





**New York State Department of Environmental Conservation**  
**Facility DEC ID: 2630100072**

year and distillate oil for up to 720 hours/year. The duct burners will only fire natural gas. Distillate fuel oil will be stored in existing tanks on site. The four (4) combustion turbines produce electricity and exhaust to the HRSGs. The steam that is produced in the HRSGs is used to drive the steam turbines to produce additional electricity. Low temperature steam that exhausts from the steam turbines flows into the air-cooled condensers. Condensate from the air-cooled condensers is returned to the HRSGs. The facility technology is referred to as combined-cycle because electric power is generated in both gas and steam turbines resulting in a highly efficient process of fuel utilization. The Standard Industrial Code for this facility is 4911- Electrical Services (establishments engaged in the generation, transmission, and/or distribution of electric energy for sale).

Astoria Energy LLC consists of one 99 MM Btu/hr auxiliary boiler (Emission Source BOIL1) and four (4) GE Combustion Turbine units (Emission Sources OT001, OT002, OT003 & OT004) each rated at 2,047 MM Btu/hr (Emission Unit U-00001), each with supplemental firing duct burners of 388 MM Btu/hr heat input each (Emission Sources 00DB1, 00DB2, 00DB3 & 00DB4). Two of the four (4) combustion turbines (Emission Sources OT001 & OT002) and a single Alstom Steam Turbine were constructed on August 1, 2004 and began natural gas commercial operation on natural gas on May 21, 2006 after successfully completing the required stack test on natural gas (Phase 1 of the project). The same two combustion turbines, Turbine 1 & Turbine 2 (Emission Sources OT001 & OT002) first fired low sulfur distillate oil on December 16 and December 19, 2006; respectively. As of December 5, 2007, commissioning of low sulfur distillate oil has not yet been completed. As of December 5, 2007, the other two combustion turbines (Emission Sources OT003 & OT004), the single Steam Turbine, and the auxiliary boiler (Emission Source BOIL1) have not been constructed yet (Phase 2 of the project). Each turbine is equipped with a dry low NO<sub>x</sub> burner (Emission Controls 0DLN1, 0DLN2, 0DLN3 & 0DLN4). In order to reduce nitrogen oxides (NO<sub>x</sub>) emissions, each turbine is equipped with SCR - selective catalytic reduction (Emission Controls 0SCR1, 0SCR2, 0SCR3 & 0SCR4) in the HRSG design. Also, in order to reduce carbon monoxide (CO) emissions and volatile organic compounds (VOC), each turbine is equipped with an oxidation catalyst (Emission Controls 00CO1, 00CO2, 00CO3 & 00CO4) in the HRSG design. Control of the ammonia feed rate will be based on the NO<sub>x</sub> and fuel flow and in order to control the NO<sub>x</sub> emissions when firing distillate oil, water injection (Emission Control 0WI01, 0WI02, 0WI03 & 0WI04) will be used. This configuration represents Best Available Control Technology (BACT). The proposed pollution control equipment will also result in the Lowest Achievable Emission Rate (LAER) for NO<sub>x</sub>, CO and volatile organic compounds (VOC). The four (4) combustion turbines will fire natural gas as the primary fuel with duct firing (Process P01), without duct firing (Process P11) and distillate fuel oil which has a sulfur limit of 0.033% by weight without duct firing (Process P10) and with duct firing (Process P12). The turbines fire natural gas for up to 8,760 hours/year and distillate oil for up to 720 hours/year. The duct burners only fire natural gas. The emissions from the four turbines/duct burners exhaust through one common stack, identified as Emission Point 00004 with four (4) separate flues. The same stack will be used for the 99 MM Btu/hr auxiliary boiler (Emission Source BOIL1). Emission Unit U-00001 also consists of a 99 MM Btu/hr auxiliary boiler which has not been constructed yet. The auxiliary boiler will only fire natural gas (Process P05) for up to 900 hours/year. The estimated annual consumption for the boiler is 88.8 MM cu ft/yr of natural gas. The emissions from the boiler exhaust through one stack identified as Emission Point 00004 (the same stack as the four turbines). The facility has a second emission unit (U-00002) for the 300 bhp diesel fire pump (emission source 00DFP). The auxiliary boiler has not been constructed yet. The diesel fire pump will operate on oil (Process P22). The diesel fire pump is expected to operate up to 500 hours/year. The emissions from the diesel fire pump exhaust through one stack identified as Emission Point 00005. The potential emissions of major air pollutants from this facility will exceed the major source thresholds for all of the PSD (Prevention of Significant Deterioration) regulated pollutants. As part of the application, the applicant provided a control technology analysis for the various pollutants based on the area's attainment status and the potential emissions from the facility. The facility is located in a severe non-attainment



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area for ozone. Oxides of Nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOCs) are precursors to ozone formation and are treated as non-attainment pollutants, even though the area is in attainment for NO<sub>x</sub>. Since the original permit application was filed, all of metropolitan New York City area (project site) has been reclassified as attainment for carbon monoxide. Therefore, the facility will need to meet the more stringent lowest achievable emission rate (LAER) requirements for the emissions of NO<sub>x</sub>, VOC and CO. The NO<sub>x</sub> emissions will be reduced with SCR - selective catalytic reduction in the HRSG design of the turbine. The emissions of VOC and CO will be controlled through the use of an oxidation catalyst equipped in the HRSG design of the turbine. When firing distillate oil, NO<sub>x</sub> emissions are controlled through water injections and SCR in the HRSG design of the turbine. The emissions of particulate matter (PM/PM-10) are controlled through the use of clean burning fuels (natural gas and distillate oil). The emissions of sulfur dioxide (SO<sub>2</sub>) and sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>) are controlled through the use of low sulfur fuels (natural gas and low sulfur distillate oil). The emissions of ammonia are based on the NO<sub>x</sub> emission and the fuel flow and are controlled by water injection and efficient use of the SCR.

There is no Total Phase II SO<sub>2</sub> Allowances from Table 2 of 40 CFR 73 for 2000-2009 or for 2010 and thereafter for Astoria Energy LLC.

The Title V Permit contains a complete listing of the applicable Federal, State and compliance monitoring requirements for the proposed facility, its emission units and emission points. The facility is subject to the provisions of Title V facility specified under 6NYCRR 201-6 and to the provisions of Title IV (Phase II Acid Rain) in addition to the following regulations and conditions:

1. The facility is required to comply with LAER (Lowest Achievable Emission Rate) by meeting the emission limits listed below under 6NYCRR 231-2 for NO<sub>x</sub>, CO and VOC. All emission limits are based on a one-hour average with the exception of the NO<sub>x</sub> emission limit, which is based on a 3-hour block average.
2. The facility is required to comply with BACT (Best Available Control Technology) by meeting the emission limits listed below under 40 CFR 52-21.A for PM/PM 10, Sulfuric Acid and Ammonia.
3. The facility is required to comply with the NO<sub>x</sub> RACT requirements for combined-cycle combustion turbines when firing oil and gas in 6NYCRR 227-2.4(e)(2)(ii). Also, the facility has to comply with the NO<sub>x</sub> RACT requirements for small boilers.
4. The auxiliary boiler is subject to 40 CFR Subpart Dc, New Source Performance Standards (NSPS) for Small Industrial Commercial Steam Generating Units. Also, the facility has to comply with the requirements for emission testing, emission monitoring, record keeping and reporting as in 40 CFR 60, NSPS.
5. The facility is required to comply with the requirements of 40 CFR 60 Subpart GG - Standards of Performance for Stationary Gas Turbines for SO<sub>2</sub> and NO<sub>x</sub> limits in Parts 332, 333, 334 and 335.
6. The facility is required to comply with the 0.033 % by weight sulfur limit in the distillate oil and with the 20 grains sulfur limit in the natural gas.
7. Demonstration of continuous compliance with the PSD permit limits will not be required until completion of the PSD compliance testing, or within 180 days of startup, whichever date comes first. However, the permittee shall take all reasonable steps to minimize emissions during startup and equipment testing prior to completion of compliance testing.

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8. The facility is required to comply with the following turbine emission limits according to 6NYCRR 231-2 (New Source Review) and 40 CFR 52-A.21 (PSD - Prevention of Significant Deterioration):

Pollutant	Emission Limit when firing gas	Emission Limit when firing oil
	(Processes P01 & P11)	(Processes P10 & P12)
CO	1.5 ppm	4 ppm
PM-10	0.01 lb/mmBtu	0.04 lb/mmBtu
SO2	0.0065 lb/mmBtu	0.034 lb/mmBtu
H2SO4	0.001 lb/mmBtu	0.0152 lb/mmBtu
NOx	2 ppm	6 ppm
VOC	0.003 lb/mmBtu	0.007 lb/mmBtu
NH3 slip	5 ppm	5 ppm

9. The facility is required to comply with the following boiler emission limits:

Pollutant	Emission Limit when firing gas	Emission Limit when firing oil
	(Process P05)	(Process P05)
NOx	1.09 lb/hr	0.011 lb/mmBtu
CO	1.98 lb/hr	0.020 lb/mmBtu
VOC	0.20 lb/hr	0.002 lb/mmBtu
Particulates	0.495 lb/hr	0.005 lb/mmBtu
PM-10	0.495 lb/hr	0.005 lb/mmBtu

10. The facility has to comply with the following diesel fire pump emission limits:

Pollutant	Emission Limit when firing oil
	(Process P22)
NOx	3.44 lb/mmBtu
CO	0.18 lb/mmBtu
VOC	0.11 lb/mmBtu
SO2	0.03 lb/mmBtu
Particulates	0.06 lb/mmBtu
PM-10	0.06 lb/mmBtu

11. The facility is required to comply with the continuous emission monitoring (CEM) and compliance certification requirements of 40 CFR Part 60 (New Source Performance Standards) and 40 CFR Parts 72 and 75 (Acid Rain Permit Program). Stack continuous emissions monitoring (CEM) equipment for NOx and CO (including a diluent monitor) have been installed and operate during all loads of turbine operations. All required CEMS certification testing have been completed for each of the four turbines within 180 days of first fire of that gas turbine unit. The CEM data from this equipment is used to determine compliance with the emission limits listed above in 8. Excess emissions measured by the CEM equipment shall constitute violations of the applicable emission limits. The emission limit applies at all times, including start-up/shutdown,



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**Permit Under the Environmental Conservation Law (ECL)**

**ARTICLE 19: AIR POLLUTION CONTROL - TITLE V PERMIT**

**IDENTIFICATION INFORMATION**

Permit Issued To: ASTORIA ENERGY LLC  
17-10 STEINWAY ST  
ASTORIA, NY 11105

Facility: ASTORIA ENERGY LLC  
17-10 STEINWAY ST  
ASTORIA, NY 11105-1097

Authorized Activity By Standard Industrial Classification Code:  
4911 - ELECTRIC SERVICES  
5171 - PETROLEUM BULK STATIONS & TERMINALS  
6512 - NONRESIDENTIAL BUILDING OPERATORS

Permit Effective Date:

Permit Expiration Date:



**LIST OF CONDITIONS**

**FEDERALLY ENFORCEABLE CONDITIONS**

**Facility Level**

- 1 6NYCRR 200.6: Acceptable Ambient Air Quality
- 2 6NYCRR 201-6.5(a)(7): Fees
- 3 6NYCRR 201-6.5(c): Recordkeeping and reporting of compliance monitoring
- 4 6NYCRR 201-6.5(c)(2): Monitoring, Related Recordkeeping, and Reporting Requirements.
- 5 6NYCRR 201-6.5(c)(3)(ii): Compliance Certification
- 6 6NYCRR 201-6.5(e): Compliance Certification
- 7 6NYCRR 202-2.1: Compliance Certification
- 8 6NYCRR 202-2.5: Recordkeeping requirements
- 9 6NYCRR 215: Open Fires Prohibited at Industrial and Commercial Sites
- 10 6NYCRR 200.7: Maintenance of Equipment
- 11 6NYCRR 201-1.7: Recycling and Salvage
- 12 6NYCRR 201-1.8: Prohibition of Reintroduction of Collected Contaminants to the air
- 13 6NYCRR 201-3.2(a): Exempt Sources - Proof of Eligibility
- 14 6NYCRR 201-3.3(a): Trivial Sources - Proof of Eligibility
- 15 6NYCRR 201-6.5(a)(4): Standard Requirement - Provide Information
- 16 6NYCRR 201-6.5(a)(8): General Condition - Right to Inspect
- 17 6NYCRR 201-6.5(d)(5): Standard Requirements - Progress Reports
- 18 6NYCRR 201-6.5(f)(6): Off Permit Changes
- 19 6NYCRR 202-1.1: Required Emissions Tests
- 20 6NYCRR 211.3: Visible Emissions Limited
- 21 40CFR 68: Accidental release provisions.
- 22 40CFR 82, Subpart F: Recycling and Emissions Reduction
- 23 6NYCRR 201-6: Steady state and fuel switching emission limit applicability.
- 24 6NYCRR 201-6: Emission Unit Definition
- 25 6NYCRR 201-6: Compliance Certification
- 26 6NYCRR 201-6.5(f): Compliance Certification
- 27 6NYCRR 201-6.5(g): Non Applicable requirements
- 28 6NYCRR 202-1.5: Prohibitions
- 29 6NYCRR 202-2: Emission Statements
- 30 6NYCRR 204-1.6: Permit requirements (To be included only in new permits or units).
- 31 6NYCRR 207: Submittal of Episode Action Plans
- 32 6NYCRR 231-2.4: Notification and reporting requirements.
- 33 6NYCRR 231-2.4: Emission offset requirements
- 34 40CFR 52.21(j), Subpart A: Compliance Certification
- 35 40CFR 60.4, NSPS Subpart A: EPA Region 2 address.
- 36 40CFR 60.7(a), NSPS Subpart A: Date of construction notification - If a COM is not used.



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- 37 40CFR 60.7(b), NSPS Subpart A: Recordkeeping requirements.
- 38 40CFR 60.7(d), NSPS Subpart A: Excess emissions report.
- 39 40CFR 60.7(f), NSPS Subpart A: Facility files for subject sources.
- 40 40CFR 60.8(a), NSPS Subpart A: Performance testing timeline.
- 41 40CFR 60.8(b), NSPS Subpart A: Performance test methods.
- 42 40CFR 60.8(c), NSPS Subpart A: Required performance test information.
- 43 40CFR 60.8(d), NSPS Subpart A: Prior notice.
- 44 40CFR 60.8(e), NSPS Subpart A: Performance testing facilities.
- 45 40CFR 60.8(f), NSPS Subpart A: Number of required tests.
- 46 40CFR 60.9, NSPS Subpart A: Availability of information.
- 47 40CFR 60.11, NSPS Subpart A: Opacity standard compliance testing.
- 48 40CFR 60.12, NSPS Subpart A: Circumvention.
- 49 40CFR 60.13, NSPS Subpart A: Monitoring requirements.
- 50 40CFR 60.14, NSPS Subpart A: Modifications.
- 51 40CFR 60.15, NSPS Subpart A: Reconstruction
- 52 40CFR 72: Facility Subject to Title IV Acid Rain Regulations and Permitting

**Emission Unit Level**

- 53 6NYCRR 201-6: Emission Point Definition By Emission Unit
- 54 6NYCRR 201-6: Process Definition By Emission Unit

**EU=U-00001**

- 55 6NYCRR 231-2.5: Compliance Certification
- 56 6NYCRR 231-2.5: Compliance Certification
- 57 6NYCRR 231-2.5: Compliance Certification
- 58 6NYCRR 231-2.6: Compliance Certification
- 59 6NYCRR 231-2.6: Compliance Certification
- 60 6NYCRR 231-2.6: Compliance Certification
- 61 6NYCRR 231-2.9: Compliance Certification
- 62 40CFR 52.21, Subpart A: Compliance Certification
- 63 40CFR 60.48c(a), NSPS Subpart Dc: Compliance Certification

**EU=U-00001,Proc=P10**

- 64 40CFR 60.44c(g), NSPS Subpart Dc: Alternate compliance methods for sulfur dioxide.

