



**New York State Department of Environmental Conservation  
Permit Review Report**

**Permit ID: 4-0122-00044/00014**

**Renewal Number: 1**

**07/16/2013**

**Facility Identification Data**

Name: BETHLEHEM ENERGY CENTER

Address: 380 RIVER RD

GLENMONT, NY 12077

**Owner/Firm**

Name: PSEG POWER NEW YORK LLC

Address: RTE 144

GLENMONT, NY 12077, USA

Owner Classification: Corporation/Partnership

**Permit Contacts**

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380 RIVER RD

GLENMONT, NY 12077

Phone:5184365027

**Permit Description**

**Introduction**

The Title V operating air permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose for this permit review report is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that this permit review report, while based on information contained in the permit, is a separate document and is not itself an enforceable term and condition of the permit.

**Summary Description of Proposed Project**

TITLE V PERMIT RENEWAL TO INCORPORATE ASF AND PSD PERMIT CONDITIONS FOR BETHLEHEM ENERGY CENTER PROJECT AND EXISTING PACKAGE BOILER.



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**Attainment Status**

BETHLEHEM ENERGY CENTER is located in the town of BETHLEHEM in the county of ALBANY. The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

Criteria Pollutant	Attainment Status
Particulate Matter (PM)	ATTAINMENT
Particulate Matter < 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	MARGINAL NON-ATTAINMENT
Oxides of Nitrogen (NOx)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT

\* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.

\*\* NOx has a separate ambient air quality standard in addition to being an ozone precursor.

**Facility Description:**

A combined cycle power plant, consisting of three combustion generating turbines burning pipeline quality natural gas and low sulfur distillate oil with supplementary-fired HRSGs, a steam turbine generator, a pipeline quality natural gas-fired package boiler, and exempt activities. The plant has a nominal generating capacity of 750 MW.

**Permit Structure and Description of Operations**

The Title V permit for BETHLEHEM ENERGY CENTER

is structured in terms of the following hierarchy: facility, emission unit, emission point, emission source and process. A facility is defined as all emission sources located at one or more adjacent or contiguous properties owned or operated by the same person or persons under common control. The facility is subdivided into one or more emission units (EU). Emission units are defined as any part or activity of a stationary facility that emits or has the potential to emit any federal or state regulated air pollutant. An emission unit is represented as a grouping of processes (defined as any activity involving one or more emission sources (ES) that emits or has the potential to emit any federal or state regulated air pollutant). An emission source is defined as any apparatus, contrivance or machine capable of causing emissions of any air contaminant to the outdoor atmosphere, including any appurtenant exhaust system or air cleaning device. [NOTE: Indirect sources of air contamination as defined in 6 NYCRR Part 203 (i.e. parking lots) are excluded from this definition]. The applicant is required to identify the principal piece of equipment (i.e., emission source) that directly results in or controls the emission of federal or state regulated air pollutants from an activity (i.e., process). Emission sources are categorized by the following types:

- combustion - devices which burn fuel to generate heat, steam or power
- incinerator - devices which burn waste material for disposal
- control - emission control devices
- process - any device or contrivance which may emit air contaminants that is not included in the above categories.



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BETHLEHEM ENERGY CENTER is defined by the following emission unit(s):

Emission unit U00005 - Unit U-00005 is a package boiler firing only pipeline quality natural gas with a design natural gas firing rate of 63,300 standard cubic feet per minute (SCFM) and a maximum heat input capacity of 64.883 million Btu per hour (MMBtu/hr) based on a natural gas heat content of 1025 Btu per cubic foot (Btu/cf) at the higher heating value (HHV). Prior to July 1, 2014 the package boiler burner controls will be modified to permanently restrict the unit heat input capacity to less than or equal to 25 MMBTU/hr.

Emission unit U00005 is associated with the following emission points (EP):  
00005

Process: P51 is located at Building 1 - P51 designates burning natural gas in the package boiler. The maximum allowable fuel flow into the boiler is 32,353 standard cubic feet per hour. There is one burner in the boiler. Prior to July 1, 2014 the maximum allowable fuel flow into the boiler is 32,353 standard cubic feet per hour. On or after July 1, 2014 the maximum allowable heat input to the boiler will be 25 MMBTU/hr.

Emission unit U00010 - This emission unit consists of three power trains and ancillary equipment. Each power train consists of a General Electric Frame 7FA combustion turbine generator (CTG) and a supplementary fired heat recovery steam turbine generator (HRSG). The CTG will fire pipeline quality natural gas; low sulfur (0.04% maximum) fuel oil (as defined in 40 CFR §72.2) will be the secondary fuel. The HRSG duct burners will fire only pipeline quality natural gas.

Emission unit U00010 is associated with the following emission points (EP):  
ST001, ST002, ST003

Process: CT1 is located at Building CTG HRSG - Combustion turbine generator operating on pipeline quality natural gas at steady state conditions without supplementary duct firing. Steady state is defined as those periods when the combustion turbine generator is operating in mode 6Q (or a different mode if opflex is implemented) as indicated by the GE Mark VI distributed control system and the combustion turbine generator is not operating in start-up, shutdown, or fuel switching mode.

Process: CT2 is located at Building CTG HRSG - Combustion turbine generator operating on low sulfur (0.04% by weight maximum) fuel oil (as defined in 40 CFR §72.2) at steady state conditions without supplementary duct firing. Steady state is defined as those periods when the combustion turbine generator is operating at 1:1 fuel to water ratio plus 15 minutes and the temperature of the heat recovery steam generator (HRSG) is at 550 degrees Fahrenheit or greater as indicated by the GE Mark VI Distributed Control System and the combustion turbine generator is not operating in start-up, shutdown, or fuel switching mode.

This Process involving operation of the combustion turbine generators on fuel oil is designated as an Alternate Operating Scenario (AOS) for operational flexibility as defined by 6 NYCRR Part 201-6.5(f). All monitoring, testing, recordkeeping and reporting requirements specified in the Permit for this AOS Process are deferred until the Process is used. If any of the three combustion turbines comprising Emission Unit U-00010 operates on fuel oil using this Process, then all required monitoring, testing, recordkeeping and reporting must be completed for that combustion turbine as specified in the associated applicable requirements and compliance conditions. The status of this AOS (i.e. whether the unit has



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operated using this Process) will be indicated in the Semi Annual Monitoring reports and the Annual Compliance Certification required by 6 NYCRR 201-6.5(c) & (e).

Process: CT3 is located at Building CTG HRSG - Pipeline quality natural gas burned in the combustion turbine generators with pipeline quality natural gas fired in the duct burners. This operating condition is limited to periods when the combustion turbine is operating at full load.

Process: CT4 is located at Building CTG HRSG - Low sulfur (0.04% by weight maximum) fuel oil (as defined in 40 CFR §72.2) burned in the combustion turbine generators with pipeline quality natural gas fired in the duct burners. This operating condition is limited to periods when the combustion turbine is operating at full load.

