



Facility Identification Data

Name: HEMPSTEAD RESOURCE RECOVERY FACILITY
Address: 600 MERCHANTS CONCOURSE
WESTBURY, NY 11590

Owner/Firm

Name: COVANTA HEMPSTEAD COMPANY
Address: 600 MERCHANTS CONCOURSE
WESTBURY, NY 11590, USA
Owner Classification: Corporation/Partnership

Permit Contacts

Division of Environmental Permits:
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Air Permitting Contact:
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600 MERCHANTS CONCOURSE
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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

Department initiated modification of current Title V permit (ID# 1-2820-01727/00028) to incorporate changes made to 40 CFR Part 60 Subpart Cb on May 10, 2006 that revise emission limits, operating practices and performance testing and monitoring. The emission limits were revised for cadmium, lead, mercury, and particulate matter. Other major revisions include changes to operator stand-in provisions and continuous emissions monitoring data availability. These emission limits were revised based on year 2000 to 2005 test data from more than a dozen municipal waste combustor units.



Attainment Status

HEMPSTEAD RESOURCE RECOVERY FACILITY is located in the town of HEMPSTEAD in the county of NASSAU.

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 < 10 μ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO ₂)	ATTAINMENT
Ozone*	SEVERE NON-ATTAINMENT
Oxides of Nitrogen (NO _x)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT

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

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

Facility Description

The site consists of three waste-to-energy systems combusting solid wastes. The facility is located at the intersection of the Meadowbrook Parkway and Merchants Concourse. The major sources of emissions at the facility are the three municipal waste combustors (MWC). All three trains are equipped with separate flues that are vented through a common stack, acid gas scrubbers, fabric filter baghouses and urea-based Selective Non-catalytic Reduction NO_x control equipment. Other auxiliary equipment, which is associated with a facility of this type is also located at the site, including an enclosed tipping hall, ash loadout area, cooling tower, lime silos, a fuel oil storage tank. All other activities at the site are categorized as exempt, trivial or insignificant as defined in 6 NYCRR part 201-3.2, 201-3.3 and 201-6.3(d)(7) respectively.

Permit Structure and Description of Operations

The Title V permit for HEMPSTEAD RESOURCE RECOVERY FACILITY 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.

HEMPSTEAD RESOURCE RECOVERY FACILITY is defined by the following emission unit(s):
Emission unit UUNITS - This emission unit consists of 3 emission points. Each emission point is a separate flue which discharges at the top of a 381 ft stack. Each emission point is fed from an independent combustor which processes municipal solid waste which include nonhazardous residential, commercial and governmental and/or institutional wastes, and other nonhazardous industrial waste stream as approved by NYSDEC on a case by case basis. Waste combustion is considered under a process termed "MSW".

These units also combust unadulterated wood as auxiliary fuel, to increase the BTU content of the waste. The unadulterated wood must exclude CCA lumber, plywood, painted wood, paneling and other treated wood with formaldehyde and urethane. Unadulterated wood combustion is considered a separate process termed "CLW".

The waste is burned on a series of roller grates, heat from the burning is recovered in a 4 pass water wall boiler. After heat recovery the flue gas enters an acid gas scrubber and then a fabric filter baghouse before finally exiting the stack. Each combustion train is also equipped with urea-based Selective Non-catalytic Reduction NO_x control equipment.

Emission unit UUNITS is associated with the following emission points (EP):
00001, 00002, 00003

It is further defined by the following process(es):

Process: CW1 is located at Building STACK - Unadulterated wood is used as an auxiliary fuel, to increase the BTU content of the waste. The unadulterated wood must exclude CCA lumber, plywood, painted wood, paneling and other treated wood with formaldehyde and urethane. Replaces process CLW.

Process: CW2 is located at Building STACK - Unadulterated wood is used as an auxiliary fuel, to increase the BTU content of the waste. The unadulterated wood must exclude CCA lumber, plywood, painted wood, paneling and other treated wood with formaldehyde and urethane. Replaces process CLW.