**EU=U-00001,EP=00004**

- 65 6NYCRR 227-1.3(a): Compliance Certification
- 66 40CFR 52.21, Subpart A: Compliance Certification
- 67 40CFR 52.21(j), Subpart A: Compliance Certification
- 68 40CFR 52.21(j), Subpart A: Compliance Certification
- 69 40CFR 60.47a(c), NSPS Subpart Da: Compliance Certification

**EU=U-00001,EP=00004,Proc=P01**

- 70 6NYCRR 231-2.7(b): Compliance Certification
- 71 6NYCRR 231-2.7(b): Compliance Certification



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- 72 6NYCRR 231-2.7(b): Compliance Certification
- 73 6NYCRR 231-2.7(b): Compliance Certification
- 74 6NYCRR 231-2.7(b): Compliance Certification
- 75 6NYCRR 231-2.7(b): Compliance Certification
- 76 40CFR 52.21(j), Subpart A: Compliance Certification
- 77 40CFR 52.21(j), Subpart A: Compliance Certification
- 78 40CFR 52.21(j), Subpart A: Compliance Certification
- 79 40CFR 52.21(j), Subpart A: Compliance Certification
- 80 40CFR 52.21(j), Subpart A: Compliance Certification
- 81 40CFR 52.21(j), Subpart A: Compliance Certification
- 82 40CFR 52.21(j), Subpart A: Compliance Certification
- 83 40CFR 52.21(j), Subpart A: Compliance Certification
- 84 40CFR 60.334(b), NSPS Subpart GG: Compliance Certification

**EU=U-00001,EP=00004,Proc=P05,ES=BOIL1**

- 85 6NYCRR 227-2.4(c): Compliance Certification
- 86 6NYCRR 231-2.7(b): Compliance Certification
- 87 6NYCRR 231-2.7(b): Compliance Certification
- 88 6NYCRR 231-2.7(b): Compliance Certification
- 89 6NYCRR 231-2.7(b): Compliance Certification
- 90 6NYCRR 231-2.7(b): Compliance Certification
- 91 6NYCRR 231-2.7(b): Compliance Certification
- 92 40CFR 52.21(j), Subpart A: Compliance Certification
- 93 40CFR 52.21(j), Subpart A: Compliance Certification
- 94 40CFR 52.21(j), Subpart A: Compliance Certification
- 95 40CFR 52.21(j), Subpart A: Compliance Certification
- 96 40CFR 52.21(j), Subpart A: Compliance Certification

**EU=U-00001,EP=00004,Proc=P10**

- 97 6NYCRR 231-2.7(b): Compliance Certification
- 98 6NYCRR 231-2.7(b): Compliance Certification
- 99 6NYCRR 231-2.7(b): Compliance Certification
- 100 6NYCRR 231-2.7(b): Compliance Certification
- 101 6NYCRR 231-2.7(b): Compliance Certification
- 102 6NYCRR 231-2.7(b): Compliance Certification
- 103 40CFR 52.21(j), Subpart A: Compliance Certification
- 104 40CFR 52.21(j), Subpart A: Compliance Certification
- 105 40CFR 52.21(j), Subpart A: Compliance Certification
- 106 40CFR 52.21(j), Subpart A: Compliance Certification
- 107 40CFR 52.21(j), Subpart A: Compliance Certification
- 108 40CFR 52.21(j), Subpart A: Compliance Certification
- 109 40CFR 52.21(j), Subpart A: Compliance Certification
- 110 40CFR 52.21(j), Subpart A: Compliance Certification
- 111 40CFR 52.21(j), Subpart A: Compliance Certification
- 112 40CFR 52.21(j), Subpart A: Compliance Certification

**EU=U-00001,EP=00004,Proc=P11**



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- 113 6NYCRR 231-2.7(b): Compliance Certification
- 114 6NYCRR 231-2.7(b): Compliance Certification
- 115 6NYCRR 231-2.7(b): Compliance Certification
- 116 6NYCRR 231-2.7(b): Compliance Certification
- 117 6NYCRR 231-2.7(b): Compliance Certification
- 118 6NYCRR 231-2.7(b): Compliance Certification
- 119 40CFR 52.21(j), Subpart A: Compliance Certification
- 120 40CFR 52.21(j), Subpart A: Compliance Certification
- 121 40CFR 52.21(j), Subpart A: Compliance Certification
- 122 40CFR 52.21(j), Subpart A: Compliance Certification
- 123 40CFR 52.21(j), Subpart A: Compliance Certification
- 124 40CFR 52.21(j), Subpart A: Compliance Certification
- 125 40CFR 52.21(j), Subpart A: Compliance Certification
- 126 40CFR 52.21(j), Subpart A: Compliance Certification

**EU=U-00001,EP=00004,Proc=P12**

- 127 6NYCRR 231-2.7(b): Compliance Certification
- 128 6NYCRR 231-2.7(b): Compliance Certification
- 129 6NYCRR 231-2.7(b): Compliance Certification
- 130 6NYCRR 231-2.7(b): Compliance Certification
- 131 6NYCRR 231-2.7(b): Compliance Certification
- 132 6NYCRR 231-2.7(b): Compliance Certification
- 133 40CFR 52.21(j), Subpart A: Compliance Certification
- 134 40CFR 52.21(j), Subpart A: Compliance Certification
- 135 40CFR 52.21(j), Subpart A: Compliance Certification
- 136 40CFR 52.21(j), Subpart A: Compliance Certification
- 137 40CFR 52.21(j), Subpart A: Compliance Certification
- 138 40CFR 52.21(j), Subpart A: Compliance Certification
- 139 40CFR 52.21(j), Subpart A: Compliance Certification
- 140 40CFR 52.21(j), Subpart A: Compliance Certification
- 141 40CFR 52.21(j), Subpart A: Compliance Certification
- 142 40CFR 52.21(j), Subpart A: Compliance Certification

**EU=U-00002**

- 143 40CFR 60.48c(a), NSPS Subpart Dc: Compliance Certification

**EU=U-00002,EP=00005,Proc=P22,ES=00DFP**

- 144 6NYCRR 231-2.7(b): Compliance Certification
- 145 6NYCRR 231-2.7(b): Compliance Certification
- 146 6NYCRR 231-2.7(b): Compliance Certification
- 147 40CFR 52.21(j), Subpart A: Compliance Certification
- 148 40CFR 52.21(j), Subpart A: Compliance Certification

**STATE ONLY ENFORCEABLE CONDITIONS**

**Facility Level**

- 149 ECL 19-0301: Contaminant List
- 150 6NYCRR 201-1.4: Unavoidable noncompliance and violations



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151 6NYCRR 211.2: Air pollution prohibited

**Emission Unit Level**

**EU=U-00001,EP=00004**

152 6NYCRR 201-5.3(b): Compliance Demonstration

153 6NYCRR 201-5.3(b): Compliance Demonstration

**EU=U-00001,EP=00004,Proc=P10**

154 6NYCRR 201-5.3(b): Compliance Demonstration

**EU=U-00001,EP=00004,Proc=P12**

155 6NYCRR 201-5.3(b): Compliance Demonstration



**FEDERALLY ENFORCEABLE CONDITIONS**

**\*\*\*\* Facility Level \*\*\*\***

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

**The items listed below are not subject to the annual compliance certification requirements under Title V. Permittees may also have other obligations under regulations of general applicability.**

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

An emergency constitutes an affirmative defense to an action brought 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 and/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;

(3) During the period of the emergency the facility owner and/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 and/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 and/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 - 6NYCRR Part 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



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Section 503(e) of the Act, except for information entitled to confidential treatment pursuant to 6NYCRR 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 201-6.3(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 201-6.3(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 201-6.5(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 201-6.5(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 G: Cessation or Reduction of Permitted Activity Not a Defense - 6NYCRR Part 201-6.5(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



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order to maintain compliance with the conditions of this permit.

**Item H: Property Rights - 6 NYCRR Part 201-6.5(a)(6)**

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

**Item I: Severability - 6 NYCRR Part 201-6.5(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 201-6.5(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

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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 201-6.5(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



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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.

**MANDATORY FEDERALLY ENFORCEABLE PERMIT CONDITIONS SUBJECT TO ANNUAL CERTIFICATIONS AT ALL TIMES**

**The following federally enforceable permit conditions are mandatory for all Title V permits and are subject to annual compliance certification requirements at all times.**

**Condition 1: Acceptable Ambient Air Quality  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 200.6**

**Item 1.1:**

Notwithstanding the provisions of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit



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any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.

**Condition 2: Fees**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(a)(7)**

**Item 2.1:**

The owner and/or operator of a stationary source shall pay fees to the Department consistent with the fee schedule authorized by ECL 72-0302.

**Condition 3: Recordkeeping and reporting of compliance monitoring**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(c)**

**Item 3.1:**

The following information must be included in any required compliance monitoring records and reports:

- (i) The date, place, and time of sampling or measurements;
- (ii) The date(s) analyses were performed;
- (iii) The company or entity that performed the analyses;
- (iv) The analytical techniques or methods used including quality assurance and quality control procedures if required;
- (v) The results of such analyses including quality assurance data where required; and
- (vi) The operating conditions as existing at the time of sampling or measurement.

Any deviation from permit requirements must be clearly identified in all records and reports. Reports must be certified by a responsible official, consistent with Section 201-6.3 of this Part 201.

**Condition 4: Monitoring, Related Recordkeeping, and Reporting Requirements.**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(c)(2)**

**Item 4.1:**

Compliance monitoring and recordkeeping shall be conducted according to the terms and conditions contained in this permit and shall follow all quality assurance requirements found in applicable



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regulations. Records of all monitoring data and support information must be retained for a period of at least 5 years from the date of the monitoring, sampling, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

**Condition 5: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(c)(3)(ii)**

**Item 5.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 5.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

To meet the requirements of this facility permit with respect to reporting, the permittee must:

Submit reports of any required monitoring at a minimum frequency of every 6 months, based on a calendar year reporting schedule. These reports shall be submitted to the Department within 30 days after the end of a reporting period. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the responsible official for this facility.

Notify the Department and report permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations shall be submitted to the permitting authority based on the following schedule:

(1) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.

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(2) For emissions of any regulated air pollutant, excluding those listed in paragraph (1) of this section, that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.

(3) For all other deviations from permit requirements, the report shall be contained in the 6 month monitoring report required above.

(4) This permit may contain a more stringent reporting requirement than required by paragraphs (1), (2) or (3) above. If more stringent reporting requirements have been placed in this permit or exist in applicable requirements that apply to this facility, the more stringent reporting requirement shall apply.

If any of the above conditions are met, the source must notify the permitting authority by telephone or facsimile based on the timetable listed in paragraphs (1) through (4) of this section. A written notice, certified by a responsible official consistent with 6 NYCRR Part 201-6.3(d)(12), must be submitted within 10 working days of the occurrence. All deviations reported under paragraph (1) through (4) of this section must also be identified in the 6 month monitoring report required above.

If the permittee seeks to have a violation excused as provided in 201-1.4, the permittee shall report such violations as required under 201-1.4(b). However, in no case may reports of any deviation be on a less frequent basis than those described in paragraphs (1) through (4) above. In order to have a violation of a federal regulation (such as a new source performance standard or national emissions standard for hazardous air pollutants) excused, the specific federal regulation must provide for an affirmative defense during start-up, shutdowns, malfunctions or upsets.

In the case of any condition contained in this permit with a reporting requirement of "Upon request by regulatory agency" the permittee shall include in the semiannual report, a statement for each such condition that the monitoring or recordkeeping was performed as required or requested and a listing of all instances of

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deviations from these requirements.

In the case of any emission testing performed during the previous six month reporting period, either due to a request by the Department, EPA, or a regulatory requirement, the permittee shall include in the semiannual report a summary of the testing results and shall indicate whether or not the Department or EPA has approved the results.

All semiannual reports shall be submitted to the Administrator (or his or her representative) as well as two copies to the Department (one copy to the regional air pollution control engineer (RAPCE) in the regional office and one copy to the Bureau of Compliance Monitoring and Enforcement (BCME) in the DEC central office). Mailing addresses for the above referenced persons are contained in the monitoring condition for 6 NYCRR Part 201-6.5(e), contained elsewhere in this permit.

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 6 calendar month(s).

**Condition 6: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(e)**

**Item 6.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 6.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Requirements for compliance certifications with terms and conditions contained in this facility permit include the following:

- i. Compliance certifications shall contain:
  - the identification of each term or condition of the permit that is the basis of the certification;
  - the compliance status;
  - whether compliance was continuous or intermittent;
  - the method(s) used for determining the compliance status

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of the facility, currently and over the reporting period consistent with the monitoring and related recordkeeping and reporting requirements of this permit;

- such other facts as the Department may require to determine the compliance status of the facility as specified in any special permit terms or conditions; and

- such additional requirements as may be specified elsewhere in this permit related to compliance certification.

ii. The responsible official must include in the annual certification report all terms and conditions contained in this permit, including emission limitations, standards, or work practices. That is, the provisions labeled herein as "Compliance Certification" are not the only provisions of this permit for which an annual certification is required.

iii. Compliance certifications shall be submitted annually. Certification reports are due 30 days after the anniversary date of four consecutive calendar quarters. The first report is due 30 days after the calendar quarter that occurs just prior to the permit anniversary date, unless another quarter has been acceptable by the Department.

iv. All compliance certifications shall be submitted to the Administrator (or his or her representative) as well as two copies to the Department (one copy to the regional air pollution control engineer (RAPCE) in the regional office and one copy to the Bureau of Compliance Monitoring and Enforcement (BCME) in the DEC central office). Please send annual compliance certifications to Chief of the Stationary Source Compliance Section, the Region 2 EPA representative for the Administrator, at the following address:

USEPA Region 2  
Air Compliance Branch  
290 Broadway  
New York, NY 10007-1866

The address for the RAPCE is as follows:

Hunters Point Plaza  
47-40 21st Street



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The address for the BCME is as follows:

NYSDEC  
Bureau of Compliance Monitoring  
and Enforcement  
625 Broadway  
Albany, NY 12233-3258

Monitoring Frequency: ANNUALLY  
Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
The initial report is due 1/30/2009.  
Subsequent reports are due on the same day each year

**Condition 7: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 202-2.1**

**Item 7.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 7.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Emission statements shall be submitted on or before April  
15th each year for emissions of the previous calendar  
year.

Monitoring Frequency: ANNUALLY

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due by April 15th for previous calendar year

**Condition 8: Recordkeeping requirements**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 202-2.5**

**Item 8.1:**

(a) The following records shall be maintained for at least five years:

- (1) a copy of each emission statement submitted to the department; and



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(2) records indicating how the information submitted in the emission statement was determined, including any calculations, data, measurements, and estimates used.

(b) These records shall be made available at the facility to the representatives of the department upon request during normal business hours.

**Condition 9: Open Fires Prohibited at Industrial and Commercial Sites  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 215**

**Item 9.1:**

No person shall burn, cause, suffer, allow or permit the burning in an open fire of garbage, refuse, rubbish for salvage, or rubbish generated by industrial or commercial activities.

**MANDATORY FEDERALLY ENFORCEABLE PERMIT CONDITIONS SUBJECT  
TO ANNUAL CERTIFICATIONS ONLY IF APPLICABLE**

**The following federally enforceable permit conditions are mandatory for all Title V permits and are subject to annual compliance certification requirements only if effectuated during the reporting period. [NOTE: The corresponding annual compliance certification for those conditions not effectuated during the reporting period shall be specified as "not applicable".]**

**Condition 10: Maintenance of Equipment  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 200.7**

**Item 10.1:**

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

**Condition 11: Recycling and Salvage  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-1.7**

**Item 11.1:**

Where practical, any person who owns or operates an air contamination source shall recycle or salvage air contaminants collected in an air cleaning device according to the requirements of the ECL.

**Condition 12: Prohibition of Reintroduction of Collected Contaminants to**

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**the air**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-1.8**

**Item 12.1:**

No person shall unnecessarily remove, handle or cause to be handled, collected air contaminants from an air cleaning device for recycling, salvage or disposal in a manner that would reintroduce them to the outdoor atmosphere.