This Process involving operation of the combustion turbine generators on fuel oil is designated as an Alternate Operating Scenario (AOS) for operational flexibility as defined by 6 NYCRR Part 201-6.5(f). All monitoring, testing, recordkeeping and reporting requirements specified in the Permit for this AOS Process are deferred until the Process is used. If any of the three combustion turbines comprising Emission Unit U-00010 operates on fuel oil using this Process, then all required monitoring, testing, recordkeeping and reporting must be completed for that combustion turbine as specified in the associated applicable requirements and compliance conditions. The status of this AOS (i.e. whether the unit has operated using this Process) will be indicated in the Semi Annual Monitoring reports and the Annual Compliance Certification required by 6 NYCRR 201-6.5(c) & (e).

Process: CT5 is located at Building CTG HRSG - Start-up of the combustion turbine on pipeline quality natural gas. Start-up on pipeline quality natural gas is defined as the period that begins when the combustion turbine generator is first fired with fuel and ends when the combustion turbine generator begins operating in mode 6Q plus 60 minutes not to exceed 6 hours. Extended startups to perform combustion tuning shall not exceed 12 hours and may occur a maximum of 4 times per calendar year per combustion turbine generator.

Process: CT6 is located at Building CTG HRSG - Start-up of the combustion turbine on low sulfur (0.04% by weight maximum) fuel oil (fuel oil is defined in 40 CFR §72.2). Startup on low sulfur fuel oil is defined as the period that begins when the combustion turbine generator is first fired with fuel and ends when the combustion turbine generator begins operating at a 1:1 fuel-to-water ratio plus 60 minutes, not to exceed 6 hours.

This Process involving operation of the combustion turbine generators on fuel oil is designated as an Alternate Operating Scenario (AOS) for operational flexibility as defined by 6 NYCRR Part 201-6.5(f). All monitoring, testing, recordkeeping and reporting requirements specified in the Permit for this AOS Process are deferred until the Process is used. If any of the three combustion turbines comprising Emission Unit U-00010 operates on fuel oil using this Process, then all required monitoring, testing, recordkeeping and reporting must be completed for that combustion turbine as specified in the associated applicable requirements and compliance conditions. The status of this AOS (i.e. whether the unit has operated using this Process) will be indicated in the Semi Annual Monitoring reports and the Annual Compliance Certification required by 6 NYCRR 201-6.5(c) & (e).

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Process: CT7 is located at Building CTG HRSG - Shutdown of the combustion turbine on pipeline quality natural gas. Shutdown on pipeline quality natural gas is defined as the period of time from the initial lowering of combustion turbine output below 50% of the base load with the intent to cease generation of electrical power output and concludes with the cessation of combustion turbine operation, not to exceed 120 minutes.

Process: CT8 is located at Building CTG HRSG - Shutdown of the combustion turbine on low sulfur (0.04% by weight maximum) fuel oil (as defined in 40 CFR §72.2). Shutdown on fuel oil is defined as the period of time from the initial lowering of combustion turbine output below 50% of the base load with the intent to cease generation of electrical power output and concludes with the cessation of combustion turbine operation, not to exceed 120 minutes.

This Process involving operation of the combustion turbine generators on fuel oil is designated as an Alternate Operating Scenario (AOS) for operational flexibility as defined by 6 NYCRR Part 201-6.5(f). All monitoring, testing, recordkeeping and reporting requirements specified in the Permit for this AOS Process are deferred until the Process is used. If any of the three combustion turbines comprising Emission Unit U-00010 operates on fuel oil using this Process, then all required monitoring, testing, recordkeeping and reporting must be completed for that combustion turbine as specified in the associated applicable requirements and compliance conditions. The status of this AOS (i.e. whether the unit has operated using this Process) will be indicated in the Semi Annual Monitoring reports and the Annual Compliance Certification required by 6 NYCRR 201-6.5(c) & (e).

Process: CT9 is located at Building CTG HRSG - Operation of the combustion turbine during fuel switching from firing pipeline quality natural gas to low sulfur (0.04% by weight maximum) fuel oil (as defined in 40 CFR §72.2) or from fuel oil to pipeline quality natural gas. Fuel transfer is defined as the period of time from initiation of the fuel transfer process in the combustion turbine generator until the cessation of the process, not to exceed 120 minutes.

This Process involving operation of the combustion turbine generators on fuel oil is designated as an Alternate Operating Scenario (AOS) for operational flexibility as defined by 6 NYCRR Part 201-6.5(f). All monitoring, testing, recordkeeping and reporting requirements specified in the Permit for this AOS Process are deferred until the Process is used. If any of the three combustion turbines comprising Emission Unit U-00010 operates on fuel oil using this Process, then all required monitoring, testing,



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recordkeeping and reporting must be completed for that combustion turbine as specified in the associated applicable requirements and compliance conditions. The status of this AOS (i.e. whether the unit has operated using this Process) will be indicated in the Semi Annual Monitoring reports and the Annual Compliance Certification required by 6 NYCRR 201-6.5(c) & (e).

Process: OF1 is located at Building CTG HRSG - Operation of one of the combustion turbine generators (CTG) on natural gas while in OpFlex™ mode for the purpose of conducting emissions testing. The purpose of this operation is to identify the minimum load at which the CTG can be operated continuously while maintaining the current emission limits. This operation would be limited to a two week period.

Process: OF2 is located at Building CTG HRSG - Continuous operation of all three combustion turbine generators (CTGs) on natural gas at a minimum load that is less than 50 percent of base load a while in OpFlex™ mode. The new minimum load would be determined based on the results of emissions testing and GE's CTG tuning program. Continuous operation in OpFlex™ mode at less than 50 percent of base load on natural gas is contingent on:

- (1) Stack testing that demonstrates that the CTGs can meet the current permit limits;
- (2) Demonstration that PSD and nonattainment new source review is not triggered; and
- (3) Demonstration via dispersion modeling that the CTGs do not cause or contribute to a violation of the applicable National Ambient Air Quality Standards

Emission unit U00015 - This emission unit consists of a Marley 12-cell plume abatement mechanical draft cooling tower (20 degrees F/85% RH design point) with 99.9995% efficient drift eliminators.

Emission unit U00015 is associated with the following emission points (EP):

ST006, ST007, ST008, ST009, ST010, ST011, ST012, ST013, ST014, ST015, ST016, ST017

Process: P71 is located at Building WCTOWER - A 12-cell plume abatement mechanical draft cooling tower (20 degrees F / 85% RH design point) with 99.9995% efficient drift eliminators.

Emission unit U00020 - This emission unit consists of a John Deere Model 6081H diesel-powered fire pump engine. The engine will use low sulfur (0.05% or less) fuel oil.

Emission unit U00020 is associated with the following emission points (EP):

ST018

Process: FP1 is located at Building FPBLDG - Operation of the Diesel Fire Pump operating on low sulfur, No. 2 fuel oil for not more than 500 hours per year. Emission Unit U-00020 is an exempt activity pursuant to 6 NYCRR 201-3.2(c)(6) and 6 NYCRR 200.1(cq); emergency power generating stationary internal combustion engines. On and after 5/13/2013, U-00020 must comply with the applicable requirements in 40 CFR 63, Subpart ZZZZ for an existing emergency stationary reciprocating internal combustion engine (RICE) at an area source of HAPs.



