program and CAIR NO_X and SO_2 trading programs for State implementation plans), including all appendices, future amendments and supplements thereto, are incorporated by reference.

2) Except as otherwise specified in PA Code §145.204, the provisions of the CAIR SO_2 Trading Program, found in 40 CFR Part 96, including all appendices, future amendments and supplements thereto, are incorporated by reference.

3) Except as otherwise specified in PA Code §145.204, the provisions of the CAIR NO_X Ozone

Season Trading Program, found in 40 CFR Part 96, including all appendices, future amendments and supplements thereto, are incorporated by reference.

4) In the event of a conflict between Federal regulatory provisions incorporated by reference in PA Code §145.204 and Pennsylvania regulatory provisions, the provision expressly set out in PA Code §145.204 shall be followed unless the Federal provision is more stringent. Federal regulations that are cited in PA Code §145.204 or that are cross-referenced in the Federal regulations incorporated by reference include any Pennsylvania modifications made to those Federal regulations.

b. §145.205. Emission reduction credit provisions.

1) The following conditions shall be satisfied in order for the PADEP to issue a permit or plan approval to the owner or operator of a unit not subject to PA Code §145.205 that is relying on emission reduction credits (ERCs) or creditable emission reductions in an applicability determination under Chapter 127, Subchapter E (relating to new source review), or is seeking to enter into an emissions trade authorized under Chapter 127 (relating to construction, modification, reactivation and operation of sources), if the ERCs or creditable emission reductions were, or will be, generated by a unit subject to PA Code §145.205.

a) Prior to issuing the permit or plan approval (Installation Permit), the PADEP will permanently reduce the Commonwealth's CAIR NO_X trading budget or CAIR NO_X Ozone Season trading budget, or both, as applicable, beginning with the sixth control period following the date the plan approval or permit to commence operations or increase emissions is issued. The PADEP will permanently reduce the applicable CAIR NO_X budgets by an amount of allowances equal to the ERCs or creditable emission reductions relied upon in the applicability determination for the non-CAIR unit subject to Chapter 127, Subchapter E or in the amount equal to the emissions trade authorized under Chapter 127, as if these emissions had already been emitted.

b) The permit or plan approval (Installation Permit) must prohibit the owner or operator from commencing operation or increasing emissions until the owner or operator of the CAIR unit generating the ERC or creditable emission reduction surrenders to the Department an amount of allowances equal to the ERCs or emission reduction credits relied upon in the applicability determination for the non-CAIR unit under Chapter 127, Subchapter E or the amount equal to the ERC trade authorized under Chapter 127, for each of the five consecutive control periods following the date the non-CAIR unit commences operation or increases emissions. The allowances surrendered must be of present or past vintage years.

c. §145.212. CAIR NOx allowance allocations.

1) *Provisions not incorporated by reference*. The requirements of 40 CFR 96.142 (relating to CAIR NO_X allowance allocations) are not incorporated by reference. Instead of 40 CFR 96.142, the requirements set forth in PA Code §145.212 apply.

2) *Baseline heat input*. Baseline heat input for each CAIR NO_X unit will be converted as follows:

a) A unit's control period heat input and a unit's status as coal-fired or oil-fired for a calendar year under Condition IV.25.c.2) will be determined in one of the following two ways:

i) In accordance with 40 CFR Part 75 (relating to continuous emission monitoring), to the extent that the unit was otherwise subject to 40 CFR Part 75 for the year.

ii) Based on the best available data reported to the Department for the unit, to the extent the unit was not otherwise subject to the requirements of 40 CFR Part 75 for the year.

b) Except as provided in Conditions IV.25.c.2)b)iv) below and IV.25.c.2)b)v) below, a unit's converted control period heat input for a calendar year shall be determined as follows:

i) The control period gross electrical output of the generators served by the unit multiplied by 7,900 Btu/kWh if the unit is coal-fired for the year, and divided by

1,000,000 Btu/mmBtu.

ii) The control period gross electrical output of the generators served by the unit multiplied by 6,675 Btu/kWh if the unit is not coal-fired for the year, and divided by 1,000,000 Btu/mmBtu.

iii) If a generator is served by two or more units, the gross electrical output of the generator will be attributed to each unit in proportion to the share of the total control period heat input from each of the units for the year.

iv) For a unit that is a boiler and has equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy, the total heat energy (in Btus) of the steam produced by the boiler during the annual control period, divided by 0.8 and by 1,000,000 Btu/mmBtu.

v) For a unit that is a combustion turbine and has equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy, the annual control period gross electrical output of the enclosed device comprising the compressor, combustor and turbine multiplied by 3,413 Btu/kWh, plus the total heat energy (in Btu) of the steam produced by any associated heat recovery steam generator during the annual control period divided by 0.8, and with the sum divided by 1,000,000 Btu/mmBtu.

vi) Calculations will be based on the best output data available on or before January 31 of the year the allocations are published. If unit level electrical or steam output data are not available from EIA, or submitted by this date by the owner or operator of the CAIR NOx unit, then heat input data for the period multiplied by 0.25 and converted to MWh will be used to determine total output.

3) *Existing unit, new unit and* §145.212*(f)(1) qualifying resource allocation baseline*. For each control period beginning with January 1, 2010, and each year thereafter, the PADEP will allocate to qualifying resources and CAIR NO_X units, including CAIR NO_X units issued allowances under Condition IV.25.e below , a total amount of CAIR NO_X allowances equal to the number of CAIR NO_X allowances remaining in the Commonwealth's CAIR NO_X trading budget under 40 CFR 96.140 (relating to State trading budgets) for those control periods using summed baseline heat input data as determined under Condition IV.25.c.2) above and §145.212*(f)(1)* from a baseline year that is 6 calendar years before the control period.

4) *Proration of allowance allocations*. The PADEP will allocate CAIR NO_X allowances to each existing CAIR NO_X unit and qualifying resource in an amount determined by multiplying the amount of CAIR NO_X allowances in the Commonwealth's CAIR NO_X trading budget available for allocation under Condition IV.25.c.3) above by the ratio of the baseline heat input of the existing CAIR NO_X unit or qualifying resource to the sum of the baseline heat input of existing CAIR NO_X units and of the qualifying resources, rounding to the nearest whole allowance as appropriate.

5) *Allocations to new CAIR NO_X units*. By March 31, 2011, and March 31 each year thereafter, the PADEP will allocate CAIR NO_X allowances under §145.211(c) (relating to timing requirements for CAIR NO_X allowance allocations) to CAIR NO_X units equal to the previous year's emissions at each unit, unless the unit has been issued allowances of the previous year's vintage in a regular allocation under §145.211(b). The PADEP will allocate CAIR NO_X allowances under §145.212 of a vintage year that is 5 years later than the year in which the emissions were generated. The number of CAIR NO_X allowances allocated may not exceed the actual emission of the year preceding the year in which the PADEP makes the allocation. The allocation of these allowances to the new unit will not reduce the number of allowances the unit is entitled to receive under another provision of §145.212.

6) *Allocations to qualifying resources and units exempted by section 405(g)(6)(a) of the Clean Air Act*. For each control period beginning with 2010 and thereafter, the PADEP will allocate

CAIR NO_X allowances to qualifying resources under § 145.212(1) in this Commonwealth that are not also allocated CAIR NO_X allowances under another provision of §145.212 and to existing units under Condition IV.25.c.2) above that were exempted at any time under section 405(g)(6)(a) of the Clean Air Act (42 U.S.C.A. §7651d(g)(6)(A)), regarding phase II SO_2 requirements, and that commenced operation prior to January 1, 2000, but did not receive an allocation of SO_2 allowances under the EPA's Acid Rain Program, as follows:

a) The PADEP will allocate CAIR NO_X allowances to a renewable energy qualifying resource or demand side management energy efficiency qualifying resource in accordance with Conditions IV.25.c.6)c) below and IV.25.c.6)d) below upon receipt by the PADEP of an application, in writing, on or before June 30 of the year following the control period, except for vintage year 2011 and 2012 NO_X allowance allocations whose application deadline will be prescribed by the PADEP, meeting the requirements of Condition IV.25.c.6) above. The number of allowances allocated to the qualifying resource will be determined by converting the certified quantity of electric energy production, useful thermal energy, and energy equivalent value of the measures approved under the Pennsylvania Alternative Energy Portfolio Standard to equivalent thermal energy. Equivalent thermal energy is a unit's baseline heat input for allocation purposes. The conversion rate for converting electrical energy to equivalent thermal energy is 3,413 Btu/kWh. To receive allowances under §145.212, the qualifying resource must have commenced operation after January 1, 2005, must be located in this Commonwealth and may not be a CAIR NO_X unit. The following procedures apply:
   i) The owner of a qualifying renewable energy resource shall appoint a CAIR-authorized account representative and file a certificate of representation with the EPA and the PADEP.
   ii) The PADEP will transfer the allowances into an account designated by the owner's CAIR-authorized account representative of the qualifying resource, or into an account designated by an aggregator approved by the Pennsylvania Public Utility Commission or its designee.
   iii) The applicant shall provide the PADEP with the corresponding renewable energy certificate serial numbers.
   iv) At least one whole allowance must be generated per owner, operator or aggregator for an allowance to be issued.

b) The PADEP will allocate CAIR NO_X allowances to the owner or operator of a CAIR SO_2 unit that commenced operation prior to January 1, 2000, that has not received an SO_2 allocation for that compliance period, as follows:
   i) By January 31, 2011, and each year thereafter, the owner or operator of a unit may apply, in writing, to the PADEP under §145.212 to receive extra CAIR NO_X allowances.
   ii) The owner or operator may request under Condition IV.25.c.6)b) above one CAIR NO_X allowance for every 8 tons of SO_2 emitted from a qualifying unit during the preceding control period. An owner or operator of a unit covered under Condition IV.25.c.6)b) above that has opted into the Acid Rain Program may request one CAIR NO_X allowance for every 8 tons of SO_2 emissions that have not been covered by the SO_2 allowances received as a result of opting into the Acid Rain Program.
   iii) If the original CAIR NO_X allowance allocation for the unit for the control period exceeded the unit's actual emissions of NO_X for the control period, the owner or operator shall also deduct the excess CAIR NO_X allowances from the unit's request under Condition IV.25.c.6)b)ii) above. This amount is the unit's adjusted allocation and will be allocated unless the proration described in Condition IV.25.c.6)b)iv) below applies.

iv) The PADEP will make any necessary corrections and then sum the requests. If the total number of NO_X allowances requested by all qualified units under Condition IV.25.c.6)b) above, as adjusted by Condition IV.25.c.6)b)iii) above, is less than 1.3% of the Commonwealth's CAIR NO_X Trading Budget, the PADEP will allocate the corrected amounts. If the total number of NO_X allowances requested by all qualified units under Condition IV.25.c.6)b) above exceeds 1.3% of the Commonwealth's CAIR NO_X Trading Budget, the PADEP will prorate the allocations based upon the following equation:

$$\mathbf{A_A = [E_A \ X \ (0.013 \ X \ B_{NA})] \ / \ T_{RA}}$$

where,

A_A is the unit's prorated allocation,

E_A is the adjusted allocation the unit may request under IV.25.c.6)b)iii) above,

B_{NA} is the total number of CAIR NO_X allowances in the Commonwealth's CAIR NO_X trading budget,

T_{RA} is the total number of CAIR NO_X allowances requested by all units requesting allowances under Condition IV.25.c.6)b) above.

c) The PADEP will review each CAIR NO_X allowance allocation request under §145.212 and will allocate CAIR NO_X allowances for each control period under a request as follows:
   i) The PADEP will accept an allowance allocation request only if the request meets, or is adjusted by the PADEP as necessary to meet, the requirements of PA Code §145.212.
   ii) On or after January 1 of the year of allocation, the PADEP will determine the sum of the CAIR NO_X allowances requested.

d) Up to 1.3% of the Commonwealth's CAIR NO_X trading budget is available for allocation in each allocation cycle from 2011-2016 to allocate 2010-2015 allowances for the purpose of offsetting SO_2 emissions from units described in Condition IV.25.c.6)b) above. Beginning January 1, 2017, and for each allocation cycle thereafter, the units will no longer be allocated CAIR NO_X allowances under Condition IV.25.c.6)b) above. Any allowances remaining after this allocation will be allocated to units under Condition IV.25.c.6)c) above during the next allocation cycle.

e) Notwithstanding the provisions of Conditions IV.25.c.6)b) above, IV.25.c.6)c) above and IV.25.c.6)d) above, the PADEP may extend, terminate or otherwise modify the allocation of NO_X allowances made available under §145.212 for units exempted under section 405(g)(6)(a) of the Clean Air Act after providing notice in the *Pennsylvania Bulletin* and at least a 30-day public comment period.