**Condition 13: Exempt Sources - Proof of Eligibility**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-3.2(a)**

**Item 13.1:**

The owner and/or operator of an emission source or unit that is eligible to be exempt may be required to certify that it operates within the specific criteria described in this Subpart. The owner or operator of any such emission source 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 which contains 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.

**Condition 14: Trivial Sources - Proof of Eligibility**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-3.3(a)**

**Item 14.1:**

The owner and/or operator of an emission source or unit that is listed as being trivial in this Part may be required to certify that it operates within the specific criteria described in this Subpart. The owner or operator of any such emission source 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 which contains 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.

**Condition 15: Standard Requirement - Provide Information**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(a)(4)**

**Item 15.1:**

The owner and/or operator shall furnish to the department, within a reasonable time, any information that the department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the



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permittee shall also furnish to the department copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to the administrator along with a claim of confidentiality, if the administrator initiated the request for information or otherwise has need of it.

**Condition 16: General Condition - Right to Inspect**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(a)(8)**

**Item 16.1:**

The department or an authorized representative shall be allowed upon presentation of credentials and other documents as may be required by law to:

(i) enter upon the permittee's premises where a facility subject to the permitting requirements of this Subpart is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(ii) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

(iii) inspect at reasonable times any emission sources, equipment (including monitoring and air pollution control equipment), practices, and operations regulated or required under the permit; and

(iv) sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

**Condition 17: Standard Requirements - Progress Reports**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(d)(5)**

**Item 17.1:**

Progress reports consistent with an applicable schedule of compliance are to be submitted at least semiannually, or at a more frequent period if specified in the applicable requirement or by the department. Such progress reports shall contain the following:

(i) dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

(ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

**Condition 18: Off Permit Changes**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(f)(6)**

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**Item 18.1:**

No permit revision will be required for operating changes that contravene an express permit term, provided that such changes would not violate applicable requirements as defined under this Part or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting, or compliance certification permit terms and conditions. Such changes may be made without requiring a permit revision, if the changes are not modifications under any provision of title I of the act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions) provided that the facility provides the administrator and the department with written notification as required below in advance of the proposed changes within a minimum of seven days. The facility owner or operator, and the department shall attach each such notice to their copy of the relevant permit.

(i) For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

(ii) The permit shield described in section 6 NYCRR 201-6.6 shall not apply to any change made pursuant to this paragraph.

**Condition 19: Required Emissions Tests**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 202-1.1**

**Item 19.1:**

For the purpose of ascertaining compliance or non-compliance with any air pollution control code, rule or regulation, the commissioner may require the person who owns such air contamination source to submit an acceptable report of measured emissions within a stated time. Such person shall bear the cost of measurement and preparing the report of measured emissions. Failure of such person to submit a report acceptable to the commissioner within the time stated shall be sufficient reason for the commissioner to suspend or deny a certificate to operate.

**Condition 20: Visible Emissions Limited**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 211.3**

**Item 20.1:**

Except as permitted by a specific part of this Subchapter and for open fires for which a restricted burning permit has been issued, no person shall cause or allow any air contamination source to emit any material having an opacity equal to or greater than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

**Condition 21: Accidental release provisions.**  
**Effective for entire length of Permit**

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**Applicable Federal Requirement: 40CFR 68**

**Item 21.1:**

If a chemical is listed in Tables 1,2,3 or 4 of 40 CFR §68.130 is present in a process in quantities greater than the threshold quantity listed in Tables 1,2,3 or 4, the following requirements will apply:

- a) The owner or operator shall comply with the provisions of 40 CFR Part 68 and;
- b) The owner or operator shall submit at the time of permit issuance (if not previously submitted) one of the following, if such quantities are present:
  - 1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR §68.10(a) or,
  - 2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan. Information should be submitted to:

Risk Management Plan Reporting Center  
C/O CSC  
8400 Corporate Dr  
Carrollton, Md. 20785

**Condition 22: Recycling and Emissions Reduction  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 82, Subpart F**

**Item 22.1:**

The permittee shall comply with all applicable provisions of 40 CFR Part 82.

**The following conditions are subject to annual compliance certification requirements for Title V permits only.**

**Condition 23: Steady state and fuel switching emission limit applicability.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6**

**Item 23.1:** The emission limits for NO<sub>x</sub>, CO, and ammonia are monitored by continuous emissions monitors (CEMs), and apply only during periods of steady state operation of the turbines. The owner or operator is required to develop emission limits for these pollutants during periods of start-up, shutdown,



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and fuel switching for both natural gas and distillate oil firing modes of operation.

**Condition 24: Emission Unit Definition  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6**

**Item 24.1:**

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: U-00001

Emission Unit Description:

Emission Unit U00001 represents four (4) identical GE 7421FA gas combustion turbines (Emission Sources 0T001, 0T002, 0T003 & 0T004), each rated at 2191 MM Btu/hr, including the 388 MM Btu/hr each duct burner (Emission Controls 00DB1, 00DB2, 00DB3 & 00DB4; respectively, when firing natural gas (Processes P01 & P11) at -5 deg Fahrenheit, and 2047 MM Btu/hr when firing distillate fuel oil (Processes P10 & P12) at -5 deg Fahrenheit. Each turbine is equipped with a dry low NOx burner (Emission Controls 0DLN1, 0DLN2, 0DLN3 & 0DLN4; respectively). Emission Unit U00001 also represents one Cleaver Brooks 99 MM Btu/hr auxiliary boiler (Emission Source BOIL1) that fires natural gas (Process 05). It is used for startups and shares the turbine stack. Also, in order to reduce carbon monoxide (CO) emissions and volatile organic compounds (VOC), each turbine is equipped with an oxidation catalyst (Emission Controls 00DB1, 00DB2, 00DB3 & 00DB4; respectively) in the HRSG design. Control of the ammonia feed rate will be based on the NOx and fuel flow in order to control the NOx emissions when firing distillate oil, water injection (Emission Controls 0WI01, 0WI02, 0WI03 & 0WI04; respectively) will be used. The emissions of VOC and CO will be controlled through the use of an oxidation catalyst (Emission Controls 00CO1, 00CO2, 00CO3 & 00CO4) equipped in the HRSG design of the turbine. The emissions of ammonia are based on the NOx emission and the fuel flow and will be controlled by water injection (Emission Controls 0WI01, 0WI02, 0WI03 & 0WI04) and efficient use of the SCR (Emission Controls 0SCR1, 0SCR2, 0SCR3 & 0SCR4). The boiler exhausts parallel to the turbine stack, but shares the turbine stack to the atmosphere (Emission Point 00004). Natural gas is the primary fuel and distillate fuel oil is the back-up fuel.

Emission Unit U-00001 has the following Emission Sources:

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00DB1, 00DB2, 00DB3 & 00DB4      Duct  
Burners

0T001, 0T002, 0T003 & 0T004      Gas Combustion  
Turbines

Emission Unit U-00001 has the following Emission  
Controls:

00CO1, 00CO2, 00CO3 & 00CO4      Carbon Monoxide  
Oxidation Catalyst

0DLN1, 0DLN2, 0DLN3 & 0DLN4      Low NO<sub>x</sub>  
Combustor

0SCR1, 0SCR2, 0SCR3 & 0SCR4      Selective Catalytic  
Reduction

0WI01, 0WI02, 0WI03 & 0WI04      Water Injection  
Control

Emissions from the above emission sources/controls are exhausted through one common stack, which is identified as Emission Point 00004 with four separate flues

The NO<sub>x</sub> emissions will be reduced with SCR - selective catalytic reduction (Emission Controls 0SCR1, 0SCR2, 0SCR3 & 0SCR4) in the HRSG Heat Recovery Steam Generator) design of the turbine, each equipped with a duct burner (Emission Sources 00DB1, 00DB2, 00DB3 & 00DB4) for supplemental firing. The emissions of VOC and CO will be controlled through the use of an oxidation catalyst (Emission Controls 00CO1, 00CO2, 00CO3 & 00CO4) equipped in the HRSG design of the turbine. When firing distillate oil, NO<sub>x</sub> emissions will be controlled through water injections (Emission Controls 0WI01, 0WI02, 0WI03 & 0WI04) and SCR (Emission Controls 0SCR1, 0SCR2, 0SCR3 & 0SCR4) in the HRSG design of the turbine. The emissions of particulate matter (PM/PM-10) will be controlled through the use of clean burning fuels (natural gas and distillate oil). The emissions of sulfur dioxide (SO<sub>2</sub>) and sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>) will be controlled through the use of low sulfur fuels (natural gas and low sulfur distillate oil). The emissions of ammonia are based on the NO<sub>x</sub> emission and the fuel flow and will be controlled by water injection (Emission Controls 0WI01, 0WI02, 0WI03 & 0WI04) and



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efficient use of the SCR (Emission Controls 0SCR1, 0SCR2, 0SCR3 & 0SCR4).

Building(s): TGB

**Item 24.2:**

The facility is authorized to perform regulated processes under this permit for:

Emission Unit: U-00002

Emission Unit Description:

Emission Unit U00002 represents a diesel fire suppression water pump (Emission Source 00DFP). The diesel fire suppression water pump will be used for emergencies (Process P22), less than 500 hours/year. Emissions from the diesel fire pump are exhausted through a stack, which is identified as Emission Point 00005.

Building(s): TGB

**Condition 25: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6**

**Item 25.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 25.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The owner or operator shall, within one year following the commencement of commercial operation, submit start-up, shutdown, and fuel switching data with an application for permit modification to establish enforceable combustion turbine start-up, shutdown, and fuel switching emission rates for NO<sub>x</sub>, CO, and NH<sub>3</sub>, and confirm that such established rates would not result in a violation of applicable NAAQS.

In the event that a minimum of 15 start-ups and 15 shutdowns, while firing distillate oil, does not occur within the one year period defined above, the owner or operator will be required to submit start-up and shutdown data, with an application for permit modification, once the 15 start-ups and shutdowns while firing distillate oil

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occur.

Also, if a minimum of 15 fuel switches do not occur within the one year period defined above, the owner or operator will be required to submit fuel switching data with an application for permit modification once the 15 fuel switches occur.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 26: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(f)**

**Item 26.1:**

The Compliance Certification activity will be performed for the Facility.

**Item 26.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

The four combustion turbines may not operate below 40% load except during periods of start-up, shutdown, fuel switching, or malfunction (not to exceed 3 hours/occurrence) and during periods of annual electrical feed line maintenance (not to exceed 24 hrs/yr).

The facility currently has installed new GE technology package - OPERATIONAL FLEXIBILITY (Op Flex) which allows the combustion turbines to operate down to 40% inlet load, rather than the current normal of 50%.

The 40% minimum inlet load operational flexibility is allowed as long as there is no increase in emissions at that level that would result in emissions above existing standards for the following:

1. NO<sub>x</sub> for NO<sub>x</sub> RACT (6 NYCRR 227-2).
2. NO<sub>x</sub>, VOC and CO for LAER/NSR (6 NYCRR 231-2.7(b)).



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3. SO<sub>2</sub>, H<sub>2</sub>SO<sub>4</sub>, NH<sub>3</sub>, and PM-a<sub>0</sub>/Particulates for BACT/PSD (40 CFR 52-A.21(j)).

Parameter Monitored: INLET LOADING

Lower Permit Limit: 40 percent

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 6 calendar month(s).

**Condition 27: Non Applicable requirements  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6.5(g)**

**Item 27.1:**

This section contains a summary of those requirements that have been specifically identified as being not applicable to this facility and/or emission units, emission points, processes and/or emission sources within this facility. The summary also includes a justification for classifying any such requirements as non-applicable.

**Condition 28: Prohibitions  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 202-1.5**

**Item 28.1:**

No person shall conceal an emission by the use of air or other gaseous diluents to achieve compliance with an emission standard which is based on the concentration of a contaminant in the gases emitted through a stack.

**Condition 29: Emission Statements  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 202-2**

**Item 29.1:**

The provisions of 6NYCRR Subpart 202-2 apply to this facility.

**Condition 30: Permit requirements (To be included only in new permits or units).  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 204-1.6**

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**Item 30.1:** The NOx authorized account representative of each NOx budget unit shall submit to the Department a complete NOx Budget permit application (as defined under Section 204-3.3) no later than 12 months before the date on which the NOx Budget unit commences operation.

**Condition 31: Submittal of Episode Action Plans**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 207**

**Item 31.1:**

An episode action plan must be submitted for approval by the Department in accordance with the requirements of 6NYCRR Part 207. The plan shall 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.

**Condition 32: Notification and reporting requirements.**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.4**

**Item 32.1:**

At least sixty (60) days prior to the scheduled commence operation date of the proposed source project or proposed major facility, the permittee shall submit any changes to the list of offset sources included in this permit. For each such change, the applicant must submit another "Use of Emission Reduction Credits Form" signed by the applicant and an authorized representative of the new offset source.

**Item 32. 2:**

The facility shall submit to the NYSDEC Regional office a letter of confirmation that each future emission reduction, if any, used to provide emission offsets for this facility has physically occurred. This letter should be submitted, not less than 10 working days, prior to the facility's scheduled start-up date.

**Item 32.3:**

This permit shall be subject to revocation if construction is not commenced within 18 months from the date of issuance of such permit or if construction is discontinued for a period of 18 months or more (excluding any period of time that the permit is subject to challenge in State or Federal court), or if construction is not completed within a reasonable time acceptable to the Department.

**Condition 33: Emission offset requirements**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.4**

**Item 33.1:**

To satisfy the emission offset requirements of Part 231, the facility has obtained 425 tpy of NOx, 145 tpy of VOC and 145 tpy of CO Emission Reduction Credits (ERCs) from the following sources:



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<b>Facility Name</b>	<b>DEC ID</b>	<b>ERCs (tpy)</b>
Con Ed. - Astoria	2-6301-00006	425 tpy of NOx
PG & E originally transferred from General Motors Corp.	3-5534-00104	145 tpy of VOC
Con Ed. - Astoria	2-6301-00006	145 tpy of CO

**Condition 34: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 34.1:**

The Compliance Certification activity will be performed for the Facility.

Regulated Contaminant(s):  
CAS No: 007446-09-5    SULFUR DIOXIDE

**Item 34.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Astoria Energy LLC will burn natural gas as the primary fuel in the turbines with up to 720 hours of distillate fuel oil as a backup. Astoria Energy LLC will burn natural gas as the only fuel in the boiler. The sulfur content of the distillate fuel oil will be no more than 0.033% by weight. The distillate fuel oil is to be tested each time it is transferred to the storage tank.

Work Practice Type: PARAMETER OF PROCESS MATERIAL

Process Material: FUEL

Parameter Monitored: SULFUR CONTENT

Upper Permit Limit: 0.033 percent by weight

Reference Test Method: ASTM METHOD D4292

Monitoring Frequency: PER BATCH OF PRODUCT/RAW MATERIAL CHANGE

Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME (INSTANTANEOUS/DISCRETE OR GRAB)

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

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**Condition 35: EPA Region 2 address.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.4, NSPS Subpart A**

**Item 35.1:**

All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted in duplicate to the following address:

Director, Division of Enforcement and Compliance Assistance  
USEPA Region 2  
290 Broadway, 21st Floor  
New York, NY 10007-1886

Copies of all correspondence to the administrator pursuant to this part shall also be submitted to the NYSDEC Regional Office issuing this permit (see address at the beginning of this permit) and to the following address:

NYSDEC  
Bureau of Quality Assurance  
625 Broadway  
Albany, NY 12233-3258

**Condition 36: Date of construction notification - If a COM is not used.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.7(a), NSPS Subpart A**

**Item 36.1:**

Any owner or operator subject to this part shall furnish the Administrator with the following information:

- 1) a notification of the date construction or reconstruction commenced, post marked no later than 30 days after such date;
- 3) a notification of the actual date of initial start up, post marked within 15 days after such date;
- 4) a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless the change is specifically exempted under this part. The notice shall be post marked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capability of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional information regarding the change;



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5) a notification of the date upon which the demonstration of continuous monitoring system performance commences, post marked not less than 30 days prior to such date;

6) a notification of the anticipated date for conducting the opacity observations, post marked not less than 30 days prior to such date.