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BETHLEHEM ENERGY CENTER is subject to Title V requirements. This determination is based on the following information:

The facility is defined as major because it is one of the 28 major source types listed in NYCRR Part 201 and has the potential to emit more than 100 tons of a pollutant(s) listed in the Act. Specifically, the facility could potentially emit more than 100 tons of NOx, SO2, CO, PM-10, and H2SO4. Also the facility could potentially emit more than 50 tons of VOC which for areas classified as marginal or moderate ozone nonattainment, any stationary source, source, or facility with the potential to emit 50 tpy or more of volatile organic compounds (VOC) will be major. Additionally, this facility is major for greenhouse gases, due to its potential to emit 100,000 tpy or more of CO<sub>2</sub> equivalents.

**Program Applicability**

The following chart summarizes the applicability of BETHLEHEM ENERGY CENTER with regards to the principal air pollution regulatory programs:

Regulatory Program	Applicability
PSD	YES
NSR (non-attainment)	NO
NESHAP (40 CFR Part 61)	NO
NESHAP (MACT - 40 CFR Part 63)	YES
NSPS	YES
TITLE IV	YES
TITLE V	YES
TITLE VI	NO
RACT	YES
SIP	YES

**NOTES:**

**PSD** Prevention of Significant Deterioration (40 CFR 52) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

**NSR** New Source Review (6 NYCRR Part 231) - requirements which pertain to major stationary



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sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

**NESHAP** National Emission Standards for Hazardous Air Pollutants (40 CFR 61) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's).

**MACT** Maximum Achievable Control Technology (40 CFR 63) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated industry, otherwise known as MACT. The corresponding regulations apply to specific source types and contaminants.

**NSPS** New Source Performance Standards (40 CFR 60) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

**Title IV Acid Rain Control Program (40 CFR 72 thru 78)** - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

**Title VI Stratospheric Ozone Protection (40 CFR 82, Subparts A thru G)** - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.

**RACT** Reasonably Available Control Technology (6 NYCRR Parts 212.10, 226, 227-2, 228, 229, 230, 232, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by application of control technology that is reasonably available, considering technological and economic feasibility. RACT is a control strategy used to limit emissions of VOC's and NOx for the purpose of attaining the air quality standard for ozone. The term as it is used in the above table refers to those state air pollution control regulations which specifically regulate VOC and NOx emissions.

**SIP** State Implementation Plan (40 CFR 52, Subpart HH) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

**Compliance Status**

Facility is in compliance with all requirements.

**SIC Codes**

SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the



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basis

of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

**SIC Code**

**Description**

4911

ELECTRIC SERVICES

**SCC Codes**

SCC or Source Classification Code is a code developed and used" by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information.Each SCC represents

a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

**SCC Code**

**Description**

1-02-006-02

EXTERNAL COMBUSTION BOILERS - INDUSTRIAL  
INDUSTRIAL BOILER - NATURAL GAS  
10-100 MMBtu/Hr

2-01-001-01

INTERNAL COMBUSTION ENGINES - ELECTRIC  
GENERATION  
ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE  
- DISTILLATE OIL (DIESEL)

2-01-002-01

Turbine  
INTERNAL COMBUSTION ENGINES - ELECTRIC  
GENERATION  
ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE  
- NATURAL GAS

2-02-001-02

Turbine  
INTERNAL COMBUSTION ENGINES - INDUSTRIAL  
INDUSTRIAL INTERNAL COMBUSTION ENGINE -  
DISTILLATE OIL (DIESEL)

3-85-882-01

Reciprocating  
COOLING TOWER

MECHANICAL DRAFT

**Facility Emissions Summary**

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant, including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount or material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE Range represents an emission range for a contaminant. Any PTE quantity that is displayed represents a facility-wide emission cap or limitation for that contaminant. If no PTE quantity is displayed, the PTE Range is provided to indicate the approximate magnitude of facility-wide emissions for the specified contaminant in terms of tons per year (tpy). The



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term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant Name	PTE	
		lbs/yr	Range
007664-41-7	AMMONIA		>= 100 tpy but < 250 tpy
007440-38-2	ARSENIC		> 0 but < 10 tpy
000071-43-2	BENZENE		> 0 but < 10 tpy
007440-41-7	BERYLLIUM		> 0 but < 10 tpy
007440-43-9	CADMIUM		> 0 but < 10 tpy
000124-38-9	CARBON DIOXIDE		>= 100,000 tpy
000630-08-0	CARBON MONOXIDE		>= 100 tpy but < 250 tpy
007440-47-3	CHROMIUM		> 0 but < 10 tpy
000050-00-0	FORMALDEHYDE		> 0 but < 10 tpy
007439-92-1	LEAD		> 0 but < 10 tpy
007439-96-5	MANGANESE		> 0 but < 10 tpy
007439-97-6	MERCURY		> 0 but < 10 tpy
000091-20-3	NAPHTHALENE		> 0 but < 10 tpy
007440-02-0	NICKEL METAL AND INSOLUBLE COMPOUNDS		> 0 but < 10 tpy
0NY210-00-0	OXIDES OF NITROGEN		>= 250 tpy but < 75,000 tpy
0NY075-00-0	PARTICULATES		>= 250 tpy but < 75,000 tpy
0NY075-00-5	PM-10		>= 250 tpy but < 75,000 tpy
007782-49-2	SELENIUM		> 0 but < 10 tpy
007446-09-5	SULFUR DIOXIDE		>= 250 tpy but < 75,000 tpy
007664-93-9	SULFURIC ACID		>= 100 tpy but < 250 tpy
000108-88-3	TOLUENE		> 0 but < 10 tpy
0NY100-00-0	TOTAL HAP		>= 10 tpy but < 25 tpy
0NY998-00-0	VOC		>= 50 tpy but < 100 tpy

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

**Item A: Emergency Defense - 6 NYCRR 201-1.5**

An emergency, as defined by subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the Department for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An emergency occurred and that the facility owner or operator can identify the cause(s) of the emergency;
- (2) The equipment at the permitted facility causing the

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emergency was at the time being properly operated and maintained;

(3) During the period of the emergency the facility owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

(4) The facility owner or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

**Item B: Public Access to Recordkeeping for Title V Facilities - 6 NYCRR 201-1.10(b)**

The Department will make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to Section 503(e) of the Act, except for information entitled to confidential treatment pursuant to 6 NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.

**Item C: Timely Application for the Renewal of Title V Permits -6 NYCRR Part 201-6.2(a)(4)**

Owners and/or operators of facilities having an issued Title V permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

**Item D: Certification by a Responsible Official - 6 NYCRR Part 201-6.2(d)(12)**

Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official. This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

**Item E: Requirement to Comply With All Conditions - 6 NYCRR Part 201-6.4(a)(2)**

The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

**Item F: Permit Revocation, Modification, Reopening, Reissuance or Termination, and Associated Information Submission Requirements - 6 NYCRR Part 201-6.4(a)(3)**

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.



