

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

Facility Identification Data

Name: RAVENSWOOD GENERATING STATION

Address: 38-54 VERNON BLVD

QUEENS, NY 11101

Owner/Firm

Name: HELIX RAVENSWOOD LLC

Address: 38-54 VERNON BLVD

LONG ISLAND CITY, NY 11101, USA

Owner Classification: Corporation/Partnership

Permit Contacts

Division of Environmental Permits:

Name: DENISE L GRATTAN

Address: 1 HUNTERS POINT PLAZA

47-40 21ST ST

LONG ISLAND CITY, NY 11101

Phone:7184824997

Division of Air Resources:

Name: PARESH SHAH

Address: NYSDEC - REGION 2

47-40 21ST ST

LONG ISLAND CITY, NY 11101

Air Permitting Facility Owner Contact:

Name: ROBERTA ZWIER

Address: HELIX RAVENSWOOD LLC

38-54 VERNON BLVD

LONG ISLAND CITY, NY 11101

Phone:8323347457

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.

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

In this renewal, in accordance with the 227-3 compliance plan dated February 2020, all seventeen (17) SCCTs and their associated engines associated, have been retired.

The renewal also includes new carbon dioxide limits as per 6 NYCRR Part 251 Performance Standard for major electric generating facilities.

Attainment Status

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

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:

This facility consists of three (3) steam boiler turbine/generator sets with a combined nominal rating of 1818 MW and three (3) emergency generators. Natural gas is the primary fuel for all units, with low-sulfur oil fuel used on a limited basis.

There are 2 separate Title V permits (2-6304-00024/00035 and 2-6304-00024/00039) in same physical location. Title 4 permit (2-6304-00024/00029) is one permit, combined for both facilities.

Title 4 permit is for for 3 boilers (Boiler 10, 20, 30) for Ravenswood Generating Station (TV permit: 2-6304-00024/00035) and Unit 40 of Ravenswood Generating Station, Article X combined cycle plant (TV permit: 2-6304-00024/00039).

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

Permit Structure and Description of Operations

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

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

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

Emission unit U00020 - THIS UNIT CONSISTS OF DUAL, TANGENTIALLY FIRED FURNACES COMPRISING A SINGLE BOILER. STEAM FROM THIS BOILER OPERATES A TANDEM TURBINE GENERATOR SET NOMINALLY RATED AT 390 MW. THIS BOILER IS EQUIPPED WITH A CLOSE-COUPLED-OVERFIRED-AIR (CCOFA) SYSTEM TO REDUCE THE FORMATION OF NITROGEN OXIDES. THE FURNACES OPERATE ON NATURAL GAS OR LOW SULFUR #6 RESIDUAL OIL. ON OCCASION, SMALL AMOUNTS OF WASTE FUEL A MAY BE FIRED IN CONJUNCTION WITH THE PRIMARY FUEL. ON AN INFREQUENT BASIS, NON-HAZARDOUS BOILER CLEANING SOLUTIONS MAY BE EVAPORATED IN THIS UNIT IN CONJUNCTION WITH PRIMARY FUEL.

Emission unit U00020 is associated with the following emission points (EP):
00020

Process: P05 is located at GROUND FLOOR, Building GEN STA - THIS PROCESS IS THE COMBUSTION OF #6 RESIDUAL OIL IN A TANGENTIALLY FIRED STEAM-ELECTRIC BOILER. A non-hazardous additive may be used to improve combustion.

Process: P06 is located at GROUND FLOOR, Building GEN STA - THIS PROCESS IS THE COMBUSTION OF PIPELINE NATURAL GAS IN A TANGENTIALLY FIRED STEAM-ELECTRIC BOILER.

The facility also may use bio-residual fuel which is equivalent to residual fuel oil in all respect.