**Condition 37: Recordkeeping requirements.**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.7(b), NSPS Subpart A**

**Item 37.1:**

Affected owners or operators shall maintain records of occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

**Condition 38: Excess emissions report.**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.7(d), NSPS Subpart A**

**Item 38.1:**

A summary report form, for each pollutant monitored, shall be sent to the Administrator in the form prescribed in Figure 1 of 40 CFR Part 60.7(d).

**Condition 39: Facility files for subject sources.**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.7(f), NSPS Subpart A**

**Item 39.1:**

The following files shall be maintained at the facility for all affected sources: all measurements, including continuous monitoring systems, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part, recorded in permanent form suitable for inspections. The file shall be maintained for at least two years following the date of such measurements, reports, and records.

**Condition 40: Performance testing timeline.**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.8(a), NSPS Subpart A**

**Item 40.1:**

Within 60 days after achieving the maximum production rate, but not later than 180 days after initial



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startup of the facility, the owner or operator of the facility shall conduct performance testing and provide the results of such tests, in a written report, to the Administrator.

**Condition 41: Performance test methods.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.8(b), NSPS Subpart A**

**Item 41.1:**

Performance testing shall be conducted in accordance with the methods and procedures prescribed in 40 CFR 60 or by alternative methods and procedures approved by the Administrator.

**Condition 42: Required performance test information.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.8(c), NSPS Subpart A**

**Item 42.1:**

Performance tests shall be conducted under such conditions specified by the Administrator, based upon representative performance data supplied by the owner or operator of the facility.

**Condition 43: Prior notice.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.8(d), NSPS Subpart A**

**Item 43.1:**

The owner or operator shall provide the Administrator with prior notice of any performance test at least 30 days in advance of testing.

**Condition 44: Performance testing facilities.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.8(e), NSPS Subpart A**

**Item 44.1:**

The following performance testing facilities shall be provided during all tests:

- 1) sampling ports adequate for tests methods applicable to such facility;
- 2) a safe sampling platform;
- 3) a safe access to the sampling platform; and
- 4) utilities for sampling and testing equipment.

**Condition 45: Number of required tests.**



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**Applicable Federal Requirement: 40CFR 60.8(f), NSPS Subpart A**

**Item 45.1:**

Each performance test shall consist of three separate runs, at the specified duration required in the applicable test method. Compliance with all applicable standards shall be determined by using the arithmetic means of the results of the three runs.

**Condition 46: Availability of information.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.9, NSPS Subpart A**

**Item 46.1:**

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by 40 CFR Part 2.

**Condition 47: Opacity standard compliance testing.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.11, NSPS Subpart A**

**Item 47.1:**

The following conditions shall be used to determine compliance with the opacity standards:

1) observations shall be conducted in accordance with Reference Method 9, in Appendix A of 40 CFR Part 60 (or an equivalent method approved by the Administrator including continuous opacity monitors);

2) the opacity standards apply at all times except during periods of start up, shutdown, and malfunction; and

3) all other applicable conditions cited in section 60.11 of this part.

**Condition 48: Circumvention.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.12, NSPS Subpart A**

**Item 48.1:**

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.



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**Condition 49: Monitoring requirements.**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.13, NSPS Subpart A**

**Item 49.1:**

All continuous monitoring systems and devices shall be installed, calibrated, maintained, and operated in accordance with the requirements of section 60.13.

**Condition 50: Modifications.**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.14, NSPS Subpart A**

**Item 50.1:**

Within 180 days of the completion of any physical or operational change (as defined in section 60.14), compliance with the applicable standards must be achieved.

**Condition 51: Reconstruction**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.15, NSPS Subpart A**

**Item 51.1:**

The following shall be submitted to the Administrator prior to reconstruction (as defined in section 60.15):

- 1) a notice of intent to reconstruct 60 days prior to the action;
- 2) name and address of the owner or operator;
- 3) the location of the existing facility;
- 4) a brief description of the existing facility and the components to be replaced;
- 5) a description of the existing air pollution control equipment and the proposed air pollution control equipment;
- 6) an estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility;
- 7) the estimated life of the facility after the replacements; and
- 8) a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

**Condition 52: Facility Subject to Title IV Acid Rain Regulations and**



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**Applicable Federal Requirement: 40CFR 72**

**Item 52.1:** This facility is subject to the Title IV Acid Rain Regulations found in 40 CFR Parts 72, 73, 75, 76, 77 and 78. The Acid Rain Permit is an attachment to this permit.

**\*\*\*\* Emission Unit Level \*\*\*\***

**Condition 53: Emission Point Definition By Emission Unit**

**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6**

**Item 53.1:**

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: U-00001

Emission Point: 00004

Height (ft.): 269

Diameter (in.): 444

NYTMN (km.): 4514.853 NYTME (km.): 593.06 Building: TGB

**Item 53.2:**

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: U-00002

Emission Point: 00005

Height (ft.): 50

Diameter (in.): 6

NYTMN (km.): 4514.767 NYTME (km.): 593.018 Building: TGB

**Condition 54: Process Definition By Emission Unit**

**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 201-6**

**Item 54.1:**

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: U-00001

Process: P01

Source Classification Code: 2-01-002-01

Process Description:

Process P01 in Emission Unit U-00001 represents natural gas firing in the four (4) identical combustion turbines



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(Emission Sources 0T001, 0T002, 0T003 & 0T004) with natural gas duct firing. The maximum firing rate for a single turbine plus duct burner is 2,191 MM Btu/hr (HHV). The maximum firing rate for a single duct burner is 388 MM Btu/hr. Due to limitations in the steam cycle portion of the plant, the maximum duct burner firing cannot occur when a turbine is operating at its maximum natural gas firing rate (1968 MM BTU/hr). Therefore, duct burner firing will only occur with less than 100 % load.

All four combustion turbines are dual-fueled and all four turbines may operate at the same time. Natural gas is the primary fuel and distillate fuel oil is the back-up fuel. For this process, dry low NOx burners (DLN) and selective catalytic reduction (SCR) are used to control NOx emissions. Emissions of VOC and CO are controlled through the use of an oxidation catalyst. Each turbine is expected to operate up to 8,760 hours/year on natural gas and up to 720 hours/year on distillate oil. The maximum natural gas throughput for Process P01 may not exceed 69,868 million cubic feet per year. The emissions from this process exhaust through a common stack identified as Emission Point 00004 with four separate flues.

Emission Source/Control: 00DB1 - Combustion  
Design Capacity: 388 million Btu per hour

Emission Source/Control: 00DB2 - Combustion  
Design Capacity: 388 million Btu per hour

Emission Source/Control: 00DB3 - Combustion  
Design Capacity: 388 million Btu per hour

Emission Source/Control: 00DB4 - Combustion  
Design Capacity: 388 million Btu per hour

Emission Source/Control: 0T001 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T002 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T003 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T004 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

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Emission Source/Control: 00CO1 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO2 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO3 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO4 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 0DLN1 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0DLN2 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0DLN3 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0DLN4 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0SCR1 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR2 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR3 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR4 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

**Item 54.2:**

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: U-00001

Process: P05

Source Classification Code: 1-02-006-04

Process Description:

Process P05 in Emission Unit U-00001 represents natural gas firing in the 99 MM Btu/hr auxiliary boiler (Emission Source BOIL1). This boiler fires natural gas only and is expected to operate up to 900 hours/year on natural gas.



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For the boiler, it is estimated that 88.8 MM cubic feet/year of natural gas will be used. The boiler's emissions exhaust parallel to the four turbines stack, but shares the four turbines stack to the atmosphere (Emission Point 00004).

Emission Source/Control: BOIL1 - Combustion  
Design Capacity: 99 million Btu per hour

**Item 54.3:**

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: U-00001

Process: P10

Source Classification Code: 2-01-001-01

Process Description:

Process P10 in Emission Unit U-00001 represents distillate fuel oil (limit of 0.033 % sulfur by weight) firing in the four (4) identical combustion turbines (Emission Sources 0T001, 0T002, 0T003 & 0T004).

All four (4) combustion turbines are dual-fueled and all four turbines may operate at the same time. Natural gas is the primary fuel and distillate fuel oil is the back-up fuel. For this process, selective catalytic reduction (SCR) and water injection (WI) are used to control NO<sub>x</sub> emissions. Emissions of VOC and CO are controlled through the use of an oxidation catalyst. Each combustion turbine is expected to operate up to 8,760 hours/year on natural gas and up to 720 hours/year on distillate oil. The maximum distillate fuel oil throughput for Process P10 may not exceed 41.6 million gallons per year. The emissions from this process exhaust through a common stack identified as Emission Point 00004 with four separate flues.

Emission Source/Control: 0T001 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T002 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T003 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T004 - Combustion  
Design Capacity: 2,047.1 million Btu per hour



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Emission Source/Control: 00CO1 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO2 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO3 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO4 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 0SCR1 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR2 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR3 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR4 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0WI01 - Control  
Control Type: WATER INJECTION

Emission Source/Control: 0WI02 - Control  
Control Type: WATER INJECTION

Emission Source/Control: 0WI03 - Control  
Control Type: WATER INJECTION

Emission Source/Control: 0WI04 - Control  
Control Type: WATER INJECTION

**Item 54.4:**

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: U-00001

Process: P11

Source Classification Code: 2-01-001-01

Process Description:

Process P11 in Emission Unit U-00001 represents natural gas firing in the four (4) identical combustion turbines (Emission Sources 0T001, 0T002, 0T003 & 0T004) without duct firing. The maximum natural gas throughput for Process P11 may not exceed 68,959 million cubic feet per

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year.

All four combustion turbines are dual-fueled and all four turbines may operate at the same time. Natural gas is the primary fuel and distillate fuel oil is the back-up fuel. For this process, dry low NO<sub>x</sub> burners (DLN) and selective catalytic reduction (SCR) are used to control NO<sub>x</sub> emissions. Emissions of VOC and CO are controlled through the use of an oxidation catalyst. Each turbine is expected to operate up to 8,760 hours/year on natural gas and up to 720 hours/year on distillate oil. The maximum natural gas throughput for Processes P01 & P11 combined may not exceed 69,868 million cubic feet per year. The emissions from this process exhaust through a common stack identified as Emission Point 00004 with four separate flues.

Emission Source/Control: 0T001 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T002 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T003 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T004 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 00CO1 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO2 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO3 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO4 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 0DLN1 - Control  
Control Type: LOW NO<sub>x</sub> BURNER

Emission Source/Control: 0DLN2 - Control

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Control Type: LOW NOx BURNER

Emission Source/Control: 0DLN3 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0DLN4 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0SCR1 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR2 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR3 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR4 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

**Item 54.5:**

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: U-00001

Process: P12

Source Classification Code: 2-01-001-01

**Process Description:**

Process P12 in Emission Unit U-00001 represents distillate fuel oil firing in the four (4) identical combustion turbines (Emission Sources 0T001, 0T002, 0T003 & 0T004) with natural gas duct firing. The maximum firing rate for a single turbine plus duct burner is 2,191 MM Btu/hr (HHV). The maximum firing rate for a single duct burner is 388 MM Btu/hr. Due to limitations in the steam cycle portion of the plant, the maximum duct burner firing cannot occur when a turbine is operating at its maximum natural gas firing rate (1968 MM BTU/hr). Therefore, duct burner firing will only occur with less than 100 % load.

All four combustion turbines are dual-fueled and all four turbines may operate at the same time. Natural gas is the primary fuel and distillate fuel oil is the back-up fuel. For this process, dry low NOx burners (DLN) and selective catalytic reduction (SCR) and water injection (WI) are used to control NOx emissions. Emissions of VOC and CO are controlled through the use of an oxidation catalyst (duct burner in the HRSG design). Each combustion



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turbine is expected to operate up to 8,760 hours/year on natural gas and up to 720 hours/year on distillate oil. The maximum distillate fuel oil throughput for Process P12 may not exceed 41.6 million gallons per year. The emissions from this process exhaust through a common stack identified as Emission Point 00004 with four separate flues.

The permit's emissions criteria for Process P12 would follow the emissions limit set forth for Process P10, and there would be NO INCREASE IN EMISSIONS.

Emission Source/Control: 00DB1 - Combustion  
Design Capacity: 388 million Btu per hour

Emission Source/Control: 00DB2 - Combustion  
Design Capacity: 388 million Btu per hour

Emission Source/Control: 00DB3 - Combustion  
Design Capacity: 388 million Btu per hour

Emission Source/Control: 00DB4 - Combustion  
Design Capacity: 388 million Btu per hour

Emission Source/Control: 0T001 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T002 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T003 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 0T004 - Combustion  
Design Capacity: 2,047.1 million Btu per hour

Emission Source/Control: 00CO1 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO2 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO3 - Control  
Control Type: CATALYTIC AFTERBURNER

Emission Source/Control: 00CO4 - Control  
Control Type: CATALYTIC AFTERBURNER

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Emission Source/Control: 0DLN1 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0DLN2 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0DLN3 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0DLN4 - Control  
Control Type: LOW NOx BURNER

Emission Source/Control: 0SCR1 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR2 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR3 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0SCR4 - Control  
Control Type: SELECTIVE CATALYTIC REDUCTION (SCR)

Emission Source/Control: 0WI01 - Control  
Control Type: WATER INJECTION

Emission Source/Control: 0WI02 - Control  
Control Type: WATER INJECTION

Emission Source/Control: 0WI03 - Control  
Control Type: WATER INJECTION

Emission Source/Control: 0WI04 - Control  
Control Type: WATER INJECTION

**Item 54.6:**

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: U-00002

Process: P22

Source Classification Code: 2-80-002-18

Process Description:

Process P22 in Emission Unit U-00002 represents the 300 brake horsepower diesel fire suppression water pump firing diesel fuel oil. The diesel fire suppression water pump is expected to operate less than 500 hours/year on diesel



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fuel oil. The emissions from this process exhaust through a stack identified as Emission Point 00005.

Emission Source/Control: 00DFP - Combustion

Design Capacity: 300 horsepower (mechanical)

**Condition 55: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.5**

**Item 55.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

Regulated Contaminant(s):

CAS No: 000630-08-0 CARBON MONOXIDE

**Item 55.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

LAER emission limit. Records for demonstration of compliance with the CO emission limit shall be maintained on site for five years. These records shall include i) mass emissions totaled over each 24-hour daily period (the total of hourly averages 12:00 midnight to the following midnight), and ii) the total mass emissions over a 365 day period beginning with the start-up of the facility. Any exceedances of the allowable annual CO emission limitation must be reported in writing to the DEC Regional office within 10 working days of the exceedance.

Parameter Monitored: CARBON MONOXIDE

Upper Permit Limit: 144 tons per year

Monitoring Frequency: CONTINUOUS

Averaging Method: ANNUAL MAXIMUM ROLLED DAILY

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 56: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.5**

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**Item 56.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

Regulated Contaminant(s):

CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 56.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

LAER emission limit. Records for demonstration of compliance with the NOx emission limit shall be maintained on site for five years. These records shall include i) mass emissions totaled over each 24-hour daily period (the total of hourly averages 12:00 midnight to the following midnight), and ii) the total mass emissions over a 365 day period beginning with the start-up of the facility. Any exceedances of the allowable annual NOx emission limitation must be reported in writing to the DEC Regional office within 10 working days of the exceedance.

Parameter Monitored: OXIDES OF NITROGEN

Upper Permit Limit: 324 tons per year

Monitoring Frequency: CONTINUOUS

Averaging Method: ANNUAL MAXIMUM ROLLED DAILY

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 57: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.5**

**Item 57.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

**Item 57.2:**



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Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

LAER emission limit. Records for demonstration of compliance with the VOC emission limit shall be maintained on site for five years. Any exceedances of the allowable annual VOC emission limitation must be reported in writing to the DEC Regional office within 10 working days of the exceedance.