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**Item G: Cessation or Reduction of Permitted Activity Not a Defense - 6 NYCRR 201-6.4(a)(5)**

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

**Item H: Property Rights - 6 NYCRR 201-6.4(a)(6)**

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

**Item I: Severability - 6 NYCRR Part 201-6.4(a)(9)**

If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.

**Item J: Permit Shield - 6 NYCRR Part 201-6.4(g)**

All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:

- i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;
- ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;
- iii. The applicable requirements of Title IV of the Act;
- iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

**Item K: Reopening for Cause - 6 NYCRR Part 201-6.4(i)**

This Title V permit shall be reopened and revised under any of the following circumstances:

- i. If additional applicable requirements under the Act become applicable where this permit's remaining term is three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the

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Department pursuant to the provisions of Part 201-6.7 and Part 621.

ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.

iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

**Item L: Permit Exclusion - ECL 19-0305**

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

**Item M: Federally Enforceable Requirements - 40 CFR 70.6(b)**

All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

**Item A: General Provisions for State Enforceable Permit Terms and Condition - 6 NYCRR Part 201-5**

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable

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Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

**Regulatory Analysis**

Location Facility/EU/EP/Process/ES	Regulation	Condition	Short Description
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FACILITY	ECL 19-0301	147	Powers and Duties of the Department with respect to air pollution control
FACILITY	40CFR 52-A.21	51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67	Prevention of Significant Deterioration
U-00010	40CFR 52-A.21	96	Prevention of Significant Deterioration
FACILITY	40CFR 60-A.11 (d)	75	General provisions - compliance with standards and maintenance requirements
FACILITY	40CFR 60-A.12	76	General provisions - Circumvention
FACILITY	40CFR 60-A.13 (d)	77	General provisions - Monitoring requirements
FACILITY	40CFR 60-A.14	78	General provisions - Modification
FACILITY	40CFR 60-A.15	79	General provisions - Reconstruction
FACILITY	40CFR 60-A.4	68	General provisions - Address
FACILITY	40CFR 60-A.7 (b)	69	Notification and Recordkeeping
FACILITY	40CFR 60-A.7 (d)	70	Notification and Recordkeeping
FACILITY	40CFR 60-A.7 (f)	71	Notification and Recordkeeping
FACILITY	40CFR 60-A.8 (d)	72	Performance Tests
FACILITY	40CFR 60-A.8 (e)	73	Performance Tests
FACILITY	40CFR 60-A.8 (f)	74	Performance Tests
U-00010	40CFR 60-D.46 (b)	97	Test Methods and Procedures
U-00005/-/P51	40CFR 60-Dc.48c (g)	91	Reporting and Recordkeeping Requirements.

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U-00010	40CFR 60-GG.332 (a) (1)	98	Standard for Oxides of nitrogen for Gas Turbines > 100 mmBTU/hr
U-00010	40CFR 60-GG.333 (b)	99, 100	Standard for Sulfur Dioxide
U-00010	40CFR 60-GG.334 (b)	101	Monitoring of Operations: CEMS
FACILITY	40CFR 60-GG.334 (c)	80	CEMS for turbines without water or steam injection
U-00010	40CFR 60-GG.334 (h) (3)	102	Allowance not to monitor sulfur or nitrogen for natural gas
U-00010	40CFR 60-GG.334 (j)	103	Reporting Requirements
FACILITY	40CFR 63-ZZZZ.6595 (a) (1)	81	Reciprocating Internal Combustion Engine (RICE) NESHAP - Compliance date for existing sources
U-00020	40CFR 63-ZZZZ.6625 (f)	145	Reciprocating Internal Combustion Engine (RICE) NESHAP - non-resettable hour meter for certain existing emergency engines
U-00020	40CFR 63-ZZZZ.6655 (f)	146	Reciprocating Internal Combustion Engine (RICE) NESHAP - Recordkeeping requirements
FACILITY	40CFR 68	19	Chemical accident prevention provisions
U-00010	40CFR 72	104	Permits regulation
FACILITY	40CFR 75-B.10 (a)	82	Continuous emission monitoring - general operating requirements
FACILITY	40CFR 75-B.10 (d)	83	Continuous emission monitoring - general operating requirements
FACILITY	40CFR 82-F	20	Protection of Stratospheric Ozone - recycling and emissions reduction
FACILITY	40CFR 97	84	Federal Cross-State Air Pollution Regulation (CSAPR)
FACILITY	6NYCRR 200.6	1	Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	10	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	148	Unavoidable noncompliance and violations
FACILITY	6NYCRR 201-1.7	11	Recycling and Salvage
FACILITY	6NYCRR 201-1.8	12	Prohibition of reintroduction of collected contaminants to the



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FACILITY	6NYCRR 201-3.2 (a)	13	air
FACILITY	6NYCRR 201-3.3 (a)	14	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-6	21, 85, 86	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6.4	22, 23, 24	Title V Permits and the Associated Permit Conditions
U-00010	6NYCRR 201-6.4	92	Standard Permit Requirements
U-00010/-/CT1	6NYCRR 201-6.4	105, 106, 107, 108, 109	Standard Permit Requirements
U-00010/-/CT2	6NYCRR 201-6.4	110, 111, 112, 113, 114, 115, 116	Standard Permit Requirements
U-00010/-/CT3	6NYCRR 201-6.4	117, 118, 119, 120, 121	Standard Permit Requirements
U-00010/-/CT4	6NYCRR 201-6.4	122, 123, 124, 125, 126, 127, 128	Standard Permit Requirements
U-00010/-/CT8	6NYCRR 201-6.4	139	Standard Permit Requirements
U-00010/-/CT9	6NYCRR 201-6.4	141	Standard Permit Requirements
FACILITY	6NYCRR 201-6.4 (a)	25	General Conditions
FACILITY	6NYCRR 201-6.4 (a) (4)	15	General Conditions - Requirement to Provide Information
FACILITY	6NYCRR 201-6.4 (a) (7)	2	General Conditions - Fees
FACILITY	6NYCRR 201-6.4 (a) (8)	16	General Conditions - Right to Inspect
FACILITY	6NYCRR 201-6.4 (c)	3	Recordkeeping and Reporting of
FACILITY	6NYCRR 201-6.4 (c) (2)	4	Compliance Monitoring Records of
FACILITY	6NYCRR 201- 6.4 (c) (3) (ii)	5	Monitoring, Sampling and Measurement Reporting
FACILITY	6NYCRR 201-6.4 (d) (4)	26	Requirements - Deviations and Noncompliance
FACILITY	6NYCRR 201-6.4 (e)	6	Compliance Schedules - Progress Reports
U-00010/-/OF1	6NYCRR 201-6.4 (f)	143	Compliance Certification
U-00010/-/OF2	6NYCRR 201-6.4 (f)	144	Operational Flexibility
FACILITY	6NYCRR 201-6.4 (f) (6)	17	Operational Flexibility
U-00010/-/CT5	6NYCRR 201-6.5 (a)	129, 130, 131, 132	Off Permit Changes
U-00010/-/CT6	6NYCRR 201-6.5 (a)	133, 134, 135, 136	State Enforceable Requirements
U-00010/-/CT7	6NYCRR 201-6.5 (a)	137, 138	State Enforceable Requirements
U-00010/-/CT8	6NYCRR 201-6.5 (a)	140	State Enforceable Requirements
U-00010/-/CT9	6NYCRR 201-6.5 (a)	142	State Enforceable Requirements
FACILITY	6NYCRR 201-7.1	87	State Enforceable Requirements Emission Capping in

