



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

**Facility Identification Data**

Name: ASTORIA GENERATING STATION

Address: 18-01 20TH AVE

ASTORIA, NY 11105

**Owner/Firm**

Name: ASTORIA GENERATING COMPANY LP

Address: 18-01 20TH AVE

LONG ISLAND CITY, NY 11105-4271, USA

Owner Classification: Corporation/Partnership

**Permit Contacts**

Division of Environmental Permits:

Name: Caitlyn P Nichols

Address: 1 HUNTERS POINT PLZ

47-40 21ST ST

LONG ISLAND CITY, NY 11101

Phone:

Division of Air Resources:

Name: CICYLY T NIRAPPEL

Address: HUNTERS POINT PLAZA

LONG ISLAND CITY, NY 11101

Phone:7184824944

Air Permitting Contact:

Name: NATALIA HERNANDEZ

Address: ASTORIA GENERATING STATION

18-01 20TH AVE GATE # 1

ASTORIA, NY 11105

Phone:7182043918

**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**

Application for renewal of Air Title V Facility.

**Attainment Status**

ASTORIA GENERATING STATION is located in the town of QUEENS in the county of QUEENS.



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

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.)

<b>Criteria Pollutant</b>	<b>Attainment Status</b>
Particulate Matter (PM)	ATTAINMENT
Particulate Matter< 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	SEVERE 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:**

The Astoria Generating Station (AGS) with a total electric generating capacity of approximately 1315 MW, consists of four very large boilers, one small boiler, and one simple cycle combustion turbine.

Emission Unit A-S0001 consists of one natural gas fired 1,795 MMBtu/hr Babcock & Wilcox boiler Boiler 20 (Emission Source 00020) and one natural gas fired auxiliary boiler of 37.8 mmbtu/hr. The emissions are exhausted through one stack (Emission Point 00021).  
Boiler 20 Emission Caps: PM 24.5 tpy, PM-10 14.5 tpy, SO2 39.5 tpy, CO 98 tpy, NOx 110 tpy, auxiliary boiler emission cap: NOx 1.96 tpy.

Emission Unit A-S0002 is a natural gas & residual oil fired 3,984 MMBtu/hr Babcock & Wilcox boiler, Boiler 30 (Emission Source 00030). The emissions from Boiler 30 are exhausted through two different stacks (Emission Points 00031 & 00032); FGR is used for NOx control  
Boiler 30 Emission Caps: CO 1,435 tpy. NOx 1,764 tpy

Emission Unit A-S0003 is a natural gas & residual oil fired 4,074 MMBtu/hr Combustion Engineering boiler, Boiler 40 (Emission Source 00040). The emissions from Boiler 40 are exhausted through two different stacks (Emission Points 00041 & 00042). Boiler 40 permit limits are: NOx= 229.9 tpy, PM2.5 = 32.7 tpy, PM10 = 34.6 tpy, and VOC = 19.1 tpy.

Emission Unit A-S0004 is a natural gas & residual oil fired 4,094 MMBtu/hr Combustion Engineering boiler, Boiler 50 (Emission Source 00050). The emissions from Boiler 50 are exhausted through two different stacks (Emission Points 00051 & 00052)

Emission Unit A-S0005 is a natural gas fired 243 MMBtu/hr GE Model 5000L simple-cycle combustion turbine, GT001 (Emission Source GT001) and has a starter engine (SD1) of 600 bhp. The emissions from GT001 and SD1 are exhausted through one stack (Emission Point GT001)

The facility also includes other sources exempt from permitting:

- Seven emergency diesel generators (<.500 hours per year each)
- Four distillate and residual fuel oil storage tanks (< 300,000 bbls capacity)



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

Ten storage tanks (<10,000 gallons capacity)  
Four horizontal petroleum storage tanks  
One ventilating and exhaust system for laboratory operations.

**Permit Structure and Description of Operations**

The Title V permit for ASTORIA GENERATING STATION

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.

ASTORIA GENERATING STATION is defined by the following emission unit(s):

Emission unit AS0001 - Emission Unit A-S0001 consists of one very large (1,795 MM Btu/hr) Babcock & Wilcox boiler, Boiler 20 (Emission Source 00020), which combusts only natural gas (Process NG3). A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour. Boiler 20 was constructed and began operating on 1/1/1953 in the Boiler House, was removed from operation on 12/31/1993, and was reactivated on 9/1/2000. Boiler 20 is a single furnace with only one stack. Emissions from Boiler 20 are exhausted through one stack, which is identified as Emission Point 00021.

Boiler 20's emission cap is as follows: 24.5 tpy of Particulates, 14.5 tpy of PM-10, 39.5 tpy of Sulfur Dioxide, 98 tpy of Carbon Monoxide, 110 tpy of NOx, 24 tpy of VOC, 0.0003 tpy of Beryllium, and 0.05 tpy of Mercury.