Work Practice Type: PROCESS MATERIAL THRUPUT

Process Material: VOC's

Upper Permit Limit: 108 tons per year

Monitoring Frequency: ANNUALLY

Averaging Method: ARITHMETIC MEAN

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 12 calendar month(s).

**Condition 58: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.6**

**Item 58.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

Regulated Contaminant(s):

CAS No: 000630-08-0 CARBON MONOXIDE

**Item 58.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

Records for demonstration of compliance with the CO emission limit shall be maintained on site for five years.

These records shall include i) mass emissions totaled over each 24-hour daily period (the total of hourly averages 12:00 midnight to the following midnight), and ii) the total mass emissions over a 365 day period beginning with the start-up of the facility. Any exceedance of the allowable annual CO emission limitation



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must be reported in writing to the DEC Regional office within 10 working days of the exceedance.

Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 144 tons per year  
Monitoring Frequency: CONTINUOUS  
Averaging Method: ANNUAL MAXIMUM ROLLED DAILY  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 59: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.6**

**Item 59.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

Regulated Contaminant(s):  
CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 59.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

Records for demonstration of compliance with the NO<sub>x</sub> emission limit shall be maintained on site for five years. These records shall include i) mass emissions totaled over each 24-hour daily period (the total of hourly averages 12:00 midnight to the following midnight), and ii) the total mass emissions over a 365 day period beginning with the start-up of the facility. Any exceedance of the allowable annual NO<sub>x</sub> emission limitation must be reported in writing to the DEC Regional office within 10 working days of the exceedance.

Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 324 tons per year  
Monitoring Frequency: CONTINUOUS  
Averaging Method: ANNUAL MAXIMUM ROLLED DAILY  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).



**Condition 60: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.6**

**Item 60.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

Regulated Contaminant(s):  
CAS No: 0NY998-00-0 VOC

**Item 60.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC  
OPERATIONS

Monitoring Description:

Records for demonstration of compliance with the VOC  
emission limit shall be maintained on site for five years.  
Any exceedance of the allowable annual VOC emission  
limitation must be reported in writing to the DEC Regional  
office within 10 working days of the exceedance.

Work Practice Type: PROCESS MATERIAL THRUPUT

Process Material: VOC's

Upper Permit Limit: 108 tons per year

Monitoring Frequency: ANNUALLY

Averaging Method: ARITHMETIC MEAN

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 12 calendar month(s).

**Condition 61: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.9**

**Item 61.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

**Item 61.2:**

Compliance Certification shall include the following monitoring:

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Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Use of Emission Reduction Credit:

Astoria Energy LLC is requesting a VOC ERC transfer from PG & E Energy Trading- Power L.P. (PGET). Cantor Fitzgerald Brokerage L. P. is authorized to act on behalf of both PG & E Energy Trading-Power L. P. and SCS Energy/Astoria Energy LLC (Astoria Energy) in the processing of the VOC ERC transfer. PG & E Energy Trading (PGET) is transferring 145 tons per year (tpy) of VOC ERCs currently held by PGET to Astoria Energy. These VOC ERCs were originally created at General Motors Corporations's North Tarrytown Plant (Sleepy Hollow), New York facility (DEC ID # 3-5534-00104), and were subsequently transferred, but unused, to PGET. PGET, in turn, subsequently transferred the subject ERCs to Astoria Energy.

In addition to the 145 tpy of VOC ERCs that are being committed to Astoria Energy from PG & E (which were originally transferred from General Motors Corp (DEC ID # 3-5534-00104)), 425 tpy of NOx ERCs have been committed to Astoria Energy from Con Ed. - Astoria, DEC ID # 2-6301-00006 and 145 tpy of CO ERCs have been committed to Astoria Energy from Con Ed. - Astoria, DEC ID # 2-6301-00006.

Monitoring Frequency: SINGLE OCCURRENCE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 62: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21, Subpart A**

**Item 62.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

**Item 62.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:



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Permittee shall submit a quarterly written CEM report to NYSDEC for every calendar year quarter. All quarterly reports shall be post marked by the 30th day following the end of each calendar quarter and shall include:

1. CEMS down time (40 CFR 60.7(b)) and excess emissions (40 CFR 60.7(c)) in a summary report format, as found in 40 CFR 60.7(d), or equivalent.
2. The results of the quarterly monitoring performance audit, reported in the format of 40 CFR 60 Appendix F (or equivalent).
3. Excess emissions shall be identified as any one-hour block period during which the average emissions of CO, or any three-hour block period during which the average emission on NO<sub>x</sub>, as measured by the CEM system, exceeds the corresponding mass or concentration emission limits set forth in this permit.
4. For the purposes of this permit, excess emissions indicated by the CEM system for the appropriate block periods other than start-ups and shutdowns, malfunctions (as stated in 6NYCRR Subpart 201-1.4) emergency, fuel switching, equipment cleaning and CEM calibrations may be considered violations of the applicable emission limits.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 63: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.48c(a), NSPS Subpart Dc**

**Item 63.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

**Item 63.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES



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**Monitoring Description:**

The owner and operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by 40 CFR 60.7 of this part. This notification shall include:

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

Monitoring Frequency: SINGLE OCCURRENCE

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 64: Alternate compliance methods for sulfur dioxide.  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.44c(g), NSPS Subpart Dc**

**Item 64.1:**

This Condition applies to:

Emission Unit: U00001  
Process: P10

Emission Unit: U00001  
Process: P12

**Item 64.1:**

This Condition applies to Emission Unit: U-00001  
Process: P10

**Item 64.2.3:**

**Oil fired facilities demonstrating compliance with the sulfur dioxide standard through sampling and analysis must test every shipment of oil after the initial approval or follow an approved custom schedule.**

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The facility will use commercially available distillate fuel oil (very low sulfur, 0.033 percent by weight). The permit limits for the sulfur content of the oil are much less than the current legal limits for sale of this product in the New York City area. It is therefore proposed that the oil monitoring plan be amended to require only one sulfur test per barge shipment delivered to the power plant. The oil supplier will provide the required distillate oil analysis (per barge shipment).

**Condition 65: Compliance Certification**  
Effective for entire length of Permit

**Applicable Federal Requirement: 6NYCRR 227-1.3(a)**

**Item 65.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004

**Item 65.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL  
DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

No owner or operator of a combustion installation shall emit greater than 20 percent opacity except for one six minute period per hour, not to exceed 27 percent, based upon the six minute average in reference test method 9 in Appendix A of 40 CFR 60.

Parameter Monitored: OPACITY

Upper Permit Limit: 20 percent

Reference Test Method: Method 9

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING  
DESCRIPTION

Averaging Method: 6-MINUTE AVERAGE (METHOD 9)

Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 6 calendar month(s).

**Condition 66: Compliance Certification**  
Effective for entire length of Permit

**Applicable Federal Requirement: 40CFR 52.21, Subpart A**

**Item 66.1:**

The Compliance Certification activity will be performed for:



Emission Unit: U-00001    Emission Point: 00004

**Item 66.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

In accordance with the requirements set forth in 40 CFR 60.334 and 60.335, Astoria Energy LLC is not required to analyze its natural gas and distillate fuel for nitrogen and sulfur content daily in accordance with 60.334(h)(3) provided that the gaseous fuel combusted in the turbine is demonstrated to meet the definition of natural gas in 60.331(u). The demonstration will be by definition of the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less. Astoria Energy LLC is proposing a custom schedule for testing the sulfur content and limiting the distillate oil sulfur content to 0.033 percent by weight. Therefore, once the alternative monitoring plan is approved by USEPA, it will be attached to the permit.

**GAS MONITORING:**

It is anticipated that natural gas will be delivered to the facility via the New York Facility System. Sulfur analysis from the New York Facility System are available and will be provided to EPA upon request, a copy of the valid purchase contract, tariff sheet, or transportation contract specifying the gas quality characteristics will be kept on site at all times.

In the event that natural gas is provided from a system other than the New York Facility System, the gas quality characteristics of the alternate natural gas source will be kept on site with a copy of the alternate valid purchase contract, tariff sheet or transportation contract and EPA will be notified.

The facility incorporates a continuous emissions monitoring system (CEMS) and meets very strict nitrogen oxides (NOx) limits. As such, it is proposed that the facility not be required to test for fuel nitrogen content due to continuous stack compliance already in

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place.

The New York Facility System will provide the natural gas analysis referred to above. In the event that the New York Facility System is unable to provide analysis, the facility will pull a sample and have it analyzed.

**OIL MONITORING:**

The facility will use commercially available distillate fuel oil (very low sulfur, 0.033 percent by weight). The permit limits for the sulfur content of the oil are much less than the current legal limits for sale of this product in the New York City area. It is therefore proposed that the oil monitoring plan be amended to require only one sulfur test per barge shipment into the oil terminal for the oil delivered to the facility. The oil supplier will provide the required distillate oil analysis (per barge shipment). Please also see Conditions 84 & 85.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST METHOD INDICATED

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 67: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 67.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 67.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS



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**Monitoring Description:**

Astoria Energy LLC will demonstrate compliance with the annual particulate matter emission rate using stack testing results and fuel consumption data. The twelve-month rolling total will be recorded monthly. Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel oil as a backup fuel.

Work Practice Type: PARAMETER OF PROCESS MATERIAL

Process Material: NUMBER 2 OIL

Parameter Monitored: PARTICULATES

Upper Permit Limit: 582,000 pounds per year

Reference Test Method: PART 60, APP A, M 5

Monitoring Frequency: MONTHLY

Averaging Method: ANNUAL TOTAL ROLLED MONTHLY

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 12 calendar month(s).

**Condition 68: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 68.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004

Regulated Contaminant(s):

CAS No: 0NY075-00-5 PM-10

**Item 68.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC  
OPERATIONS

Monitoring Description:

Astoria Energy LLC will demonstrate compliance with the annual PM-10 emission rate using stack testing results and fuel consumption data. The twelve-month rolling total will be recorded monthly. Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel oil as a backup fuel.

Work Practice Type: PARAMETER OF PROCESS MATERIAL

Process Material: NUMBER 2 OIL



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Parameter Monitored: PM-10  
Upper Permit Limit: 582,000 pounds per year  
Reference Test Method: App A, M 201A & 202  
Monitoring Frequency: MONTHLY  
Averaging Method: ANNUAL TOTAL ROLLED MONTHLY  
Reporting Requirements: ANNUALLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 12 calendar month(s).

**Condition 69: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.47a(c), NSPS Subpart Da**

**Item 69.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004

Regulated Contaminant(s):  
CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 69.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)  
Monitoring Description:

Astoria Energy LLC has installed, calibrated, maintained, and operates a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides emissions discharged to the atmosphere.

Astoria Energy will use a continuous emissions monitoring system (CEMS) to measure NO<sub>x</sub> concentration in pounds per million Btus at Emission Point 00004 and Emission Unit U-00001 (from the combustion turbines and the auxiliary boiler).

Manufacturer Name/Model Number: CEMS  
Upper Permit Limit: 0.20 pounds per million Btus  
Reference Test Method: 40 CFR 60 App A, Method 7  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).



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**Condition 70: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 70.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 0NY998-00-0 VOC

**Item 70.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.003 lb/MM BTU of VOC emission limit during natural gas firing in the gas turbine with duct firing based on HHV of fuel. Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing. The reference test method for VOC is 40 CFR part 60, Appendix A, method 18 (for Methane) and method 25A (for total). The averaging method is for the reference test method is 1-hour average. LAER is required.

Parameter Monitored: VOC

Upper Permit Limit: 0.003 pounds per million Btus

Reference Test Method: APP A, M 18 & 25A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 71: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 71.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):



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CAS No: 000630-08-0 CARBON MONOXIDE

**Item 71.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

1.5 ppm of CO emission limit during natural gas firing in the gas turbine with duct firing based on HHV of fuel. Astoria Energy LLC will use CEMS to monitor CO emission in the stack. LAER is required.

Manufacturer Name/Model Number: CEM

Parameter Monitored: CARBON MONOXIDE

Upper Permit Limit: 1.5 parts per million by volume  
(dry, corrected to 15% O<sub>2</sub>)

Reference Test Method: PT 60 APP B & F

Monitoring Frequency: CONTINUOUS

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 72: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 72.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):

CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 72.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

2.0 ppm of NO<sub>x</sub> emission limit during natural gas firing in the gas turbine with duct firing based upon high heating value (HHV) of fuel. Astoria Energy LLC will use CEMS to monitor NO<sub>x</sub> emission at the stack. LAER is required.



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**Facility DEC ID: 2630100072**

Manufacturer Name/Model Number: CEM  
Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 2.0 parts per million by volume  
(dry, corrected to 15% O<sub>2</sub>)  
Reference Test Method: Part 60, App B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 73: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 73.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 0NY998-00-0 VOC

**Item 73.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

5.92 lbs/hr of VOC emission limit during natural gas firing in the gas turbine with duct firing based on HHV of fuel. Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing. The reference test method for VOC is 40 CFR part 60, Appendix A, Method 18 (for Methane) and Method 25A (for total). The averaging method is for the reference test method is 1-hour average. LAER is required.

Parameter Monitored: VOC  
Upper Permit Limit: 5.92 pounds per hour  
Reference Test Method: APP A, M 18 & 25A  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE



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**Facility DEC ID: 2630100072**

**Condition 74: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 74.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 000630-08-0    CARBON MONOXIDE

**Item 74.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

7.77 lbs/hr of CO emission limit during natural gas firing in the gas turbine with duct firing based on HHV of fuel. Astoria Energy LLC will use CEMS to monitor CO emission in the stack. LAER is required.

Astoria Energy LLC shall, within one year following the commencement of commercial operation, analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NO<sub>x</sub>, CO, and NH<sub>3</sub>. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM

Parameter Monitored: CARBON MONOXIDE



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**Facility DEC ID: 2630100072**

Upper Permit Limit: 7.77 pounds per hour  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 75: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 75.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 75.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)  
Monitoring Description:

17.0 lbs/hr of NO<sub>x</sub> emission limit during natural gas firing in the gas turbine with duct firing based upon high heating value (HHV) of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor NO<sub>x</sub> emission at the stack. LAER is required.

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching events and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NO<sub>x</sub>, CO, and NH<sub>3</sub>. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of



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15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 17.0 pounds per hour  
Reference Test Method: Part 60, App B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 76: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 76.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 007664-93-9 SULFURIC ACID

**Item 76.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING  
Monitoring Description:  
0.001 lb/MM BTU emission limit of Sulfuric Acid for the gas turbine with duct burner firing natural gas. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Sulfuric Acid emission by stack testing.



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Parameter Monitored: SULFURIC ACID  
Upper Permit Limit: 0.001 pounds per million Btus  
Reference Test Method: Part 60, App A, M 8  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 77: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 77.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 0NY075-00-0 PARTICULATES

**Item 77.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING  
Monitoring Description:  
0.0098 lb/MM BTU of Particulates emission limit during natural gas firing in the gas turbine with duct firing based on HHV of fuel. Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES  
Upper Permit Limit: 0.0098 pounds per million Btus  
Reference Test Method: 40 CFR PART 60, APP A, M 5  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 78: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**



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**Permit ID: 2-6301-00072/00014**

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**Item 78.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 0NY075-00-5    PM-10

**Item 78.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.0098 lb/MM BTU of PM-10 emission limit during natural gas firing in the gas turbine with duct firing based upon HHV of fuel. Astoria Energy LLC will burn natural gas as primary fuel with distillate fuel oil as a backup fuel. Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing.

Parameter Monitored: PM-10

Upper Permit Limit: 0.0098 pounds per million Btus

Reference Test Method: 40 CFR App A, M 201A & 202

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 79: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 79.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 007664-41-7    AMMONIA

**Item 79.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)



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**Monitoring Description:**

15.7 lb/hr of Ammonia emission limit during natural gas firing in the turbine with duct firing based on HHV of fuel. Astoria Energy LLC will control ammonia emission through proper operation and control of the Selective Catalytic Reduction (SCR). Control of the Ammonia feed rate will be based on the NOx and fuel flow. Astoria energy LLC will use CEMS to monitor NH3 emission in the stack. LAER is required.