7) The PADEP will correct any errors in allocations made by the PADEP and discovered after final allocations are made but before the next allocation cycle, in the subsequent allocation cycle using future allowances that have not yet been allocated.

d. Section §145.213 Supplemental monitoring, recordkeeping and reporting requirements for gross electrical output and useful thermal energy for units subject to 40 CFR 96.170--96.175.

1) By January 1, 2009, or by the date of commencing commercial operation, whichever is later, the owner or operator of the CAIR NO_X unit shall install, calibrate, maintain and operate a wattmeter, measure gross electrical output in megawatt-hours on a continuous basis and record the output of the wattmeter. If a generator is served by two or more units, the information to determine the heat input of each unit for that control period shall also be recorded, so as to allow each unit's share of the gross electrical output to be determined. If heat input data are used, the owner or operator shall comply with the applicable provisions of 40 CFR Part 75 (relating to continuous emission monitoring).
2) By September 1, 2008, for a CAIR NO_X unit that is a cogeneration unit, and for a CAIR NO_X unit with cogeneration capabilities, the owner or operator shall install, calibrate, maintain and operate meters for steam flow in lbs/hr, temperature in degrees Fahrenheit, and pressure in PSI, to measure and record the useful thermal energy that is produced, in mmBtu/hr, on a continuous basis. The owner or operator of a CAIR NO_X unit that produces useful thermal energy but uses an energy transfer medium other than steam, such as hot water or glycol, shall install, calibrate, maintain and operate the necessary meters to measure and record the data necessary to express the useful thermal energy produced, in mmBtu/hr, on a continuous basis. If the unit ceases to produce useful thermal energy, the owner or operator may cease operation of the meters, but operation of the meters shall be resumed if the unit resumes production of useful thermal energy.
3) Beginning with 2009, the designated representative of the unit shall submit to the PADEP an annual report showing monthly gross electrical output and monthly useful thermal energy from the unit. The report is due by January 31 for the preceding calendar year.
4) Beginning with 2011, the designated representative of the unit shall submit to the Department an annual report showing monthly gross electrical output and monthly useful thermal energy from the unit. The report is due by January 31 for the preceding calendar year. (§2103.12.k)
5) The owner or operator of a CAIR NO_X unit shall maintain onsite the monitoring plan detailing the monitoring system and maintenance of the monitoring system, including quality assurance activities. The owner or operator of a CAIR NO_X unit shall retain the monitoring plan for at least 5 years from the date that it is replaced by a new or revised monitoring plan. The owner or operator of a CAIR NO_X unit shall provide the PADEP with a written copy of the monitoring plan by January 1, 2009, and thereafter within 3 calendar months of making updates to the plan. The owner or operator of a CAIR NO_X unit shall provide the Department with a written copy of the monitoring plan required by Condition IV.25.d.5) above by January 1, 2011 and thereafter within 3 calendar months of making updates to the plan. (§2103.12.k)
6) The owner or operator of a CAIR NO_X unit shall retain records for at least 5 years from the date the record is created or the data collected as required by Conditions IV.25.d.1) and IV.25.d.2) above, and the reports submitted to the PADEP and the EPA in accordance with Conditions IV.25.d.3) and IV.25.d.5).

e. § 145.222. CAIR NOx Ozone Season allowance allocations.

1) *Provisions not incorporated by reference*. The requirements of 40 CFR 96.342 (relating to CAIR NO_X Ozone Season allowance allocations) are not incorporated by reference. Instead of 40 CFR 96.342, the requirements in §145.222 apply.
2) *Baseline heat input*. Baseline heat input for each CAIR NO_X Ozone Season unit will be converted as follows:
   a) A unit's control period heat input and a unit's status as coal-fired or oil-fired for the ozone season portion of a calendar year under Condition IV.25.e.2) above will be determined in one of the following two ways:
      i) In accordance with 40 CFR Part 75 (relating to continuous emission monitoring), to

the extent that the unit was otherwise subject to the requirements of 40 CFR Part 75 for the control period.

ii) Based on the best available data reported to PADEP for the unit, to the extent the unit was not otherwise subject to the requirements of 40 CFR Part 75 for the year.

b) Except as provided in Conditions IV.25.e.2)b)iv) below and IV.25.e.2)b)v) below, a unit's converted control period heat input for the ozone season portion of a calendar year shall be determined as follows:

i) The control period gross electrical output of the generators served by the unit multiplied by 7,900 Btu/kWh if the unit is coal-fired for the ozone season control period, and divided by 1,000,000 Btu/mmBtu.

ii) The control period gross electrical output of the generators served by the unit multiplied by 6,675 Btu/kWh if the unit is not coal-fired for the ozone season control period, and divided by 1,000,000 Btu/mmBtu.

iii) If a generator is served by 2 or more units, the gross electrical output of the generator will be attributed to each unit in proportion to the share of the total control period heat input from each of the units for the ozone season control period.

iv) For a unit that is a boiler and has equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy, the total heat energy (in Btus) of the steam produced by the boiler during the ozone season control period, divided by 0.8 and by 1,000,000 Btu/mmBtu.

v) For a unit that is a combustion turbine and has equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy, the control period gross electrical output of the enclosed device comprising the compressor, combustor and turbine multiplied by 3,413 Btu/kWh, plus the total heat energy (in Btu) of the steam produced by any associated heat recovery steam generator during the ozone season control period divided by 0.8, and with the sum divided by 1,000,000 Btu/mmBtu.

vi) Calculations will be based on the best output data available on or before January 31 of the year the allocations are published. If unit level electrical or steam output data are not available from EIA, or submitted by this date by the owner or operator of the CAIR NO_X Ozone Season unit, then heat input data for the period multiplied by 0.25 and converted to MWh will be used to determine total output.

c) *Existing unit, new unit and* §145.212*(f)(1) qualifying resource allocation baseline*. For each control period beginning with the 2010 control period and thereafter, the PADEP will allocate to qualifying resources and CAIR NO_X Ozone Season units, including CAIR NO_X Ozone Season units issued allowances under Condition IV.25.e.2)e) below, a total amount of CAIR NO_X Ozone Season allowances equal to the number of CAIR NO_X Ozone Season allowances remaining in the Commonwealth's CAIR NO_X Ozone Season trading budget under 40 CFR 96.140 (relating to State trading budgets) for those control periods using summed baseline heat input data as determined under Conditions IV.25.e.2)b) above and IV.25.e.2)f)i) below from an ozone season control period in a baseline year that is 6 calendar years before the control period.

d) *Proration of allowance allocations*. The PADEP will allocate CAIR NO_X Ozone Season allowances to each existing CAIR NO_X Ozone Season unit and qualifying resource in an amount determined by multiplying the amount of CAIR NO_X Ozone Season allowances in the Commonwealth's CAIR NO_X Ozone Season trading budget available for allocation under Condition IV.25.e.2)c) above by the ratio of the baseline heat input of the existing CAIR NO_X Ozone Season unit or qualifying resource to the sums of the baseline heat input of existing CAIR NO_X Ozone Season units and of the qualifying resources, rounding to the

nearest whole allowance as appropriate.

e) *Allocations to new CAIR NO_X Ozone Season units*. By March 31, 2011, and March 31 each year thereafter, the PADEP will allocate CAIR NO_X Ozone Season allowances under §145.221(c) (relating to timing requirements for CAIR NO_X Ozone Season allowance allocations) to CAIR NO_X Ozone Season units equal to the previous year's emissions at each unit, unless the unit has been issued allowances of the previous year's vintage in a regular allocation under §145.221(b). The PADEP will allocate CAIR NO_X allowances under §145.222 of a vintage year that is 5 years later than the year in which the emissions were generated. The number of CAIR NO_X Ozone Season allowances allocated shall not exceed the actual emission of the year preceding the year in which the PADEP makes the allocation. The allocation of these allowances to the new unit will not reduce the number of allowances the unit is entitled to receive under another provision of §145.222.

f) *Allocations to qualifying resources*. For each control period beginning with the 2010 control period, and thereafter, the PADEP will allocate CAIR NO_X Ozone Season allowances to qualifying resources in this Commonwealth that are not also allocated CAIR NO_X Ozone Season allowances under another provision of §145.222, as follows:

i) The PADEP will allocate CAIR NO_X Ozone Season allowances to a renewable energy qualifying resource or demand side management energy efficiency qualifying resource in accordance with Conditions IV.25.e.2)c) above and IV.25.e.2)d) above upon receipt by the PADEP of an application, in writing, on or before June 30 of the year following the control period, except for vintage year 2011 and 2012 NO_X Ozone Season allowance allocations whose application deadline will be prescribed by the PADEP, meeting the requirements of this condition. The number of allowances allocated to the qualifying resource will be determined by converting the certified quantity of electric energy production, useful thermal energy, and energy equivalent value of the measures approved under the Pennsylvania Alternative Energy Portfolio Standard to equivalent thermal energy. Equivalent thermal energy is a unit's baseline heat input for allocation purposes. The conversion rate for converting electrical energy to equivalent thermal energy is 3,413 Btu/kWh. To receive allowances under §145.222, the qualifying resource must have commenced operation after January 1, 2005, must be located in this Commonwealth and may not be a CAIR NO_X Ozone Season unit. The following procedures apply:

(1) The owner of a qualifying renewable energy resource shall appoint a CAIR-authorized account representative and file a certificate of representation with the EPA and the PADEP.

(2) The PADEP will transfer the allowances into an account designated by the owner's CAIR-authorized account representative of the qualifying resource, or into an account designated by an aggregator approved by the Pennsylvania Public Utility Commission or its designee.

(3) The applicant shall provide the PADEP with the corresponding renewable energy certificate serial numbers.

(4) At least one whole allowance must be generated per owner, operator or aggregator for an allowance to be issued.

g) The PADEP will correct any errors in allocations made by the PADEP and discovered after final allocations are made but before the next allocation cycle, in the subsequent allocation cycle using future allowances that have not yet been allocated.

f. §145.223. Supplemental monitoring, recordkeeping and reporting requirements for gross electrical output and useful thermal energy for units subject to 40 CFR 96.370--96.375.

1) By January 1, 2009, or by the date of commencing commercial operation, whichever is later,

the owner or operator of the CAIR NO_X Ozone Season unit shall install, calibrate, maintain and operate a wattmeter, measure gross electrical output in megawatt-hours on a continuous basis and record the output of the wattmeter. If a generator is served by two or more units, the information to determine the heat input of each unit for that control period shall also be recorded, so as to allow each unit's share of the gross electrical output to be determined. If heat input data are used, the owner or operator shall comply with the applicable provisions of 40 CFR Part 75 (relating to continuous emission monitoring).