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U-00010	6NYCRR 201-7.1	96	Facility Permits
FACILITY	6NYCRR 202-1.1	18	Emission Capping in Facility Permits
FACILITY	6NYCRR 202-1.3	27, 28, 29	Required emissions tests.
FACILITY	6NYCRR 202-2.1	7	Acceptable procedures.
FACILITY	6NYCRR 202-2.5	8	Emission Statements - Applicability
FACILITY	6NYCRR 211.1	30	Emission Statements - record keeping requirements.
FACILITY	6NYCRR 211.2	149	General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 215.2	9	General Prohibitions - visible emissions limited.
FACILITY	6NYCRR 225-1.5 (c)	31	Open Fires - Prohibitions
FACILITY	6NYCRR 227-1.3 (a)	32	Monitoring Requirements
U-00005/-/P51	6NYCRR 227-2.4 (c) (1)	89	Smoke Emission Limitations.
U-00005	6NYCRR 227- 2.4 (c) (1) (i)	88	Emission limits.
U-00005/-/P51	6NYCRR 227-2.4 (d)	90	1994 NOx RACT presumptive limit.
FACILITY	6NYCRR 242-1.5	150, 151, 152	Small boilers, small combustion turbines, and small stationary internal combustion engines.
U-00010	6NYCRR 242-8	153	CO2 Budget Trading Program - Standard requirements
FACILITY	6NYCRR 243-1.6 (a)	33	CO2 Budget Trading Program - Monitoring and reporting
FACILITY	6NYCRR 243-1.6 (b)	34	Permit Requirements - CAIR NOx Ozone Season Trading Program
FACILITY	6NYCRR 243-1.6 (c)	35	Monitoring Requirements - CAIR NOx Ozone Season Trading Program
FACILITY	6NYCRR 243-1.6 (d)	36	NOx Ozone Season Emission Requirements - CAIR NOx Ozone Season Trading Program
FACILITY	6NYCRR 243-1.6 (e)	37	Excess Emission Requirements - CAIR NOx Ozone Season Trading Program
FACILITY	6NYCRR 243-2.1	38	Recordkeeping and reporting requirements - CAIR NOx Ozone Season Trading Program
FACILITY	6NYCRR 243-2.4	39	Authorization and responsibilities - CAIR Designated Representative Certificate of



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FACILITY	6NYCRR 243-8.1	40, 41	representation - CAIR Designated Representative General Requirements - Monitoring and Reporting
FACILITY	6NYCRR 243-8.5 (d)	42	Quarterly reports re: recordkeeping and reporting - Monitoring and Reporting
FACILITY	6NYCRR 243-8.5 (e)	43	Compliance certification re: recordkeeping and reporting - Monitoring and Reporting
FACILITY	6NYCRR 244-1	44, 45	CAIR NOx Ozone Annual Trading Program General Provisions
FACILITY	6NYCRR 244-2	46	CAIR Designated Representative for CAIR NOx Sources
FACILITY	6NYCRR 244-8	47	Monitoring and Reporting CAIR NOx Allowances
FACILITY	6NYCRR 245-1	48	CAIR SO2 Trading Program General Provisions
FACILITY	6NYCRR 245-2	49	CAIR Designated Representative for CAIR SO2 Sources
FACILITY	6NYCRR 245-8	50	Monitoring and Reporting for CAIR SO2 Trading Program

**Applicability Discussion:**

Mandatory Requirements: The following facility-wide regulations are included in all Title V permits:

ECL 19-0301

This section of the Environmental Conservation Law establishes the powers and duties assigned to the Department with regard to administering the air pollution control program for New York State.

6 NYCRR 200.6

Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

6 NYCRR 200.7

Anyone owning or operating an air contamination source which is equipped with an emission control device must operate the control consistent with ordinary and necessary practices, standards and procedures, as per manufacturer's specifications and keep it in a satisfactory state of maintenance and repair so that it operates effectively

6 NYCRR 201-1.4

This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable state enforceable emission standard that results from a necessary scheduled equipment maintenance, start-up, shutdown, malfunction or upset in the event that these are unavoidable.



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6 NYCRR 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

6 NYCRR 201-1.8

Prohibits the reintroduction of collected air contaminants to the outside air

6 NYCRR 201-3.2 (a)

An owner and/or operator of an exempt emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains exempt emission sources or units, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR 201-3.3 (a)

The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains trivial emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR Subpart 201-6

This regulation applies to those terms and conditions which are subject to Title V permitting. It establishes the applicability criteria for Title V permits, the information to be included in all Title V permit applications as well as the permit content and terms of permit issuance. This rule also specifies the compliance, monitoring, recordkeeping, reporting, fee, and procedural requirements that need to be met to obtain a Title V permit, modify the permit and demonstrate conformity with applicable requirements as listed in the Title V permit. For permitting purposes, this rule specifies the need to identify and describe all emission units, processes and products in the permit application as well as providing the Department the authority to include this and any other information that it deems necessary to determine the compliance status of the facility.

6 NYCRR 201-6.4 (a) (4)

This mandatory requirement applies to all Title V facilities. It requires the permittee to provide information that the Department may request in writing, within a reasonable time, in order to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The request may include copies of records required to be kept by the permit.

6 NYCRR 201-6.4 (a) (7)

This is a mandatory condition that requires the owner or operator of a facility subject to Title V requirements to pay all applicable fees associated with the emissions from their facility.

6 NYCRR 201-6.4 (a) (8)

This is a mandatory condition for all facilities subject to Title V requirements. It allows the Department to inspect the facility to determine compliance with this permit, including copying records, sampling and monitoring, as necessary.

6 NYCRR 201-6.4 (c)

This requirement specifies, in general terms, what information must be contained in any required compliance monitoring records and reports. This includes the date, time and place of any sampling,



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measurements and analyses; who performed the analyses; analytical techniques and methods used as well as any required QA/QC procedures; results of the analyses; the operating conditions at the time of sampling or measurement and the identification of any permit deviations. All such reports must also be certified by the designated responsible official of the facility.

6 NYCRR 201-6.4 (c) (2)

This requirement specifies that all compliance monitoring and recordkeeping is to be conducted according to the terms and conditions of the permit and follow all QA requirements found in applicable regulations. It also requires monitoring records and supporting information to be retained for at least 5 years from the time of sampling, measurement, report or application. Support information is defined as including all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

6 NYCRR 201-6.4 (c) (3) (ii)

This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

6 NYCRR 201-6.4 (d) (5)

This condition applies to every Title V facility subject to a compliance schedule. It requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted semiannually.

