



New York State Department of Environmental Conservation
Permit Review Report

Permit ID: 2-6101-00042/00011

Renewal Number: 3

12/26/2018

Facility Identification Data

Name: CON EDISON - HUDSON AVE STATION

Address: 1 HUDSON AVE

BROOKLYN, NY 11201

Owner/Firm

Name: CONSOLIDATED EDISON COMPANY OF NEW YORK INC

Address: 4 IRVING PL

NEW YORK, NY 10003-3502, USA

Owner Classification: Corporation/Partnership

Permit Contacts

Division of Environmental Permits:

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4 IRVING PL RM 15 NE

NEW YORK, NY 10003-3502

Phone:2124601223

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 permit renewal of Air Title V Facility.



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Attainment Status

CON EDISON - HUDSON AVE STATION is located in the town of BROOKLYN in the county of KINGS.

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 operates three (3) simple cycle combustion turbines (Emission Sources GT003, GT004 and GT005), which generate electricity. Each of these combustion turbines is rated at 235 MMBtu/hr. The three combustion turbines burn distillate oil only and began operation on July 1, 1970. The emissions from each of these combustion turbines exhaust through each turbine's separate stack, identified as Emission Points GT003, GT004 and GT005; respectively. Combustion turbine GT003 is equipped with a diesel starter engine.

The facility operates other sources which are considered exempt from permitting in accordance with 6 NYCRR 201-3.2(c), including one (1) emergency power generator (<500 hrs/yr) in the Tunnel Head House Building, and four (4) distillate and residual fuel oil storage tanks with storage capacities <300,000 bbls.

The four (4) low pressure very large Combustion Engineering boilers, Boilers Nos. 71, 72, 81 and 82 (Emission Sources 00071, 00072, 00081 and 00082; respectively) at this facility were permanently shutdown and ceased operation on February 7, 2011.

Permit Structure and Description of Operations

The Title V permit for CON EDISON - HUDSON AVE 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



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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.

CON EDISON - HUDSON AVE STATION is defined by the following emission unit(s):

Emission unit HA0005 - Emission Unit H-A0005 consists of three simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005) utilized to generate electricity. These three combustion turbines are rated at 235 MM Btu/hr each. The three combustion turbines burn distillate fuel oil only (Process GTD) and began operating on 7/1/1970. There is also a small diesel starter engine firing diesel fuel and is used to start Combustion Turbine No. 3 (Emission Source GT003) in Emission Unit H-A0005.

This diesel starter engine is operated to start GT3 (Emission Source GT003). The starter engine is a Cummins KT19-C Model year 2012, and is rated at 450HP equivalent to 336 KW or 1.1465 MMBtu/hr. In 2017, this starter engine operated 18.5 hours.

The emissions from the diesel starter engine (Emission Source ENG03) exhaust through the same stack (Emission Point GT003) as No. 3 combustion turbine (Emission Source GT003).

The emissions from each of these three combustion turbines (Emission Sources GT003, GT004 & GT005) exhaust through its own separate stack, identified as Emission Points GT003, GT004 & GT005, respectively.

Emission unit HA0005 is associated with the following emission points (EP):
GT003, GT004, GT005

Process: ENG Process ENG is the firing of diesel fuel in the small diesel starter engine that starts, Combustion Turbine No. 3 (Emission Source GT003) in Emission Unit H-A0005.

This diesel starter engine is operated to start GT3 (Emission Source GT003). The starter engine is a Cummins KT19-C Model year 2012, and is rated at 450HP equivalent to 336 KW or 1.1465 MMBtu/hr.

The emissions from the diesel starter engine (Emission Source ENG03) exhaust through the same stack (Emission Point GT003) as No. 3 combustion turbine (Emission Source GT003).

In 2017, this starter engine operated 18.5 hours.

From AP-42, the NOx emission factor for this diesel starter engine is 0.031 lbs/hp-hr, and the NOx emissions in 2017 are calculated as:



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$$(0.031 \text{ lbs/hp-hr}) \times (450 \text{ HP}) \times (18.5 \text{ hrs}) = 258.075 \text{ lbs of NO}_x$$

Process: GTD is located at Floor 1, Building GTFAC - Process GTD is the combustion of distillate fuel oil in the three simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005) in Emission Unit H-A0005 to generate electricity. These three combustion turbines are rated at 235 MM Btu/hr each and burn ultra-low sulfur distillate fuel oil only with 0.0015 % maximum sulfur. Combustion turbine No. 3 (Emission Source GT003) is equipped with a diesel stater engine.

The emissions from each of these three combustion turbines (Emission Sources GT003, GT004 & GT005) exhaust through its own separate stack, identified as Emission Points GT003, GT004 & GT005, respectively.

Title V/Major Source Status

CON EDISON - HUDSON AVE STATION is subject to Title V requirements. This determination is based on the following information:

Consolidated Edison Hudson Avenue Generating Station is a major facility because the potential emissions of nitrogen oxides, and particulate matter are greater than the major source thresholds (100 tons/year for carbon monoxide, 25 tons per year for nitrogen oxides and total HAPS, and 100 tons/year for sulfur dioxide and particulate matter).