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching events and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NOx, CO, and NH3. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM

Parameter Monitored: AMMONIA

Upper Permit Limit: 15.7 pounds per hour

Reference Test Method: PT 60 APP B & F

Monitoring Frequency: CONTINUOUS

Averaging Method: 3-HOUR BLOCK AVERAGE

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 80: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 80.1:**



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The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 0NY075-00-5 PM-10

**Item 80.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

18.0 lb/hr of PM-10 emission limit during natural gas firing in the gas turbine with duct firing based upon HHV of fuel. Astoria energy will burn natural gas as primary fuel with distillate fuel oil as a backup fuel. Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing.

Parameter Monitored: PM-10

Upper Permit Limit: 18.0 pounds per hour

Reference Test Method: 40 CFR 60, App A, M 201A & 202

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 81: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 81.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 0NY075-00-0 PARTICULATES

**Item 81.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

18.0 lbs/hr of Particulates emission limit during



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natural gas firing in the gas turbine with duct firing based on HHV of fuel. Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 18.0 pounds per hour

Reference Test Method: PART 60, APP A, M 5

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 82: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 82.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004

Process: P01

Regulated Contaminant(s):

CAS No: 007664-93-9 SULFURIC ACID

**Item 82.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

2.37 lbs/hr emission limit of Sulfuric Acid for the gas turbine with duct burner firing natural gas. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4 . Astoria Energy LLC will demonstrate compliance with Sulfuric Acid emission by stack testing.

Parameter Monitored: SULFURIC ACID

Upper Permit Limit: 2.37 pounds per hour

Reference Test Method: Part 60, App A, M 8

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT



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Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 83: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 83.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P01

Regulated Contaminant(s):  
CAS No: 007664-41-7 AMMONIA

**Item 83.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

Astoria Energy LLC will control Ammonia emission through proper operation and control of the Selective Catalytic Reduction (SCR). Control of the ammonia feed rate will be based on the NOx and fuel flow.

Manufacturer Name/Model Number: CEM

Parameter Monitored: AMMONIA

Upper Permit Limit: 5.0 parts per million by volume  
(dry, corrected to 15% O2)

Reference Test Method: PT 60 APP B & F

Monitoring Frequency: CONTINUOUS

Averaging Method: 3-HOUR BLOCK AVERAGE

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 84: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.334(b), NSPS Subpart GG**

**Item 84.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Process: P01

Regulated Contaminant(s):

CAS No: 007446-09-5      SULFUR DIOXIDE

**Item 84.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL  
DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor the sulfur content and the nitrogen content of the fuel being fired in the turbine. Owners, operators, or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with the requirements of this Section. If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that the fuel is transferred to the storage tank from any other source. In accordance with the custom fuel monitoring schedule established by the USEPA in a letter to Indeck dated 12/19/91, fuel suppliers may be different for each purchase. The oil may not be used at the facility for an extended period of time once delivered to the site, therefore, monitoring would be made for each batch delivered to the site. Each batch may include multiple truck deliveries. If more than one batch is involved, multiple samples would be taken. In addition to monitoring the nitrogen content of the fuel, the facility utilizes a Continuous Emissions Monitoring System (CEMS) to monitor NOx emissions from the gas turbine/Heat Recovery Steam Generator System.

On November 18, 1988, due to a BACT determination required under 40CFR52.21, a limit of 0.3% sulfur by weight was established for fuel utilized at any combustion source at the facility. That limit supersedes the 0.8% sulfur by weight limit required under 40CFR60 Subpart GG.

Astoria Energy LLC is proposing a custom schedule for testing the natural gas Sulfur content. The EPA approved alternative monitoring plan shall be attached to the



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permit.

Parameter Monitored: SULFUR

Upper Permit Limit: 20 grains

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME (INSTANTANEOUS/DISCRETE OR GRAB)

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 85: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 227-2.4(c)**

**Item 85.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P05                Emission Source: BOIL1

Regulated Contaminant(s):  
CAS No: 0NY210-00-0    OXIDES OF NITROGEN

**Item 85.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

Astoria Energy LLC is required to initially stack test the mid-size boiler for NO<sub>x</sub> emission limit compliance.

To comply with this Subpart, owners or operators of mid-size boilers must meet the requirements of either paragraph (1) or (2) of this subdivision by May 31, 1995. The emission limit for NO<sub>x</sub> RACT for mid-size boiler (between 50 and 100 MM Btu/hr) operating on natural gas only is 0.10 pounds of NO<sub>x</sub> per million Btu. However, Astoria Energy is required to comply with LAER, for which the NO<sub>x</sub> emission limit is 0.011 lbs/MM Btu rather than the 0.10 lbs/MM Btu limit under the NO<sub>x</sub> RACT plan for mid-size boilers.

Compliance with the 0.011 lbs/MM Btu emission limit shall



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be determined with a one hour average in accordance with section 227-2.6(a)(4) of this Subpart unless the owner/operator opts to utilize CEMS under the provisions of section 227-2.6(a)(2) of this Subpart. If CEMS are utilized, the requirements of section 227-2.6(b) of this Subpart apply, including the use of a 24 hour averaging period.

Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 0.011 pounds per million Btus  
Reference Test Method: METHOD 7, 7E, 19  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 86: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 86.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P05                Emission Source: BOIL1

Regulated Contaminant(s):  
CAS No: 0NY210-00-0    OXIDES OF NITROGEN

**Item 86.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING  
Monitoring Description:  
1.09 lb/hr of NOx emission limit during natural gas firing in the auxiliary boiler based upon high heating value (HHV) of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with NOx emission by stack testing. LAER is required.

Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 1.09 pounds per hour  
Reference Test Method: PART 60 APP A, M 7E  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

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**Condition 87: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 87.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P05                    Emission Source: BOIL1

Regulated Contaminant(s):  
CAS No: 000630-08-0    CARBON MONOXIDE

**Item 87.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.020 lb/MM BTU of CO emission limit during natural gas firing in the auxiliary boiler based on HHV of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with CO emission by stack testing. LAER is required.

Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 0.020 pounds per million Btus  
Reference Test Method: PT 60 APP A, M 10  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 88: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 88.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P05                    Emission Source: BOIL1

Regulated Contaminant(s):  
CAS No: 0NY998-00-0    VOC



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**Permit ID: 2-6301-00072/00014**

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**Item 88.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.20 lb/hrof VOC emission limit during natural gas firing in the auxiliary boiler based on HHV of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing. The reference test method for VOC is 40 CFR Part 60, Appendix A, Method 18 (for Methane) and Method 25A (for total). The averaging method for the reference test method is 1-hour average. LAER is required.

Parameter Monitored: VOC

Upper Permit Limit: 0.20 pounds per hour

Reference Test Method: APP A, M 18 & 25A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 89: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 89.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P05                Emission Source: BOIL1

Regulated Contaminant(s):

CAS No: 0NY210-00-0    OXIDES OF NITROGEN

**Item 89.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.011 lb/MM BTU of NO<sub>x</sub> emission limit during natural gas firing in the auxiliary boiler based upon high heating value (HHV) of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with NO<sub>x</sub> emission by stack testing. LAER is required.



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 0.011 pounds per million Btus  
Reference Test Method: PART 60 APP A, M 7E  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 90: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 90.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P05                Emission Source: BOIL1

Regulated Contaminant(s):  
CAS No: 000630-08-0    CARBON MONOXIDE

**Item 90.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING  
Monitoring Description:  
1.98 lb/hr of CO emission limit during natural gas firing in the auxiliary boiler based on HHV of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with CO emission by stack testing. LAER is required.

Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 1.98 pounds per hour  
Reference Test Method: PT 60 APP A, M 10  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 91: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 91.1:**

The Compliance Certification activity will be performed for:



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Emission Unit: U-00001    Emission Point: 00004  
Process: P05                      Emission Source: BOIL1

Regulated Contaminant(s):  
CAS No: 0NY998-00-0    VOC

**Item 91.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.002 lb/MM BTU of VOC emission limit during natural gas firing in the auxiliary boiler based on HHV of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing. The reference test method for VOC is 40 CFR Part 60, Appendix A, Method 18 (for Methane) and Method 25A (for total). The averaging method for the reference test method is 1-hour average. LAER is required.

Parameter Monitored: VOC

Upper Permit Limit: 0.002 pounds per million Btus

Reference Test Method: APP A, M 18 & 25A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 92: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 92.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P05                      Emission Source: BOIL1

**Item 92.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The auxiliary boiler will not operate below 50 % load, except during startup and shutdown.



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Monitoring Frequency: CONTINUOUS  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 93: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 93.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P05    Emission Source: BOIL1

Regulated Contaminant(s):  
CAS No: 0NY075-00-0    PARTICULATES

**Item 93.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING  
Monitoring Description:

0.005 lb/MM BTU of Particulates emission limit during natural gas firing in the auxiliary boiler based upon HHV of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES  
Upper Permit Limit: 0.005 pounds per million Btus  
Reference Test Method: PART 60, APP A, M 5  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 94: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 94.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Process: P05

Emission Source: BOIL1

Regulated Contaminant(s):

CAS No: 0NY075-00-5 PM-10

**Item 94.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.005 lb/MM BTU of PM-10 emission limit during natural gas firing in auxiliary boiler based upon HHV of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing.

Parameter Monitored: PM-10

Upper Permit Limit: 0.005 pounds per million Btus

Reference Test Method: APP A, M 201A & 202

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 95: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 95.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001

Emission Point: 00004

Process: P05

Emission Source: BOIL1

Regulated Contaminant(s):

CAS No: 0NY075-00-5 PM-10

**Item 95.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.495 lb/hr of PM-10 emission limit during natural gas firing in auxiliary boiler based upon HHV of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing.



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**Facility DEC ID: 2630100072**

Parameter Monitored: PM-10  
Upper Permit Limit: 0.495 pounds per hour  
Reference Test Method: APP A, M 201A & 202  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 96: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 96.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P05                Emission Source: BOIL1

Regulated Contaminant(s):  
CAS No: 0NY075-00-0    PARTICULATES

**Item 96.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING  
Monitoring Description:  
0.495 lb/hr of Particulates emission limit during natural gas firing in the auxiliary boiler based upon HHV of fuel. Astoria Energy LLC will burn only natural gas in the boiler. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES  
Upper Permit Limit: 0.495 pounds per hour  
Reference Test Method: PART 60, APP A, M 5  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 97: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 97.1:**

The Compliance Certification activity will be performed for:

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**Facility DEC ID: 2630100072**



Emission Unit: U-00001 Emission Point: 00004  
Process: P10

Regulated Contaminant(s):  
CAS No: 0NY998-00-0 VOC

**Item 97.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.007 lb/MM BTU of VOC emission limit during distillate oil firing in the gas turbine based on HHV of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4 . Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing. The reference test method for VOC is 40 CFR Part 60, Appendix A, Method 18 (for Methane) and Method 25A (for total). The averaging method is for the reference test method is 1-hour average. LAER is required.

Parameter Monitored: VOC

Upper Permit Limit: 0.007 pounds per million Btus

Reference Test Method: APP A, M 18 & 25A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 98: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 98.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P10

Regulated Contaminant(s):  
CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 98.2:**

Compliance Certification shall include the following monitoring:



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

6.0 ppm of NO<sub>x</sub> emission limit during distillate oil firing in the turbine based upon high heating value (HHV) of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor NO<sub>x</sub> emission in the stack. LAER is required.

Manufacturer Name/Model Number: CEM

Parameter Monitored: OXIDES OF NITROGEN

Upper Permit Limit: 6.0 parts per million by volume

(dry, corrected to 15% O<sub>2</sub>)

Reference Test Method: Part 60, App B & F

Monitoring Frequency: CONTINUOUS

Averaging Method: 3-HOUR BLOCK AVERAGE

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 99: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 99.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004

Process: P10

Regulated Contaminant(s):

CAS No: 000630-08-0 CARBON MONOXIDE

**Item 99.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

4.0 ppm of CO emission limit during distillate oil firing in gas turbine based on HHV of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor CO emission in



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the stack. LAER is required.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 4.0 parts per million by volume  
(dry, corrected to 15% O<sub>2</sub>)  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 100: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 100.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P10

Regulated Contaminant(s):  
CAS No: 000630-08-0 CARBON MONOXIDE

**Item 100.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

19.7 lbs/hr of CO emission limit during distillate oil firing in gas turbine based on HHV of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor co emission in the stack. LAER is required.

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NO<sub>x</sub>, CO, and NH<sub>3</sub>. Astoria Energy LLC shall confirm that such established rates would not result in a violation of



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applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 19.7 pounds per hour  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 101: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 101.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P10

Regulated Contaminant(s):  
CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 101.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)  
Monitoring Description:  
48.5 lbs/hr of NO<sub>x</sub> emission limit during distillate oil firing in the turbine based upon high heating value (HHV) of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance,



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malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor NOx emission at the stack. LAER is required.

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NOx, CO, and NH3. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 48.5 pounds per hour  
Reference Test Method: Part 60, APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 102: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 102.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P10

Regulated Contaminant(s):



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

CAS No: 0NY998-00-0 VOC

**Item 102.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

14.1 lbs/hr of VOC emission limit during distillate oil firing in the gas turbine based on HHV of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing. The reference test method for VOC is 40 CFR Part 60, Appendix A, Method 18 (for Methane) and Method 25A (for total). The averaging method is for the reference test method is 1-hour average. LAER is required.

Parameter Monitored: VOC

Upper Permit Limit: 14.1 pounds per hour

Reference Test Method: APP A, M 18 & 25A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 103: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 103.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004

Process: P10

Regulated Contaminant(s):

CAS No: 0NY075-00-5 PM-10

**Item 103.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

57.7 lb/hr of PM-10 emission limit during distillate fuel oil firing in the gas turbine based on HHV of fuel.



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Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel oil as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4 . Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing

Parameter Monitored: PM-10

Upper Permit Limit: 57.7 pounds per hour

Reference Test Method: App A, M 201A & 202

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 104: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 104.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P10

Regulated Contaminant(s):  
CAS No: 0NY075-00-0 PARTICULATES

**Item 104.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

57.7 lb/hr of Particulates emission limit during distillate fuel oil firing in the gas turbine based on HHV of fuel. Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel oil as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 57.7 pounds per hour

Reference Test Method: PART 60, APP A, M 5



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Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 105: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 105.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P10

Regulated Contaminant(s):

CAS No: 007446-09-5 SULFUR DIOXIDE

**Item 105.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

69.6 lb/hr limit of Sulfur Dioxide for the turbine firing distillate fuel oil. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Sulfur Dioxide emission by stack testing. The stack testing is required once during the term of the permit.

Parameter Monitored: SULFUR DIOXIDE

Upper Permit Limit: 69.6 pounds per hour

Reference Test Method: Part 60, App A, M 8

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 106: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 106.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Process: P10

Regulated Contaminant(s):

CAS No: 007664-41-7 AMMONIA

**Item 106.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

Astoria Energy LLC will control Ammonia emission through proper operation and control of the Selective Catalytic Reduction (SCR). Control of the Ammonia feed rate will be based on the NOx and fuel flow. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4 .

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NOx, CO, and NH3. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM

Parameter Monitored: AMMONIA

Upper Permit Limit: 14.9 pounds per hour

Reference Test Method: PT 60 APP B & F

Monitoring Frequency: CONTINUOUS

Averaging Method: 3-HOUR BLOCK AVERAGE

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Subsequent reports are due every 3 calendar month(s).

**Condition 107: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 107.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P10

Regulated Contaminant(s):  
CAS No: 0NY075-00-5 PM-10

**Item 107.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.04 lb/MM BTU of PM-10 emission limit during distillate fuel oil firing in the gas turbine based on HHV of fuel.

Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel oil as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4.

Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing.