This emission unit also has an auxiliary boiler(37.8 MMBtu/RH) boiler firing natural gas, provides station auxiliary steam and operates only when the four steam boilers are not operating.



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

The auxiliary boiler exhaust gases vent through the existing boiler 20 stack.

Emission unit AS0001 is associated with the following emission points (EP):

00021

Process: 005 is located at Building BOILERHS - Auxiliary Boiler AB002 firing natural gas.

Process: NG3 is located at 1-4, Building BOILERHS - Process NG3 consists of one face fired very large (1,795 MM Btu/hr) Babcock & Wilcox boiler, Boiler 20 (Emission Source 00020) in Emission Unit A-S0001 burning only natural gas. A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour. Boiler 20 was constructed and began operating on 1/1/1953 in the Boiler House, was removed from operation on 12/31/1993, and was reactivated on 9/1/2000. Boiler 20 is a single furnace with only one stack. Emissions from Boiler 20 are exhausted through one stack, which is identified as Emission Point 00021.

Boiler 20 has the following emission limits:

NO<sub>x</sub> - 110 tpy

VOC - 24 tpy

CO - 98 tpy

PM-10 - 14.5 tpy

Particulates - 24.5 tpy

SO<sub>2</sub> - 39.5 tpy

Beryllium - 0.0003 tpy

Mercury - 0.05 tpy

Emission unit AS0002 - Emission Unit A-S0002 consists of one very large (3,984 MM Btu/hr) Babcock & Wilcox boiler, Boiler 30 (Emission Source 00030), which has the capability to burn residual oil (Process RO1) and natural gas (Process NG1) and can fire these fuels in various combinations. A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour. Boiler 30 was constructed and began operating on 9/1/1958 in the Boiler House. Boiler 30 is twin furnace boiler with two stacks/emission points. Emissions from Boiler 30 are exhausted through two different stacks, which are identified as Emission Points 00031 & 00032. Boiler 30 uses Flue Gas Recirculation (FGR) to control NO<sub>x</sub> emissions.

The NO<sub>x</sub> emissions from Boiler 30 are limited to 1,764 tons/yr and the CO emissions from Boiler 30 are limited to 1,435 tons/yr.



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

Emission unit AS0002 is associated with the following emission points (EP):  
00031, 00032

Process: NG1 is located at 1-4, Building BOILERHS - Process NG1 is the combustion of natural gas in Boiler 30 (Emission Source 00030 in Emission Unit A-S0002. This very large boiler is one face fired Babcock & Wilcox boiler and is rated at 3,984 million BTU/hr and covers the combustion of natural gas in this boiler. A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour.

Boiler 30 (Emission Source 00030) has the capability to burn residual oil (Process RO1) and natural gas (Process NG1) and can fire these fuels in various combinations. Boiler 30 (Emission Source 00030) was constructed and began operating on 9/1/1958 in the Boiler House. Emissions from Boiler 30 (Emission Source 00030) are exhausted through two different stacks, which are identified as Emission Points 00031 & 00032. Boiler 30 uses Flue Gas Recirculation (FGR) to control NOx emissions. The NOx emissions from Boiler 30 are limited to 1,764 tons/yr and the CO emissions from Boiler 30 are limited to 1,435 tons/yr.

Process: RO1 is located at 1-4, Building BOILERHS - Process RO1 is the combustion of residual oil in Boiler 30 (Emission Source 00030 in Emission Unit A-S0002. This very large boiler is one face fired Babcock & Wilcox boiler and is rated at 3,984 million BTU/hr and covers the combustion of natural gas in this boiler. A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour.

Boiler 30 (Emission Source 00030) has the capability to burn residual oil (Process RO1) and natural gas (Process NG1) and can fire these fuels in various combinations. Boiler 30 (Emission Source 00030) was constructed and began operating on 9/1/1958 in the Boiler House. Emissions from Boiler 30 (Emission Source 00030) are exhausted through two different stacks, which are identified as Emission Points 00031 & 00032. Boiler 30 uses Flue Gas Recirculation (FGR) to control NOx emissions. The NOx emissions from Boiler 30 are limited to 1,764 tons/yr and the CO emissions from Boiler 30 are limited to 1,435 tons/yr.

Emission unit AS0003 - Emission Unit A-S0003 consists of one very large (4,074 MM Btu/hr) Combustion Engineering, Boiler 40 (Emission Source 00040), which has the capability to burn residual oil (Process RO2) and natural gas (Process NG2) and can fire these fuels in various combinations. A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour. Boiler 40 was constructed and began operating on 9/1/1958 in the Boiler House. Boiler 40 is a twin furnace boiler with two stacks/emission points. Emissions from Boiler 40 are exhausted through two different stacks, which are identified as Emission Points 00041 & 00042.

NOx is controlled using off-stoichiometric(OS) firing. A new burner management system(BMS) will be installed as part of the repair which will provide safe and efficient control of the burners.