Program Applicability

The following chart summarizes the applicability of CON EDISON - HUDSON AVE 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	YES
TITLE IV	NO
TITLE V	YES
TITLE VI	NO
RACT	YES
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 212-3, 226, 227-2, 228, 229, 230, 232, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by 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.



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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
4931	ELEC & OTHER SERVICES COMBINED
4961	STEAM SUPPLY

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
2-01-001-01	INTERNAL COMBUSTION ENGINES - ELECTRIC GENERATION ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE - DISTILLATE OIL (DIESEL) Turbine
2-02-001-01	INTERNAL COMBUSTION ENGINES - INDUSTRIAL INDUSTRIAL INTERNAL COMBUSTION ENGINE - DISTILLATE OIL(DIESEL) Turbine

Facility Emissions Summary

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



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Cas No.	Contaminant	PTE lbs/yr	PTE tons/yr	Actual lbs/yr	Actual tons/yr
0NY508-00-0	40 CFR 60 SUBPART IIII - NMHC + NOX	2148		52	
0NY750-00-0	CARBON DIOXIDE	85928742		5340389	
000630-08-0	EQUIVALENTS CARBON MONOXIDE	30701		1908	
007439-92-1	LEAD	31.24		1.94	
0NY210-00-0	OXIDES OF NITROGEN	332867		20687	
0NY075-00-0	PARTICULATES	39319		2444	
0NY075-02-5	PM 2.5	39319		2444	
0NY075-00-5	PM-10	39319		2444	
007446-09-5	SULFUR DIOXIDE	808		50	
0NY100-00-0	TOTAL HAP	1073		68	
0NY998-00-0	VOC	3770		234	

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)



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

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

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

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

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

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

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

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

All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and 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



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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 2 01-6.7 and Part 621.

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

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

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

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

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

Item 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.

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Item A: Emergency Defense - 6 NYCRR 201-1.5

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

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

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

(b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of 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	Regulation	Condition	Short Description
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Facility/EU/EP/Process/ES

FACILITY	ECL 19-0301	53	Powers and Duties of the Department with respect to air pollution control
FACILITY	40CFR 60-IIII	42	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
FACILITY	40CFR 63-ZZZZ	43, 44	Reciprocating Internal Combustion Engine (RICE) NESHAP
FACILITY	40CFR 68	19	Chemical accident prevention provisions
FACILITY	40CFR 82-F	20	Protection of Stratospheric Ozone - recycling and emissions reduction
H-A0005/GT005/ENG/ENG03	40CFR 89-B.112	49, 50, 51	Oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter exhaust emission standards
FACILITY	6NYCRR 200.3	21	False Statement.
FACILITY	6NYCRR 200.6	1	Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	10	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	54	Unavoidable noncompliance and violations
FACILITY	6NYCRR 201-1.7	11	Recycling and Salvage
FACILITY	6NYCRR 201-1.8	12	Prohibition of reintroduction of collected contaminants to the air
FACILITY	6NYCRR 201-3.2(a)	13	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-3.3(a)	14	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6	22, 45, 46	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



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FACILITY	6NYCRR 201-6.4(d)(4)	23	Noncompliance
FACILITY	6NYCRR 201-6.4(e)	6	Compliance Schedules - Progress Reports
FACILITY	6NYCRR 201-6.4(f)(6)	17	Compliance Certification
FACILITY	6NYCRR 201-7.1	24, 47, 48	Off Permit Changes
FACILITY	6NYCRR 202-1.1	18	Emission Capping in Facility Permits
FACILITY	6NYCRR 202-2.1	7	Required emissions tests.
FACILITY	6NYCRR 202-2.5	8	Emission Statements - Applicability
FACILITY	6NYCRR 207.3(d)	26	Emission Statements - record keeping requirements.
FACILITY	6NYCRR 211.1	55	Episode actions
FACILITY	6NYCRR 211.2	27	General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 215.2	9	General Prohibitions - visible emissions limited.
FACILITY	6NYCRR 225.7(a)	33	Open Fires - Prohibitions
FACILITY	6NYCRR 225-1.2	28	Reports, Sampling and Analysis
FACILITY	6NYCRR 225-1.2(g)	29	Sulfur-in-Fuel Limitations
FACILITY	6NYCRR 225-1.2(h)	30	Sulfur-in-Fuel Limitations
FACILITY	6NYCRR 225-1.6	31	Sulfur-in-Fuel Limitations
FACILITY	6NYCRR 225-1.6(b)	32	Reports, Sampling, and Analysis
FACILITY	6NYCRR 227.2(b)(1)	41	Recordkeeping Requirements
H-A0005/GT005/GTD/GT005	6NYCRR 227-1.3(a)	52	Particulate emissions.
FACILITY	6NYCRR 227-2.4(e)(1)	34, 35	Smoke Emission Limitations.
FACILITY	6NYCRR 227-2.4(f)(3)	36	Simple cycle combustion turbines.
FACILITY	6NYCRR 227-2.5(b)	37	Emission limit for distillate oil fired engines.
FACILITY	6NYCRR 227-2.5(c)	38, 39	System averaging plan.
FACILITY	6NYCRR 227-2.6(c)	40	Alternative RACT option.
			Stack Test 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



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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 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.



