



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

Permit ID: 2-6007-00726/00003

Renewal Number: 2

12/29/2015

Facility Identification Data

Name: HARLEM RIVER YARDS PLANT

Address: E 132ND ST & ROBERT F KENNEDY BRIDGE APPR|APPR 688 EAST 132ND STREET
BRONX, NY 10454

Owner/Firm

Name: NEW YORK POWER AUTHORITY

Address: 123 MAIN ST
WHITE PLAINS, NY 10601, USA

Owner Classification: State

Permit Contacts

Division of Environmental Permits:

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123 MAIN ST

WHITE PLAINS, NY 10601

Phone:9146816308

Permit Description

Introduction

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

Summary Description of Proposed Project

Application for renewal of Air Title V Facility.

Also, this project will include the following modifications:



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- the addition of a 1 MW Black Start emergency diesel generator (BSEDG) to Emission Unit 1-00001
- modification of the natural gas piping to bypass the natural gas compressor
- modification of the LM 6000 controls to allow the Harlem River facility to act as black start station
- installation black start electrical equipment
- Modify Conditions 23, 52 & 53 to include the new 1 MW EDG
- Modify Condition# 54 to include the new 1 MW EDG to the NOx cap calculations
- New Title V Black Start permit condition(s)

In general, all power stations need an electric power source to start up. Under normal operation this power would come from the transmission or distribution system. During a wide-area outage, off-site power will not be available. In the absence of grid power, a so-called black start needs to be performed to bootstrap the power grid into operation. Black start is a capability of select power stations to generate their own power to enable them to restart after a power failure. Most power stations cannot restart without off-station power after a power failure, so the ability of some stations to perform black starts is imperative to achieve efficient reestablishment of power after a black out. Once these stations have completed their black starts, they can be connected to the rest of the power network and provide power to start non-black start stations. There are no black start capable power plants located within the New York City Metropolitan area. The New York Power Authority, in coordination with Consolidated Edison, will be modifying its Harlem River Small Clean Power Plant (SCPP) located in the Bronx in order to achieve black start capability.

Attainment Status

HARLEM RIVER YARDS PLANT is located in the town of BRONX in the county of BRONX. The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

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

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

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

Facility Description:

The facility consists of two simple cycle combustion turbines (GE LM6000). The turbines will employ spray intercooling systems to optimize power output. The units are each equipped with selective catalytic



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reduction to control emissions of oxides of nitrogen and catalytic oxidation to control emissions of carbon monoxide. Other equipment on-site include gas and air compressors, cooling tower lube oil cooling system, water treatment and storage system, ammonia storage and injection system, raw water storage, and auxiliary electrical systems. The stack is approximately 107 feet in height and 144 inches in diameter. The facility will generate a maximum 79.9 megawatts of power. Neither turbine will operate below 60 percent load (during either singular or dual turbine operation) except during periods of start-up or shutdown.

With this renewal facility will also add a 1 MW Black Start emergency diesel generator (BSEDG) to Emission Unit 1-00001

Permit Structure and Description of Operations

The Title V permit for HARLEM RIVER YARDS PLANT

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

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

HARLEM RIVER YARDS PLANT is defined by the following emission unit(s):

Emission unit 100001 - This emission unit consists of the following:

- 1) two combustion turbines (with SCR and catalytic oxidation as controls) which shall be operated in the simple cycle and fire only natural gas,
 - 2) two Heater boilers used to heat gas turbine combustion inlet air when ambient temperature and humidity could cause icing at the turbine inlet,
 - 3) a 60 bhp diesel fire pump, and
 - 4) a 746 bhp diesel back-up generator.
- 5) With this renewal this emission unit will also add one Model Year 2015, 1474 HP Caterpillar(1000KWe) emergency diesel generator(EDG) which will supply power to start the Harlem River Yards Plant turbine generator in the event of a blackout. The EDG will be limited to 500 hours per year of operation which includes one hour per week testing and Black Start use.



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Emission unit 100001 is associated with the following emission points (EP):
00001, 00002, 00003, 00004, 00005, 00006, 00007
Process: 001 Two combustion turbines (GE LM6000) firing natural gas.

Process: 002 Natural gas firing in two 7.4 mmBtu/hr boilers.

Process: 003 One 60 bhp diesel fire pump.

Process: 004 One 746 bhp diesel back-up generator.