Process: CW3 is located at Building STACK - Unadulterated wood is used as an auxiliary fuel, to increase the BTU content of the waste. The unadulterated wood must exclude CCA lumber, plywood, painted wood, paneling and other treated wood with formaldehyde and urethane. Replaces process CLW.

Process: MW1 is located at Building STACK - Process involves the incineration of municipal solid waste which includes residential, commercial and industrial non-hazardous wastes. All wastes are combusted for the purpose of destruction, volume reduction, and energy recovery. For periods of startup, shutdown or malfunction, the facility will utilize the procedures in 40 CFR 60.58a(a) to assess compliance. Also, the malfunction and emergency defense provisions of 6 NYCRR Part 201-1.4 and Part 201-1.5 apply to the facility. Replaces process MSW.

Process: MW2 is located at Building STACK - Process involves the incineration of municipal solid waste which includes residential, commercial and industrial non-hazardous wastes. All wastes are combusted for the purpose of destruction, volume reduction, and energy recovery. For periods of startup, shutdown or malfunction, the facility will utilize the procedures in 40 CFR 60.58a(a) to assess compliance. Also, the malfunction and emergency defense provisions of 6 NYCRR Part 201-1.4 and Part 201-1.5 apply to the facility. Replaces process MSW.

Process: MW3 is located at Building STACK - Process involves the incineration of municipal solid waste which



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includes residential, commercial and industrial non-hazardous wastes. All wastes are combusted for the purpose of destruction, volume reduction, and energy recovery. For periods of startup, shutdown or malfunction, the facility will utilize the procedures in 40 CFR 60.58a(a) to assess compliance. Also, the malfunction and emergency defense provisions of 6 NYCRR Part 201-1.4 and Part 201-1.5 apply to the facility. Replaces process MSW.

Process: ST1 is located at Building STACK - Oil is used during startup, shutdown and other upset conditions on an "as-needed" basis. The oil used is negligible on a heat basis averaged over the year. Replaces process STS.

Process: ST2 is located at Building STACK - Oil is used during startup, shutdown and other upset conditions on an "as-needed" basis. The oil used is negligible on a heat basis averaged over the year. Replaces process STS.

Process: ST3 is located at Building STACK - Oil is used during startup, shutdown and other upset conditions on an "as-needed" basis. The oil used is negligible on a heat basis averaged over the year. Replaces process STS.

Title V/Major Source Status

HEMPSTEAD RESOURCE RECOVERY FACILITY is subject to Title V requirements. This determination is based on the following information:

This facility exceeds the major source threshold for Hazardous Air Pollutant (HAP), any air pollutant regulated under the act and oxides of nitrogen (NOx) in ozone nonattainments areas classified as severe.

Program Applicability

The following chart summarizes the applicability of HEMPSTEAD RESOURCE RECOVERY FACILITY with regards to the principal air pollution regulatory programs:

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



NOTES:

PSD Prevention of Significant Deterioration (40 CFR 52) - 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 Part 231) - 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) - 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) - 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) - 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) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

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

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

SIP State Implementation Plan (40 CFR 52, Subpart HH) - 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



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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
4939	COMBINATION UTILITY SERVICES
4953	REFUSE SYSTEMS

SCC Codes

SCC or Source Classification Code is a code developed and used" by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information. Each SCC represents a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

SCC Code	Description
1-02-005-01	EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - DISTILLATE OIL Grades 1 and 2 Oil
5-01-001-02	SOLID WASTE DISPOSAL - GOVERNMENT SOLID WASTE DISPOSAL: GOVERNMENT - MUNICIPAL INCINERATION Mass Burn: Single Chamber
5-03-001-05	SOLID WASTE DISPOSAL - INDUSTRIAL SOLID WASTE DISPOSAL: INDUSTRIAL - INCINERATION Conical Design (Tee Pee) Wood Refuse