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6 NYCRR 201-6.4 (a) (7)

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

6 NYCRR 201-6.4 (a) (8)

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

6 NYCRR 201-6.4 (c)

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

6 NYCRR 201-6.4 (c) (2)

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

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

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

6 NYCRR 201-6.4 (d) (5)

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

6 NYCRR 201-6.4 (e)

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

6 NYCRR 201-6.4 (f) (6)

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



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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.

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, CON EDISON - HUDSON AVE STATION has been determined to be subject to the following regulations:

40 CFR 89.112

This regulation sets forth the limits for oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter from the exhaust of compression-ignition nonroad engines.

40 CFR Part 60, Subpart IIII

This regulation is for the Applicability of Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Facilities that have stationary compression ignition internal combustion engines must comply with applicable portion of 40 CFR 60 Subpart IIII.



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40 CFR Part 63, Subpart ZZZZ

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

This regulation is for the Applicability of Reciprocating Internal Combustion Engine (RICE) NESHAP.

Facilities that have reciprocating internal combustion engine must comply with applicable portions of 40 CFR 63 Subpart ZZZZ.

6 NYCRR 200.3

No person shall make a false statement in connection with applications, plans, specifications and/or reports submitted pursuant to this Subchapter.

6 NYCRR 201-7.1

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

6 NYCRR 207.3 (d)

This regulation requires any person who owns an air contamination source for which an episode action plan has been issued or approved to take whatever actions are prescribed by this episode action plan when an air pollution episode is in effect.

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 225.7 (a)

The commissioner may require an owner of an air contamination source to retain for up to three years, and to submit to him, fuel analyses, information on the quantity of fuel received, burned or sold, and results of stack sampling, stack monitoring and other procedures to ensure compliance with the provisions of the Part. **NOTE: This citation has been replaced by requirements cited under 225-1.8(a) and is no longer a part of current State regulations, however, it remains as part of New York State's approved State Implementation Plan (SIP).**

6 NYCRR 225-1.2

This section of the regulation establishes sulfur-in-fuel limitations for coal, residual oil,



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distillate oil, and waste oil.

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

This section establishes the requirements for reporting, sampling, and analyzing fuel by subject facilities.

6 NYCRR 225-1.6 (b)

This citation sets the the types of records a subject facility must keep to prove compliance with this Subpart.

6 NYCRR 227.2 (b) (1)

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

6 NYCRR 227-1.3 (a)

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

6 NYCRR 227-2.4 (e) (1)

Presumptive NO_x RACT emission limits for simple cycle combustion turbines.

6 NYCRR 227-2.4 (f) (3)

Presumptive NO_x RACT emission limit for distillate oil fired stationary internal combustion engines.



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6 NYCRR 227-2.5 (b)

This provision is for compliance option involving case-by-case NO_x RACT determination for an alternative emission limit. This option provides flexibility to any owner or operator of a major facility of NO_x to meet the control requirements of section 227-2.4 of this Subpart but are not of the type that require the additional approval of the administrator as a separate SIP revision.

6 NYCRR 227-2.5 (c)

This provision allows the owner or operator to demonstrate that the applicable presumptive RACT emission limit in section 227-2.4 of this Subpart is not economically or technically feasible. Based on this determination the Department is allowed to set a higher emission source specific emission limit.

6 NYCRR 227-2.6 (c)

This regulation is a SIP regulation. This citation is for stack test requirements. The owner or operator of the facility is required to test for NO_x emission and follow monitoring and reporting requirements. The stack testing for NO_x emission requires the facility to:

- (1) Submit a compliance test protocol to the department for approval at least 30 days prior to emission testing. The condition of the testing and the locations of the sampling devices must be acceptable to the department; and
- (2) Utilize procedures set forth in 40 CFR Part 60, Appendix A or any other method acceptable to the department and EPA for determining compliance with the appropriate NO_x limit in section 227-2.4 of this Subpart, and shall follow the procedures set forth in Part 202 of this Title.
 - (i) For large and mid-size boilers, utilize Method 7, 7E, or 19 from 40 CFR Part 60, Appendix A or another reference method approved by the department.
 - (ii) For simple cycle combustion turbines, utilize Method 20 from 40 CFR Part 60, Appendix A or another reference method approved by the department.
 - (iii) For combined cycle combustion turbines, utilize Method 7, 7E, or 19 from 40 CFR Part 60, Appendix A or another reference method approved by the department.
 - (iv) For internal combustion engines, utilize Method 7, 7E or 19 from 40 CFR Part 60, Appendix A or another reference method approved by the department.