2) By September 1, 2008, for a CAIR NO_X Ozone Season unit that is a cogeneration unit, and for a CAIR NO_X Ozone Season unit with cogeneration capabilities, the owner or operator shall install, calibrate, maintain and operate meters for steam flow in lbs/hr, temperature in degrees Fahrenheit and pressure in PSI, to measure and record the useful thermal energy that is produced, in mmBtu/hr, on a continuous basis. The owner or operator of a CAIR NO_X Ozone Season unit that produces useful thermal energy but uses an energy transfer medium other than steam, such as hot water or glycol, shall install, calibrate, maintain and operate the necessary meters to measure and record the data necessary to express the useful thermal energy produced, in mmBtu/hr, on a continuous basis. If the unit ceases to produce useful thermal energy, the owner or operator may cease operation of the meters, but operation of the meters shall be resumed if the unit resumes production of useful thermal energy.
3) Beginning with 2009, the designated representative of the unit shall submit to the PADEP an annual report showing monthly gross electrical output and monthly useful thermal energy from the unit. The report is due by January 31 for the preceding calendar year.
4) The owner or operator of a CAIR NO_X Ozone Season unit shall maintain onsite the monitoring plan detailing the monitoring system and maintenance of the monitoring system, including quality assurance activities. The owner or operator of a CAIR NO_X Ozone Season unit shall retain the monitoring plan for at least 5 years from the date that it is replaced by a new or revised monitoring plan. The owner or operator of a CAIR NO_X Ozone Season unit shall provide the PADEP with a written copy of the monitoring plan by January 1, 2009, and thereafter within 3 calendar months of making updates to the plan.
5) The owner or operator of a CAIR NO_X Ozone Season unit shall provide the PADEP with a written copy of the monitoring plan required by Condition IV.25.f.4) above by January 1, 2011 and thereafter within 3 calendar months of making updates to the plan. (§2103.12.k)
6) The owner or operator of a CAIR NO_X Ozone Season unit shall retain records for at least 5 years from the date the record is created or the data collected as required by Conditions IV.25.f.1) above and IV.25.f.2) above, and the reports submitted to the PADEP and the EPA in accordance with Conditions IV.25.f.3) above and IV.25.f.4) above.

26. New Source Performance Standards (§2105.05)

a. It shall be a violation of this permit giving rise to the remedies provided by §2109.02 of Article XXI for any person to operate, or allow to be operated, any source in a manner that does not comply with all requirements of any applicable NSPS now or hereafter established by the EPA, except if such person has obtained from EPA a waiver pursuant to Section 111 or Section 129 of the Clean Air Act or is otherwise lawfully temporarily relieved of the duty to comply with such requirements.

b. Any person who operates, or allows to be operated, any source subject to any NSPS shall conduct, or cause to be conducted, such tests, measurements, monitoring and the like as is required by such standard. All notices, reports, test results and the like as are required by such standard shall be submitted to the Department in the manner and time specified by such standard. All information, data and the like which is required to be maintained by such standard shall be made available to the Department upon request for inspection and copying.

27. Greenhouse Gas Reporting (40 CFR Part 98)

If the facility emits 25,000 metric tons or more of carbon dioxide equivalent (CO_2e) in any 12-month period, the facility shall submit reports to the US EPA in accordance with 40 CFR Part 98.

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

A. Process P001: Two 424 MMBtu/hr Simple Cycle Combustion Turbines

Process Description: Two General Electric LM 6000-PC combustion turbines
Facility ID: AE-1 (Unit 1), AE-2 (Unit 2)
Max. Design Rate: 424 MMBtu/hr/48 MWe (each unit)
Raw Materials: Natural Gas; No. 2 Fuel Oil
Control Device: Water Injection
CEM/Fuel Flow Meter: NO_X/SO_2

1. Restrictions:

a. Only pipeline quality natural gas or low sulfur (0.0015% sulfur by weight) No. 2 fuel oil may be combusted in Unit 1 and Unit 2. [§210312.a.2.D; 2102.06.b.1; 2102.07.a; §2104.10.a; IP 0580-I005, V.A.1.a]

b. Emissions from Units 1 and 2 shall not exceed the following limitations in pounds per hour while operating using natural gas as fuel, except during startup, shutdown, tuning, and NERC reliability testing, where the permittee will meet the limits in condition V.A.1.d below: [§210312.a.2.D; 2102.06.b.1; 2102.07.a; IP 0580-I005, V.A.1.b; §129.114]

TABLE V-A-1: Unit 1 and Unit 2 Emission Limitations

POLLUTANT	Natural Gas Combustion Emissions (lb/hr – each unit)
Particulate Matter (PM_{10})	6.6
Sulfur oxides (SO_X)	0.3
Nitrogen oxides (NO_X)	41.0
Carbon monoxide (CO)	57.0
Volatile organic compounds (VOC)	5.0
Formaldehyde	1.4

c. Emissions from Units 1 and 2 shall not exceed the following limitations in pounds per hour while operating using No. 2 fuel oil as fuel, except during startup, shutdown, tuning, and NERC reliability testing, where the permittee will meet the limits in condition V.A.1.d below: [§210312.a.2.D; §2103.12.a.2.D; 2102.06.b.1; 2102.07.a; IP 0580-I005, V.A.1.c; §129.114]

TABLE V-A-2: Unit 1 and Unit 2 Emission Limitations

POLLUTANT	#2 Fuel Oil Combustion Emissions (lb/hr – each unit)
Particulate Matter (PM_{10})	17.0

POLLUTANT	#2 Fuel Oil Combustion Emissions (lb/hr – each unit)
Sulfur oxides (SO_X)	22.5
Nitrogen oxides (NO_X)	71.0
Carbon monoxide (CO)	6.0
Volatile organic compounds (VOC)	1.0

d. Compliance with the NO_X limits in conditions V.A.1.b and V.A.1.c above shall be based on a 4-hour averaging period during periods of normal operation. [§210312.a.2.D; 2102.06.b.1; 2102.07.a; §60.332(j)(iii); IP 0580-I005, V.A.1.d; §129.114]

e. The following conditions shall apply during startup, shutdown, tuning, blackstart testing and NERC reliability testing:

1) To the extent practicable, maintain and operate the turbines and associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [§60.11(d); §210312.a.2.D; §2102.04.e; IP 0580-I005, V.A.1.e; §129.114]]
2) A startup is defined as the period of time from when fuel combustion commences in the unit until normal steady-state conditions are reached. [§210312.a.2.D; §2102.04.e; IP 0580-I005, V.A.1.e; §129.114]
3) Shutdown is defined as the period of time from the initial lowering of turbine output, with the intention to shutdown, until the time at which the combustion is completely stopped. [§210312.a.2.D; §2102.04.e; IP 0580-I005, V.A.1.e; §129.114]
4) The duration of each startup or shutdown shall not exceed thirty (30) minutes. [§210312.a.2.D; §2102.04.e; IP 0580-I005; §129.114]
5) To the extent practicable, minimize periods of tuning, blackstart testing and NERC reliability testing. [§210312.a.2.D; §2102.04.e; IP 0580-I005, V.A.1.e; §129.114]

f. The annual emissions, expressed in units of (tons/year) and evaluated on a 12-month running total, shall include all periods of operation including startup, shutdown, tuning and NERC reliability testing. [§210312.a.2.D; IP 0580-I005, V.A.1.f; §129.114]

TABLE V-A-3: Unit 1 and Unit 2 Emission Limitations

POLLUTANT	Combined Annual Emissions Units 1 & 2 (tons/yr)[1]
Particulate Matter (PM_{10})	17.0
Sulfur oxides (SO_X)	6.0
Nitrogen oxides (NO_X)	98.0

POLLUTANT	Combined Annual Emissions Units 1 & 2 (tons/yr)[1]
Carbon monoxide (CO)	115.0
Volatile organic compounds (VOC)	10.0
Formaldehyde	3.3

[1] A year is defined as any consecutive 12-month period.

g. The permittee shall not cause to be discharged into the atmosphere from Units 1 or 2, any gases which contain nitrogen oxides in excess of the result provided by the following equation: [§60.332(a)(1); §60.332(b); §210312.a.2.D; IP 0580-I005, V.A.1.g; §129.114]

$$STD = 0.0075\frac{(14.4)}{Y} + F$$

Where:

STD = allowable ISO corrected (if required as given in § 60.335(b)(1)) NO_X emission concentration (percent by volume at 15 percent oxygen and on a dry basis),

Y = manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and

F = NO_X emission allowance for fuel-bound nitrogen as defined in §60.332(a)(4).

h. The permittee is exempt from the requirements of Condition V.A.1.g above when ice fog is deemed a traffic hazard by the owner or operator. [§210312.a.2.D; IP 0580-I005, V.A.1.h; §60.332(f)]

i. Exemptions from the requirements of Condition V.A.1.g above will be granted on a case-by-case basis as determined by the Department where mandatory water restrictions are required because of drought conditions. These exemptions will be allowed only while the mandatory water restrictions are in effect. [§210312.a.2.D; IP 0580-I005, V.A.1.i; §60.332(i)]

j. The permittee shall comply with one or the other of the following conditions:

1) The permittee shall not cause to be discharged into the atmosphere from any stationary gas turbine any gases containing sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis. [IP 0580-I005, V.A.1.j; §60.333(a)]
2) The permittee shall not burn in Units 1 and 2 any fuel containing total sulfur in excess of 0.8 percent by weight. [§210312.a.2.D; IP 0580-I005, V.A.1.j; §60.333(b)]

2. Testing Requirements:

a. Combustion turbines shall be tested for nitrogen oxide emissions to determine the proper water to fuel ratio necessary to comply with nitrogen oxide emission limit at the following load conditions: [40 CFR Part 60 Subpart GG §60.335(b)(2); IP 0580-I005, V.A.2.a]

1) 48MW(100%);
2) 36MW(75%);
3) 24MW(50%);
4) 14MW(30%) or;

5) At four points in the normal operating range of the gas turbine including the minimum point in the range and peak load.

b. All loads should be corrected to International Organization for Standardization (ISO) conditions using the appropriate equations supplied by the manufacturer. [§210312.a.2.D; §2103.12.h.1; IP 0580-I005, V.A.2.b]

c. Emissions testing shall be performed for NO_X and CO emissions on each of the turbines every two years in accordance with Article XXI §2108.02.e. The NO_X emission testing requirements may be satisfied by the NO_X relative accuracy testing for CEMS systems conducted in accordance with the requirements of 40 CFR Part 75 and Condition V.A.2.h.6) below. [§2103.12.h.1; IP 0580-I005, V.A.2.c]

d. The Department may approve the use of properly operated, maintained and calibrated continuous emissions monitoring in lieu of stack testing for nitrogen oxides as required by Conditions V.A.2.a above and V.A.2.c above. [§2103.12.i; §2103.12.h.1; §2108.02; §2108.03; IP 0580-I005, V.A.2.d; §129.115]

e. In order to demonstrate compliance with the CO emissions limitations in Conditions V.A.1.b, 1.c, and 1.f above, testing shall be performed while combusting each fuel (natural gas and No. 2 fuel oil) separately. [§2103.12.h.1; IP 0580-I005, V.A.2.e; §129.115]

f. Emissions testing shall be performed for CO emissions on each of the turbines every two years in accordance with Article XXI §2108.02.e. and by using U.S. EPA Method 10. [§210312.a.2.D; §2103.12.h.1; IP 0580-I005, V.A.2.f; §129.115]

g. Except as provided in condition V.A.2.d above for NO_X, the Permittee shall conduct the performance tests required by §60.8, using the Methods and procedures of §60.335(a). [§60.335(a); IP 0580-I005, V.A.2.g; §129.115]

h. Except as provided in condition V.A.2.d above for NO_X, the Permittee shall determine compliance with the applicable nitrogen oxides limitation in Condition V.A.1.g above and shall meet the performance test requirements of §60.8 as follows: [IP 0580-I005, V.A.2.h; §129.115]

1) For each run of the performance test, the mean nitrogen oxides emission concentration (NO_{Xo}) corrected to 15 percent O_2 shall be corrected to ISO standard conditions using the following equation: [IP 0580-I005; §60.335(b)(1)]

$$\mathbf{NO_X = (NO_{Xo})(P_r/P_o)^{0.5} e^{19(Ho-0.00633)} (288°K/T_a)^{1.53}}$$

Where:
NO_X = emission concentration of NO_X at 15 percent O_2 and ISO standard ambient conditions, ppm by volume, dry basis;
NO_{Xo} = observed NO_x concentration ppm by volume, dry basis, at 15 percent O_2;
P_r = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg;
P_o = observed combustor inlet absolute pressure at test, mm Hg;
H_o = observed humidity of ambient air, g H_2O/g air;
e = transcendental constant, 2.718; and
T_a = ambient temperature, °K

Notwithstanding this requirement, use of the ISO correction equation is optional for Units 1 and 2.