6 NYCRR 201-6.4 (e)

Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

6 NYCRR 201-6.4 (f) (6)

This condition allows changes to be made at the facility, without modifying the permit, provided the changes do not cause an emission limit contained in this permit to be exceeded. The owner or operator of the facility must notify the Department of the change. It is applicable to all Title V permits which may be subject to an off permit change.

6 NYCRR 202-1.1

This regulation allows the department the discretion to require an emission test for the purpose of determining compliance. Furthermore, the cost of the test, including the preparation of the report are to be borne by the owner/operator of the source.

6 NYCRR 202-2.1

Requires that emission statements shall be submitted on or before April 15th each year for emissions of the previous calENDar year.

6 NYCRR 202-2.5

This rule specifies that each facility required to submit an emission statement must retain a copy of the statement and supporting documentation for at least 5 years and must make the information available to department representatives.

6 NYCRR 211.2

This regulation limits opacity from sources to less than or equal to 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.



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6 NYCRR 215.2

Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

40 CFR Part 68

This Part lists the regulated substances and their applicability thresholds and sets the requirements for stationary sources concerning the prevention of accidental releases of these substances.

40 CFR Part 82, Subpart F

Subpart F requires the reduction of emissions of class I and class II refrigerants to the lowest achievable level during the service, maintenance, repair, and disposal of appliances in accordance with section 608 of the Clean Air Act Amendments of 1990. This subpart applies to any person servicing, maintaining, or repairing appliances except for motor vehicle air conditioners. It also applies to persons disposing of appliances, including motor vehicle air conditioners, refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment. Those individuals, operations, or activities affected by this rule, may be required to comply with specified disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.

**Facility Specific Requirements**

In addition to Title V, BETHLEHEM ENERGY CENTER has been determined to be subject to the following regulations:

40 CFR 52.21

This citation applies to facilities that are subject to Prevention of Significant Deterioration provisions;

ie: facilities that are located in an attainment area and that emit pollutants which are listed in 40 CFR 52.21(b)(23)(i) .

40 CFR 60.11 (d)

This regulation specifies the type of opacity monitoring requirements in relation to compliance with the standards and maintenance requirements.

40 CFR 60.12

This regulation prohibits an owner or operator from concealing emissions in violation of applicable standards by any means.

40 CFR 60.13 (d)

This regulation contains the requirements for daily drift testing for continuous monitoring systems required by 40 CFR Part 60.

40 CFR 60.14

This regulation defines the term modification and what is and is not considered to be a modification, for the purpose of rule applicability.

40 CFR 60.15



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This regulation defines the term reconstruction and what is and is not considered to be a reconstruction project, for the purpose of rule applicability.

40 CFR 60.332 (a) (1)

This regulation provides the equation to be used to determine the allowable emissions of oxides of nitrogen (NOx) from a gas turbine with a heat input greater than 100 million BTU per hour.

40 CFR 60.333 (b)

This regulation limits the amount of sulfur in the fuel burned in a gas turbine to 0.8% by weight

40 CFR 60.334 (b)

This regulation allows the owner/operator of a gas turbine to use a CEMS to monitor NOx emissions instead of monitoring fuel and water/steam usage.

40 CFR 60.334 (c)

This regulation allows the owner or operator of a gas turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use steam or water injection to control NOx emissions, for purposes of determining excess emissions, use a CEMS that meets the requirements of paragraph (b) of 40 CFR 60.334.

40 CFR 60.334 (h) (3)

This regulation allows the owner or operator of a gas turbine to not monitor the fuel for sulfur or nitrogen content if the fuel meets the 40 CFR 60.331(u) definition of natural gas.

40 CFR 60.334 (j)

This regulation sets forth the reporting requirements for affected units that continuously monitor parameters or emissions or those that periodically determine the sulfur and/or nitrogen content of the fuel burned in a gas turbine.

40 CFR 60.4

This condition lists the USEPA Region 2 address for the submittal of all communications to the "Administrator". In addition, all such communications must be copied to NYSDEC Bureau of Quality Assurance (BQA).

40 CFR 60.46 (b)

40 CFR 60.48c (g)

The owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each day.



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40 CFR 60.7 (b)

This regulation requires the owner or operator to maintain records of the occurrence and duration of any startup, shutdown, or malfunction of the source or control equipment or continuous monitoring system.

40 CFR 60.7 (d)

This condition specifies the required information and format for a summary report form and details when either a summary form and/or excess emissions reports are required.

40 CFR 60.7 (f)

This condition specifies requirements for maintenance of files of all measurements, including continuous monitoring system (CMS), monitoring device, and performance testing measurements; all CMS performance evaluations; all CMS or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices for at least two years.

40 CFR 60.8 (d)

This regulation contains the requirements for advance notification of Performance (stack) testing.

40 CFR 60.8 (e)

This regulation requires the facility to provide appropriate sampling ports, safe platforms and utilities as necessary for Performance (stack) testing.

40 CFR 60.8 (f)

This regulation requires that Performance (stack) tests consist of three runs unless otherwise specified. The rule also designates the allowable averaging methods for the analysis of the results.

40 CFR 63.6595 (a) (1)

This condition lists the compliance dates for existing engines.

40 CFR 63.6625 (f)

This condition reduces the emission of hazardous air pollutants by requiring existing emergency engines greater than or equal to 500 brake horsepower located at a major source of HAP emissions and existing emergency engines located at an area source of HAP emissions to install a non-resettable hour meter.

40 CFR 63.6655 (f)

This regulation requires the owner/operator of a reciprocating internal combustion engine to record the number of hours the engine has been used, in both emergency and non-emergency use.



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40 CFR 75.10 (a)

This section specifies the primary measurement requirements for opacity, and all SO<sub>2</sub>, NO<sub>x</sub>, and CO<sub>2</sub> emissions from the facility. It details how often measurements are to be made and the general type of systems to be used.

40 CFR 75.10 (d)

This section specifies the operating requirements of the monitoring systems. It requires the facility to ensure that all monitoring systems in operation and functioning as specified, at all times fuel is being burned, except as provided in § 75.11(e) and during other specified periods.

40 CFR Part 72

In order to reduce acid rain in the U.S. and Canada, Title IV of the Clean Air Act Amendments of 1990 requires the establishment of a program to reduce emissions of SO<sub>2</sub> and NO<sub>x</sub> (sulfur dioxide and oxides of nitrogen). Fossil fuel burning electric utility companies are a major source of these contaminants in the US. These sources were regulated in a phased approach. Phase I, which began in 1995, requires 110 of the higher-emitting utility plants in the eastern and Midwest states to meet intermediate SO<sub>2</sub> emission limitations. Phase II, which began in 2000, tightens the emission limitations and expands the coverage to most fossil fuel burning utilities. The utilities are given "allowances" which is a limited authorization to emit one ton of SO<sub>2</sub>. The utilities are required to limit SO<sub>2</sub> emissions to the number of allowances they hold. Some can benefit however by reducing their emissions and selling their excess allowances. Part 72 contains the means of implementing this portion of Title IV of the Clean Air Act.