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Compliance Certification

Summary of monitoring activities at CON EDISON - HUDSON AVE STATION:

Location Facility/EU/EP/Process/ES	Cond No.	Type of Monitoring
H-A0005/GT005/ENG/ENG03	49	work practice involving specific operations
H-A0005/GT005/ENG/ENG03	50	work practice involving specific operations
H-A0005/GT005/ENG/ENG03	51	work practice involving specific operations
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
FACILITY	25	work practice involving specific operations
FACILITY	7	record keeping/maintenance procedures
FACILITY	26	record keeping/maintenance procedures
FACILITY	33	record keeping/maintenance procedures
FACILITY	28	work practice involving specific operations
FACILITY	29	work practice involving specific operations
FACILITY	30	work practice involving specific operations
FACILITY	31	record keeping/maintenance procedures
FACILITY	32	record keeping/maintenance procedures
FACILITY	41	intermittent emission testing
H-A0005/GT005/GTD/GT005	52	monitoring of process or control device parameters as surrogate
FACILITY	34	intermittent emission testing
FACILITY	35	intermittent emission testing
FACILITY	36	intermittent emission testing
FACILITY	37	work practice involving specific operations
FACILITY	38	intermittent emission testing
FACILITY	39	intermittent emission testing
FACILITY	40	intermittent emission testing

Basis for Monitoring

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

Condition # 5 for 6 NYCRR 201-6.4(c)(3)(ii): This is a facility-wide condition. This condition is for Record Keeping/Maintenance Procedures. This condition 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.

Condition # 6 for 6 NYCRR 201-6.4(e): This is a facility-wide condition. This condition is for Record Keeping/Maintenance Procedures. This condition specifies the overall permit requirements for compliance certification, including emission limitations, standards or work practices. This facility must submit an annual compliance certification to the NYSDEC and the USEPA.



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Condition # 7 for 6 NYCRR 202-2.1: This is a facility-wide condition. This condition is for Record Keeping/Maintenance Procedures. This condition sets forth the applicability criteria for submitting an annual statement of emissions. The criteria is based on annual emission threshold quantities and ozone attainment designation. This condition is a requirement for all Title V facilities. These facilities must submit an annual emission statement by April 15th of each year for emissions of the previous calendar year.

Condition # 25 for 6 NYCRR 201-7.1, Capping Out of 6 NYCRR 227-2.4 for Oxides of Nitrogen: This condition is an emission unit level, emission point level, process level and emission source level Work Practice Involving Specific Operations for Hours Per Year Operation condition for EU: H-A0005, EP: GT003, GT004 & GT005, Proc: GTD, and ES: GT003, GT004 & GT005 for Oxides of Nitrogen. The three simple combustion turbines (Emission Sources GT003, GT004 & GT005) are restricted to operating 764 hours per year per turbine on an annual 365-day rolling average on each turbine. Daily records for Emission Sources GT003, GT004 & GT005 shall be kept by the facility and/or at Corporate EH & S office, 4 Irving Place - 15 Fl NE, New York, NY 10003-3502. Records will be available for inspection by the DEC, and the facility will maintain records on-site for a minimum of five years.

Condition # 26 for 6 NYCRR 207.3(d): This is a facility-wide condition. This condition is for Record Keeping/Maintenance Procedures. This condition requires any person who owns an air contamination source for which an episode action plan has been issued or approved to take whatever actions are prescribed by this episode action plan when an air pollution episode is in effect.

Condition # 28 for 6 NYCRR 225-1.2: This is a facility wide condition. This condition is for Work Practice Involving Specific Operations for the sulfur content in distillate fuel oil. This section of the regulation establishes sulfur-in-fuel limitations for coal, residual oil, distillate oil, and waste oil.

Owners and/or operators of a stationary combustion installation that fires distillate oil other than number two heating oil are limited to the purchase of distillate oil with 0.0015 percent sulfur by weight or less on or after July 1, 2014 and are limited to the firing of distillate oil including number two heating oil with 0.0015 percent sulfur by weight or less on or after July 1, 2016.

The department will require fuel analyses, information on the quantity of fuel received, fired or sold, and results of stack sampling, stack monitoring, and other procedures to ensure compliance with the provisions of this Subpart. All records must be maintained at the facility for a minimum of five years.



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Facility owners subject to this Subpart must submit a written report of the fuel sulfur content exceeding the applicable sulfur-in-fuel limitation, measured emissions exceeding the applicable sulfur-in-fuel limitation, measured emissions exceeding the applicable equivalent emission rate, and the nature and cause of such exceedances if known, for each calendar quarter, within 30 days after the end of any quarterly period in which an exceedance takes place.

Condition # 29 for 6 NYCRR 225-1.2 (g) for Sulfur Content: This is a facility wide condition. This condition is for Work Practice Involving Specific Operations for the sulfur content in distillate fuel oil. The distillate fuel oil (#2 heating oil) purchase is limited to 0.0015 percent sulfur by weight on or after July 1, 2014. Compliance with this limit will be based on vendor certifications.

Condition # 30 for 6 NYCRR 225-1.2 (h) for Sulfur Content: This is a facility wide condition. This condition is for Work Practice Involving Specific Operations for the sulfur content in distillate fuel oil. The distillate fuel oil (#2 heating oil) firing is limited to 0.0015 percent sulfur by weight on or after July 1, 2016. Compliance with this limit will be based on vendor certifications.

Condition # 31 for 6 NYCRR 225-1.6: This is a facility-wide condition. This condition is for Record Keeping/Maintenance Procedures. This condition requires any owner or operator of a facility which purchases and fires coal and/or oil to submit reports to the commissioner containing fuel analysis data, information on the quantity of the fuel received, burned, and results of any stack sampling, stack monitoring and any other procedures to ensure compliance with the provisions of 6 NYCRR Part 225-1.