Emission unit AS0003 is associated with the following emission points (EP):  
00041, 00042

Process: NG2 is located at 1-4, Building BOILERHS - Process NG2 is the combustion of natural gas in Boiler 40 (Emission Source 00040 in Emission Unit A-S0003. This very large boiler is one tangentially fired Combustion Engineering boiler and is rated at 4,074 million BTU/hr and covers the combustion of natural gas in this boiler. A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour.



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

Boiler 40 (Emission Source 00040) has the capability to burn residual oil (Process RO2) and natural gas (Process NG2) and can fire these fuels in various combinations. Boiler 40 (Emission Source 00040) was constructed and began operating on 9/1/1958 in the Boiler House. Emissions from Boiler 40 (Emission Source 00040) are exhausted through two different stacks, which are identified as Emission Points 00041 & 00042.

Process: RO2 is located at 1-4, Building BOILERHS - Process RO2 is the combustion of residual oil in Boiler 40 (Emission Source 00040 in Emission Unit A-S0003. This very large boiler is one tangentially fired Combustion Engineering boiler and is rated at 4,074 million BTU/hr and covers the combustion of natural gas in this boiler. A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour.

Boiler 40 (Emission Source 00040) has the capability to burn residual oil (Process RO2) and natural gas (Process NG2) and can fire these fuels in various combinations. Boiler 40 (Emission Source 00040) was constructed and began operating on 9/1/1958 in the Boiler House. Emissions from Boiler 40 (Emission Source 00040) are exhausted through two different stacks, which are identified as Emission Points 00041 & 00042.

Emission unit AS0004 - Emission Unit A-S0004 consists of one very large (4,094 MM Btu/hr) Combustion Engineering, Boiler 50 (Emission Source 00050), which has the capability to burn residual oil (Process RO3) and natural gas (Process NG4) and can fire these fuels in various combinations. A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour. Boiler 50 was constructed and began operating on 5/1/1962 in the Boiler House. Boiler 50 is twin furnace boiler with two stacks/emission points. Emissions from Boiler 50 are exhausted through two different stacks, which are identified as Emission Points 00051 & 00052.

Emission unit AS0004 is associated with the following emission points (EP):  
00051, 00052

Process: NG4 is located at 1-4, Building BOILERHS - Process NG4 is the combustion of natural gas in Boiler 50 (Emission Source 00050 in Emission Unit A-S0004. This very large boiler is one tangentially fired Combustion Engineering boiler and is rated at 4,094 million BTU/hr and covers the combustion of natural gas in this boiler. A very large boiler is defined as a boiler with a maximum heat input capacity greater than 250 million Btu per hour.

Boiler 50 (Emission Source 00050) has the capability to burn residual oil (Process RO3) and natural gas (Process NG4) and can fire these fuels in various combinations. Boiler 50 (Emission Source 00050) was constructed and began operating on 5/1/1962 in the Boiler House. Emissions from Boiler 50 (Emission Source 00050) are exhausted through two different stacks, which are identified as Emission Points 00051 & 00052.

Process: RO3 is located at 1-4, Building BOILERHS - Process RO3 is the combustion of residual oil in Boiler 50 (Emission Source 00050 in Emission Unit A-S0004. This very large boiler is one tangentially fired Combustion Engineering boiler and is rated at 4,094 million BTU/hr and covers the combustion of natural gas in this boiler. A very large boiler is defined as a boiler with a maximum heat input capacity  
Boiler 50 (Emission Source 00050) has the capability to burn residual oil (Process RO3) and natural gas (Process NG4) and can fire these fuels in various combinations. Boiler 50 (Emission Source 00050) was



New York State Department of Environmental Conservation  
Permit Review Report

Permit ID: 2-6301-00185/00009

Renewal Number: 3

04/27/2018

constructed and began operating on 5/1/1962 in the Boiler House. Emissions from Boiler 50 (Emission Source 00050) are exhausted through two different stacks, which are identified as Emission Points 00051 & 00052.

Emission unit AS0005 - Emission Unit A-S0005 consists of one 243 MM Btu/hr General Electric Model 5000L simple cycle combustion turbine, GT001 (Emission Source GT001), utilized to generate electricity. The combustion turbine burns only natural gas (Process GTN) and has a 600 hp diesel starter engine. Combustion Turbine GT001 was constructed and began operating on 7/1/1967 in the Gas Turbine Facility (GTFAC). Emissions from GT001 and starter engine are exhausted through one stack, which is identified as Emission Point GT001.

Emission unit AS0005 is associated with the following emission points (EP):  
GT001

Process: GTN is located at Building GTFAC - Process GTN is the combustion of natural gas in the General Electric Model 5000L simple cycle combustion turbine GT001 (Emission Source GT001) in Emission Unit A-S0005. This combustion turbine is rated at 243 MM BTU/hr and is utilized to generate electricity.