Process: 005 is located at Building BSEDG - One Model Year 2015 1474hp Caterpillar (1000KWe) emergency generator which will supply power to start the Harlem River Yards Plant gas turbine generator in the event of blackout. The EDG will be limited to 500 hours per year of operation which includes one hour per week testing and Black Start use.

Title V/Major Source Status

HARLEM RIVER YARDS PLANT is subject to Title V requirements. This determination is based on the following information:

The facility is subject to the provisions of 40 CFR 72 Acid Rain. Therefore, it must be permitted as a Title V source.

Program Applicability

The following chart summarizes the applicability of HARLEM RIVER YARDS PLANT with regards to the principal air pollution regulatory programs:

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



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NOTES:

PSD Prevention of Significant Deterioration (40 CFR 52, 6 NYCRR 231-7, 231-8) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NSR New Source Review (6 NYCRR 231-5, 231-6) - requirements which pertain to major stationary sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NESHAP National Emission Standards for Hazardous Air Pollutants (40 CFR 61, 6 NYCRR 200.10) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's).

MACT Maximum Achievable Control Technology (40 CFR 63, 6 NYCRR 200.10) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated industry, otherwise known as MACT. The corresponding regulations apply to specific source types and contaminants.

NSPS New Source Performance Standards (40 CFR 60, 6 NYCRR 200.10) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

Title IV Acid Rain Control Program (40 CFR 72 thru 78, 6 NYCRR 201-6) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

Title VI Stratospheric Ozone Protection (40 CFR 82, Subpart A thru G, 6 NYCRR 200.10) - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.

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

SIP State Implementation Plan (40 CFR 52, Subpart HH, 6 NYCRR 200.10) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.



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Compliance Status

Facility is in compliance with all requirements.

SIC Codes

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

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

SIC Code	Description
4911	ELECTRIC SERVICES

SCC Codes

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

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

SCC Code	Description
1-02-006-03	EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - NATURAL GAS Less Than 10 MMBtu/Hr
2-01-001-07	INTERNAL COMBUSTION ENGINES - ELECTRIC GENERATION ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE - DISTILLATE OIL (DIESEL) RECIPROCATING: EXHAUST
2-01-002-01	INTERNAL COMBUSTION ENGINES - ELECTRIC GENERATION ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE - NATURAL GAS Turbine
2-02-001-02	INTERNAL COMBUSTION ENGINES - INDUSTRIAL INDUSTRIAL INTERNAL COMBUSTION ENGINE - DISTILLATE OIL (DIESEL) Reciprocating

Facility Emissions Summary

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant , including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount or material



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combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE Range represents an emission range for a contaminant. Any PTE quantity that is displayed represents a facility-wide emission cap or limitation for that contaminant. If no PTE quantity is displayed, the PTE Range is provided to indicate the approximate magnitude of facility-wide emissions for the specified contaminant in terms of tons per year (tpy). The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant Name	PTE	
		lbs/yr	Range
007664-41-7	AMMONIA		>= 10 tpy but < 25 tpy
000630-08-0	CARBON MONOXIDE	52000	
000050-00-0	FORMALDEHYDE		> 0 but < 10 tpy
007439-92-1	LEAD		> 0 but < 10 tpy
0NY210-00-0	OXIDES OF NITROGEN	45000	
0NY075-00-0	PARTICULATES		>= 10 tpy but < 25 tpy
0NY075-00-5	PM-10		>= 10 tpy but < 25 tpy
007446-09-5	SULFUR DIOXIDE		> 0 but < 2.5 tpy
000108-88-3	TOLUENE		> 0 but < 10 tpy
0NY100-00-0	TOTAL HAP		> 0 but < 2.5 tpy
0NY998-00-0	VOC		>= 2.5 tpy but < 10 tpy

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

Item A: Emergency Defense - 6 NYCRR 201-1.5

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

- (a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An emergency occurred and that the facility owner or operator can identify the cause(s) of the emergency;
 - (2) The equipment at the permitted facility causing the emergency was at the time being properly operated and maintained;
 - (3) During the period of the emergency the facility owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
 - (4) The facility owner or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.