Condition # 32 for 6 NYCRR 225-1.6 (b): This is a facility-wide condition. This condition is for Record Keeping/Maintenance Procedures. This condition requires any owner or operator of a facility which purchases and fires coal and/or oil to keep the following types of records a subject facility must keep to prove compliance with this Subpart.

(b) (1) Any person who sells oil and/or coal must retain, for at least five years, records containing the following information:

(i) fuel analyses and data on the quantities of all oil and coal received; and

(ii) the names of all purchasers, fuel analyses, and data on the quantities of all oil and coal sold.



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(2) Such fuel analyses must contain, as a minimum:

(i) data on the sulfur content, ash content, specific gravity, and heating value of residual oil;

(ii) data on the sulfur content, specific gravity, and heating value of distillate oil; and

(iii) data on the sulfur content, ash content, and heating value of coal.

Sampling, compositing, and analysis of fuel samples must be done in accordance with methods acceptable to the department.

Facility owners or fuel distributors required to maintain and retain records pursuant to this Subpart must make such records available for inspection by the department.

Condition # 33 for 6 NYCRR 225.7(a): This is a facility-wide condition. This condition is for Record Keeping/Maintenance Procedures. The commissioner may require an owner of an air contamination source to retain for up to three years, and to submit to him, fuel analyses, information on the quantity of fuel received, burned or sold, and results of stack sampling, stack monitoring and other procedures to ensure compliance with the provisions of the Part. NOTE: This citation has been replaced by requirements cited under 225-1.8(a) and is no longer a part of current State regulations, however, it remains as part of New York State's approved State Implementation Plan (SIP).

Condition # 34 for 6 NYCRR 227-2.4 (e) (1): This condition is an emission unit level, emission point level, process level and emission source level Intermittent Emission Testing condition for EU: H-A0005, EP: GT003, GT004 & GT005, Proc: GTD, and ES: GT003, GT004 & GT005 for Oxides of Nitrogen.

This condition applies to the three simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005) on or after July 1, 2014 with NO_x RACT limit of 0.618 lb/MM Btu .

Existing presumptive NO_x RACT emission limits for simple cycle combustion turbines on or after July 1, 2014. This condition applies to the three distillate oil fired simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005). Each simple cycle combustion turbine is rated at 235 MM Btu/hr. Con Edison has proposed a case-by-case NO_x emission rate limitation option for the compliance with NO_x RACT regulation. This condition is for the NO_x RACT compliance starting on July 1, 2014. This condition establishes the NO_x RACT requirements for the three (3) simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005). Compliance with the relevant



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presumptive NOx RACT emission limit of 0.618 lb/MM Btu (159 ppm by volume dry, corrected to 15% O2 - see calculations below) for each turbine will be demonstrated by a stack emission testing once during the term of the permit. Emission will be calculated based on the most recent stack test result.

Compliance with these emission limits must be determined with a 24-hour average during the ozone season and a 30-day average during the non-ozone season unless the owner or operator chooses to use a CEMS under the provisions of section 227- 2.6(b) of this Subpart. Con Edison will conduct emission stack testing once during the permit term to demonstrate compliance with a case-by-case limit of 0.618 lb/MM Btu.

The three simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005) are restricted to operating 764 hours per year per turbine on an annual 365-day rolling average on each turbine. Daily records for Emission Sources GT003, GT004 & GT005 shall be kept by the facility and/or at Corporate EH & S office, 4 Irving Place - 15 Fl NE, New York, NY 10003-3502. Records will be available for inspection by the DEC staff, and the facility will maintain records on-site for a minimum of five years.

Compliance with the NOx emission limit as well as monitoring, recordkeeping and reporting requirement listed in this condition is effective July 1, 2014.

$$0.618 \text{ lb/MM Btu} = [(\text{ppmvd NOx @ 15\% O}_2) \times (20.9) \times (\text{Fd}) \times (\text{K})] / [20.9 - 15\% \text{ O}_2]$$

where:

- ppmvd is the concentration in parts per million by volume, dry basis, of NOx or CO;
- MW is the molecular weight for NOx (= 46 lb/lb-mole) or CO (= 28 lb/lb-mole);
- Fdry factor for natural gas = 8,710 dscf/MM BTU; for residual or fuel oil = 9,190 dscf/MMBTU; and
- O2 correction factor = (20.9%)/(20.9% - O2 measured); where O2 measured is percent oxygen on a dry basis.

$$k \text{ for NOx} = 1.194 \text{ E-07 (lb/scf)/ppm}$$

Solving for ppmvd in the above equation, its value is calculated to be 159.0

Condition # 35 for 6 NYCRR 227-2.4 (e) (1): This condition is an emission unit level, emission point level, process level and emission and emission source level Intermittent Emission Testing condition for EU: H-A0005, EP: GT003, GT004 & GT005, Proc: GTD, and ES: GT003, GT004 & GT005 for Oxides of Nitrogen.



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This condition applies to the three simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005) on or after July 1, 2014 with NO_x RACT limit of 159 ppm by volume dry, corrected to 15% O₂.