The combustion turbine burns only natural gas (Process GTN) and has a diesel starter engine. Combustion Turbine GT001 was constructed and began operating on 7/1/1967 in the Gas Turbine Facility (GTFAC). Emissions from GT001 are exhausted through one stack, which is identified as Emission Point GT001.

Process: SD1 600 Hp Starter engine(for GT001) burning Ultral low sulfur diesel( 0.0015%% sulfur by weight). The starter engine is exhausted through the same stak as GT001.

**Title V/Major Source Status**

ASTORIA GENERATING STATION is subject to Title V requirements. This determination is based on the following information:

The Astoria generating Station is a major facility because the potential emissions of particulates, sulfur dioxide, oxides of nitrogen, carbon monoxide, and volatile organic compounds are greater than the major source thresholds (100 tons/year for both particulates and sulfur dioxide, 25 tons/year for both oxides of nitrogen and volatile organic compounds, and 100 tons/year for carbon monoxide).

**Program Applicability**

The following chart summarizes the applicability of ASTORIA GENERATING STATION with regards to the principal air pollution regulatory programs:

Regulatory Program	Applicability
PSD	NO





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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

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, 6 NYCRR 231-7, 231-8) - 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 231-5, 231-6) - requirements which pertain to major stationary 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, 6 NYCRR 200.10) - 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, 6 NYCRR 200.10) - 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, 6 NYCRR 200.10) - 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, 6 NYCRR 201-6) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

**Title VI** Stratospheric Ozone Protection (40 CFR 82, Subpart A thru G, 6 NYCRR 200.10) - 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 212-3, 226, 227-2, 228, 229, 230, 232, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by





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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

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, 6 NYCRR 200.10) - 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 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**

1-01-004-01

EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION

ELECTRIC UTILITY BOILER - RESIDUAL OIL Grade 6 Oil: Normal Firing

1-01-004-04

EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION

ELECTRIC UTILITY BOILER - RESIDUAL OIL Grade 6 Oil: Tangential Firing

1-01-006-01

EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION

ELECTRIC UTILITY BOILER - NATURAL GAS Boilers > 100 MBtu/Hr except Tangential

1-01-006-04

EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION

ELECTRIC UTILITY BOILER - NATURAL GAS Tangentially Fired Units

1-02-006-02

EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - NATURAL GAS

10-100 MMBtu/Hr

2-01-002-01

INTERNAL COMBUSTION ENGINES - ELECTRIC GENERATION



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

**Permit ID: 2-6301-00185/00009  
Renewal Number: 3  
04/27/2018**

2-02-001-01

ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE  
- NATURAL GAS  
Turbine  
INTERNAL COMBUSTION ENGINES - INDUSTRIAL  
INDUSTRIAL INTERNAL COMBUSTION ENGINE -  
DISTILLATE OIL(DIESEL)  
Turbine

**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 for each contaminant that is displayed represents the facility-wide PTE in tons per year (tpy) or pounds per year (lbs/yr). In some instances the PTE represents a federally enforceable emissions cap or limitation for that contaminant. The 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	PTE lbs/yr	PTE tons/yr	Actual lbs/yr	Actual tons/yr
007440-41-7	BERYLLIUM	20.3			
000630-08-0	CARBON MONOXIDE	4591086			
007439-92-1	LEAD	1079			
007439-97-6	MERCURY	180			
0NY210-00-0	OXIDES OF NITROGEN	10463188			
0NY075-00-0	PARTICULATES	2969171			
0NY075-02-5	PM 2.5	1480666			
0NY075-00-5	PM-10	2103812			
007446-09-5	SULFUR DIOXIDE	22547139			
007664-93-9	SULFURIC ACID	218468519			
0NY100-00-0	TOTAL HAP	386446			
0NY998-00-0	VOC	466252.3			

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

**Item A: 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



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

6 NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.

**Item B: 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 C: 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 D: 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 E: 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.

**Item F: 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 G: 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 H: 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 I: 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



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

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 J: 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 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.



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

**Item K: 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 L: 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: 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 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



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

Permit ID: 2-6301-00185/00009

Renewal Number: 3

04/27/2018

proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement. item\_02

**Item B: 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 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
FACILITY	ECL 19-0301	77	Powers and Duties of the Department with respect to air pollution control
A-S0001/-/005/AB002	40CFR 60-Dc.48c(a)	50	Reporting and Recordkeeping Requirements.
A-S0001/-/005/AB002	40CFR 60-Dc.48c(g)	51	Reporting and Recordkeeping Requirements.
A-S0001/-/005/AB002	40CFR 60-Dc.48c(i)	52	Reporting and Recordkeeping Requirements.
FACILITY	40CFR 63-DDDDD	34, 35	Boilers and Process Heaters Major Source NESHAP rule
FACILITY	40CFR 63-UUUU.9983(c)	36	Coal and Oil Fired EGU NESHAP - Sources Not Affected
FACILITY	40CFR 63-ZZZZ	37, 38	Reciprocating Internal Combustion Engine (RICE) NESHAP
FACILITY	40CFR 68	19	Chemical accident prevention provisions
FACILITY	40CFR 72	39	Permits regulation
FACILITY	40CFR 75	40	Continuous emission monitoring
FACILITY	40CFR 82-F	20	Protection of Stratospheric Ozone - recycling and emissions reduction