2) Except as provided in Condition V.A.2.h.6) below, the 3-run performance test required by §60.8 and Condition V.A.2.c above must be performed within ± 5 percent at 30, 50, 75, and 90- to-100 percent of peak load or at four evenly-spaced load points in the normal operating range of the gas turbine, including the minimum point in the operating range and 90-to-100 percent of peak load, or at the highest achievable load point if 90-to-100 percent of peak load cannot be physically achieved in practice. If the turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel. [§60.335(b)(2); §60.335(b)(7); §2108.02; IP 0580-I005; §129.115;]

3) The water injection system monitoring system must be operated concurrently with each EPA Method 20, ASTM D6522–00, or EPA Method 7E run. Data shall be recorded continuously during the emissions testing. In the event that the permittee chooses to monitor steam or water to fuel ratio in order to comply with the emission limit specified in §60.332, then the test runs shall also be used to determine fuel consumption and the steam or water to fuel injection ratio necessary to comply with §60.332. [§60.335(a)(6)(b)(4); §2108.02; IP 0580-I005; §129.115]

4) If the owner operator elects to claim an emission allowance for fuel bound nitrogen as described in §60.332, then concurrently with each reference method run, a representative sample of the fuel used shall be collected and analyzed, following the applicable procedures described in §60.335(b)(9). These data shall be used to determine the maximum fuel nitrogen content for which the established water (or steam) to fuel ratio will be valid. [§60.335(b)(5); IP 0580-I005; §129.115]

5) The performance evaluation of the CEMS may either be conducted separately (as described in Condition V.A.2.h.6) below or as part of the initial performance test of each unit. [§60.335(b)(6); IP 0580-I005; §129.115]

6) The performance test required under §60.8 and this permit may be done in the following alternative manner [§60.335(b)(7); IP 0580-I005; §129.115]:
   a) Perform a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load.
   b) Use the test data both to demonstrate compliance with the applicable NO_X emission limit under §60.332 and to provide the required reference method data for the RATA of the CEMS described under §60.334(b).
   c) The requirement to test at three additional load levels is waived.

7) When combusting fuel oil during a performance test, a minimum of three fuel samples shall be collected. The samples shall be analyzed for the total sulfur content of the fuel using the methods provided by §60.335(b)(10)(i) and (ii). [§60.335(b)(10) IP 0580-I005; §129.115]

8) The fuel analysis required under V.A.2.h.7) above may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency. [§60.335(b)(11); IP 0580-I005; §129.115]

i. If particulate matter testing is required or requested, the following USEPA Test Methods shall be performed: filterable emissions from stationary sources should be determined by the Methods 5

through 5F inclusive and Method 17 United States Environmental Protection Agency, 40 CFR 60 Appendix A. PM_{10} emissions from stationary sources should be determined by Method 20 or Method 201A United States Environmental Protection Agency, 40 CFR 51 Appendix M. [§210312.a.2.D; IP 0580-I005, V.A.2.i; §129.115]

j. The Department reserves the right to require additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1; IP 0580-I005, V.A.2.j]

3. Monitoring Requirements:

a. Except as provided in Condition V.A.3.c below, the permittee shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Department. [§60.334(a); IP 0580-I005, V.A.3.a; §129.115]

b. The permittee shall monitor and record lower heating value, and sulfur and nitrogen content of each fuel being fired. In lieu of analysis by an independent laboratory, certification by the fuel supplier shall be sufficient for this provision. [§2104.10(a); §2103.12.i.1; §60.333(a); IP 0580-I005, V.A.3.b; §129.115]

1) Sulfur content of the No. 2 fuel oil shall be measured and shall not exceed 0.0015% by weight.
2) Nitrogen content of the No. 2 fuel oil shall be measured.
3) Ash content of the No. 2 fuel oil shall be measured and shall not exceed 0.01%. by weight.

c. The permittee may as an alternative to operating the continuous monitoring system described in Condition V.A.3.a above, install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NO_X and O_2 monitors. As an alternative, a CO_2 monitor may be used to adjust the measured NO_X concentrations to 15 percent O_2 by either converting the CO_2 hourly averages to equivalent O_2 concentrations using Equation F–14a or F–14b in appendix F to part 75 of this chapter and making the adjustments to 15 percent O_2, or by using the CO_2 readings directly to make the adjustments, as described in Method 20. If the option to use a CEMS is chosen, the CEMS shall be installed, certified, maintained and operated as follows: [60.334(b); IP 0580-I005, V.A.3.c; §129.115]

1) Each CEMS must be installed and certified according to PS 2 and 3 (for diluent) of 40 CFR part 60, appendix B, except the 7-day calibration drift is based on unit operating days, not calendar days. Appendix F, Procedure 1 is not required. The relative accuracy test audit (RATA) of the NO_X and diluent monitors may be performed individually or on a combined basis, *i.e.*, the relative accuracy tests of the CEMS may be performed either [§60.334(b)(1); IP 0580-I005; §129.115]:
   a) On a ppm basis (for NO_X) and a percent O_2 basis for oxygen; or
   b) On a ppm at 15 percent O_2 basis; or
   c) On a ppm basis (for NO_X) and a percent CO_2 basis (for a CO_2 monitor that uses the procedures in Method 20 to correct the NO_X data to 15 percent O_2).
2) As specified in § 60.13(e)(2), during each full unit operating hour, each monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants)

are required to validate the hour. [§60.334(b)(2); IP 0580-I005; §129.115]

3) For purposes of identifying excess emissions, CEMS data must be reduced to hourly averages as specified in § 60.13(h). [§60.334(b)(3); IP 0580-I005; §129.115]
   a) For each unit operating hour in which a valid hourly average, as described in Condition V.A.3.c.2) above, is obtained for both NO_X and diluent, the data acquisition and handling system must calculate and record the hourly NO_X emissions in the units of the applicable NO_X emission standard under §60.332(a), *i.e.*, percent NO_X by volume, dry basis, corrected to 15 percent O_2 and International Organization for Standardization (ISO) standard conditions (if required as given in §60.335(b)(1)). For any hour in which the hourly average O_2 concentration exceeds 19.0 percent O_2, a diluent cap value of 19.0 percent O_2 may be used in the emission calculations. [§60.334(b)(3)(i); IP 0580-I005; §129.115]
   b) A worst-case ISO correction factor may be calculated and applied using historical ambient data. For the purpose of this calculation, substitute the maximum humidity of ambient air (H_o), minimum ambient temperature (Ta), and minimum combustor inlet absolute pressure (P_o) into the ISO correction equation. [§60.334(b)(3)(ii); IP 0580-I005; §129.115]
   c) If the owner or operator has installed a NO_X CEMS to meet the requirements of part 75 of this chapter, and is continuing to meet the ongoing requirements of part 75 of this chapter, the CEMS may be used to meet the monitoring requirements of Condition V.A.3 above except that the missing data substitution methodology provided for at 40 CFR part 75, subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in § 60.7(c). [§60.334(b)(3)(iii); IP 0580-I005; §129.115]
   d) The alternative monitoring proposal approved by the USEPA on September 11, 2002, may continue to be used. A copy of the EPA letter granting approval and the permittee's letter stating the alternate proposal shall be maintained at the facility. [IP 0580-I005; §60.334(c)]

d. The water to fuel ratio or other parameters that are continuously monitored as described in Condition V.A.3.a above shall be monitored during the performance test required under § 60.8 and this permit, to establish acceptable values and ranges. If the permittee chooses to monitor the water to fuel ratio in accordance with Condition V.A.3.a above, they may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. The permittee shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_X emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan. [§60.334(g); IP 0580-I005, V.A.3.d; §129.115]

e. The permittee shall monitor fuel as follows: [IP 0580-I005, V.A.3.e; §60.334(h)]:

1) The permittee shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in Condition V.A.3.e.3) below. The sulfur content of the fuel must be determined using total sulfur methods described in § 60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppm_w), ASTM D4084–82, 94, D5504– 01, D6228–98, or Gas Processors Association Standard 2377–86 (all of which are incorporated by reference-see § 60.17), which measure the major sulfur compounds may be used; and [§60.334(h)(1); §129.115]
2) The permittee shall monitor the nitrogen content of the fuel combusted in the turbine, if the

owner or operator claims an allowance for fuel bound nitrogen (*i.e.*, if an F-value greater than zero is being or will be used by the permittee to calculate STD in § 60.332). The nitrogen content of the fuel shall be determined using methods described in § 60.335(b)(9) or an approved alternative. [§60.334(h)(2); IP 0580-I005; §129.115]

3) Notwithstanding the provisions of Condition V.A.3.e.1) above, the permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in § 60.331(u), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring. The permittee shall use one of the following sources of information to make the required demonstration: [§60.334(h)(3); IP 0580-I005; §129.115]
   a) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or
   b) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.
4) For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the permittee may, without submitting a special petition to the Administrator, continue monitoring on this schedule. [§60.334(h)(4); IP 0580-I005; §129.115]

f. The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows [§60.334(i); IP 0580-I005, V.A.3.f; §129.115]:
   1) *Fuel oil.* For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of Chapter 40 (*i.e.*, flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). If an emission allowance is being claimed for fuel bound nitrogen, the nitrogen content of the oil shall be determined and recorded once per unit operating day.
   2) *Gaseous fuel.* If the permittee chooses to claim an allowance for fuel bound nitrogen, any applicable nitrogen content value of the gaseous fuel shall be determined and recorded once per unit operating day. For owners and operators that elect not to demonstrate sulfur content using options in Condition V.A.3.e.3) above, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.
   3) *Custom schedules.* Notwithstanding the requirements of Condition V.A.3.f.2) above, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except for the sulfur monitoring schedules set forth in §60.334(i)(3)(i) and §60.334(i)(3)(ii), the custom schedules below shall be substantiated with data and shall be approved by the Administrator and the Department before they can be used to comply with this permit.