Existing presumptive NO_x RACT emission limits for simple cycle combustion turbines on or after July 1, 2014. This condition applies to the three distillate oil fired simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005). Each simple cycle combustion turbine is rated at 235 MM Btu/hr. Con Edison has proposed a case-by-case NO_x emission rate limitation option for the compliance with NO_x RACT regulation. This condition is for the NO_x RACT compliance starting on July 1, 2014. This condition establishes the NO_x RACT requirements for the three (3) simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005). Compliance with the relevant presumptive NO_x RACT emission limit of 0.618 lb/MM Btu (159 ppm by volume dry, corrected to 15% O₂ - see calculations below) for each turbine will be demonstrated by a stack emission testing once during the term of the permit. Emission will be calculated based on the most recent stack test result.

Compliance with these emission limits must be determined with a 24-hour average during the ozone season and a 30-day average during the non-ozone season unless the owner or operator chooses to use a CEMS under the provisions of section 227- 2.6(b) of this Subpart. Con Edison will conduct emission stack testing once during the permit term to demonstrate compliance with a case-by-case limit of 0.618 lb/MM Btu.

The three simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005) are restricted to operating 764 hours per year per turbine on an annual 365-day rolling average on each turbine. Daily records for Emission Sources GT003, GT004 & GT005 shall be kept by the facility and/or at Corporate EH & S office, 4 Irving Place - 15 Fl NE, New York, NY 10003-3502. Records will be available for inspection by the DEC staff, and the facility will maintain records on-site for a minimum of five years.

Compliance with the NO_x emission limit as well as monitoring, recordkeeping and reporting requirement listed in this condition is effective July 1, 2014.

$$0.618 \text{ lb/MM Btu} = [(\text{ppmvd NO}_x @ 15\% \text{ O}_2) \times (20.9) \times (\text{Fd}) \times (\text{K})] / [20.9 - 15\% \text{ O}_2]$$

where:

ppmvd is the concentration in parts per million by volume, dry basis, of NO_x or CO;

MW is the molecular weight for NO_x (= 46 lb/lb-mole) or CO (= 28 lb/lb-mole);

Fdry factor for natural gas = 8,710 dscf/MM BTU; for residual or fuel oil = 9,190 dscf/MMBTU; and

O₂ correction factor = (20.9%)/(20.9% - O₂ measured); where O₂ measured is percent oxygen on a dry basis.



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k for $\text{NO}_x = 1.194 \text{ E-}07 \text{ (lb/scf)/ppm}$

Solving for ppmvd in the above equation, its value is calculated to be 159.0

Condition # 36 for 6 NYCRR 227-2.4(f)(3) for Oxides of Nitrogen: This condition is an emission unit level, emission point level, process level and emission source level for Intermittent Emission Testing for EU: H-A0005, EP: GT003, Proc: ENG, and ES: ENG03 for Oxides of Nitrogen.

This condition is the presumptive NO_x RACT emission limit for distillate oil fired stationary internal combustion engines and applies to the diesel fired starter engine. The diesel starter engine is a 450HP/336KW equivalent to 1.1465 MMBtu/hr, Cummins KT19-C Model year 2012. According to the manufacturer specification for this 450 HP Cummins KT19-C starter engine, which is used to startup Combustion Turbine #3 (GT3), the NO_x emission limit is 3.62 g/kW-hr (or 2.70 g/bhp-hr). The starter engine comes up every time combustion turbine GT3 starts up. Only combustion turbine GT3 is equipped with diesel starter engine for startup purposes and the other two combustion turbines (GT4 and GT5) have electric motor for their startup operations. For the diesel-fired non-emergency engine (used for starting turbine No. 3), the Combustion engine has a limit operating hours per year of 764. According to the facility's record, the Cummins starter engine operated 18.5 hours per year in 2017 for a total NO_x emission of 258 lbs.

This condition is for the NO_x RACT limit for the starter engine. According to 6 NYCRR 227-2.4 (f)(3), the NO_x RACT limit for this engine is 2.3 g/bhp-hr, but since the hours of operation for this engine are so low with a maximum operating hours of 764 per year, the Department is accepting the manufacturer's NO_x limit of 2.70 g/bhp-hr for this starter engine, This NO_x emission limit will be the case-by-case NO_x RACT limit in this condition for 6 NYCRR 227-2.4 (f)(3). This diesel engine is used only for startup purposes.

This 2.7 grams per BHP-hr NO_x RACT limit for the starter diesel-fired engine (Emission Source ENG03) which is used to startup Combustion Turbine #3 (Emission Source GT005) will be submitted EPA for approval as a source-specific SIP revision.

Condition # 37 for 6 NYCRR 227-2.5(b) for Oxides of Nitrogen: This condition is an emission unit level, emission point level, process level and emission source level Record Keeping/Maintenance Procedures condition for EU: H-A0005, EP: GT003, GT004 & GT005, Proc: GTD, and ES: GT003, GT004 & GT005 for Oxides of Nitrogen.

This condition applies to the three simple cycle combustion turbines for a compliance option for NO_x RACT.



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The three simple combustion turbines (Emission Sources GT003, GT004 & GT005) are restricted to operating 764 hours per year per turbine on an annual 365-day rolling average on each turbine. Daily records for Emission Sources GT003, GT004 & GT005 shall be kept by the facility. records will be available for inspection by the DEC staff and the facility will maintain records for a minimum of five years.