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

FACILITY	40CFR 97-AAAAA.406	41	Transport Rule (TR) NOx Annual Trading Program Standard Requirements
FACILITY	40CFR 97-BBBBB.506	42	Transport Rule (TR) NOx Ozone Season Trading Program Standard Requirement
FACILITY	40CFR 97-CCCCC.606	43	Transport Rule (TR) SO2 Group 1 Trading Program Standard Requirements
FACILITY	6NYCRR 200.6	1, 21, 22, 23	Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	10	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	78	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 air
FACILITY	6NYCRR 201-3.2(a)	13	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-3.3(a)	14	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6	24, 44, 45	Title V Permits and the Associated Permit 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 Compliance Monitoring
FACILITY	6NYCRR 201-6.4(c)(2)	4	Records of Monitoring, Sampling and Measurement Reporting
FACILITY	6NYCRR 201- 6.4(c)(3)(ii)	5	Requirements - Deviations and Noncompliance
FACILITY	6NYCRR 201-6.4(d)(4)	25	Compliance Schedules - Progress Reports
FACILITY	6NYCRR 201-6.4(e)	6	Compliance Certification
FACILITY	6NYCRR 201-6.4(f)(6)	17	Off Permit Changes
FACILITY	6NYCRR 201-7	26, 46	Federally Enforceable Emissions Caps
FACILITY	6NYCRR 202-1.1	18	Required emissions tests.
FACILITY	6NYCRR 202-2.1	7	Emission Statements - Applicability
FACILITY	6NYCRR 202-2.5	8	Emission Statements - record keeping requirements.
FACILITY	6NYCRR 207	27	Control Measures for





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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

FACILITY	6NYCRR 211.1	28	an Air Pollution Episode
FACILITY	6NYCRR 215.2	9	General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 225-1.2(d)	29	Open Fires - Prohibitions
FACILITY	6NYCRR 225-1.2(h)	30	Sulfur-in-Fuel Limitations
FACILITY	6NYCRR 225-1.5(c)	31	Sulfur-in-Fuel Limitations
A-S0002/-/RO1/00030	6NYCRR 227.2(b)(1)	60	Monitoring Requirements
A-S0003/-/RO2/00040	6NYCRR 227.2(b)(1)	68	Particulate emissions.
A-S0004/-/RO3/00050	6NYCRR 227.2(b)(1)	72	Particulate emissions.
FACILITY	6NYCRR 227-1.3	32	Particulate emissions.
A-S0002/00031	6NYCRR 227-1.3	61	Smoke Emission Limitations.
A-S0002/00032	6NYCRR 227-1.3	62	Smoke Emission Limitations.
A-S0003/00041	6NYCRR 227-1.3	69	Smoke Emission Limitations.
A-S0003/00042	6NYCRR 227-1.3	70	Smoke Emission Limitations.
A-S0004/00051	6NYCRR 227-1.3	73	Smoke Emission Limitations.
A-S0004/00052	6NYCRR 227-1.3	74	Smoke Emission Limitations.
A-S0001	6NYCRR 227-1.3(a)	47	Smoke Emission Limitations.
A-S0001/-/005/AB002	6NYCRR 227-2.4(c)	49	Mid-size boilers.
FACILITY	6NYCRR 227-2.5(b)	33	System averaging plan.
A-S0005	6NYCRR 227-2.6	75, 76	Testing, monitoring, and reporting requirements
A-S0001	6NYCRR 227-2.6(a)(1)	48	Emission source monitoring procedure for very large boilers.
A-S0002	6NYCRR 227-2.6(a)(1)	59	Emission source monitoring procedure for very large boilers.
A-S0003	6NYCRR 227-2.6(a)(1)	67	Emission source monitoring procedure for very large boilers.
A-S0004	6NYCRR 227-2.6(a)(1)	71	Emission source monitoring procedure for very large boilers.
FACILITY	6NYCRR 242-1.5	79, 80, 81	CO2 Budget Trading Program - Standard requirements

**Applicability Discussion:**

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



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

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.

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



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

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, 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



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

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 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 there 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, ASTORIA GENERATING STATION has been determined to be subject to the following regulations:

40 CFR 60.48c (a)

This regulation requires the owner and operator of each affected facility to submit notification of the date of construction or reconstruction, anticipated startup, and actual startup of the facility. The notification must include the following information:

- (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
- (2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR 60.42c., or 40 CFR 60.43c.
- (3) The annual capacity factor at which the owner or operator anticipates operating the affected



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

facility based on all fuels fired and based on each individual fuel fired.