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

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

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

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

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

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

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

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

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

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

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

This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

Item L: Permit Exclusion - ECL 19-0305

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

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

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

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

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

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

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this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Regulatory Analysis

Location Facility/EU/EP/Process/ES	Regulation	Condition	Short Description
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FACILITY	ECL 19-0301	51	Powers and Duties of the Department with respect to air pollution control
FACILITY	40CFR 60-A.12	32	General provisions - Circumvention
FACILITY	40CFR 60-A.13	33	General provisions - Monitoring requirements
FACILITY	40CFR 60-A.14	34	General provisions - Modification
FACILITY	40CFR 60-A.15	35	General provisions - Reconstruction
FACILITY	40CFR 60-A.4	28	General provisions - Address
FACILITY	40CFR 60-A.7(a)	29	Notification and Recordkeeping
FACILITY	40CFR 60-A.7(b)	30	Notification and Recordkeeping
FACILITY	40CFR 60-A.7(f)	31	Notification and Recordkeeping
1-00001	40CFR 60-GG.334(h)(4)	47	Custom fuel monitoring schedule
FACILITY	40CFR 60-IIII	36, 37	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
FACILITY	40CFR 63-ZZZZ	38	Reciprocating Internal Combustion Engine (RICE) NESHAP
FACILITY	40CFR 68	19	Chemical accident prevention provisions
FACILITY	40CFR 72	39	Permits regulation
FACILITY	40CFR 82-F	20	Protection of Stratospheric Ozone - recycling and emissions reduction
FACILITY	40CFR 97-AAAAA.406	40	Transport Rule (TR) NOx Annual Trading Program Standard Requirements
FACILITY	40CFR 97-BBBBB.506	41	Transport Rule (TR) NOx Ozone Season Trading Program Standard Requirement
FACILITY	40CFR 97-CCCCC.606	42	Transport Rule (TR) SO2 Group 1 Trading Program Standard Requirements
FACILITY	6NYCRR 200.6	1	Acceptable ambient air quality.



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FACILITY	6NYCRR 200.7	10	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	52, 53	Unavoidable noncompliance and violations
FACILITY	6NYCRR 201-1.7	11	Recycling and Salvage
FACILITY	6NYCRR 201-1.8	12	Prohibition of reintroduction of collected contaminants to the air
FACILITY	6NYCRR 201-3.2 (a)	13	Exempt Activities - Proof of eligibility
1-00001/-/005/00011	6NYCRR 201-3.2 (c)	48	Exempt Activities - exempt activity list
FACILITY	6NYCRR 201-3.3 (a)	14	Trivial Activities - proof of eligibility
1-00001	6NYCRR 201-5	58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71	State Facility Permit General Provisions
FACILITY	6NYCRR 201-6	21, 43, 44	Title V Permits and the Associated Permit Conditions
FACILITY	6NYCRR 201-6.4 (a) (4)	15	General Conditions - Requirement to Provide Information
FACILITY	6NYCRR 201-6.4 (a) (7)	2	General Conditions - Fees
FACILITY	6NYCRR 201-6.4 (a) (8)	16	General Conditions - Right to Inspect
FACILITY	6NYCRR 201-6.4 (c)	3	Recordkeeping and Reporting of Compliance Monitoring
FACILITY	6NYCRR 201-6.4 (c) (2)	4	Records of Monitoring, Sampling and Measurement
FACILITY	6NYCRR 201-6.4 (c) (3) (ii)	5	Reporting Requirements - Deviations and Noncompliance
FACILITY	6NYCRR 201-6.4 (d) (4)	22	Compliance Schedules - Progress Reports
FACILITY	6NYCRR 201-6.4 (e)	6	Compliance Certification
FACILITY	6NYCRR 201-6.4 (f) (6)	17	Off Permit Changes
FACILITY	6NYCRR 201-7	23, 45	Federally Enforceable Emissions Caps
FACILITY	6NYCRR 202-1.1	18	Required emissions tests.
FACILITY	6NYCRR 202-2.1	7	Emission Statements - Applicability
FACILITY	6NYCRR 202-2.5	8	Emission Statements - record keeping requirements.
FACILITY	6NYCRR 211.1	24	General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 211.2	54	General Prohibitions - visible emissions limited.
FACILITY	6NYCRR 215.2	9	Open Fires - Prohibitions
FACILITY	6NYCRR 225-1.2 (g)	25	Sulfur-in-Fuel Limitations