Condition # 38 for 6 NYCRR 227-2.5(c) for Oxides of Nitrogen: This condition is an emission unit level, emission point level, process level and emission source level Intermittent Emission Testing condition for EU: H-A0005, EP: GT003, GT004 & GT005, Proc: GTD, and ES: GT003, GT004 & GT005 for Oxides of Nitrogen.

Con Edison has proposed case-by-case emission rate limitation option for the compliance with NO_x RACT regulation. This condition is for the NO_x RACT compliance beginning July 1, 2014. Compliance with the NO_x emission limit as well as monitoring, recordkeeping and reporting requirement listed in this condition is effective July 1, 2014 for the three (3) simple cycle combustion turbines (Emission Sources GT003, GT004 & GT005).

This condition applies to the three distillate oil fired simple combustion turbines (Emission Sources GT003, GT004 & GT005). Compliance with the NO_x RACT emission limit of 0.618 lb/MM Btu (159 ppm by volume dry, corrected to 15% O₂) for each turbine will be demonstrated and determined by a stack emission testing once during the term of the permit. Emission will be calculated based on the most recent stack test result. Con Edison will conduct emission stack testing once during the permit term to demonstrate compliance with a case-by-case limit of 0.618 lb/MM Btu.

The three simple combustion turbines (Emission Sources GT003, GT004 & GT005) are restricted to operating 764 hours per year per turbine on an annual 365-day rolling average on each turbine. Daily records for Emission Sources GT003, GT004 & GT005 shall be kept by the facility and/or at Corporate EH & S office, 4 Irving Place - 15 Fl NE, New York, NY 10003-3502. Records will be available for inspection by the DEC staff, and the facility will maintain records on-site for a minimum of five years.

Condition # 39 for 6 NYCRR 227-2.5(c) for Oxides of Nitrogen: This condition is an emission unit level, emission point level, process level and emission source level for Intermittent Emission Testing for EU: H-A0005, EP: GT003, Proc: ENG, and ES: ENG03 for Oxides of Nitrogen.



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This condition is the presumptive NO_x RACT emission limit for distillate oil fired stationary internal combustion engines and applies to the diesel fired starter engine. The diesel starter engine is a 450HP/336KW equivalent to 1.1465 MMBtu/hr, Cummins KT19-C Model year 2012. According to the manufacturer specification for this 450 HP Cummins KT19-C starter engine, which is used to startup Combustion Turbine #3 (GT3), the NO_x emission limit is 3.62 g/kW-hr (or 2.70 g/bhp-hr). The starter engine comes up every time combustion turbine GT3 starts up. Only combustion turbine GT3 is equipped with diesel starter engine for startup purposes and the other two combustion turbines (GT4 and GT5) have electric motor for their startup operations. For the diesel-fired non-emergency engine (used for starting turbine No. 3), the Combustion engine has a limit operating hours per year of 764. According to the facility's record, the Cummins starter engine operated 18.5 hours per year in 2017 for a total NO_x emission of 258 lbs.

This condition is for the NO_x RACT limit for the starter engine. According to 6 NYCRR 227-2.4 (f)(3), the NO_x RACT limit for this engine is 2.3 g/bhp-hr, but since the hours of operation for this engine are so low with a maximum operating hours of 764 per year, the Department is accepting the manufacturer's NO_x limit of 2.70 g/bhp-hr for this starter engine, This NO_x emission limit will be the case-by-case NO_x RACT limit in this condition for 6 NYCRR 227-2.4 (f)(3). This diesel engine is used only for startup purposes.

This 2.7 grams per BHP-hr NO_x RACT limit for the starter diesel-fired engine (Emission Source ENG03) which is used to startup Combustion Turbine #3 (Emission Source GT005) will be submitted EPA for approval as a source-specific SIP revision.

Condition # 40 for 6 NYCRR 227-2.6(c) for Oxides of Nitrogen: This condition is an emission unit level, emission point level, process level and emission source level Intermittent Emission Testing condition for EU: H-A0005, EP: GT003, GT004 & GT005, Proc: GTD, and ES: GT003, GT004 & GT005 for Oxides of Nitrogen with a limit of 0.618 pounds per million Btus. This condition is a SIP condition. This citation is for stack test requirements. The owner or operator of the facility is required to test for NO_x emission and follow monitoring and reporting requirements. The stack testing for NO_x emission requires the facility to:

- (1) Submit a compliance test protocol to the department for approval at least 30 days prior to emission testing. The condition of the testing and the locations of the sampling devices must be acceptable to the department; and
- (2) Utilize procedures set forth in 40 CFR Part 60, Appendix A or any other method acceptable to the department and EPA for determining compliance with the appropriate NO_x limit in section 227-2.4 of this Subpart, and shall follow the procedures set forth in Part 202 of this Title.



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(ii) For simple cycle combustion turbines, utilize Method 20 from 40 CFR Part 60, Appendix A or another reference method approved by the department.