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.

40 CFR 60.48c (i)

This regulation requires the source owner or operator to retain all records for a minimum of two years for compliance with the NSPS. This does not supercede any requirement that is more stringent, including the Title V requirement to maintain records for for a minimum of 5 years.

40 CFR 63.9983 (c)

40 CFR 97.406

This condition provides the general requirements for implementing EPAs Transport Rule (TR) 40 CFR Part 97, Subpart AAAAA; intended to reduce the interstate transport of fine particulate matter and ozone. This particular condition requires facilities to measure and report their emissions of Nitrogen Oxide (NOx) and to hold TR annual NOx allowances sufficient to cover these emissions. Commonly referred to as a budget trading program, each State has an established 'budget' of emissions that are distributed or sold to facilities, which, in turn, can only emit as much as they hold in allowances.

40 CFR 97.506

This condition provides the general requirements for implementing EPAs Transport Rule (TR) 40 CFR Part 97, Subpart BBBBB; intended to reduce the interstate transport of fine particulate matter and ozone. This particular condition requires facilities to measure and report their emissions of Nitrogen Oxide (NOx) during the ozone season (May through September) and to hold TR ozone season NOx allowances sufficient to cover these emissions. Commonly referred to as a budget trading program, each State has an established 'budget' of emissions that are distributed or sold to facilities, which, in turn, can only emit as much as they hold in allowances.

40 CFR 97.606

This condition provides the general requirements for implementing EPAs Transport Rule (TR) 40 CFR Part 97, Subpart CCCCC; intended to reduce the interstate transport of fine particulate matter and ozone. This particular condition requires facilities to measure and report their emissions of sulfur dioxide (SO2) annually and to hold TR annual SO2 allowances sufficient to cover these emissions. Commonly referred to as a budget trading program, each State has an established 'budget' of emissions that are distributed or sold to facilities, which, in turn, can only emit as much as they hold in allowances.



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

40 CFR Part 63, Subpart DDDDD

This subpart establishes national emission limits and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP emissions. It also establishes requirements to demonstrate initial and continuous compliance with the emission limits and work practice standards.

40 CFR Part 63, Subpart ZZZZ

This regulation defines performance standards for stationary reciprocating internal combustion engines.

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 75

Part 75 establishes the requirements for the monitoring, record keeping, and reporting for sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon dioxide (CO<sub>2</sub>) emissions and other data to be gathered by facilities affected by the Acid Rain Program

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 225-1.2 (d)

Sulfur-in-fuel limitations that fire residual oil in the downstate after July 1, 2014.



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

6 NYCRR 225-1.2 (h)

Sulfur-in-fuel limitation for the firing of distillate oil on or after July 1, 2016.

6 NYCRR 225-1.5 (c)

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

6 NYCRR 227.2 (b) (1)

This regulation is from the 1972 version of Part 227 and still remains as part of New York's SIP. The rule establishes a particulate limit of 0.10 lbs/mmBtu based on a 2 hour average emission for any oil fired stationary combustion installation.

6 NYCRR 227-1.3

This regulation requires a limitation and compliance monitoring for opacity from a stationary combustion installation.

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)

Emission limits for mid-size boilers.

6 NYCRR 227-2.5 (b)

System averaging plan NOx RACT compliance option.

6 NYCRR 227-2.6

This regulation establishes the compliance testing, monitoring, and reporting requirements for NOx RACT affected stationary combustion installations.

6 NYCRR 227-2.6 (a) (1)

6 NYCRR 242-1.5





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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

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 Part 207

This regulation requires the owner or operator to submit an episode action plan to the Department in accordance with the requirements of 6NYCRR Part 207. The plan must contain detailed steps which will be taken by the facility to reduce air contaminant emissions during each stage of an air pollution episode. Once approved, the facility shall take whatever actions are prescribed by the episode action plan when an air pollution episode is in effect.

6 NYCRR Subpart 201-7

This regulation sets forth an emission cap that cannot be exceeded by the facility.