Emission unit U00030 - THIS UNIT CONSISTS OF DUAL BOILERS, EACH HEATED BY DUAL, TANGENTIALLY FIRED FURNACES. STEAM FROM THESE BOILERS OPERATES A TANDEM

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

TURBINE GENERATOR SET NOMINALLY RATED AT 972 MW. THIS UNIT HAS A CLOSE-COUPLED-OVERFIRED-AIR (CCOFA) SYSTEM TO FURTHER REDUCE THE FORMATION OF NITROGEN OXIDES. THE FURNACES OPERATE ON NATURAL GAS OR LOW SULFUR #6 RESIDUAL OIL. ON OCCASION, SMALL AMOUNTS OF WASTE FUEL A MAY BE FIRED IN CONJUNCTION WITH THE PRIMARY FUEL. ON AN INFREQUENT BASIS, NON-HAZARDOUS BOILER CLEANING SOLUTION MAY BE EVAPORATED IN THIS UNIT IN CONJUNCTION WITH THE PRIMARY FUEL.

Emission unit U00030 is associated with the following emission points (EP):
00030

Process: P09 is located at GROUND FLOOR, Building GEN STA - THIS PROCESS IS THE COMBUSTION OF #6 RESIDUAL OIL IN A TANGENTIALLY FIRED STEAM-ELECTRIC BOILER. A non-hazardous additive may be used to improve combustion.

The facility also may use bio-residual fuel which is equivalent to residual fuel oil in all respect.

Process: P10 is located at GROUND FLOOR, Building GEN STA - THIS PROCESS IS THE COMBUSTION OF PIPELINE NATURAL GAS IN A TANGENTIALLY FIRED STEAM-ELECTRIC BOILER.

Emission unit U00010 - THIS UNIT CONSISTS OF DUAL, TANGENTIALLY FIRED FURNACES COMPRISING A SINGLE BOILER. STEAM FROM THIS BOILER OPERATES A TANDEM TURBINE GENERATOR SET NOMINALLY RATED AT 390 MW. THE FURNACES OPERATE ON NATURAL GAS OR LOW SULFUR #6 RESIDUAL OIL. ON OCCASION, SMALL AMOUNTS OF WASTE FUEL A MAY BE FIRED IN CONJUNCTION WITH THE PRIMARY FUEL. ON AN INFREQUENT BASIS, NON-HAZARDOUS BOILER CLEANING SOLUTION MAY BE EVAPORATED IN THIS UNIT IN CONJUNCTION WITH THE PRIMARY FUEL.

CLOSE COUPLED OVER-FIRED AIR (CCOFA) COMPARTMENTS HAVE BEEN ADDED TO THE UPPER AND LOWER WINDBOX SECTIONS OF THIS EMISSION UNIT. CCOFA IS A NO_x REDUCTION TECHNOLOGY.

Emission unit U00010 is associated with the following emission points (EP):
00010

Process: P01 is located at GROUND FLOOR, Building GEN STA - THIS PROCESS IS THE COMBUSTION OF #6 RESIDUAL OIL IN A TANGENTIALLY FIRED STEAM-ELECTRIC BOILER. A non-hazardous additive may be used to improve combustion.

The facility also may use bio-residual fuel which is equivalent to residual fuel oil in all respect.

Process: P02 is located at GROUND FLOOR, Building GEN STA - THIS PROCESS IS THE COMBUSTION OF PIPELINE NATURAL GAS IN A TANGENTIALLY FIRED STEAM-ELECTRIC BOILER.

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

Title V/Major Source Status

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

Facility has PTE (potential to emit) emissions of a Major Source for NO_x, CO, SO₂ and HAPs.

Program Applicability

The following chart summarizes the applicability of RAVENSWOOD GENERATING STATION 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	NO
TITLE IV	NO
TITLE V	YES
TITLE VI	NO
RACT	YES
SIP	YES

NOTES:

PSD Prevention of Significant Deterioration (40 CFR 52.21, 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.

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035
Renewal Number: 4
05/13/2024

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

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

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

RACT Reasonably Available Control Technology (6 NYCRR Parts 212-3, 220-1.6, 220-1.7, 220-2.3, 220-2.4, 226, 227-2, 228, 229, 230, 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.

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.