40 CFR Part 97

Cross-State Air Pollution Rule (CSAPR), requires states to significantly improve air quality by reducing power plant emissions that contribute to ozone and/or fine particle pollution in other states.

6 NYCRR 201-6.4

The provisions contained in this Subpart are considered standard solely for the Federal portion of the Title V facility permit.

6 NYCRR 201-6.4 (a)

The provisions contained in this Subpart are considered standard solely for the Federal portion of the Title V facility permit.

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6 NYCRR 201-6.4 (f)

6 NYCRR 201-6.5 (a)

The Department shall specifically designated as not being federally enforceable, any terms and conditions included in the permit that are not required under the act or under any of its applicable requirements.

6 NYCRR 201-7.1

This section of Part 201-7 specifies the criteria that need to be met in order to restrict emissions to avoid Title V or other applicable requirements using federally enforceable permit conditions permit.

6 NYCRR 202-1.3

This regulation requires that any emission testing, sampling and analytical determination used to determine compliance must use methods acceptable to the department. Acceptable test methods may include but are not limited to the reference methods found in 40 CFR Part 60 appendix A and Part 61, appendix B. Alternate methods may be also be used provided they are determined to be acceptable by the department. Finally, unless otherwise specified, all emission test reports must be submitted within 60 days after completion of testing.

6 NYCRR 211.1

This regulation requires that no person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property.

6 NYCRR 225-1.5 (c)

This citation sets the daily and weekly fuel monitoring requirements for subject emission sources.

6 NYCRR 227-1.3 (a)

This regulation prohibits any person from operating a stationary combustion installation which emits smoke equal to or greater than 20% opacity except for one six-minute period per hour of not more than 27% opacity.

6 NYCRR 227-2.4 (c) (1)

Presumptive NOx RACT emission limits for mid-size boilers.

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6 NYCRR 227-2.4 (c) (1) (i)

Existing NO<sub>x</sub> RACT presumptive limit that expires on 6/30/14.

6 NYCRR 227-2.4 (d)

This section includes NO<sub>x</sub> RACT requirements for small boilers, small combustion turbines, and small stationary internal combustion engines.

6 NYCRR 242-1.5

His regulation requires that the facility hold enough carbon dioxide allowances in their carbon dioxide budget at least equal to the amount of carbon dioxide emitted from the facility each year.

6 NYCRR 243-1.6 (a)

This condition requires the facility to acknowledge that they are subject to this CAIR regulation and provide owner and contact information. It also requires them to update this information as it changes or provide supplemental information at the Departments request.

6 NYCRR 243-1.6 (b)

This condition obligates the owners and operators of the facility to comply with the monitoring and reporting requirements of the CAIR regulations.

6 NYCRR 243-1.6 (c)

This citation explains the general provisions of the Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Ozone Season Trading Program. This ozone season NO<sub>x</sub> cap and trade program runs from May 1 through September 30 each year, starting in 2009. Each source shall hold a tonnage equivalent in CAIR NO<sub>x</sub> Ozone Season allowances that is not less than the total tons of NO<sub>x</sub> emissions for the ozone season.

6 NYCRR 243-1.6 (d)

This citation for the Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Ozone Season Trading Program explains some of the penalties that can be imposed on a CAIR NO<sub>x</sub> Ozone Season source that does not surrender enough CAIR NO<sub>x</sub> Ozone Season allowances to cover their NO<sub>x</sub> Ozone Season emissions.

6 NYCRR 243-1.6 (e)

This citation for the Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Ozone Season Trading Program requires that all reports be submitted as required by this program, and that copies of all records and submissions made for this program be kept on site for at least five years.



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6 NYCRR 243-2.1

This citation of the Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Ozone Season Trading Program explains that an CAIR NO<sub>x</sub> Ozone Season designated representative must be selected to submit, sign and certify each submission on behalf of the source for the this program.

6 NYCRR 243-2.4

This condition describes the required elements of the "Certificate of Representation" for the CAIR program and the certifying language required with submissions to the Department.

6 NYCRR 243-8.1

This citation of the Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Ozone Season Trading Program explains that CAIR NO<sub>x</sub> Ozone Season Trading Program sources must install, certify and operate monitoring systems the meet the monitoring, recordkeeping, and reporting requirements in Subpart 6 NYCRR 243-8 and in Subpart H of 40 CFR Part 75.

6 NYCRR 243-8.5 (d)

This citation of the Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Ozone Season Trading Program explains what requirements the quarterly reports must meet.

6 NYCRR 243-8.5 (e)

This citation of the Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Ozone Season Trading Program explains the compliance certification requirements the source must follow for each quarterly report.

6 NYCRR Subpart 242-8

Citation 6NYCRR Part 242-8.5 requires that the record keeping and reporting requirements of 40 CFR Part 75.73 and 6NYCRR Part 242-2.1(e) be followed, that a CO<sub>2</sub> monitoring plan(s) be submitted, that the CO<sub>2</sub> emission monitor(s) be certified, and that CO<sub>2</sub> emissions be reported quarterly in an electronic format.

6 NYCRR Subpart 244-1

This subpart explains the general provisions of the Clean Air Interstate Rule (CAIR) Nitrogen Oxide (NO<sub>x</sub>) Annual Trading Program. The control period for this annual NO<sub>x</sub> cap and trade program runs from January 1 to December 31 each year, starting in 2009. Each source shall hold a tonnage equivalent in CAIR NO<sub>x</sub> allowances that is not less than the total tons of NO<sub>x</sub> emissions for the control period.

6 NYCRR Subpart 244-2

Each Clean Air Interstate Rule (CAIR) NO<sub>x</sub> source shall have one CAIR designated representative and may have one alternate representative. Each submission for the CAIR NO<sub>x</sub> Annual Trading Program shall be submitted, signed, and certified by the CAIR designated representative or the alternate



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representative.

6 NYCRR Subpart 244-8

The owners, operators, and Clean Air Interstate Rule (CAIR) designated representative of a CAIR NOx unit shall comply with the monitoring, recordkeeping, and reporting requirements as provided in Subpart 6 NYCRR Part 244-8 and in 40 CFR Part 75, Subparts F and G. A certified NOx emission monitoring system must be used to measure NOx emissions. NOx emission reports must be certified and submitted quarterly.

6 NYCRR Subpart 245-1

This subpart explains the general provisions of the Clean Air Interstate Rule (CAIR) sulfur dioxide (SO2) Trading Program. The control period for this annual SO2 cap and trade program runs from January 1 to December 31, starting in the year 2010. Each source shall hold a tonnage equivalent in CAIR SO2 allowances that is not less than the total tons of SO2 emissions for the control period.

6 NYCRR Subpart 245-2

Each Clean Air Interstate Rule (CAIR) SO2 source shall have one CAIR designated representative and may have one alternate representative. Each submission for the CAIR SO2 Trading Program shall be submitted, signed, and certified by the CAIR designated representative or the alternate representative.