**Compliance Certification**

**Summary of monitoring activities at ASTORIA GENERATING STATION:**

<b>Location Facility/EU/EP/Process/ES</b>	<b>Cond No.</b>	<b>Type of Monitoring</b>
A-S0001/-/005/AB002	50	record keeping/maintenance procedures
A-S0001/-/005/AB002	51	record keeping/maintenance procedures
A-S0001/-/005/AB002	52	record keeping/maintenance procedures
FACILITY	36	record keeping/maintenance procedures
FACILITY	39	record keeping/maintenance procedures
FACILITY	40	record keeping/maintenance procedures
FACILITY	41	record keeping/maintenance procedures
FACILITY	42	record keeping/maintenance procedures
FACILITY	43	record keeping/maintenance procedures
FACILITY	21	monitoring of process or control device parameters as surrogate
FACILITY	22	monitoring of process or control device parameters as surrogate
FACILITY	23	monitoring of process or control device parameters as surrogate
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
A-S0001/-/NG3/00020	53	continuous emission monitoring (cem)
A-S0001/-/NG3/00020	54	continuous emission monitoring (cem)
A-S0001/-/NG3/00020	55	intermittent emission testing
A-S0001/-/NG3/00020	56	monitoring of process or control device parameters as surrogate
A-S0001/-/NG3/00020	57	monitoring of process or control device parameters as surrogate
A-S0001/00021/005/AB002	58	monitoring of process or control device parameters as surrogate
A-S0003	63	monitoring of process or control device parameters as surrogate
A-S0003	64	monitoring of process or control device parameters as surrogate
A-S0003	65	monitoring of process or control device parameters as surrogate
A-S0003	66	continuous emission monitoring (cem)
FACILITY	7	record keeping/maintenance procedures



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

FACILITY	29	work practice involving specific operations
FACILITY	30	work practice involving specific operations
FACILITY	31	record keeping/maintenance procedures
A-S0002/-/RO1/00030	60	intermittent emission testing
A-S0003/-/RO2/00040	68	intermittent emission testing
A-S0004/-/RO3/00050	72	intermittent emission testing
FACILITY	32	record keeping/maintenance procedures
A-S0002/00031	61	continuous emission monitoring (cem)
A-S0002/00032	62	continuous emission monitoring (cem)
A-S0003/00041	69	continuous emission monitoring (cem)
A-S0003/00042	70	continuous emission monitoring (cem)
A-S0004/00051	73	continuous emission monitoring (cem)
A-S0004/00052	74	continuous emission monitoring (cem)
A-S0001	47	monitoring of process or control device parameters as surrogate
A-S0001/-/005/AB002	49	intermittent emission testing
FACILITY	33	record keeping/maintenance procedures
A-S0005	75	record keeping/maintenance procedures
A-S0005	76	record keeping/maintenance procedures
A-S0001	48	record keeping/maintenance procedures
A-S0002	59	record keeping/maintenance procedures
A-S0003	67	record keeping/maintenance procedures
A-S0004	71	record keeping/maintenance procedures
FACILITY	80	record keeping/maintenance procedures
FACILITY	81	record keeping/maintenance procedures

**Basis for Monitoring**

This facility is subject to the requirements of Title V. The facility is required, under the provisions of 6 NYCRR Subpart 201-6, to submit semiannual compliance reports and an annual Compliance Certification. This facility has to comply with the following monitoring conditions:

**6NYCRR Part 6.5(4)(3)(ii):** Facility-wide condition that applies to monitoring conditions in all Title V Permits. All facilities that are subject to the Title V requirements must submit reports of any required monitoring to the NYSDEC every six months.

**6NYCRR Part 201-6.4(e):** Facility-wide record keeping requirement that applies to all Title V facilities. These facilities must submit an annual compliance certification to the NYSDEC and the USEPA.

**6NYCRR Part 202-2.1:** This condition applies to all Title V facilities and these facilities must submit an annual emission statement by April 15th of each year.

**6 NYCRR Part 200.6:** The facility-wide SO<sub>2</sub> emissions cap is limited to 3,120 pounds per hour based on a 3-hour average, 8,935.2 tons per year based on a 24-hour average and 2,040 pounds per hour based on a 24-hour average.

**6 NYCRR Part 201-7, Capping out of 40 CFR 52-A.21:** Emission Unit A-S0001, Boiler 20 has a PM-10 emission limit of 29,000 pounds per year on a 12-month



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

rolling basis, Particulates emission limit of 49,000 pounds per year on a 12-month rolling basis. Facility is required to conduct a Particulates stack testing once during the term of the permit to verify compliance. Sulfur Dioxide emissions are limited to 79,000 pounds per year on a 12-month rolling basis.

**6 NYCRR Part 201-7, Capping out of 40 6 NYCRR part 231-2:** Emission Unit A-S0001- Boiler 20, NO<sub>x</sub> and CO emissions are limited to 110 tpy and 98 tpy respectively. Facility is required to operate CEMS to show compliance with the NO<sub>x</sub> and CO limits on a 365 day rolling basis

**6 NYCRR Part 201-7, Capping out of 6 NYCRR 231-2: Emission Unit A-S0002, Boiler 30** - The combined NO<sub>x</sub> Emissions from Emission Points 00031 & 00032 from are limited to 1,764 ton per 365-day period. The NO<sub>x</sub> emissions from Emission Points 00031 & 00032 are to be continuously monitored and recorded using Part 75 certified CEMS. The combined CO emissions from Emission Points 00031 & 00032 from Boiler 30 are limited to 1,435 ton per 365-day period. Quantities of fuels fired are to be recorded daily.