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FACILITY	6NYCRR 225-1.2 (h)	26	Sulfur-in-Fuel Limitations
FACILITY	6NYCRR 225-1.6 (f)	27	Excess Emission Reports
1-00001/00001	6NYCRR 227-1.3 (a)	49	Smoke Emission Limitations.
1-00001/00002	6NYCRR 227-1.3 (a)	50	Smoke Emission Limitations.
FACILITY	6NYCRR 242-1.5	55, 56, 57	CO2 Budget Trading Program - Standard requirements

Applicability Discussion:

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

ECL 19-0301

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

6 NYCRR 200.6

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

6 NYCRR 200.7

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

6 NYCRR 201-1.4

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

6 NYCRR 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

6 NYCRR 201-1.8

Prohibits the reintroduction of collected air contaminants to the outside air

6 NYCRR 201-3.2 (a)

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

6 NYCRR 201-3.3 (a)

The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains trivial emission sources



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or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR Subpart 201-5

This regulation applies to those permit terms and conditions which are not federally enforceable. It specifies the applicability criteria for state facility permits, the information to be included in all state facility permit applications as well as the permit content, terms of permit issuance, and sets guidelines for modifying state facility permits and allowing for operational flexibility. For permitting purposes, this rule specifies the need to list all emission units except those that are exempt or trivial pursuant to Subpart 201-3 in the permit application and provide a description of the emission unit's processes and products. Finally, this rule also provides the Department the authority to include this and any other information that it deems necessary to identify applicable Federal standards, recordkeeping and reporting requirements, and establish terms and conditions that will ensure compliance with the national ambient air quality standards.

6 NYCRR Subpart 201-6

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

6 NYCRR 201-6.4 (a) (4)

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

6 NYCRR 201-6.4 (a) (7)

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

6 NYCRR 201-6.4 (a) (8)

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

6 NYCRR 201-6.4 (c)

This requirement specifies, in general terms, what information must be contained in any required compliance monitoring records and reports. This includes the date, time and place of any sampling, measurements and analyses; who performed the analyses; analytical techniques and methods used as well as any required QA/QC procedures; results of the analyses; the operating conditions at the time of sampling or measurement and the identification of any permit deviations. All such reports must also be certified by the designated responsible official of the facility.

6 NYCRR 201-6.4 (c) (2)

This requirement specifies that all compliance monitoring and recordkeeping is to be conducted according



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

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

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

6 NYCRR 201-6.4 (d) (5)

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

6 NYCRR 201-6.4 (e)

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

6 NYCRR 201-6.4 (f) (6)

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

6 NYCRR 202-1.1

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

6 NYCRR 202-2.1

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

6 NYCRR 202-2.5

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

6 NYCRR 211.2

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

6 NYCRR 215.2

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

40 CFR Part 68

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



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40 CFR Part 82, Subpart F

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

Facility Specific Requirements

In addition to Title V, HARLEM RIVER YARDS PLANT has been determined to be subject to the following regulations:

40 CFR 60.12

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

40 CFR 60.13

This regulation specifies how monitoring shall be performed and which methods and appendices are used to determine if the monitoring is adequate and in compliance with the regulated standards.

40 CFR 60.14

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

40 CFR 60.15

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

40 CFR 60.334 (h) (4)

This regulation allows the owner or operator of a gas turbine, that has a previously approved custom fuel monitoring schedule, to continue to maintain this schedule without submitted another petition to the EPA.

40 CFR 60.4

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

40 CFR 60.7 (a)

This regulation requires any owner or operator subject to a New Source Performance Standard (NSPS) to furnish the Administrator with notification of the dates of: construction or



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reconstruction, initial startup, any physical or operational changes, commencement of performance testing for continuous monitors and anticipated date for opacity observations as required.

40 CFR 60.7 (b)

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

40 CFR 60.7 (f)

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

40 CFR 97.406

The facility, and the designated representative, of each TR NO_x Annual source (facility) and each TR NO_x Annual Unit at the facility shall comply with the monitoring, reporting, and recordkeeping requirements of §§97.430 through 97.435 of Subpart AAAAA and subpart H of part 75 of this chapter. This includes but is not limited to: requirements for installation, certification, and data accounting for all required monitoring systems; requirements for recording, reporting, and quality-assurance of the data; and certification of compliance of such data.