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035
Renewal Number: 4
05/13/2024

SCC Code	Description
1-01-004-04	EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION ELECTRIC UTILITY BOILER - RESIDUAL OIL Grade 6 Oil: Tangential Firing
1-01-006-04	EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION ELECTRIC UTILITY BOILER - NATURAL GAS Tangentially Fired Units

Facility Emissions Summary

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant, including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount or material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE for each contaminant that is displayed represents the facility-wide PTE in tons per year (tpy) or pounds per year (lbs/yr). In some instances the PTE represents a federally enforceable emissions cap or limitation for that contaminant. The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant	PTE lbs/yr	PTE tons/yr	Actual lbs/yr	Actual tons/yr
007440-38-2	ARSENIC	195			
007440-43-9	CADMIUM	212			
000124-38-9	CARBON DIOXIDE		9888535.87		
0NY750-00-0	CARBON DIOXIDE EQUIVALENTS		9902047.66		
000630-08-0	CARBON MONOXIDE	4367723		155973	
007440-47-3	CHROMIUM	322			
007440-50-8	COPPER	281			
007439-89-6	IRON	153952			
007439-92-1	LEAD	268			
007439-97-6	MERCURY	52			
007440-02-0	NICKEL METAL AND INSOLUBLE COMPOUNDS	7878			
0NY210-00-0	OXIDES OF NITROGEN	28409225		483121	
0NY075-00-0	PARTICULATES	2382557			
0NY075-00-5	PM-10	2382557			
007446-09-5	SULFUR DIOXIDE	4344625			
0NY100-00-0	TOTAL HAP	284762			
0NY998-00-0	VOC	860901			

Division of Air Resources
Permit Review Report

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

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NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Division of Air Resources
Permit Review Report

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

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

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

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

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

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

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

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

- i. If additional applicable requirements under the Act become applicable where this permit's remaining term is three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 201-6.7 and Part 621.
- ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
- iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.
- iv. If the permitted facility is an "affected source" subject to the requirements

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

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 K: Permit Exclusion - ECL 19-0305

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

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

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

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

Item A: Emergency Defense - 6 NYCRR 201-1.5

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

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

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

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

emergency was at the time being properly operated and maintained;

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

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

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

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement. item_02

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

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

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

Regulatory Analysis

Location Facility/EU/EP/Process/ES	Regulation	Condition	Short Description

FACILITY	ECL 19-0301	47	Powers and Duties of the Department with respect to air
FACILITY	40CFR 63- UUUUU.10000 (b)	37	pollution control Coal and Oil Fired EGU NESHAP - Good Control Practices
FACILITY	40CFR 63- UUUUU.10032 (j)	38	Coal and Oiler Fired EGU NESHAP - Limited Use Boiler Recordkeeping Requirements
FACILITY	40CFR 63-UUUUU.10040	39	Coal and Oil Fired EGU NESHAP - General Provisions

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

U-00010	40CFR 63- UUUUU.9990 (b)	46	Coal and Oil Fired EGU NESHAP - Oil Subcategories
FACILITY	40CFR 63- UUUUU.9991 (a) (36	Coal and Oil Fired EGU NESHAP - Emission Limits and Work Practice Standards
FACILITY	40CFR 63-ZZZZ.6603 (a)	40	Reciprocating Internal Combustion Engine (RICE) NESHAP - requirements for existing engines at area sources of HAP emissions
FACILITY	40CFR 68	17	Chemical accident prevention provisions
FACILITY	40CFR 82-F	18	Protection of Stratospheric Ozone - recycling and emissions reduction
FACILITY	40CFR 97	41	Federal Cross-State Air Pollution Regulation (CSAPR)
FACILITY	40CFR 97-AAAAA.406	42	Transport Rule (TR) NOx Annual Trading Program Standard Requirments
FACILITY	40CFR 97-CCCCC.606	43	Transport Rule (TR) SO2 Group 1 Trading Program Standard Requirments
FACILITY	6NYCRR 200.6	1	Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	9	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	48	Unavoidable noncompliance and violations
FACILITY	6NYCRR 201-1.7	10	Recycling and Salvage
FACILITY	6NYCRR 201-1.8	11	Prohibition of reintroduction of collected contaminants to the air
FACILITY	6NYCRR 201-3.2 (a)	12	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-3.3 (a)	13	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6	19, 44, 45	Title V Permits and the Associated Permit Conditions
FACILITY	6NYCRR 201-6.4 (a) (4)	14	General Conditions - Requirement to Provide Information
FACILITY	6NYCRR 201-6.4 (a) (7)	2	General Conditions - Fees
FACILITY	6NYCRR 201-6.4 (a) (8)	15	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-	5	Reporting