**NYCRR Part 201-7 Capping out of NYCRR Part 231-6:** Auxiliary boiler project emission potentials are less than any 231-6 applicable significant project thresholds. Boiler AB002 operation hours are limited to 2500 hr per year, thus the NO<sub>x</sub> will be limited to 1.96 tpy (< 2.5 tpy threshold.) Facility is required to perform NO<sub>x</sub> emission stack testing once during the term of the permit.

**6 NYCRR Part 225-1.2(d):** The sulfur content in the residual fuel oil used shall not exceed 0.30 % by weight.

**6 NYCRR Part 225-1.2(h):** The sulfur content in the distillate fuel oil used shall not exceed 0.0015% by weight.

**6 NYCRR Part 225-1.5 (c):** The facility is to record continuously and maintain the daily fuel usage, the average daily electrical output and hourly generation data. Records of the gross heat content and ash content of each fuel delivery are to be maintained at the facility.

**6 NYCRR Part 227-1.3:** COMS will be operated continuously on Emission points 00031, 00032, 00041, 00042, 00051 & 00052 in accordance with Appendix B of 40 CFR Part 60. The facility is to operate Boilers 30, 40 & 50 in accordance with these boiler's opacity related equipment and preventive maintenance. Emission Unit A-S0001 and Emission point 00021 for Boiler 20, the opacity is monitored to verify compliance with the 20 % limit.



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

Permit ID: 2-6301-00185/00009

Renewal Number: 3

04/27/2018

**6 NYCRR Part 227-2.4(c)** NOX RACT limit for mid-size auxiliary boiler is 0.05. Facility is required to perform emission testing using Department approved stack test protocol, once during the term of the permit.

**6 NYCRR Part 227-2.5(b):** The facility's system-wide NO<sub>x</sub> averaging of NO<sub>x</sub> emissions from its Astoria, Gowanus, and Narrows generating stations must be performed in accordance with the most current version of the NOX RACT System Averaging Plan dated October 2017 . Boilers 20, 30, 40 and 50, combustion turbine GT001 and starter RICE are included in the NO<sub>x</sub> RACT averaging plan. NO<sub>x</sub> emissions from Astoria Generating Station Boilers 20, 30, 40, and 50) will be monitored continuously using Part 75 certified CEMS. NO<sub>x</sub> emissions from the Astoria Generating Station combustion turbine (GT001) as well as the Gowanus and Narrows Generating Stations will be calculated using hourly heat inputs and tested NO<sub>x</sub> emission rates. For RICE starter, AP42 Section 3.3 (10/96) emission factor 0.031 lb/p-hr (4.41 lb/mmbtu) is used.

**6 NYCRR Part 227.2(b)(1):** Boiler 30 in Emission Unit A-S0002, Process RO1 and Emission Source 00030; Boiler 40 in Emission Unit A-S0003, Process RO2 and Emission Source 00040; Boiler 50 in Emission Unit A-S0004, Process RO3 and Emission Source 00050. The facility is required to conduct Particulate stack testing once during the term of the permit to verify compliance with the 0.10 pounds per million Btu.

**6 NYCRR 227-2.6:** Emission Unit A-S0005, Starter Engine. In lieu of performing a stack on the Starter Engine associated with the Combustion Turbine, a log must be kept which lists the dates of operation of the Starter Engine and the duration of each occurrence. The log must be maintained at the facility and submitted to the Department with the semi-annual report.

**6 NYCRR Part 227-2.6 :** The Combustion Turbine (Emission Source GT001) in Emission Unit A-S0005 for NO<sub>x</sub>: The facility is required to conduct stack testing once during the term of the permit to verify compliance of NO<sub>x</sub> emissions from the Combustion Turbine with the most current version of the system-wide averaging plan (), submitted by the facility.

**6 NYCRR Parts 242:** Four very large boilers at Astoria generating station are subject to the CO<sub>2</sub> Budget Trading Program and are subject to the monitoring, recordkeeping, and reporting requirements

**40 CFR Part 72:** The facility is subject to the Title IV Acid Rain regulations found in 40 CFR Parts 72, 73, 75, 76, 77 & 78. The Acid Rain Permit is an attachment to this Title V permit. As per Title IV permit, the facility is required to have sufficient



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

**Permit ID: 2-6301-00185/00009**

**Renewal Number: 3**

**04/27/2018**

SO<sub>2</sub> allowance in its possession to cover the SO<sub>2</sub> emissions from the facility. This facility must also submit reports as required in the Title IV permit.

With a previous permit, Mod (Ren 2 Mod 1) Boiler 40 air emissions are limited, following an extensive repair to the Boiler 40 due to a damage. 6 NYCRR Part 231-6 & PSD applicability analysis were performed and facility limited the Boiler 40 emissions below the baseline emissions, and thus resulted in zero net increase of emissions. Boiler 40 permit emission limits: NO<sub>x</sub> = 229.9 tpy, PM<sub>2.5</sub> = 32.7tpy, PM<sub>10</sub> = 34.6 tpy, and VOC = 19.1tpy.