40 CFR 97.506

The facility, and the designated representative, of each TR NO_x Ozone Season source (facility) and each TR NO_x Ozone Season Unit at the facility shall comply with the monitoring, reporting, and recordkeeping requirements of §§97.530 through 97.535 of Subpart BBBBB and subpart H of part 75 of this chapter. This includes but is not limited to: requirements for installation, certification, and data accounting for all required monitoring systems; requirements for recording, reporting, and quality-assurance of the data; and certification of compliance of such data.

40 CFR 97.606

The facility, and the designated representative, of each TR SO₂ Group 1 source (facility) and each TR SO₂ Group 1 Unit at the facility shall comply with the monitoring, reporting, and recordkeeping requirements of §§97.630 through 97.635 of Subpart CCCCC and subpart H of part 75 of this chapter. This includes but is not limited to: requirements for installation, certification, and data accounting for all required monitoring systems; requirements for recording, reporting, and quality-assurance of the data; and certification of compliance of such data. Data from continuous emission monitoring equipment are submitted quarterly (calendar year).

40 CFR Part 60, Subpart IIII



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Facility is subject to the requirements of 40 CFR 60 Subpart IIII.

40 CFR Part 63, Subpart ZZZZ

Facility is subject to the requirements of 40 CFR 63 Subpart ZZZZ

40 CFR Part 72

In order to reduce acid rain in the U.S. and Canada, Title IV of the Clean Air Act Amendments of 1990 requires the establishment of a program to reduce emissions of SO₂ and NO_x (sulfur dioxide and oxides of nitrogen). Fossil fuel burning electric utility companies are a major source of these contaminants in the US. These sources were regulated in a phased approach. Phase I, which began in 1995, requires 110 of the higher-emitting utility plants in the eastern and Midwest states to meet intermediate SO₂ emission limitations. Phase II, which began in 2000, tightens the emission limitations and expands the coverage to most fossil fuel burning utilities. The utilities are given "allowances" which is a limited authorization to emit one ton of SO₂. The utilities are required to limit SO₂ emissions to the number of allowances they hold. Some can benefit however by reducing their emissions and selling their excess allowances. Part 72 contains the means of implementing this portion of Title IV of the Clean Air Act.

6 NYCRR 201-3.2 (c)

This section lists the specific activities which may be exempt from the permitting provisions of this Part.

6 NYCRR 211.1

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

6 NYCRR 225-1.2 (g)

Sulfur-in-fuel limitations for the purchase of distillate oil on or after July 1, 2014.

6 NYCRR 225-1.2 (h)

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

6 NYCRR 225-1.6 (f)

This citation requires subject facilities to submit excess emissions reports to the Department.

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6 NYCRR 227-1.3 (a)

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

6 NYCRR 242-1.5

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

6 NYCRR Subpart 201-7

This regulation sets forth an emission cap that cannot be exceeded by the facility. In this permit that cap is

Compliance Certification

Summary of monitoring activities at HARLEM RIVER YARDS PLANT:

Location Facility/EU/EP/Process/ES	Cond No.	Type of Monitoring

FACILITY	40	record keeping/maintenance procedures
FACILITY	41	record keeping/maintenance procedures
FACILITY	42	record keeping/maintenance procedures
FACILITY	53	record keeping/maintenance procedures
1-00001/-/005/00011	48	work practice involving specific operations
1-00001	58	record keeping/maintenance procedures
1-00001	59	monitoring of process or control device parameters as surrogate
1-00001	60	continuous emission monitoring (cem)
1-00001	61	intermittent emission testing
1-00001	62	continuous emission monitoring (cem)
1-00001	63	intermittent emission testing
1-00001	64	work practice involving specific operations
1-00001	65	continuous emission monitoring (cem)
1-00001	66	continuous emission monitoring (cem)
1-00001	67	continuous emission monitoring (cem)
1-00001	68	continuous emission monitoring (cem)
1-00001	69	monitoring of process or control device parameters as surrogate
1-00001	70	continuous emission monitoring (cem)
1-00001	71	continuous emission monitoring (cem)
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
1-00001	46	continuous emission monitoring (cem)
FACILITY	7	record keeping/maintenance procedures
FACILITY	25	work practice involving specific operations
FACILITY	26	work practice involving specific operations
FACILITY	27	record keeping/maintenance procedures
1-00001/00001	49	monitoring of process or control device parameters as surrogate



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1-00001/00002	50	monitoring of process or control device parameters as surrogate
FACILITY	56	record keeping/maintenance procedures
FACILITY	57	record keeping/maintenance procedures

Basis for Monitoring

General Monitoring Requirements: Title V facilities are required to submit semiannual reports and annual compliance certifications, which the Department uses to determine if the facility has complied with the requirements of their permit. Title V facilities are also required to submit an annual emission statement which quantifies the actual amount of emissions that the facility emitted for the previous year.