Parameter Monitored: PM-10

Upper Permit Limit: 0.04 pounds per million Btus

Reference Test Method: App A, M 201A & 202

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 108: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 108.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Process: P10

Regulated Contaminant(s):

CAS No: 007664-93-9 SULFURIC ACID

**Item 108.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.0152 lb/MM BTU limit of Sulfuric Acid for the turbine firing distillate fuel oil. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Sulfuric Acid emission by stack testing.

Parameter Monitored: SULFURIC ACID

Upper Permit Limit: 0.0152 pounds per million Btus

Reference Test Method: Part 60, App A, M 8

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 109: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 109.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004

Process: P10

Regulated Contaminant(s):

CAS No: 0NY075-00-0 PARTICULATES

**Item 109.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.04 lb/MM BTU Particulates emission limit during distillate fuel oil firing in the gas turbine based on HHV of fuel. Astoria Energy LLC will burn natural gas as the



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primary fuel with distillate fuel oil as a backup fuel.  
This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES  
Upper Permit Limit: 0.04 pounds per million Btus  
Reference Test Method: PART 60, APP A, M 5  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 110: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 110.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P10

Regulated Contaminant(s):  
CAS No: 007664-93-9 SULFURIC ACID

**Item 110.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING  
Monitoring Description:  
21.9 lb/hr limit of Sulfuric Acid for the turbine firing distillate fuel oil. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Sulfuric Acid emission by stack testing.

Parameter Monitored: SULFURIC ACID  
Upper Permit Limit: 21.9 pounds per hour  
Reference Test Method: Part 60, App A, M 8  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

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**Condition 111: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 111.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P10

**Item 111.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC  
OPERATIONS

Monitoring Description:

Astoria Energy LLC will burn natural gas as a primary  
fuel and distillate fuel oil as a backup fuel (which has a  
limit of 0.033 % by weight Sulfur content) for up to 720  
hours per year per turbine.

Work Practice Type: HOURS PER YEAR OPERATION

Upper Permit Limit: 720 hours

Monitoring Frequency: DAILY

Averaging Method: ANNUAL MAXIMUM ROLLED DAILY

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 112: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 112.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P10

Regulated Contaminant(s):

CAS No: 007664-41-7    AMMONIA

**Item 112.2:**

Compliance Certification shall include the following monitoring:



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

Astoria Energy LLC will control Ammonia emission through proper operation and control of the Selective Catalytic Reduction (SCR). Control of the Ammonia feed rate will be based on the NOx and fuel flow.

Manufacturer Name/Model Number: CEM

Parameter Monitored: AMMONIA

Upper Permit Limit: 5.0 parts per million by volume  
(dry, corrected to 15% O2)

Reference Test Method: PT 60 APP B & F

Monitoring Frequency: CONTINUOUS

Averaging Method: 3-HOUR BLOCK AVERAGE

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 113: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 113.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P11

Regulated Contaminant(s):

CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 113.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

15.6 lbs/hr of NOx emission limit during natural gas firing in the gas turbine without duct firing based upon high heating value (HHV) of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor NOx emission at the stack. LAER is required.



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Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NO<sub>x</sub>, CO, and NH<sub>3</sub>. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 15.6 pounds per hour  
Reference Test Method: Part 60, App B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 114: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 114.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 000630-08-0 CARBON MONOXIDE

**Item 114.2:**

Compliance Certification shall include the following monitoring:

**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**



Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

7.15 lbs/hr of CO emission limit during natural gas firing in the gas turbine without duct firing based on HHV of fuel. Astoria Energy LLC use CEMS to monitor CO emission in the stack. LAER is required.

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NO<sub>x</sub>, CO, and NH<sub>3</sub>. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 7.15 pounds per hour  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 115: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 115.1:**

The Compliance Certification activity will be performed for:



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Emission Unit: U-00001    Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 0NY998-00-0    VOC

**Item 115.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

5.43 lbs/hr of VOC emission limit during natural gas firing in the gas turbine without duct firing based on HHV of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing. The reference test method for VOC is 40 CFR Part 60, Appendix A, Method 18 (for Methane) and Method 25A (for total). The averaging method is for the reference test method is 1-hour average. LAER is required.

Upper Permit Limit: 5.43 pounds per hour  
Reference Test Method: APP A, M 18 & 25A  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 116: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 116.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 0NY998-00-0    VOC

**Item 116.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

**Monitoring Description:**

0.003 lb/MM BTU of VOC emission limit during natural gas firing in the gas turbine without duct firing based on HHV of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing. The reference test method for VOC is 40 CFR Part 60, Appendix A, Method 18 (for Methane) and method 25A (for total). The averaging method is for the reference test method is 1-hour average. LAER is required.

Parameter Monitored: VOC

Upper Permit Limit: 0.003 pounds per million Btus

Reference Test Method: APP A, M 18 & 25A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 117: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 117.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P11

Regulated Contaminant(s):

CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 117.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

2.0 ppm of NO<sub>x</sub> emission limit during natural gas firing in the gas turbine without duct firing based upon high heating value (HHV) of fuel. This emission limit applies at all times, excluding start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor NO<sub>x</sub> emission at the stack. LAER is required.



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Manufacturer Name/Model Number: CEM  
Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 2.0 parts per million by volume  
(dry, corrected to 15% O<sub>2</sub>)  
Reference Test Method: Part 60, App B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 118: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 118.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 000630-08-0 CARBON MONOXIDE

**Item 118.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)  
Monitoring Description:

1.5 ppm of CO emission limit during natural gas firing  
in the gas turbine without duct firing based on HHV of  
fuel. This emission limit applies at all times, excluding  
start-up/shutdown, equipment maintenance, malfunctions and  
upsets as per the requirements of 6 NYCRR 201-1.4.  
Astoria Energy LLC will use CEMS to monitor CO emission in  
the stack. LAER is required.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 1.5 parts per million by volume  
(dry, corrected to 15% O<sub>2</sub>)  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 119: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 119.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 0NY075-00-0 PARTICULATES

**Item 119.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

12.9 lb/hr of Particulates emission limit during natural gas firing in the gas turbine without duct firing based upon HHV of fuel. Astoria Energy LLC will burn natural gas as primary fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 12.9 pounds per hour

Reference Test Method: PART 60, APP A, M 5

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 120: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 120.1:**

The Compliance Certification activity will be performed for:



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Emission Unit: U-00001    Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 0NY075-00-5    PM-10

**Item 120.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

12.9 lb/hr of PM-10 emission limit during natural gas firing in the gas turbine without duct firing based upon HHV of fuel. Astoria Energy LLC will burn natural gas as primary fuel with distillate fuel oil as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing.

Parameter Monitored: PM-10

Upper Permit Limit: 12.9 pounds per hour

Reference Test Method: App A, M 201A & 202

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 121: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 121.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 007664-93-9    SULFURIC ACID

**Item 121.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

0.90 lbs/hr of Sulfuric Acid emission limit when the turbine is firing natural gas and is without duct firing. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4 . Astoria Energy LLC will demonstrate compliance with Sulfuric Acid emission by stack testing.

Parameter Monitored: SULFURIC ACID  
Upper Permit Limit: 0.90 pounds per hour  
Reference Test Method: Part 60, App A, M 8  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 122: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 122.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 0NY075-00-0 PARTICULATES

**Item 122.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING  
Monitoring Description:  
0.0098 lb/MM BTU of Particulates emission limit during natural gas firing in the gas turbine without duct firing based upon HHV of fuel. Astoria Energy LLC will burn natural gas as primary fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES  
Upper Permit Limit: 0.0098 pounds per million Btus  
Reference Test Method: PART 60, APP A, M 5



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 123: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 123.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 0NY075-00-5 PM-10

**Item 123.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.0098 lb/MM BTU of PM-10 emission limit during natural gas firing in the gas turbine without duct firing based upon HHV of fuel. Astoria Energy LLC will burn natural gas as primary fuel with distillate fuel oil as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing.

Parameter Monitored: PM-10

Upper Permit Limit: 0.0098 pounds per million Btus

Reference Test Method: App A, M 201A & 202

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 124: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 124.1:**

The Compliance Certification activity will be performed for:



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Emission Unit: U-00001    Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 007664-41-7    AMMONIA

**Item 124.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

Astoria Energy LLC will control Ammonia emission through proper operation and control of the Selective Catalytic Reduction (SCR). Control of the Ammonia feed rate will be based on the NOx and fuel flow.

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NOx, CO, and NH3. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: AMMONIA  
Upper Permit Limit: 14.1 pounds per hour  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

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Permit ID: 2-6301-00072/00014

Facility DEC ID: 2630100072



**Condition 125: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 125.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P11

Regulated Contaminant(s):  
CAS No: 007664-41-7    AMMONIA

**Item 125.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

Astoria Energy LLC will control Ammonia emission through proper operation and control of the Selective Catalytic Reduction (SCR). Control of the Ammonia feed rate will be based on the NOx and fuel flow.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: AMMONIA  
Upper Permit Limit: 5.0 parts per million by volume  
(dry, corrected to 15% O2)

Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 126: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 126.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P11



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Regulated Contaminant(s):

CAS No: 007664-93-9      SULFURIC ACID

**Item 126.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.001 lb/MM BTU of Sulfuric Acid emission limit when the turbine is firing natural gas and is without duct firing.

This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4.

Astoria Energy LLC will demonstrate compliance with Sulfuric Acid emission by stack testing.

Parameter Monitored: SULFURIC ACID

Upper Permit Limit: 0.001 pounds per million Btus

Reference Test Method: Part 60, App A, M 8

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 127: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 127.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001      Emission Point: 00004

Process: P12

Regulated Contaminant(s):

CAS No: 000630-08-0      CARBON MONOXIDE

**Item 127.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

19.7 lbs/hr of CO emission limit during distillate oil firing with natural gas duct firing in gas turbine based on HHV of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the



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requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor co emission in the stack. LAER is required.

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NO<sub>x</sub>, CO, and NH<sub>3</sub>. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 19.7 pounds per hour  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 128: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 128.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P12

Regulated Contaminant(s):



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CAS No: 0NY998-00-0 VOC

**Item 128.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.007 lb/MM BTU of VOC emission limit during distillate oil firing with natural gas duct firing in the gas turbine based on HHV of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing. The reference test method for VOC is 40 CFR Part 60, Appendix A, Method 18 (for Methane) and Method 25A (for total). The averaging method is for the reference test method is 1-hour average. LAER is required.

Parameter Monitored: VOC

Upper Permit Limit: 0.007 pounds per million Btus

Reference Test Method: APP A, M 18 & 25A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 129: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 129.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004

Process: P12

Regulated Contaminant(s):

CAS No: 0NY998-00-0 VOC

**Item 129.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

14.1 lbs/hr of VOC emission limit during distillate oil firing with natural gas duct firing in the gas turbine



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based on HHV of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with VOC emission by stack testing.

The reference test method for VOC is 40 CFR Part 60, Appendix A, Method 18 (for Methane) and Method 25A (for total). The averaging method is for the reference test method is 1-hour average. LAER is required.

Parameter Monitored: VOC

Upper Permit Limit: 14.1 pounds per hour

Reference Test Method: APP A, M 18 & 25A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 130: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 130.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 130.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

6.0 ppm of NO<sub>x</sub> emission limit during distillate oil firing with natural gas duct firing in the turbine based upon high heating value (HHV) of fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor NO<sub>x</sub> emission in the stack. LAER is required.

Manufacturer Name/Model Number: CEM

Parameter Monitored: OXIDES OF NITROGEN



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Upper Permit Limit: 6.0 parts per million by volume  
(dry, corrected to 15% O<sub>2</sub>)  
Reference Test Method: Part 60, App B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 131: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 131.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 0NY210-00-0 OXIDES OF NITROGEN

**Item 131.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

48.5 lbs/hr of NO<sub>x</sub> emission limit during distillate oil firing with natural gas duct firing in the turbine based upon high heating value (HHV) of fuel. This emission limit applies at all times, excluding start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor NO<sub>x</sub> emission at the stack. LAER is required.

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NO<sub>x</sub>, CO, and NH<sub>3</sub>. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas,



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and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing.

Manufacturer Name/Model Number: CEM  
Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 48.5 pounds per hour  
Reference Test Method: Part 60, APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 132: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 132.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 000630-08-0 CARBON MONOXIDE

**Item 132.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)  
Monitoring Description:

4.0 ppm of CO emission limit during distillate oil firing with natural gas duct firing in gas turbine based on HHV of fuel. This emission limit applies at all times, excluding start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will use CEMS to monitor CO emission in the stack. LAER is required.



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**Permit ID: 2-6301-00072/00014**

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Manufacturer Name/Model Number: CEM  
Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 4.0 parts per million by volume  
(dry, corrected to 15% O<sub>2</sub>)  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 133: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 133.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P12

**Item 133.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC  
OPERATIONS

Monitoring Description:

Astoria Energy LLC will burn natural gas as a primary  
fuel and distillate fuel oil as a backup fuel (which has a  
limit of 0.033 % by weight Sulfur content) for up to 720  
hours per year per turbine.

Work Practice Type: HOURS PER YEAR OPERATION

Upper Permit Limit: 720 hours

Monitoring Frequency: DAILY

Averaging Method: ANNUAL MAXIMUM ROLLED DAILY

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 134: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

**Item 134.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 007446-09-5    SULFUR DIOXIDE

**Item 134.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

69.6 lb/hr limit of Sulfur Dioxide for the turbine firing distillate fuel oil with natural gas duct firing. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Sulfur Dioxide emission by stack testing. The stack testing is required once during the term of the permit.

Parameter Monitored: SULFUR DIOXIDE  
Upper Permit Limit: 69.6 pounds per hour  
Reference Test Method: Part 60, App A, M 8  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 135: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 135.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 0NY075-00-5    PM-10

**Item 135.2:**

Compliance Certification shall include the following monitoring:



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Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

57.7 lb/hr of PM-10 emission limit during distillate fuel oil firing with natural gas duct firing in the gas turbine based on HHV of fuel. Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel oil as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing

Parameter Monitored: PM-10

Upper Permit Limit: 57.7 pounds per hour

Reference Test Method: App A, M 201A & 202

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 136: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 136.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 007664-93-9 SULFURIC ACID

**Item 136.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

21.9 lb/hr limit of Sulfuric Acid for the turbine firing distillate fuel oil with natural gas duct firing. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Sulfuric Acid emission by stack testing.



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Parameter Monitored: SULFURIC ACID  
Upper Permit Limit: 21.9 pounds per hour  
Reference Test Method: Part 60, App A, M 8  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 137: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 137.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 0NY075-00-0 PARTICULATES

**Item 137.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.04 lb/MM BTU Particulates emission limit during distillate fuel oil firing with natural gas duct firing in the gas turbine based on HHV of fuel. Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel oil as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES  
Upper Permit Limit: 0.04 pounds per million Btus  
Reference Test Method: PART 60, APP A, M 5  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 138: Compliance Certification**  
**Effective for entire length of Permit**



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 138.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 0NY075-00-5    PM-10

**Item 138.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.04 lb/MM BTU of PM-10 emission limit during distillate fuel oil firing with natural gas duct firing in the gas turbine based on HHV of fuel. Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel oil as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with PM-10 emission by stack testing.

Parameter Monitored: PM-10  
Upper Permit Limit: 0.04 pounds per million Btus  
Reference Test Method: App A, M 201A & 202  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 139: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 139.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 007664-93-9    SULFURIC ACID

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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**



**Item 139.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.0152 lb/MM BTU limit of Sulfuric Acid for the turbine firing distillate fuel oil with natural gas duct firing. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Sulfuric Acid emission by stack testing.

Parameter Monitored: SULFURIC ACID

Upper Permit Limit: 0.0152 pounds per million Btus

Reference Test Method: Part 60, App A, M 8

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 140: Compliance Certification  
Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 140.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P12

Regulated Contaminant(s):

CAS No: 007664-41-7 AMMONIA

**Item 140.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

Astoria Energy LLC will control Ammonia emission through proper operation and control of the Selective Catalytic Reduction (SCR). Control of the Ammonia feed rate will be based on the NOx and fuel flow.