**Division of Air Resources
Permit Review Report**

**Permit ID: 2-6304-00024/00035
Renewal Number: 4
05/13/2024**

	6.4 (c) (3) (ii)		Requirements - Deviations and Noncompliance
FACILITY	6NYCRR 201-6.4 (d) (4)	20	Compliance Schedules - Progress Reports
FACILITY	6NYCRR 201-6.4 (e)	6	Compliance Certification
FACILITY	6NYCRR 201-6.4 (f)	21	Operational Flexibility
FACILITY	6NYCRR 202-1.1	16	Required emissions tests.
FACILITY	6NYCRR 202-2.4 (a) (3)	22	Emission statement methods and procedures
FACILITY	6NYCRR 202-2.5	7	Emission Statements - record keeping requirements.
FACILITY	6NYCRR 207	23	Control Measures for an Air Pollution Episode
FACILITY	6NYCRR 211.1	49	General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 211.2	24	General Prohibitions - visible emissions limited.
FACILITY	6NYCRR 215.2	8	Open Fires - Prohibitions
FACILITY	6NYCRR 225-1.2 (c)	25	Sulfur-in-Fuel Limitations - Residual Oil
FACILITY	6NYCRR 225-1.2 (d)	26	Sulfur-in-Fuel Limitation - Distillate Oil
FACILITY	6NYCRR 225-1.5 (c)	27	Fuel Monitoring
FACILITY	6NYCRR 225-1.6 (f)	28	Excess Emission Reports
FACILITY	6NYCRR 227-1.3 (a)	29	Particulate Emission Standards
FACILITY	6NYCRR 227-1.3 (c)	30	Annual Tune-up Requirement
FACILITY	6NYCRR 227-1.4 (a)	31, 32	Opacity Standard
FACILITY	6NYCRR 227-1.5 (b) (2)	33	Excess Emissions & Monitoring System Reports
FACILITY	6NYCRR 227-2.5 (b)	34	System averaging plan.
FACILITY	6NYCRR 227-2.6 (a)	35	Applicable testing and/or monitoring requirements.
FACILITY	6NYCRR 242-1.5	50, 51, 52	CO2 Budget Trading Program - Standard requirements
FACILITY	6NYCRR 251.3 (b)	53	Emission limits for non-modified sources.

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.

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

6 NYCRR 200.6

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

6 NYCRR 200.7

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

6 NYCRR 201-1.4

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

6 NYCRR 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

6 NYCRR 201-1.8

Prohibits the reintroduction of collected air contaminants to the outside air

6 NYCRR 201-3.2 (a)

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

6 NYCRR 201-3.3 (a)

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

6 NYCRR Subpart 201-6

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

6 NYCRR 201-6.4 (a) (4)

This mandatory requirement applies to all Title V facilities. It requires the permittee to provide

Division of Air Resources
Permit Review Report

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

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

6 NYCRR 201-6.4 (a) (7)

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

6 NYCRR 201-6.4 (a) (8)

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

6 NYCRR 201-6.4 (c)

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

6 NYCRR 201-6.4 (c) (2)

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

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

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

6 NYCRR 201-6.4 (d) (4)

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 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 202-2.5

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

Division of Air Resources
Permit Review Report

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

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.

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

40 CFR 63.10000 (b)

This condition states that the electric generating unit must be operated according to good air pollution control practices

40 CFR 63.10032 (j)

This condition states the recordkeeping requirements for limited use boilers.