Fuel Monitoring Requirements: The facility is required to conduct and submit a nitrogen and sulfur analysis on their fuel semiannually to both the Department and EPA. The applicant may submit a fuel vendor certification instead of conducting the fuel analysis.

Opacity Requirements: The facility is required to annually conduct and certify compliance with a 20 percent opacity limit.

CO₂ Budget Trading Program is designed to stabilize and then reduce man made emissions of CO₂, a greenhouse gas, from CO₂ budget sources, by creating and allocating CO₂ allowances. The regulation requires facility to hold CO allowances.

Facility Limitations: The facility is required to install continuous emissions monitors (CEMs) for ammonia, carbon monoxide, and oxides of nitrogen on each gas turbine. The gas turbines are each required to meet the following limitations -

- NOx 2.5 ppmvd (corrected to 15% O₂)* and 5.0 lbs/hr **
- CO 0.013 lb/mmBtu
- NH₃ 10.0 ppmvd (corrected to 15% O₂)

* The 2.5 ppmvd limit shall be applicable during periods of steady state operation where a gas turbine operates 16 or more minutes consecutively in one clock hour. When a gas turbine operates in steady state less than 16 minutes (consecutively in one clock hour, and excluding startup or shutdown) a mass emission limit of 2.5 pounds applies.

** The 5.0 pounds per hour NOx limit shall apply during steady state operations where the turbine operates for the full 60 minutes of the hour. The following limits shall apply during steady state partial hours (less than the full 60 minutes) of operation of the gas turbines:

Time Period (minutes)	NOx Mass Limit (pounds)
1 - 15	2.5
16 - 30	3.0
31 - 45	3.75
46 - 59	5.0

These limitations apply during steady state operation of the gas turbines, which is defined as 60 percent load or greater. The facility is required to operate at or above 60 percent load except during



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periods of start-up or shutdown. The facility is limited to 22.5 tons per year of NO_x emissions. This limit was used to avoid applicability with non-attainment new source review.

With this renewal facility will be adding one 1474 bhp black start emergency diesel generator to Emission Unit 00001, but still be limiting facility wide emissions below any major size thresholds, and New Source Review applicability. This emergency generator is subject to NSPS 40 CFR 60 Subpart IIII and NEHAPS 40 CFR 63 subpart ZZZZ.

The following limitations apply to the other sources at the facility:

Each Heatec boiler is limited to 30 ppm of NO_x,
The back-up engine is limited to 10.23 pounds per hour of NO_x, and
The fire pump is limited to 500 hours per year of operation.

Start-up and Shutdown Limitations: The facility has specific limitations during periods of start-up and shutdown. During start-up the control equipment must be both "warmed" and "cycled" up to peak performance. Until the proper amount of exhaust flow has been achieved the control equipment is not operating at maximum efficiency. During shutdown the control equipment must be turned off prior to the gas turbine. The gas turbine can't be switched off immediately, it must be "cycled" down. During this "cycle down" period the amount of exhaust flow decreases to the point where the control equipment must be shutdown. However, the gas turbine must still fire a minimal amount of fuel for a brief period of time. Therefore, start-up is limited to a maximum of 30 minutes in duration, while shutdown is limited to a maximum of 20 minutes in duration. The facility is required to report quarterly the time of duration for each start-up and shutdown and the amount of NO_x, CO, and ammonia emitted during these periods. The facility is required to meet the following emission limitations during periods of start-up or shutdown:

NO_x 15 pounds start-up, 5.0 lbs/hr shutdown
CO 8.0 pounds start-up and shutdown
NH₃ 7.4 pounds start-up and shutdown

Excess Emissions Requirements: The facility is required to submit to the Department, quarterly reports of excess emissions of any pollutant. These reports include the duration of the exceedance, the amount of the exceedance, and the explanation for the exceedance.

Recordkeeping Requirements: All Title V facilities are required to maintain copies of their records on-site for a minimum period of five years. This is an unmanned facility remotely operated from their applicant's Poletti Station. Therefore, applicant shall be required to keep all records at the Poletti Station.