4. Record Keeping Requirements:

a. Specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action adopted shall be recorded. [§2103.12.j.1; IP 0580-I005, V.A.4.a; §129.115]

b. Any period one-hour period during which the water to fuel ratio falls, as measured by the continuous emission monitoring system, below the water to fuel ratio determined by the compliance demonstration as required by permit condition V.A.3.a shall be recorded. [§2103.12.j.1; IP 0580-I005, V.A.4.b; §129.115]

c. Any period during which the nitrogen content of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance determined during the compliance demonstration as required by permit condition V.A.2.h shall be recorded. [§2103.12.j.1; IP 0580-I005, V.A.4.c; §129.115]

d. Any period during which sulfur content of the fuel being burned in the gas turbine exceeds 0.0015% shall be recorded. [§2103.12.j.1; IP 0580-I005, V.A.4.d; §129.115]

e. All CEM data sufficient to demonstrate compliance with this permit. [§2103.12.h.1; IP 0580-I005, V.A.4.e; §129.115]

f. The permittee shall maintain the following records of the annual (once per calendar year) tune-up required for the Units 1 and 2 in Condition V.A.6.d below: [§2105.06; IP 0580-I005, V.A.4.f; §129.115]
1) The date of the adjustment procedure;
2) The name of the service company and technicians;
3) The operating rate or load after adjustment;
4) The CO and NO_X emission rates before and after adjustment;
5) The excess oxygen rate after adjustment; and
6) Other information required by the applicable operating permit.

g. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2; IP 0580-I005, V.A.4.g; §129.115]

5. Reporting Requirements:

a. All reports required shall be postmarked by the 30th day following the end of each calendar quarter. [§60.334(j)(5) ; IP 0580-I005, V.A.5.a]

b. Records as required by V.A.4 above shall be reported in accordance with Condition V.A.5.a above. [§2103.12.k; IP 0580-I005, V.A.5.b; §129.115]

c. The permittee shall submit Excess Emissions Reports (EERs) in accordance with §60.7(c). Each report shall include the average water-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content when appropriate of the fuel during the period of excess emissions and the graphs or figures developed under permit condition V.A.4.a. For the purpose of reports required under § 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows:
1) Nitrogen oxides.
a) For turbines using water or steam to fuel ratio monitoring [§60.334(j)(1)(i); IP 0580-I005; §129.115]:
i) An excess emission shall be any unit operating hour for which the average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with §60.332, as established during the performance test required in §60.8. Any unit

operating hour in which no water or steam is injected into the turbine shall also be considered an excess emission. [§60.334(j)(1)(i)(A); IP 0580-I005; §129.115]

ii) A period of monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [§60.334(j)(1)(i)(B); IP 0580-I005; §129.115]

iii) Each report shall include the average steam or water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during each excess emission. You do not have to report ambient conditions if you opt to use the worst-case ISO correction factor as specified in §60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of §60.335(b)(1). [§60.334(j)(1)(i)(C); IP 0580-I005; §129.115]

b) If the owner or operator elects to take an emission allowance for fuel bound nitrogen, then excess emissions and periods of monitor downtime are as described in §60.334(j)(1)(ii)(A) and (B). [§60.334(j)(1)(ii); IP 0580-I005; §129.115]

c) For turbines using NO_X and diluent CEMS:

i) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO_X concentration exceeds the applicable emission limit in §60.332(a)(1) or (2). For the purposes of this subpart, a ‘‘4- hour rolling average NO_X concentration’’ is the arithmetic average of the average NO_X concentration measured by the CEMS for a given hour (corrected to 15 percent O_2 and, if required under §60.335(b)(1), to ISO standard conditions) and the three unit operating hour average NO_X concentrations immediately preceding that unit operating hour. [§60.334(j)(1)(iii)(A); IP 0580-I005; §129.115]

ii) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO_X concentration or diluent (or both). [§60.334(j)(1)(iii)(B); IP 0580-I005; §129.115]

iii) Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. You do not have to report ambient conditions if you opt to use the worst-case ISO correction factor as specified in §60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of §60.335(b)(1). [§60.334(j)(1)(iii)(C); IP 0580-I005; §129.115]

2) Sulfur dioxide. The sulfur content of the fuel shall be monitored as follows:

a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit’s storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. [§60.334(j)(2)(i); IP 0580-I005; §129.115]

b) If the option to sample each delivery of fuel oil has been selected, the owner or operator shall immediately switch to one of the other oil sampling options (*i.e.*, daily sampling, flow proportional sampling, or sampling from the unit’s storage tank) if the sulfur content of a delivery exceeds 0.8 weight percent. The owner or operator shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted and shall evaluate excess emissions according to paragraph (j)(2)(i) of this section. When all of the fuel from the delivery has been burned, the owner or operator may resume using the as delivered sampling option. [§60.334(j)(2)(ii); IP 0580-I005; §129.115]

c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. [§60.334(j)(2)(iii); IP 0580-I005; §129.115]

3) Ice fog. Each period during which an exemption provided in Condition V.A.1.g above is in effect shall be reported in writing to the Administrator and the Department quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. [IP 0580-I005; §60.334(j)(3)]

d. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. [IP 0580-I005; §2103.12.k]

6. Work Practice Standard:

a. All air pollution control equipment required by this Article or any permit or order under this Article, and all equivalent compliance techniques which have been approved by the Department pursuant to this Article, shall be properly installed, maintained, and operated consistent with good air pollution control practice. [§2105.03; IP 0580-I005, V.A.6.a; §129.114]

b. The permittee shall take corrective action if an out of control period occurs to a monitoring system (e.g., continuous emission monitor). [40 CFR §75.24, Article XXI §2103.22.j, §2103.50; IP 0580-I005, V.A.6.b; §129.114]

c. The failure to install and operate any continuous emissions monitoring system required by §2108.03 within the time specified, the failure to retain any data or submit any report so required, or the knowing retention or reporting of false data shall be a violation of this permit giving rise to the remedies provided by §2109.02. [§2108.03.f; IP 0580-I005, V.A.6.c; §129.114]

d. The permittee shall perform an adjustment or "tune-up" on Units 1 and 2 once every calendar year. Such tune-up shall include: [RACT IP #0580-I003; 2102.04.b.5; §2105.06.d.2; IP 0580-I005, V.A.6.d; §129.114]

1) Inspection, adjustment, cleaning, or necessary replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer;
2) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO_X, and to the extent practicable minimize emissions of CO; and
3) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

7. Acid Rain Requirements:

a. Unit 1 and Unit 2 are each subject to the Title IV Acid Rain Program of the Clean Air Act Amendments of 1990 and shall comply with all applicable provisions of that Title, to include the following: [IP 0580-I005, V.A.7.a]

1) 40 CFR Part 72: Permit Regulation
2) 40 CFR Part 73: Sulfur Dioxide Allowance System

3) 40 CFR Part 75: Continuous Emission Monitoring
4) 40 CFR Part 76: Nitrogen Oxides Emission Reduction Program
5) 40 CFR Part 77: Excess Emissions

b. The following are prohibited: [IP 0580-I005, V.A.7.b; §2103.22.j.6]
1) Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide that the owner or operator or designated representative holds for that unit.
2) Exceeding applicable emission rates or standards, including ambient air quality standards.
3) The use of an allowance prior to the year for which it is allocated.
4) Contravention of other provisions of an Acid Rain permit.

c. At any time after submission of an acid rain permit application and compliance plan, the applicant may submit a revised application and compliance plan. [IP 0580-I005, V.A.7.c; §2103.22.j.5]

d. In the case of affected sources for which an application and plan are timely received, the permit application and the compliance plan, including amendments thereto, shall be binding on the owner, operator, and the designated representative of the owner or operator and shall be enforceable as a permit until a permit is issued by the Department. [IP 0580-I005, V.A.7.d; §2103.22.j.3]

e. The permittee shall comply with all the terms and conditions of the acid rain permit. A copy of the acid rain permit for Unit 1 and Unit 2 is included as Appendix A to this permit. [IP 0580-I005, V.A.7.e; §2103.22.j.6]

B. Process P002: Units 3, 4, and 5 – Combined Cycle Units

Process Description:	Two Siemens Westinghouse 501F combustion turbines (combined cycle mode) each exhausting to a heat recovery steam generator (w/o duct burners) driving one steam turbine generator rated at 186 MW (nominal)
Facility ID:	AE-3 (Unit 3), AE-4 (Unit 4) and AE-5 (Unit 5)
Max. Design Rate:	2,094 MMBtu/hr and 209 MWe (net, each unit)
Fuel:	Natural gas
Control Device:	Dry Low NO_X Burners with SCR
CEM/Fuel Flow Meter:	NO_X; CO/SO_2

1. Restrictions:

a. Only natural gas shall be combusted in in the combustion turbines. [§2103.12.a.2.D; §2104.03.a; §2102.06.b.1; §2102.07.a; IP 0580-I005, V.B.1.a]

b. Heat input to each unit shall be limited to 2,094 MMBtu/hr based on the higher heating value of the fuel being combusted. [§2103.12.a.2.D; §2104.10.a; §2102.06.b.1; §2102.07.a; IP 0580-I005, V.B.1.b; §129.114]

c. Except during startup, shutdown, and NERC reliability testing, the permittee shall not operate or allow to be operated Units 3 & 4 unless Dry Low-NO_X burners and selective catalytic reduction are in place and operating according to manufacturer's specifications. [§2103.12.a.2.D; §2102.04.e; IP 0580-I005, V.B.1.c; §129.114]

d. Nitrogen oxides shall not exceed 2.5 ppm_{vd} @15% O_2 during any 4-hour time period at or above 70% of full load or after a combustion turbine has achieved steady state operation above 70% load and is subsequently turned down to 50% load. [§2103.12.a.2.D, §2102.06.b.1, §2102.07.a, IP 0580-I005, V.B.1.d; §129.114(b)]]

e. Emissions of volatile organic compounds (VOCs) from the combustion turbines shall not exceed 2.0 ppm_{vd} at 15% oxygen (O_2) as propane at or above 70% of full load or after a combustion turbine has achieved steady state operation above 70% load and is subsequently turned down to 50% load. [§2103.12.a.2.D; §2102.06.b.1; §2102.07.a; IP 0580-I005, V.B.1.e; §129.114(d)]

f. Emissions of particulate matter due to operation of Units 3 & 4 shall not exceed 0.015 lb/MMBtu in accordance with USEPA Test Methods 1 through 5f. [§2103.12.a.2.D; §2104.02.a.1.A.; §2102.07.a.; §2107.02; IP 0580-I005, V.B.1.f]

g. Emissions of sulfur oxides from each unit shall not exceed 0.00286 lb/MMBtu. [§2103.12.a.2.D; §2102.06.b.1; §2102.07.a; IP 0580-I005, V.B.1.g]

h. Emissions of ammonia due to operation of Units 3 & 4 shall not exceed 10 ppm_{vd} @15% O_2 at any time. [§2103.12.a.2.D; §2103.12.a.2.D; §2102.06.b.1; §2102.07.a; IP 0580-I005, V.B.1.h]

i. The following conditions shall apply during start-up and shutdown periods: [§2103.12.a.2.D; §2102.04.e; IP 0580-I005, V.B.1.i; §129.114]

1) A cold start-up shall be defined as an event that occurs after the combustion turbine has not been operating for at least 48 hours. A cold start-up shall not last longer than 6.25 hours after ignition, unless NERC reliability testing requires extended low-load operation.