40 CFR 63.10040

This condition states what General Provisions of 40 CFR 63 apply to electric generating units

40 CFR 63.6603 (a)

These conditions list the emission limits, operating limits, and work practices that existing engines located at an area source of HAP emissions must meet.

The engines must meet work practices, emission limits, and operating limits on carbon monoxide or

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

formaldehyde for the specific type of engine listed in table 2d of subpart ZZZZ.

40 CFR 63.9990 (b)

This condition states the subcategories for oil fired electric generating units

40 CFR 63.9991 (a) (1)

These conditions state the emission limits and work practice standards that apply to coal and oil fired electric generating units

40 CFR 97.406

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

40 CFR 97.606

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

40 CFR Part 97

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

6 NYCRR 201-6.4 (f)

This section describes the potential for certain operational changes to be made by the facility owner or operator without first obtaining a permit modification. Changes made pursuant to this provision must meet all of the criteria described in this section to qualify for consideration as operational flexibility. The Department reserves the right to require the facility owner or operator to obtain a permit modification

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

prior to making any changes at the facility pursuant to this section.

6 NYCRR 202-2.4 (a) (3)

Once a facility is required to submit annual emission statements electronically, emission statements must be submitted to the department per the specified schedule, in this regulation beginning the reporting year that a Title V permit containing a condition mandating electronic submittal is issued.

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 (c)

This subdivision sets the sulfur-in-fuel limitation for residual oil fired emission sources throughout the State.

6 NYCRR 225-1.2 (d)

This subdivision sets the sulfur-in-fuel limitation for distillate oil fired emission sources throughout the State.

6 NYCRR 225-1.5 (c)

This subdivision requires specific measurements of the fuel fired at a facility that employs a CEM.

6 NYCRR 225-1.6 (f)

This subdivision requires the submission of excess emission reports when the the sulfur-in-fuel limitation, equivalent emission rate, or measured emissions exceeds the allowable standard.

6 NYCRR 227-1.3 (a)

This subdivision sets the particulate matter emission standards for subject stationary combustion installations.

6 NYCRR 227-1.3 (c)

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

This subdivision requires that all stationary combustion installations subject to this subpart perform an annual tune-up.

6 NYCRR 227-1.4 (a)

This subdivisions sets the opacity standard for subject stationary combustion installations.

6 NYCRR 227-1.5 (b) (2)

This paragraph contains the excess emissions and monitoring system reporting requirements for emission sources required to utilize a continuous opacity monitor.

6 NYCRR 227-2.5 (b)

System averaging plan NOx RACT compliance option.

6 NYCRR 227-2.6 (a)

Applicable testing and/or monitoring requirements for emission sources subject to NOx RACT.

6 NYCRR 242-1.5

This 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 251.3 (b)

Emission limits for non-modified sources.

6 NYCRR Part 207

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

Compliance Certification

Summary of monitoring activities at RAVENSWOOD GENERATING STATION:

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

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

U-00010	46	record keeping/maintenance procedures
FACILITY	36	record keeping/maintenance procedures
FACILITY	40	record keeping/maintenance procedures
FACILITY	42	record keeping/maintenance procedures
FACILITY	43	record keeping/maintenance procedures
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
FACILITY	25	work practice involving specific operations
FACILITY	26	work practice involving specific operations
FACILITY	27	record keeping/maintenance procedures
FACILITY	28	record keeping/maintenance procedures
FACILITY	29	record keeping/maintenance procedures
FACILITY	30	record keeping/maintenance procedures
FACILITY	31	monitoring of process or control device parameters as surrogate
FACILITY	32	monitoring of process or control device parameters as surrogate
FACILITY	33	record keeping/maintenance procedures
FACILITY	34	record keeping/maintenance procedures
FACILITY	35	record keeping/maintenance procedures
FACILITY	51	record keeping/maintenance procedures
FACILITY	52	record keeping/maintenance procedures
FACILITY	53	monitoring of process or control device parameters as surrogate

Basis for Monitoring

6 NYCRR Part 201- 6.5: Ravenswood Generating Station maintains records of all required monitoring, record keeping, and reporting for a period of five years.