Condition # 41 for 6 NYCRR 227.2(b)(1) for Particulates: This condition is an emission unit level, emission point level, process level and emission source level Intermittent Emission Testing condition for EU: H-A0005, EP: GT003, GT004 & GT005, Processes: GTD & ENG, and ES: GT003, GT004, GT005 & ENG03 for Particulates. This regulation is from the 1972 version of Part 227 and still remains as part of New York's SIP. The condition establishes a particulate limit of 0.10 lbs/mmBtu based on a 2 hour average emission for any oil fired stationary combustion installation.

Condition # 49 for 40 CFR 89.112, Subpart B for Carbon Monoxide: This condition is an emission unit level, emission point level, process level and emission source level Work Practice Involving Specific Operations condition for EU: H-A0005, EP: GT005, Proc: ENG, and ES: ENG03 for Carbon Monoxide for a limit of 3.5 grams per kilowatt hour.

This condition sets forth the limits for oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter from the exhaust of compression-ignition nonroad engines.

This condition lists the compliance options for all Tier II engines Model 2007 and later model compression ignition engines that must comply with emission standards.

Exhaust emission from nonroad compression-ignition engines to which this subpart is applicable shall not exceed the applicable exhaust emission limit standards of 3.5 gm/kW-hr for the emissions of CO.

This condition applies to the Cummins 450 HP diesel-fired starter engine (Emission Source ENG03) that is used to start Combustion Turbine No.3 (Emission Source GT005) in Emission Unit H-A0005. This is a small diesel starter engine firing only diesel fuel oil in the compression ignition nonroad engine.

The starter engine is a Cummins KT19-C Model year 2012, and is rated at 450HP (equivalent to 336 KW or 1.1465 MMBtu/hr). This engine is certified by the manufacturer and has a Certification Emission Result Value of 1.8 gm/kW-hr for the emissions of CO, which is below the EPA Standard Limit Value of 3.5 gm/kW-hr for the emissions of CO. In 2017, this starter engine operated 18.5 hours.

Condition # 50 for 40 CFR 89.112, Subpart B for Particulates: This condition is an emission unit level, emission point level, process level and emission source level Work Practice Involving Specific Operations condition for EU: H-A0005, EP: GT005, Proc: ENG, and ES: ENG03 for Particulates for a limit of 0.20 grams per kilowatt hour.



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This condition sets forth the limits for oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter from the exhaust of compression-ignition nonroad engines.

This condition lists the compliance options for all Tier II engines Model 2007 and later model compression ignition engines that must comply with emission standards.

Exhaust emission from nonroad compression-ignition engines to which this subpart is applicable shall not exceed the applicable exhaust emission limit standards of 0.2 gm/kW-hr for the emissions of PM.

This condition applies to the Cummins 450 HP diesel-fired starter engine (Emission Source ENG03) that is used to start Combustion Turbine No.3 (Emission Source GT005) in Emission Unit H-A0005. This is a small diesel starter engine firing only diesel fuel oil in the compression ignition nonroad engine.

The starter engine is a Cummins KT19-C Model year 2012, and is rated at 450HP (equivalent to 336 KW or 1.1465 MMBtu/hr). This engine is certified by the manufacturer and has a Certification Emission Result Value of 0.12 gm/kW-hr for the emissions of Particulate Matter, which is below the EPA Standard Limit Value of 0.20 gm/kW-hr for the emissions of Particulate Matter. In 2017, this starter engine operated 18.5 hours.

Condition # 51 for 40 CFR 89.112, Subpart B for 40 CFR 60 Subpart IIII – NMHC + NOx: This condition is an emission unit level, emission point level, process level and emission source level Work Practice Involving Specific Operations condition for EU: H-A0005, EP: GT005, Proc: ENG, and ES: ENG03 for NMHC + NOx limit of 4.0 grams per kilowatt hour.

This condition sets forth the limits for oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter from the exhaust of compression-ignition nonroad engines.

This condition lists the compliance options for all Tier II engines Model 2007 and later model compression ignition engines that must comply with emission standards.

Exhaust emission from nonroad compression-ignition engines to which this subpart is applicable shall not exceed the applicable exhaust emission limit standards of 4.0 gm/kW-hr for the combined emissions of NOx and NMHC.

This condition applies to the Cummins 450 HP diesel-fired starter engine (Emission Source ENG03) that is used to start Combustion Turbine No. 3 (Emission Source GT005) in Emission Unit H-A0005. This is a small diesel starter engine firing only diesel fuel oil in the compression ignition nonroad engine.

The starter engine is a Cummins KT19-C Model year 2012, and is rated at 450HP (equivalent to 336 KW or 1.1465 MMBtu/hr). This engine is certified by the manufacturer and has a Certification Emission Result Value of 3.8 gm/kW-hr for the emissions of NOx + NMHC, which is below the EPA Standard Limit Value of 4.0



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gm/kW-hr for the emissions of NO_x + NMHC. In 2017, this starter engine operated 18.5 hours.

Condition # 52 for 6 NYCRR 227-1.3(a) for Particulates: This condition is an emission unit level, emission point level, process level and emission source level Monitoring of Process or Control Device Parameters as Surrogates condition for EU: H-A0005, EP: GT003, GT004 & GT005, Proc: GTD, and ES: GT003, GT004 & GT005 for Particulates. This condition 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.