2) A warm start-up shall be defined as an event that occurs after the combustion turbine has not been operating for 8 hours to 48 hours. A warm start-up shall not last longer than 3.75 hours after ignition, unless NERC reliability testing requires extended low-load operation.
3) A hot start-up shall be defined as an event that occurs after the combustion turbine has not been operating for less than 8 hours. A hot start-up shall not last longer than 2.5 hours after ignition, unless NERC reliability testing requires extended low-load operation.
4) A start-up shall be defined as the period after ignition until the unit reaches stable compliance with short-term NO_X and CO emission limits (lb/hr) as determined by NO_X and CO CEMS or 70% of full load, whichever occurs first.
5) A shutdown shall be defined as the period after the load is reduced below 70% of full load or when in compliance with short-term NO_X and CO emission limits (lb/hr) as determined by NO_X and CO CEMS, whichever occurs last.
6) Emission limitations contained in V.B.1.d and V.B.1.f above as well as V.B.1.q below shall not apply during start-up, shutdown, tuning and NERC reliability testing.
7) Emissions during startup, warm up, shutdown tuning, and NERC reliability testing shall be included in the 12-month rolling emissions totals for nitrogen oxides, sulfur oxides, volatile organic compounds, carbon monoxide, PM/PM_{10} and formaldehyde.

j. Emissions from Units 3 and 4 shall not exceed the following: [§2103.12.a.2.D; §2102.06.b.1; §2102.07.a; IP 0580-I005, V.B.1.j; §129.114]:

TABLE V-B-1: Unit 3 & Unit 4 Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (lb/hr – each unit)	ANNUAL [a, b] EMISSION LIMIT (tons/year - combined)
Particulate Matter/PM_{10} [d]	19	166
Nitrogen Oxides	20[c]	210
Sulfur Oxides	5.7	53
Carbon Monoxide	48	550
Volatile Organic Compounds	3.8	48.0
Sulfuric Acid Mist	0.685	6.0
Formaldehyde	0.68	5.7
Ammonia	28.0	245

[a] A year is defined as any 12 consecutive months.
[b] Annual emissions include emissions during startup and shutdown. The NO_X and CO emissions are monitored and accounted for by CEMS. The VOC and PM/PM_{10} SUSD emission factors were established during initial stack testing.
[c] Based on a rolling, 4-hour average for NO_X and a 1-hour average for all other pollutants.
[d] Based on US EPA Test Method 201 or 201A for PM_{10}.

k. The hourly emission limits for normal operation shall not apply during periods of startup, shutdown, malfunction, tuning or NERC reliability testing. [IP 0580-I005, V.B.1.k; §2103.12.a.2.D; §129.114]

l. Emission factors established during the emissions testing at 70% to 90% full load for volatile

organic compounds and formaldehyde shall be used to quantify emissions at loads less than 90%. [IP 0580-I005, V.B.1.l; §2103.12.a.2.D; §129.114]

m. The permittee shall comply with all provisions of the PADEP NO_X budget and NO_X allowance trading program established by 25 Pa Code §§123.102-123.120 and §2105.100. [IP 0580-I005, V.B.1.m; §2103.12.a.2.D]

n. Failure by the permittee to hold in its compliance account, for any NO_X allowance control period, as of the NO_X allowance transfer deadline, sufficient NO_X allowances equal to or exceeding actual emissions for the NO_X allowance control period (May 1 through September 30) as specified under 25 Pa Code, Section 123.102 (relating to source allowance requirements and NO_X allowance control period) shall result in a NO_X allowance deduction from the NO_X affected source=s compliance account at the rate of 3 NO_X allowances for every 1 ton of excess emission. If sufficient allowances meeting the requirements of 25 Pa Code, Section 123.110(a)(relating to source compliance requirements) are not available, the source shall provide other sufficient allowances which shall be deducted prior to the beginning of the next NO_X allowance control period, otherwise the source may not operate during subsequent control periods. [IP 0580-I005, V.B.1.n; §2105.100.h.1.; §129.114]

o. In accordance with Article XXI, §2109, "Enforcement," the Department may enforce the NO_X allowance provisions of this permit and Article XXI, §2105.100. [IP 0580-I005, V.B.1.o; §2105.100.h.2.]

p. Pursuant to Title IV-Acid Deposition Control of the Clean Act Amendments of 1990, all combustion turbines and associated heat recovery steam generators (HRSGs) approved by issuance of this permit shall comply with all applicable provisions of Title IV including the following [IP 0580-I005, V.B.1.p; §2103.12..a.2.D; §129.115]:

1) 40 CFR Part 72 Permit Regulation
2) 40 CFR Part 73 Sulfur Dioxide Allowance
3) 40 CFR Part 75 Continuous Emission Monitoring
4) 40 CFR Part 77 Excess Emissions

q. Emissions of carbon monoxide shall not exceed an average of 10.0 ppm_{vd} @15% O_2 during any one-hour time period at or above 70% of full load or after a combustion turbine has achieved steady state operation above 70% load and is subsequently turned down to 50% load. [IP 0580-I005, V.B.1.q; §2103.12..a.2.D, §2102.06.b.1, §2102.07.a.]

r. The permittee shall construct the facility such that an oxidation catalyst is capable of being installed in the event the permittee cannot demonstrate compliance with Condition V.B.1.q above. [IP 0580-I005, V.B.1.r; §2103.12..a.2.D]

2. Testing Requirements:

a. The Permittee shall conduct the performance tests required by §60.8, using the Methods and procedures of §60.335(a). [§60.335(a); IP 0580-I005, V.B.2.a]

b. The owner or operator shall determine compliance with the applicable nitrogen oxides limitation in Condition V.B.1.d above and shall meet the performance test requirements of §60.8 as follows:

1) For each run of the performance test, the mean nitrogen oxides emission concentration (NO_{xo}) corrected to 15 percent O_2 shall be corrected to ISO standard conditions using the following equation Notwithstanding this requirement, use of the ISO correction equation is optional for units equipped with add-on emission control devices: [§60.335(b)(1); IP 0580-I005]

$$NO_x = (NO_{xo})(P_r/P_o)^{0.5} e^{19(Ho-0.00633)} (288°K/T_a)^{1.53}$$

where

NO_x = emission concentration of NOx at 15 percent O_2 and ISO standard ambient conditions, ppm by volume, dry basis;

NO_{xo} = observed NO_x concentration ppm by volume, dry basis, at 15 percent O_2;

P_r = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg;

P_o = observed combustor inlet absolute pressure at test, mm Hg;

H_o = observed humidity of ambient air, g H_2O/g air;

e = transcendental constant, 2.718; and

T_a = ambient temperature, °K

2) Except as provided in Condition V.B.2.b.4) below, the 3-run performance test required by §60.8 and Condition V.B.2.a above must be performed within ± 5 percent at 30, 50, 75, and 90- to-100 percent of peak load or at four evenly-spaced load points in the normal operating range of the gas turbine, including the minimum point in the operating range and 90-to-100 percent of peak load, or at the highest achievable load point if 90-to-100 percent of peak load cannot be physically achieved in practice. [§60.335(b)(2) and (b)(7); §2108.02; IP 0580-I005]

3) The performance evaluation of the CEMS may either be conducted separately (as described in Condition V.B.2.b.4) below or as part of the initial performance test of each unit. [§60.335(b)(6); IP 0580-I005]

4) The initial performance test required under §60.8 and this permit may be done in the following alternative manner [§60.335(b)(7); IP 0580-I005]:

   a) Perform a minimum of 9 reference method runs, with a minimum time per run of 21 minutes, at a single load level, between 90 and 100 percent of peak (or the highest physically achievable) load.
   b) Use the test data both to demonstrate compliance with the applicable NO_X emission limit under V.B.1.d above and to provide the required reference method data for the RATA of the CEMS described under §60.334(b).

c. Emissions testing shall be performed to determine the PM_{10} and volatile organic compound emissions during cold, warm, and hot start up conditions. Emissions of nitrogen oxides and carbon monoxide during start up conditions shall be determined by the CEM. [§2108.02.b; §2108.02.e; IP 0580-I005, V.B.2.c; §129.115]

d. Emissions testing in accordance with Article XXI, §2108.02.d. and e. shall be performed once every three years for volatile organic compounds and formaldehyde. [§2108.02.b; §2108.02.e; IP 0580-I005, V.B.2.d; §129.115]

e. Emissions testing shall be performed annually to demonstrate compliance with the ammonia emissions limitation of 10 ppm and the corresponding ammonia emission limits in Condition V.B.1.j in accordance with Article XXI, §2108.02.d. and e. [IP 0580-I005, V.B.2.e]

f. The permittee shall perform particulate matter (PM), PM_{10} and $PM_{2.5}$ emissions testing once every three years. Such testing shall be conducted in accordance with U.S. EPA test methods 5, 201A, and 202 or other method as approved by the Department and Article XXI §2108.02. [§2103.12.h.1; §2108.02; IP 0580-I005, V.B.2.f]

g. Particulate matter missions testing required by Condition V.B.2.f above shall be for filterable and condensable particulate matter. Compliance with Condition V.B.1.f above may be determined using the front-half catch of Method 5. [§2103.12.h.1; §2108.02; IP 0580-I005, V.B.2.g]

h. The Department reserves the right to require additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall install, operate and maintain continuous emission monitors for nitrogen oxides, oxygen and carbon monoxide on Units 3 & 4. Such monitoring systems shall meet the requirements of 40 CFR Part 75. [IP 0580-I005, V.B.3.a; §2108.03.a, b, and c; §129.115]

b. Continuous emission monitoring systems for fuel flow, nitrogen oxides, carbon monoxide (CO) and oxygen (O_2) shall be approved by the Department and installed, operated and maintained in accordance with the requirements of 25 Pa Code Chapter 139 and Article XXI, §2108.03. Proposals containing information as listed in Phase I section of the PADEP Continuous Source Monitoring Manual must be submitted to the PADEP and the Department at least 3 months prior to start-up of any unit operating in combined cycle mode. [§2103.12.a.2.D; §2108.03.e; §2108.03.f IP 0580-I005, V.B.3.b; §129.115]

1) Phase I PADEP and Department approval must be obtained for the continuous emission monitors prior to initial start-up of the source in combined cycle mode. Phase II PADEP and Department approval must be obtained within 60 days of achieving the maximum production rate at which the source will be operated, but not later than 180 days after initial start-up of the source. PADEP review time for Phase III report (time between postmark of company's Phase III report and the postmark of the Department's response letter) will not be charged against the source in determining compliance with this condition. Information on obtaining PADEP approval is included in the PADEP Continuous Source Monitoring Manual. [§2103.12.a.2.D; IP 0580-I005]
2) No continuous emission monitoring system shall be considered to meet the requirements of this permit unless such system has been approved by the Department in writing. At least 45 days prior to installing any such system, or at such other times as is specified in an applicable order or permit condition, the person responsible for the affected source shall make written application to the Department for the approval of such system, which application shall include a thorough description of the system, the location where such system will be installed, a program for periodic calibration, zero and span drift checks and other quality assurance procedures and all other information needed by the Department to evaluate such system. The Department shall make its evaluation in accordance with all relevant guidelines, including the performance specifications and other requirements of Appendix P of 40 CFR Part 51 and Appendix B of 40 CFR Part 60, including all modifications to such appendices as may hereafter be made by the EPA. [§2108.03.e.; IP 0580-I005]
3) Failure to install and operate any continuous emissions monitoring system required by this

permit or by an order, within the time specified, the failure to retain any data or submit any report so required, or the knowing retention or reporting of false data shall be a violation of this permit giving rise to the remedies provided by Article §2109.02. [§2108.03.f.; IP 0580-I005]

c. Continuous fuel flow monitors shall be installed and maintained on each unit in accordance with 40 CFR Part 75 Appendix D Chapter 2.1. [IP 0580-I005, V.B.3.c; §129.115]

d. A NO_X CEMS installed to meet the requirements of 40 CFR Part 75 may be used to meet the monitoring requirements of §60.334 except that the missing data substitution methodology provided for at 40 CFR part 75, subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in §60.7(c). [IP 0580-I005, V.B.3.d; §60.334(b)(3)(iii)]

e. Except as provided in Condition V.B.3.h below, the permittee shall determine and record daily sulfur content and nitrogen content of the fuel being fired in the turbine. The permittee may propose alternative monitoring procedures for approval by the Department. [IP 0580-I005, V.B.3.e; §60.334(b) and §60.13(i)]

f. The permittee shall monitor the total sulfur content of the fuel being fired in each turbine, except as provided in Condition V.B.3.h below. The sulfur content of the fuel must be determined using total sulfur methods described in § 60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppm_w), ASTM D4084–82, 94, D5504– 01, D6228–98, or Gas Processors Association Standard 2377–86 (all of which are incorporated by reference-see § 60.17), which measure the major sulfur compounds may be used; and [IP 0580-I005, V.B.3.f; §60.334(h)(1)]

g. The permittee shall monitor the nitrogen content of the fuel combusted in each turbine if claiming an allowance for fuel bound nitrogen (*i.e.*, if an F-value greater than zero is being or will be used to calculate STD in § 60.332). The nitrogen content of the fuel shall be determined using methods described in § 60.335(b)(9) or an approved alternative. [IP 0580-I005, V.B.3.g; §60.334(h)(2)]

h. Notwithstanding the provisions of Condition V.B.3.f above, the permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in §60.331(u), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring. The permittee shall use one of the following sources of information to make the required demonstration: [IP 0580-I005, V.B.3.h; §60.334(h)(3)]

1) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or
2) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

i. For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the permittee may, without submitting a special petition to the Administrator, continue monitoring on this schedule. [IP 0580-I005, V.B.3.i; §60.334(h)(4)]

j. The frequency of determining the sulfur and nitrogen content of the fuel shall be as follows [IP 0580-I005, V.B.3.j; §60.334(i)]:

1) *Gaseous fuel.* Any applicable nitrogen content value of the gaseous fuel shall be determined and recorded once per unit operating day. If the permittee elects not to demonstrate sulfur content using options in Condition V.B.3.h above, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.