Part 225: Sulfur in fuel is monitored for Part 225 compliance. The sulfur content of distillate oil used at the facility is limited to 0.0015% by weight and for residual fuel, sulfur is limited to 0.30% by weight. Vendor certification is required by this permit for each fuel oil delivery.

Part 227-1.3(a): Particulate Matter: Large boilers are required to demonstrate compliance with the particulate emission limit of 0.10 lb/mmbtu by keeping vendor certified fuel receipts demonstrating compliance with Part 225. Annual tune-ups are also required to ensure compliance.

Part 227-1.4 (a) Opacity: This condition is for compliance with opacity limit of 20 percent, by continuous opacity monitors (COMs).

6 NYCRR 227-2.6(a)(I): Each of the applicable boilers (Unit 00010, 00020, 00030) has a NOx CEMS installed and operating in accordance with DEC and EPA regulations. An annual RATA test is performed on each CEM system and submitted in accordance with 40 CFR Part 75 regulations.

6 NYCRR 227-2.5(b)

The facility will continue to comply with the current NOx RACT system wide averaging plan , dated December 2011. During Ozone period, system wide average emission will be calculated by

**Division of Air Resources
Permit Review Report**

Permit ID: 2-6304-00024/00035

Renewal Number: 4

05/13/2024

24-hr weighted average, while other times, it will be calculated by 30-day rolling average NO_x emissions rates of all the units.

6 NYCRR Part 201-6.5(a): December 2022 NYPA submitted Climate Leadership and Community Protection Act (CLCPA) analysis for the facility pursuant to the requirements of sections CLCPA 7(3). DEC found the analysis consistent with the attainment of the statewide GHG limits.

6 NYCRR Part 251.3 (b) is applicable to this facility as a fossil fuel-fired existing major electric generating facilities that provide more than 10 percent of their annual electric output to the electric grid and that are not subject to section 251.3(a) of this Part. On or after December 31, 2020, owners or operators of non-modified existing sources is not allowed to fire any single fossil fuel, alone or in combination with any other fuel with an emission rate greater than or equal to 180 pounds of CO₂ per million Btu of input (input-based limit). These emission limits are measured on an annual basis, calculated by dividing the annual total of CO₂ emissions for the calendar year by the annual total Btus (input-based limit) fired over the same calendar year for each fossil fuel fired.

The facility shall monitor emissions of CO₂ by measuring and recording the heat input and computing CO₂ emissions using Eq G-4 under section 2.3 of 40 CFR Part 75, Appendix G (hourly heat input to estimate hourly CO₂ mass emissions) and Appendix F (Table 1 - F- and Fc-Factors). Appendix G calculation methods are an alternative to using a Continuous Emission Monitoring System (CEMS) to measure CO₂ in 40 CFR Part 75.13(b), where Part 251.5(b)(1) calls for the installation of CO₂ CEMS in accordance with 40 CFR Part 75.13.

6 NYCRR Part 242- The boilers are subject to this regulation. This regulation establishes the NYS Budget Trading Program and 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 permit conditions require the facility to hold CO₂ allowances and comply with monitoring and reporting requirements.

6 NYCRR Part 227-3: The simple cycle turbines are subject to the requirements of 6 NYCRR Part 227-3, which requires to meet NO_x limits 100 ppmvd by May 1, 2023 and 25 ppmvd by May 1, 2025. All turbines have been retired before May 2023.

July 2021, DEC reviewed 1 hour NO₂ modeling report for both the permits (2-6304-00024/00035 and 2-6304-00024/00039) located at 38-54 Vernon Blvd, Queens, NY. The modeling methodologies used in the ambient air quality modeling analysis are acceptable. The results of this refined modeling analysis demonstrate that the modeled 1-hour NO₂ impacts will not cause or contribute to an exceedance of the National Ambient Air Quality Standards.

**Division of Air Resources
Permit Review Report**

**Permit ID: 2-6304-00024/00035
Renewal Number: 4
05/13/2024**