Manufacturer Name/Model Number: CEM

Parameter Monitored: AMMONIA



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Upper Permit Limit: 5.0 parts per million by volume  
(dry, corrected to 15% O<sub>2</sub>)  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 141: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 141.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 0NY075-00-0 PARTICULATES

**Item 141.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

57.7 lb/hr of Particulates emission limit during distillate fuel oil firing with natural gas duct firing in the gas turbine based on HHV of fuel. Astoria Energy LLC will burn natural gas as the primary fuel with distillate fuel oil as a backup fuel. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4. Astoria Energy LLC will demonstrate compliance with Particulates emission by stack testing.

Parameter Monitored: PARTICULATES

Upper Permit Limit: 57.7 pounds per hour

Reference Test Method: PART 60, APP A, M 5

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 142: Compliance Certification**



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 142.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P12

Regulated Contaminant(s):  
CAS No: 007664-41-7    AMMONIA

**Item 142.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: CONTINUOUS EMISSION MONITORING (CEM)

Monitoring Description:

Astoria Energy LLC will control Ammonia emission through proper operation and control of the Selective Catalytic Reduction (SCR). Control of the Ammonia feed rate will be based on the NOx and fuel flow. This emission limit applies at all times, including start-up/shutdown, equipment maintenance, malfunctions and upsets as per the requirements of 6 NYCRR 201-1.4 .

Following the commencement of commercial operation, Astoria Energy LLC shall analyze data obtained from start-up/shutdown and fuel switching and shall submit a permit modification to establish enforceable combustion turbine start-up and shutdown emission rates for NOx, CO, and NH3. Astoria Energy LLC shall confirm that such established rates would not result in a violation of applicable NAAQS. The application for permit modification shall be submitted within 120 days of completion of one year of commercial operation when firing natural gas, and/or within 120 days of completion of 15-start-up/shutdown events when burning distillate fuel oil. If 15 such events with oil firing are not completed within the first year of commercial operation, the analysis of data and submission of the permit modification to establish enforceable emission rates with oil firing and/or fuel switching, and to confirm that such emission rates will not result in a violation of applicable NAAQS, shall occur within 120 days of completion of the final (fifteenth) start-up/shutdown event with oil firing with natural gas duct firing.



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**Permit ID: 2-6301-00072/00014**

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Manufacturer Name/Model Number: CEM  
Parameter Monitored: AMMONIA  
Upper Permit Limit: 14.9 pounds per hour  
Reference Test Method: PT 60 APP B & F  
Monitoring Frequency: CONTINUOUS  
Averaging Method: 3-HOUR BLOCK AVERAGE  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 143: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 60.48c(a), NSPS Subpart Dc**

**Item 143.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00002

**Item 143.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The owner and operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by 40 CFR 60.7 of this part. This notification shall include:

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

Monitoring Frequency: SINGLE OCCURRENCE



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**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 144: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 144.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00002    Emission Point: 00005  
Process: P22                      Emission Source: 00DFP

Regulated Contaminant(s):  
CAS No: 0NY210-00-0    OXIDES OF NITROGEN

**Item 144.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

3.44 lb/MM BTU of NO<sub>x</sub> emission limit during fuel oil firing in the diesel fire pump based upon high heating value (HHV) of fuel.

The stack testing for Oxides of Nitrogen is an initial stack testing that will be performed only once during the life of this fire pump. This facility can be excused from performing this stack test only if this facility supplies NYSDEC with the make, model and the manufacture's Oxides of Nitrogen emission guarantee for the fire pump that is acceptable to the Department and will become part of this Title V permit.

As part of the Title V renewal that was received on November 14, 2006, the facility has supplied the Department with the following information for the fire pump (Emission Source 00DFP):

Make: Clarke  
Model: JW6H-UF40  
NO<sub>x</sub> emission guarantee: 1.35 lbs/MMBtu, 2.72 lbs/hr,  
4.11 g/hp-hr

Parameter Monitored: OXIDES OF NITROGEN  
Upper Permit Limit: 3.44 pounds per million Btus  
Reference Test Method: PT60, APP A, M7E



**New York State Department of Environmental Conservation**

**Permit ID: 2-6301-00072/00014**

**Facility DEC ID: 2630100072**

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 3-HOUR BLOCK AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 145: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 145.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00002    Emission Point: 00005  
Process: P22                Emission Source: 00DFP

Regulated Contaminant(s):  
CAS No: 000630-08-0    CARBON MONOXIDE

**Item 145.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.18 lb/MM BTU of CO emission limit during oil firing in the diesel fire pump based on HHV of fuel.

The stack testing for Carbon Monoxide is an initial stack testing that will be performed only once during the life of this fire pump. This facility can be excused from performing this stack test only if this facility supplies NYSDEC with the make, model and the manufacture's Carbon Monoxide emission guarantee for the fire pump that is acceptable to the Department and will become part of this Title V permit.

As part of the Title V renewal that was received on November 14, 2006, the facility has supplied the Department with the following information for the fire pump (Emission Source 00DFP):

Make: Clarke  
Model: JW6H-UF40  
CO emission guarantee: 0.13 lbs/MMBtu, 0.27 lbs/hr,  
0.41 g/bhp-hr

Parameter Monitored: CARBON MONOXIDE  
Upper Permit Limit: 0.18 pounds per million Btus



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Reference Test Method: PT 60, APP A, M10

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 146: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 6NYCRR 231-2.7(b)**

**Item 146.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00002    Emission Point: 00005

Process: P22                      Emission Source: 00DFP

Regulated Contaminant(s):

CAS No: 0NY998-00-0    VOC

**Item 146.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.11 lb/MM BTU of VOC emission limit during oil firing in the diesel fire pump based on HHV of fuel. The reference test method for VOC is 40 CFR Part 60, Appendix A, Method 18 (for Methane) and Method 25A (for total). The averaging method is for the reference test method is 1-hour average.

The stack testing for VOC is an initial stack testing that will be performed only once during the life of this fire pump. This facility can be excused from performing this stack test only if this facility supplies NYSDEC with the make, model and the manufacturer's VOC emission guarantee for the fire pump that is acceptable to the Department and will become part of this Title V permit.

As part of the Title V renewal that was received on November 14, 2006, the facility has supplied the Department with the following information for the fire pump (Emission Source 00DFP):

Make: Clarke

Model: JW6H-UF40

VOC emission guarantee: 0.11 lbs/MMBtu, 0.222

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lbs/hr

Parameter Monitored: VOC

Upper Permit Limit: 0.11 pounds per million Btus

Reference Test Method: APP A, M 18 & 25A

Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT

Averaging Method: 1-HOUR AVERAGE

Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 147: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 147.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00002    Emission Point: 00005  
Process: P22                Emission Source: 00DFP

Regulated Contaminant(s):  
CAS No: 0NY075-00-5    PM-10

**Item 147.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.06 lb/MM BTU of PM-10 emission limit during fuel oil firing in the diesel fire pump based upon HHV of fuel.

The stack testing for PM-10 is an initial stack testing that will be performed only once during the life of this fire pump. This facility can be excused from performing this stack test only if this facility supplies NYSDEC with the make, model and the manufacture's PM-10 emission guarantee for the fire pump that is acceptable to the Department and will become part of this Title V permit.

As part of the Title V renewal that was received on November 14, 2006, the facility has supplied the Department with the following information for the fire pump (Emission Source 00DFP):

Make: Clarke



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Model: JW6H-UF40  
PM-10 emission guarantee: 0.05 lbs/MMBtu, 0.11  
lbs/hr, 0.16 g/bhp-hr

Parameter Monitored: PM-10  
Upper Permit Limit: 0.06 pounds per million Btus  
Reference Test Method: METHOD 201A & 202  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE

**Condition 148: Compliance Certification**  
**Effective for entire length of Permit**

**Applicable Federal Requirement: 40CFR 52.21(j), Subpart A**

**Item 148.1:**

The Compliance Certification activity will be performed for:

Emission Unit: U-00002    Emission Point: 00005  
Process: P22                Emission Source: 00DFP

Regulated Contaminant(s):  
CAS No: 0NY075-00-0    PARTICULATES

**Item 148.2:**

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

0.06 lb/MM BTU of Particulates emission limit during  
fuel oil firing in the diesel fire pump based upon HHV of  
fuel.

The stack testing for Particulates is an initial stack  
testing that will be performed only once during the life  
of this fire pump. This facility can be excused from  
performing this stack test only if this facility supplies  
NYSDEC with the make, model and the manufacture's  
Particulates emission guarantee for the fire pump that is  
acceptable to the Department and will become part of this  
Title V permit.

As part of the Title V renewal that was received on  
November 14, 2006, the facility has supplied the  
Department with the following information for the fire  
pump (Emission Source 00DFP):

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Make: Clarke  
Model: JW6H-UF40  
Particulates emission guarantee: 0.05 lbs/MMBtu,  
0.11 lbs/hr, 0.16 g/bhp-hr

Parameter Monitored: PARTICULATES  
Upper Permit Limit: 0.06 pounds per million Btus  
Reference Test Method: PT 60, APP A, M5  
Monitoring Frequency: ONCE DURING THE TERM OF THE PERMIT  
Averaging Method: 1-HOUR AVERAGE  
Reporting Requirements: ONCE / BATCH OR MONITORING OCCURRENCE



**STATE ONLY ENFORCEABLE CONDITIONS**

**\*\*\*\* Facility Level \*\*\*\***

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

**This section contains terms and conditions which are not federally enforceable. Permittees may also have other obligations under regulations of general applicability**

**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 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.

**STATE ONLY APPLICABLE REQUIREMENTS**

**The following conditions are state applicable requirements and are not subject to compliance certification requirements unless otherwise noted or required under 6 NYCRR Part 201.**

**Condition 149: Contaminant List  
Effective for entire length of Permit**

**Applicable State Requirement: ECL 19-0301**

**Item 149.1:**

Emissions of the following contaminants are subject to contaminant specific requirements in this

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permit(emission limits, control requirements or compliance monitoring conditions).

CAS No: 007664-41-7

Name: AMMONIA

CAS No: 000630-08-0

Name: CARBON MONOXIDE

CAS No: 0NY210-00-0

Name: OXIDES OF NITROGEN

CAS No: 0NY075-00-0

Name: PARTICULATES

CAS No: 0NY075-00-5

Name: PM-10

CAS No: 007446-09-5

Name: SULFUR DIOXIDE

CAS No: 007664-93-9

Name: SULFURIC ACID

CAS No: 0NY998-00-0

Name: VOC

**Condition 150: Unavoidable noncompliance and violations**

**Effective for entire length of Permit**

**Applicable State Requirement: 6NYCRR 201-1.4**

**Item 150.1:**

At the discretion of the commissioner a violation of any applicable emission standard for necessary scheduled equipment maintenance, start-up/shutdown conditions and malfunctions or upsets may be excused if such violations are unavoidable. The following actions and recordkeeping and reporting requirements must be adhered to in such circumstances.

(a) The facility owner and/or operator shall compile and maintain records of all equipment maintenance or start-up/shutdown activities when they can be expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the commissioner's representative when requested to do so in writing or when so required by a condition of a permit issued for the corresponding air contamination source except where conditions elsewhere in this permit which contain more stringent reporting and notification provisions for an applicable requirement, in which case they supercede those stated here. Such reports shall describe why the violation was unavoidable and shall include the time, frequency and duration of the maintenance and/or start-up/shutdown activities and the identification of air contaminants, and the estimated emission rates. If a facility owner and/or operator is subject to continuous stack monitoring and quarterly reporting requirements, he need not submit reports



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for equipment maintenance or start-up/shutdown for the facility to the commissioner's representative.

(b) In the event that emissions of air contaminants in excess of any emission standard in 6 NYCRR Chapter III Subchapter A occur due to a malfunction, the facility owner and/or operator shall report such malfunction by telephone to the commissioner's representative as soon as possible during normal working hours, but in any event not later than two working days after becoming aware that the malfunction occurred. Within 30 days thereafter, when requested in writing by the commissioner's representative, the facility owner and/or operator shall submit a written report to the commissioner's representative describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates. These reporting requirements are superseded by conditions elsewhere in this permit which contain reporting and notification provisions for applicable requirements more stringent than those above.

(c) The Department may also require the owner and/or operator to include in reports described under (a) and (b) above an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions depending on the deviation of the malfunction and the air contaminants emitted.

(d) In the event of maintenance, start-up/shutdown or malfunction conditions which result in emissions exceeding any applicable emission standard, the facility owner and/or operator shall take appropriate action to prevent emissions which will result in contravention of any applicable ambient air quality standard. Reasonably available control technology, as determined by the commissioner, shall be applied during any maintenance, start-up/shutdown or malfunction condition subject to this paragraph.

(e) In order to have a violation of a federal regulation (such as a new source performance standard or national emissions standard for hazardous air pollutants) excused, the specific federal regulation must provide for an affirmative defense during start-up, shutdowns, malfunctions or upsets.

**Condition 151: Air pollution prohibited**  
**Effective for entire length of Permit**

**Applicable State Requirement: 6NYCRR 211.2**

**Item 151.1:**

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. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.

**\*\*\*\* Emission Unit Level \*\*\*\***

**Condition 152: Compliance Demonstration**  
**Effective for entire length of Permit**



**Applicable State Requirement: 6NYCRR 201-5.3(b)**

**Item 152.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004

**Item 152.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The gas turbine will only fire natural gas and distillate oil.

Monitoring Frequency: CONTINUOUS

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 153: Compliance Demonstration**  
**Effective for entire length of Permit**

**Applicable State Requirement: 6NYCRR 201-5.3(b)**

**Item 153.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004

**Item 153.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The gas turbine will not operate below 50% load, except during startup/shutdown, combustion tuning and emergency conditions.

Astoria Energy LLC generating configuration consists of Phase 1 and Phase 2, each include two combustion turbines and HRSGs that produce steam to a single steam turbine generator (commonly referred as 2x1 Operation). A condition may arise in which the combustion turbine operation has been staggered. Therefore, in order to properly synchronize the steam turbine generator, or match



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steam turbine temperature requirements, a reduction of unit load on the combustion turbine may be required. During this situation, unit operation could be reduced to less than 50% Load in order to properly bring up the generation of the 2x1 configuration.

Monitoring Frequency: CONTINUOUS  
Averaging Method: AVERAGING METHOD - SEE MONITORING DESCRIPTION  
Reporting Requirements: QUARTERLY (CALENDAR)  
Reports due 30 days after the reporting period.  
Subsequent reports are due every 3 calendar month(s).

**Condition 154: Compliance Demonstration**  
**Effective for entire length of Permit**

**Applicable State Requirement: 6NYCRR 201-5.3(b)**

**Item 154.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: U-00001 Emission Point: 00004  
Process: P10

**Item 154.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Total annual distillate fuel use shall not exceed 41.6448 million gallons per year within any consecutive 365 day period for the gas turbines.

Work Practice Type: PROCESS MATERIAL THRUPUT

Process Material: FUEL

Upper Permit Limit: 41.6448 million gallons

Monitoring Frequency: DAILY

Averaging Method: ANNUAL MAXIMUM ROLLED DAILY

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).

**Condition 155: Compliance Demonstration**  
**Effective for entire length of Permit**

**Applicable State Requirement: 6NYCRR 201-5.3(b)**



**Item 155.1:**

The Compliance Demonstration activity will be performed for:

Emission Unit: U-00001    Emission Point: 00004  
Process: P12

**Item 155.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC  
OPERATIONS

Monitoring Description:

Total annual distillate fuel use shall not exceed 41.6448  
million gallons per year within any consecutive 365 day  
period for the gas turbines.

Work Practice Type: PROCESS MATERIAL THRUPUT

Process Material: FUEL

Upper Permit Limit: 41.6448 million gallons

Monitoring Frequency: DAILY

Averaging Method: ANNUAL MAXIMUM ROLLED DAILY

Reporting Requirements: QUARTERLY (CALENDAR)

Reports due 30 days after the reporting period.

Subsequent reports are due every 3 calendar month(s).