2) *Custom schedules.* Notwithstanding the requirements of Condition V.B.3.j.1) above, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in Condition V.B.3.j.3) below, custom schedules shall be substantiated with data and shall be approved by the Administrator and the Department before they can be used to comply with this permit.

3) The two custom sulfur monitoring schedules set forth in §60.334(i)(3)(i) and §60.334(i)(3)(ii) are acceptable without prior Administrative and Department approval.

k. The permittee shall determine and record daily the sulfur content and nitrogen content of the fuel being fired in the turbine. The permittee may propose alternative monitoring procedures for approval by the Department. [IP 0580-I005, V.B.3.k; §60.334(b) and §60.13(i)]

l. The following parameters shall be monitored and recorded hourly for each SCR: [§2108.02; §2103.12.a.2.D; §2105.0; IP 0580-I005, V.B.3.l; §129.115]
1) Catalytic bed inlet gas temperature;
2) Ammonia solution injection rate; and
3) Ammonia concentration.

m. The permittee shall operate and maintain Units 3 & 4 and the associated control equipment and monitoring instrumentation in accordance with the manufacturers' specifications and good air pollution control practice. [§2105.03, §2103.12.a.2.D; IP 0580-I005, V.B.3.m; §129.115]

4. Record Keeping Requirements:

a. The results of the inspections required by Condition V.B.3.m above, episodes of non-compliance with any permit condition, and corrective actions taken shall be recorded upon occurrence in accordance with §60.7. as appropriate. [§60.7; §2102.03.12.j; IP 0580-I005, V.B.4.a; §129.115]

b. The permittee shall maintain records of all air pollution control system performance evaluations and all records of calibration checks, adjustments and maintenance performed on all equipment which is subject to this permit. [§2103.12.j.1; IP 0580-I005, V.B.4.b; §129.115]

c. The permittee shall maintain a copy of the manufacturers' specifications for the combustion turbines and air pollution control equipment onsite. [§2103.12.j.1; IP 0580-I005, V.B.4.c; §129.115]

d. The permittee shall maintain onsite a copy of the manufacturer's specifications for all CEMs that are required by this permit. [§2103.12.j.1; IP 0580-I005, V.B.4.d; §129.115]

e. Start-up and shutdown of each combustion turbine shall be recorded, including date, time and duration of each event. [§60.7; §2103.12.j; IP 0580-I005, V.B.4.e; §129.115]

f. The permittee shall keep a record of the date of any malfunction, the time of the malfunction, the cause of the malfunction and the action taken to correct the malfunction. [§2103.12.j.1; IP 0580-I005, V.B.4.f; §129.115]

g. At a minimum the following information shall be recorded for each combustion turbine. [§2103.12.j.1; IP 0580-I005, V.B.4.g; §129.115]
1) Hourly fuel consumption and hours of operation; and
2) Monthly emissions for the following pollutants: sulfur oxides (including sulfuric acid mist), nitrogen oxides, carbon monoxide, volatile organic compounds, formaldehyde, and ammonia.

h. The permittee shall keep and maintain records sufficient to demonstrate compliance with the annual limits for carbon monoxide, volatile organic compounds, and formaldehyde; 4-hour NO_X emission limitation; and the hourly and annual sulfur oxides limitations specified in Conditions V.B.1.c and V.B.1.j above. [§2103.12.j.1; IP 0580-I005, V.B.4.h; §129.115]

i. The permittee shall keep and maintain all records required under 40 CFR Parts 72 through 78. [§2103.12.j.1; IP 0580-I005, V.B.4.i; §129.115]

j. The permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or digital data recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [§2103.12.j; IP 0580-I005, V.B.4.j; §129.115]

k. The permittee shall maintain the following records of the annual tune-up (once every calendar year) required for Units 3 and 4 in Condition V.B.6.e below: [IP 0580-I005, V.B.4.k; §2105.06]

1) The date of the adjustment procedure;
2) The name of the service company and technicians;
3) The operating rate or load after adjustment;
4) The CO and NO_X emission rates before and after adjustment;
5) The excess oxygen rate after adjustment; and
6) Other information required by the applicable operating permit.

l. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2]

5. Reporting Requirements:

a. The following shall be reported to the Department on a semi-annual basis: [§2103.12.k; IP 0580-I005, V.B.5.a; §129.115]
1) Monthly fuel usage, monthly hours of operation, etc. shall be reported to the Department on a semi-annual basis.
2) Rolling 12-month total emissions for nitrogen oxides and carbon monoxide for each month of the reporting period including emissions due to startup and shutdown.
3) Report the information required to be recorded by Conditions V.B.4.a, V.B.4.e, and V.B.4.f.

b. Report exceedances quarterly to the Department and the Administrator in accordance with 40 CFR Part 77 Excess Emissions reporting requirements and §60.7, as appropriate. [IP 0580-I005, V.B.5.b; §129.115]

c. Report emissions quarterly to the Department and the Administrator in accordance with 40 CFR Part 75 Continuous Emission Monitoring reporting requirements and §60.7, as appropriate. [IP 0580-I005, V.B.5.c; §129.115]

d. The permittee shall submit reports of excess emissions and monitor downtime, in accordance with § 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under § 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows [IP 0580-I005, V.B.5.d; §60.334(j)]:

1) Nitrogen oxides.
   a) If the permittee elects to take an emission allowance for fuel bound nitrogen, then excess emissions and periods of monitor downtime are as described in §60.334(j)(1)(ii)(A) and (B). [IP 0580-I005; §60.334(j)(1)(ii)]
   b) For turbines using NO_X and diluent CEMS:
      i) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO_X concentration exceeds the applicable emission limit in §60.332(a)(1) or (2). For the purposes of this subpart, a ‘‘4- hour rolling average NO_X concentration’’ is the arithmetic average of the average NO_X concentration measured by the CEMS for a given hour (corrected to 15 percent O_2 and, if required under §60.335(b)(1), to ISO standard conditions) and the two unit operating hour average NO_X concentrations immediately preceding that unit operating hour. [IP 0580-I005; §60.334(j)(1)(iii)(A)]
      ii) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO_X concentration or diluent (or both). [IP 0580-I005; §60.334(j)(1)(iii)(B)]
      iii) Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the permittee has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. The permittee does not have to report ambient conditions if they opt to use the worst-case ISO correction factor as specified in §60.334(b)(3)(ii), or if they are not using the ISO correction equation under the provisions of §60.335(b)(1). [IP 0580-I005; §60.334(j)(1)(iii)(C)]

2) Sulfur dioxide. The sulfur content of the fuel shall be monitored as follows:
   a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit’s storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. [IP 0580-I005; §60.334(j)(2)(i)]
   b) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. [IP 0580-I005;

§60.334(j)(2)(iii)]

e. Report exceedances quarterly to the Department and the Administrator in accordance with 40 CFR Part 77 Excess Emissions reporting requirements and §60.7, as appropriate [IP 0580-I005, V.B.5.e; §60.7].

f. Report emissions quarterly to the Department and the Administrator in accordance with 40 CFR Part 75 Continuous Emission Monitoring reporting requirements and §60.7, as appropriate [IP 0580-I005, V.B.5.f; §60.7(c)].

g. Reporting instances of non-compliance or malfunction in accordance with condition V.B.5.a above, does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.7 above as appropriate. [§2103.12.k.1; §2108.01.c.; IP 0580-I005, V.B.5.g]

6. Work Practice Standard:

a. The permittee shall at all times properly operate and maintain all process and emission control equipment at the facility in accordance with the manufacturer's specifications and with good operating and engineering practices. [§2105.03; IP 0580-I005, V.B.6.a; §129.114]

b. The permittee shall at all times adhere to permit conditions pertaining to start-ups and shutdowns. [40 CFR §75.24, Article XXI §2103.22.j, §2103.50; IP 0580-I005, V.B.6.b; §129.114]

c. The permittee shall take corrective action if an out of control period occurs to a monitoring system (e.g., continuous emission monitor). [40 CFR §75.24, Article XXI §2103.22.j, §2103.50; IP 0580-I005, V.B.6.c]

d. The failure to install and operate any continuous emissions monitoring system required by §2108.03 within the time specified, the failure to retain any data or submit any report so required, or the knowing retention or reporting of false data shall be a violation of this permit giving rise to the remedies provided by §2109.02. [§2108.03.f; IP 0580-I005, V.B.6.d; §129.114]

e. The permittee shall perform an annual adjustment or "tune-up" on Units 3 and 4 once every calendar year, (hereafter referred to as "annual tune-up"). Such annual tune-up shall include: [RACT IP #0580-I003; 2102.04.b.5; §2105.06.d.2; IP 0580-I005, V.B.6.e; §129.114]

1) Inspection, adjustment, cleaning, or necessary replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer;

2) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO_X, and to the extent practicable minimize emissions of CO; and

3) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

7. Acid Rain Requirements:

a. Unit 3 and Unit 4 are each subject to the Title IV Acid Rain Program of the Clean Air Act Amendments of 1990 and shall comply with all applicable provisions of that Title, to include the

following: [IP 0580-I005, V.B.7.a]

1) 40 CFR Part 72: Permit Regulation
2) 40 CFR Part 73: Sulfur Dioxide Allowance System
3) 40 CFR Part 75: Continuous Emission Monitoring
4) 40 CFR Part 76: Nitrogen Oxides Emission Reduction Program
5) 40 CFR Part: 77: Excess Emissions

b. The following are prohibited: [§2103.22.j.6; IP 0580-I005, V.B.7.b]

1) Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide that the owner or operator or designated representative holds for that unit.
2) Exceeding applicable emission rates or standards, including ambient air quality standards.
3) The use of an allowance prior to the year for which it is allocated.
4) Contravention of other provisions of an Acid Rain permit.

c. At any time after submission of an acid rain permit application and compliance plan, the applicant may submit a revised application and compliance plan. [§2103.22.j.5; IP 0580-I005, V.B.7.c]

d. In the case of affected sources for which an application and plan are timely received, the permit application and the compliance plan, including amendments thereto, shall be binding on the owner, operator, and the designated representative of the owner or operator and shall be enforceable as a permit until a permit is issued by the Department. [§2103.22.j.3; IP 0580-I005, V.B.7.d]

e. The permittee shall comply with all the terms and conditions of the acid rain permit. A copy of the acid rain permit is included as Appendix B to this permit. [§2103.22.j.6; IP 0580-I005, V.B.7.e]

C. Emergency Generators EG01 & EG02:

Process Description: Two Caterpillar C32 Diesel Emergency Generators
Facility ID: EG01 & EG02
Capacity: 1250 kW
Raw Material(s)/Fuel(s): Diesel
Control Device(s): None; Tier 2 Compliant

I.D.	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL
EG01	Caterpillar C32 Backup Emergency Generator	None	1,250 kW	Diesel
EG02	Caterpillar C32 Backup Emergency Generator	None	1,250 kW	Diesel