6 NYCRR Subpart 245-8

The owners, operators, and Clean Air Interstate Rule (CAIR) designated representative of a CAIR SO2 unit shall comply with the monitoring, recordkeeping, and reporting requirements as provided in Subpart 6 NYCRR Part 245-8 and in 40 CFR Part 75, Subparts F and G. A certified SO2 emission monitoring system must be used to measure SO2 emissions. SO2 emission reports must be certified and submitted quarterly.

The owners, operators, and Clean Air Interstate Rule (CAIR) designated representative of a CAIR SO2 unit shall comply with the monitoring, recordkeeping, and reporting requirements as provided in Subpart 6 NYCRR Part 245-8 and in 40 CFR Part 75, Subparts F and G. A certified SO2 emission monitoring system must be used to measure SO2 emissions. SO2 emission reports must be certified and submitted quarterly.

**Compliance Certification**

**Summary of monitoring activities at BETHLEHEM ENERGY CENTER:**

<b>Location Facility/EU/EP/Process/ES</b>	<b>Cond No.</b>	<b>Type of Monitoring</b>
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FACILITY	51	intermittent emission testing
FACILITY	52	intermittent emission testing
FACILITY	53	intermittent emission testing
FACILITY	54	intermittent emission testing

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FACILITY	55	intermittent emission testing
FACILITY	56	intermittent emission testing
FACILITY	57	intermittent emission testing
FACILITY	58	intermittent emission testing
FACILITY	59	intermittent emission testing
FACILITY	60	intermittent emission testing
FACILITY	61	intermittent emission testing
FACILITY	62	intermittent emission testing
FACILITY	63	intermittent emission testing
FACILITY	64	intermittent emission testing
FACILITY	65	intermittent emission testing
FACILITY	66	intermittent emission testing
FACILITY	67	intermittent emission testing
U-00010	97	intermittent emission testing
U-00005/-/P51	91	record keeping/maintenance procedures
U-00010	98	continuous emission monitoring (cem)
U-00010	99	record keeping/maintenance procedures
U-00010	100	record keeping/maintenance procedures
FACILITY	80	record keeping/maintenance procedures
U-00010	102	record keeping/maintenance procedures
U-00010	103	record keeping/maintenance procedures
U-00020	145	record keeping/maintenance procedures
U-00020	146	record keeping/maintenance procedures
FACILITY	82	record keeping/maintenance procedures
FACILITY	83	record keeping/maintenance procedures
FACILITY	22	continuous emission monitoring (cem)
FACILITY	23	continuous emission monitoring (cem)
FACILITY	24	work practice involving specific operations
U-00010	92	continuous emission monitoring (cem)
U-00010/-/CT1	105	intermittent emission testing
U-00010/-/CT1	106	intermittent emission testing
U-00010/-/CT1	107	intermittent emission testing
U-00010/-/CT1	108	continuous emission monitoring (cem)
U-00010/-/CT1	109	continuous emission monitoring (cem)
U-00010/-/CT2	110	intermittent emission testing
U-00010/-/CT2	111	intermittent emission testing
U-00010/-/CT2	112	intermittent emission testing
U-00010/-/CT2	113	continuous emission monitoring (cem)
U-00010/-/CT2	114	continuous emission monitoring (cem)
U-00010/-/CT2	115	continuous emission monitoring (cem)
U-00010/-/CT2	116	continuous emission monitoring (cem)
U-00010/-/CT3	117	intermittent emission testing
U-00010/-/CT3	118	intermittent emission testing
U-00010/-/CT3	119	intermittent emission testing
U-00010/-/CT3	120	continuous emission monitoring (cem)
U-00010/-/CT3	121	continuous emission monitoring (cem)
U-00010/-/CT4	122	intermittent emission testing
U-00010/-/CT4	123	intermittent emission testing
U-00010/-/CT4	124	intermittent emission testing
U-00010/-/CT4	125	continuous emission monitoring (cem)
U-00010/-/CT4	126	continuous emission monitoring (cem)
U-00010/-/CT4	127	continuous emission monitoring (cem)
U-00010/-/CT4	128	continuous emission monitoring (cem)
U-00010/-/CT8	139	continuous emission monitoring (cem)
U-00010/-/CT9	141	continuous emission monitoring (cem)
FACILITY	25	monitoring of process or control device parameters as surrogate
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
U-00010/-/OF1	143	record keeping/maintenance procedures
U-00010/-/OF2	144	record keeping/maintenance procedures
U-00010	93	record keeping/maintenance procedures
U-00010	94	record keeping/maintenance procedures
U-00010	95	record keeping/maintenance procedures

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U-00010/-/CT5	129	continuous emission monitoring (cem)
U-00010/-/CT5	130	continuous emission monitoring (cem)
U-00010/-/CT5	131	continuous emission monitoring (cem)
U-00010/-/CT5	132	continuous emission monitoring (cem)
U-00010/-/CT6	133	continuous emission monitoring (cem)
U-00010/-/CT6	134	continuous emission monitoring (cem)
U-00010/-/CT6	135	continuous emission monitoring (cem)
U-00010/-/CT6	136	continuous emission monitoring (cem)
U-00010/-/CT7	137	continuous emission monitoring (cem)
U-00010/-/CT7	138	continuous emission monitoring (cem)
U-00010/-/CT8	140	continuous emission monitoring (cem)
U-00010/-/CT9	142	continuous emission monitoring (cem)
U-00010	96	continuous emission monitoring (cem)
FACILITY	7	record keeping/maintenance procedures
FACILITY	31	record keeping/maintenance procedures
FACILITY	32	intermittent emission testing
U-00005/-/P51	89	monitoring of process or control device parameters as surrogate
U-00005	88	intermittent emission testing
U-00005/-/P51	90	record keeping/maintenance procedures
FACILITY	151	record keeping/maintenance procedures
FACILITY	152	record keeping/maintenance procedures
U-00010	153	record keeping/maintenance procedures
FACILITY	47	record keeping/maintenance procedures
FACILITY	50	record keeping/maintenance procedures

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**Basis for Monitoring**

A Title V Air Permit application was submitted by Bethlehem Energy Center to operate a 750 megawatt combined cycle power generation facility located in the Town of Bethlehem, Albany County, New York. The facility is classified as a major source as defined by 6 NYCRR Part 201. This facility is subject to 6 NYCRR Parts 243 (NOX Budget), 244 (Acid Deposition NOx Trading), 245 Sulfur Dioxide Trading), Part 257(Air Quality Standards and, 40 CFR Parts 60 (NSPS), 72, 73, 75 (Acid Deposition and Control) and Part 52(PSD). Each rule requires compliance assurance demonstrated by a specified monitoring activity.

Emission monitoring may be of the following types; continuous monitoring, intermittent monitoring usually involving stack testing, work practice monitoring or record keeping. Where the facility operates and maintains a continous emissions monitor (NOx, CO) annual RATA is required.