1. Restrictions:

a. The permittee shall not operate emergency generators EG01 and EG02 for more than 500 hours each in any consecutive 12-month period, including operation for maintenance checks and readiness testing. [§2103.12.a.2.D; §2102.04.e; IP 0580-I004, V.A.1.a; §129.112]

b. Diesel fuel consumption shall be limited to 87.4 gallons/hour and 43,700 gallons per consecutive 12-month period for each generator. [§2103.12.a.2.D; §2102.04e; IP 0580-I004, V.A.1.b; §129.112]

c. The permittee should only combust or allow to be combusted diesel fuel that meets the following requirements: [§2103.12.a.2.D; §2102.04.e; §60.4207(b); IP 0580-I004, V.A.1.c; §80.510(b)]

1) Sulfur content no higher than 0.0015% sulfur content (by weight, 15 ppm S) and
2) A minimum cetane index of 40, or a maximum aromatic content of 35 volume percent.

d. The emergency generators may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the Department, the manufacturer, the vendor, or the insurance company associated with the generators. Maintenance checks and readiness testing are limited to 100 hours per year. [§2103.12.a.2.D; §2102.04.e; §60.4211(f)(2)(i); IP 0580-I004, V.A.1.d; §129.112]

e. The permittee may operate the emergency generators up to 50 hours per year in non-emergency situations. The 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid, or otherwise supply non-emergency power as part of a financial arrangement with another entity. [§2103.12.a.2.D; §2102.04.e; §60.4211(f)(3); IP 0580-I004, V.A.1.e; §129.112]

f. Emissions from the emergency generators shall not exceed the following at any time: [§2103.12.a.2.D, §2104.02.a, §60.4202, §60.4205(b), §89.112 Table 1; IP 0580-I004, V.A.1.f; §129.112]

TABLE V-C-1: Emission Unit EG01 & EG02 Emission Limitations

POLLUTANT	Per Emergency Generator HOURLY EMISSION LIMIT (lb/hr)	Per Emergency Generator ANNUAL EMISSION LIMIT (tons/year)*	For Both Generators ANNUAL EMISSION LIMIT (tons/year)*
$PM_{2.5}$/ PM/PM_{10}	0.080	0.020	0.04
NO_X	24.89	6.223	12.45
SO_X	0.018	0.005	0.01
CO	0.843	0.211	0.42
VOC	0.401	0.100	0.20

* A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.14 above entitled "Emissions Testing." [§2102.04e]

3. Monitoring Requirements:

a. The permittee shall install a non-settable hour meter for each generator. [§2103.12.a.2.D; §60.4209(a); IP 0580-I004, V.A.3.a; §129.115]

b. Compliance with the fuel oil sulfur limitations in V.C.1.c above shall be determined based on a certification of analysis from the fuel supplier. [§2103.12.a.2.D; IP 0580-I004, V.A.3.b; §2103.12.i]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain the following data for the generators: [§2103.12.a.2.B; §2103.12.j §60.4214(b); IP 0580-I004, V.A.4.a; §129.115]
   1) Fuel shipment records (data and amount received), type of fuel consumed and supplier's certification of sulfur content, and heating value;
   2) Monthly fuel usage for the generators' testing/operation process;
   3) Date, time, duration, and reason for each use;
   4) Operating hours (monthly and 12-month) as recorded by the non-resettable hour meters required under condition V.C.3 above, and
   5) Records of operation, maintenance, inspection, calibration, and/or replacement of combustion equipment.

b. Records of fuel supplier certifications used to demonstrate compliance with the sulfur limitations of Condition V.C.3.b above shall be maintained per shipment and include the following information [§2103.12.a.2.D; §2103.12.j; IP 0580-I004, V.A.4.b]
   1) The name of the diesel fuel supplier; and
   2) A statement from the fuel supplier that the diesel fuel complies with ASTM D975 "Standard Specification for Diesel Fuel Oils".

c. Instances of non-compliance with the conditions of this permit shall be recorded upon occurrence. [§2103.12.a.2.D; §2103.12.j; IP 0580-I004, V.A.4.c; §129.115]

d. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [§2103.12.a.2.D; §2103.12.j; IP 0580-I004, V.A.4.d; §129.115]

5. Reporting Requirements:

a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report. [§2103.12.k; IP 0580-I004, V.A.5.a; §129.115]

   1) Information required under conditionsV.C.4.a.2) ,V.C.4.a.3), andV.C.4.a.4) above;
   2) Non-compliance information required to be recorded by condition V.C.4.c above; and
   3) Diesel fuel certifications and a statement from the permittee that the record of fuel supplier certifications represents all the diel fuel used during the reporting period.

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above if appropriate. [§2103.12.k; IP 0580-I004; §129.115]

6. Work Practice Standard:

a. The permittee shall operate and maintain the engines according to the manufacturer's emission-related written instructions. [§2103.12.a.2.D; §60.4211(a)(1); IP 0580-I004, V.A.6.a; §129.112]

b. The permittee shall change only those emission-related settings that are permitted by the manufacturer. [§2103.12.a.2.D; §60.4211(a)(2); IP 0580-I004, V.A.6.b; §129.112]

c. The manufacturer's operation and maintenance manuals shall be kept on-site at all times for the life of the generators. [§2103.12.a.2.D; §2105.03; §60.4206; §60.4211(a); IP 0580-I004, V.A.6.c; §129.112]

D. Circulating Water Cooling Tower:

Process Description: One 148,690 gallon per minute cooling tower (six closely spaced, identical fan stacks)
Facility ID: CT-2
Raw Material(s)/Fuel(s): Water
Control Device(s): Mist eliminators (limit drift to 0.0005% of circulating water flow)

1. Restrictions:

a. Emissions from the 6- to 10-cell, circulating water cooling tower shall not exceed the following limitations: [§2103.12.a.2.D; IP 0580-I005, VI.A.1.a]

TABLE V-D-1: Water Cooling Tower Emission Limitations

POLLUTANT	TPY *
Particulate Matter (PM)	4.9
Particulate Matter (PM_{10})	4.9

* A year is defined as any consecutive 12-month period.

b. Total dissolved solids (TDS) concentration shall be limited to 3,000 ppm. [§2103.12.a.2.D; IP 0580-I005, VI.A.1.b]

c. The cooling tower shall be equipped with a mist eliminator designed to achieve a drift of 0.0005% of the circulating water flow or better. [§2103.12.a.2.D; IP 0580-I005, VI.A.1.b]

d. The cooling tower shall be operated and maintained in accordance with the manufacturers' specifications and instructions. [§2103.12.a.2.D; IP 0580-I005, VI.A.1.c]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02 and with Site Level Condition IV.14 entitled "Emissions Testing." [§2103.12.h.1; IP 0580-I005]

3. Monitoring Requirements:

The total dissolved solids concentration of the service water shall be monitored weekly, at a minimum. [§2103.12.i.1; IP 0580-I005, VI.A.3]

4. Record Keeping Requirements:

a. Records of the total dissolved solids concentration of the service water shall be maintained. [§2103.12.i.1; IP 0580-I005, VI.A.4.a]

b. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2; IP 0580-I005, VI.A.4.b]

5. Reporting Requirements:

a. The average monthly TDS concentration of the service water shall be submitted to the Department annually. [§2103.12.k; IP 0580-I005, VI.A.5.a]

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate. [§2103.12.k; IP 0580-I005, VI.A.5.b]

6. Work Practice Standards:

None except as provided elsewhere in this permit.

7. Additional Requirements:

None except as provided elsewhere.

VI. MISCELLANEOUS

This stationary source also includes the following activities:

A. Sources of Minor Significance

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
G-02	Emergency Fire Water Pump	NA	265 bhp/2.01 MMBtu/hr	Ultra-Low Sulfur Diesel	NA

1. Restrictions:

a. The fire water pump (G-02) shall be fired only during emergency conditions and for a maximum of 500 hours per year. [§2103.12.a.2.D; IP 0580-I005, VI.C.1.a; §129.111]

b. The fire water pump shall be properly operated and maintained according to manufacturer's specifications. The manufacturer's operation and maintenance manuals shall be kept on site at all times. [§2103.12.a.2.B; §2105.03; §129.111]

c. The permittee shall only combust or allow to be combusted diesel fuel that meets the following requirements: [§2103.12.a.2.D; §2104.10.a; §80.510(b); IP 0580-I005, VI.C.1.b]

1) Sulfur content no higher than 0.0015% sulfur content (by weight) (15 ppm S); and
2) A minimum cetane index of 40, or a maximum aromatic content of 35 volume percent.

B. Storage Tanks: Aqueous Ammonia:

Process Description: One 24,800-gallon storage tank
Facility ID: T-2
Raw Material(s)/Fuel(s): Aqueous Ammonia (29.5%)
Control Device(s): Vapor Balancing and Bottom Loading

1. Restrictions:

a. The permittee shall not fill the subject tank unless vapor balancing and bottom loading is in place and operating at all times during the unloading. [§2103.12.a.2.D; IP 0580-I005, VI.B.1.a]

b. The storage tank shall be inspected monthly to assure structural integrity of tank so that no leaks occur. [§2103.12.a.2.D; IP 0580-I005, VI.B.1.a]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.14 entitled "Emissions Testing." [§2103.12.h.1]

3. Monitoring Requirements:

The storage tank shall be inspected monthly to assure structural integrity of tank and that no leaks are present. [§2103.12.i; IP 0580-I005, VI.B.3]

4. Record Keeping Requirements:

a. Records shall be kept of monthly throughput and the results of the inspections required by Condition VI.B.3 above. [§2103.12.j; IP 0580-I005, VI.B.4.a]

b. Records shall be kept of the ammonia concentration of each aqueous ammonia solution delivery to the storage tank. [§2103.12.j; IP 0580-I005, VI.B.4.b]

c. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2; IP 0580-I005, VI.B.4.c]

5. Reporting Requirements:

a. Reports of monthly throughput shall be provided to the Department on an annual basis. [§2103.12.k; IP 0580-I005, VI.B.5.a]

b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. [§2103.12.k; IP 0580-I005, VI.B.5.b]

6. Work Practice Standards:

None except as provided elsewhere.

C. No. 2 Fuel Oil Storage Tank T-3:

Process Description: Above ground, fixed roof fuel storage tank
Facility ID: T-3
Capacity: 400,000 gallons
Control Device: None

1. Restrictions:

a. No person shall place or store, or allow to be placed or stored, a volatile organic compound having a vapor pressure greater than 1.5 psia under actual storage conditions in the tank. [§2105.12.b; IP 0580-I004, V.B.1.a; §129.111]

b. The vapor pressure under actual storage conditions shall be determined using a temperature which is representative of the average storage temperature for the hottest month of the year in which such storage takes place. [§2105.12.d; IP 0580-I004, V.B.1.b; 129.111]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.a.2.D; §2103.12.h.1; IP 0580-I004, V.B.2]

3. Monitoring Requirements:

The fixed roof and its closure devices shall be visually inspected for defects that could result in air emissions. The roof must have an initial inspection upon installation, and then yearly thereafter, and repair any defects that are found. [§2103.12.a.2.D; IP 0580-I004, V.B.3]

4. Record Keeping Requirements:

The permittee shall maintain a record of inspection and repairs. [§2103.12.a.2.D; §2103.12.j; IP 0580-I004, V.B.4]

5. Reporting Requirements:

Reporting instances of non-compliances does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 above, if appropriate [§2103.12.a.2.D; IP 0580-I004, V.B.5]

6. Work Practice Standard:

None except as provided elsewhere.

VII. ALTERNATIVE OPERATING SCENARIOS

No alternative operating scenarios exist for this facility.

VIII. EMISSIONS LIMITATIONS SUMMARY

The emission limitations for the Springdale Energy, LLC facility are summarized in the following table:

TABLE VIII-1: Emission Limitations Summary

POLLUTANT	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter/PM_{10}	187.4
Nitrogen Oxides	321.4
Sulfur Oxides	59.0
Carbon Monoxide	665.5
Volatile Organic Compounds	58.2
Ammonia	245.7
Formaldehyde	9
Sulfuric Acid Mist	6

*** A year is defined as any consecutive 12-month period.**