Facility Emissions Summary

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

Cas No.	Contaminant Name	PTE		Range	
		lbs/yr			
051207-31-9	2,3,7,8-TETRACHLORODIBENZOFURAN	2914000			A
001746-01-6	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	pteyear			Y



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007440-36-0	ANTIMONY	pteyear		Y	
007440-38-2	ARSENIC	pteyear		Y	
007440-41-7	BERYLLIUM	pteyear		Y	
007440-43-9	CADMIUM	pteyear		Y	
000630-08-0	CARBON MONOXIDE	pteyear		H	
007440-47-3	CHROMIUM	pteyear		Y	
007440-48-4	COBALT	pteyear		Y	
007440-50-8	COPPER	pteyear		A	
000050-00-0	FORMALDEHYDE	pteyear		Z	
007647-01-0	HYDROGEN CHLORIDE	pteyear		Z	
007664-39-3	HYDROGEN FLUORIDE	pteyear		Y	
007439-92-1	LEAD	pteyear		Y	
007439-97-6	MERCURY	pteyear		Y	
007440-02-0	NICKEL METAL AND INSOLUBLE COMPOUNDS		pteyear		Y
0NY210-00-0	OXIDES OF NITROGEN	pteyear			
0NY075-00-0	PARTICULATES	pteyear		G	
0NY075-00-5	PM-10	pteyear		G	
001336-36-3	POLYCHLORINATED BIPHENYL		pteyear		Y
130498-29-2	POLYCYCLIC AROMATIC HYDROCARBONS		pteyear		Y
007446-09-5	SULFUR DIOXIDE	pteyear		H	
007446-11-9	SULFUR TRIOXIDE	pteyear		E	
007664-93-9	SULFURIC ACID	pteyear		E	
0NY998-00-0	VOC	pteyear		H	
007440-66-6	ZINC	pteyear		D	

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

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

An emergency constitutes an affirmative defense to an action brought for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

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



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

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

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

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

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

Item C: Timely Application for the Renewal of Title V Permits - 6 NYCRR Part 201-6.3(a)(4)

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

Item D: Certification by a Responsible Official - 6 NYCRR Part 201-6.3(d)(12)

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

Item E: Requirement to Comply With All Conditions - 6 NYCRR Part 201-6.5(a)(2)

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



Item F: Permit Revocation, Modification, Reopening, Reissuance or Termination, and Associated Information Submission Requirements - 6 NYCRR Part 201-6.5(a)(3)

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

Item G: Cessation or Reduction of Permitted Activity Not a Defense - 6NYCRR Part 201-6.5(a)(5)

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

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

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

Item I: Severability - 6 NYCRR Part 201-6.5(a)(9)

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

Item J: Permit Shield - 6 NYCRR Part 201-6.5(g)

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

- i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;



- ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;
- iii. The applicable requirements of Title IV of the Act;
- iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

Item K: Reopening for Cause - 6 NYCRR Part 201-6.5(i)

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

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

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

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

Item L: Permit Exclusion - ECL 19-0305

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring,



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

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

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

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

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

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

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by 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		62	Powers and Duties of the Department with respect to air pollution control
FACILITY	40CFR 52-A.21 (j) (2)	1-6, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13,	



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1-14 Best Available Control			Technology (BACT) (see narrative)
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.33b(a) (1) (i)	1-17	Existing Large MWC's - emission limit for particulates
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.33b(a) (1) (iii)	1-18	Existing Large MWC's - emission limit for opacity
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.33b(a) (2) (i)	1-19	Existing Large MWC's - emission limit for cadmium
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.33b(a) (3)	1-20, 1-21	Existing Large MWC's - emission limit for mercury
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.33b(a) (4)	1-22	Existing Large MWC's - emission limit for lead
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.33b(b) (3) (i)	1-23, 1-24	Existing Large MWC's - emission limit for sulfur dioxide
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.33b(b) (3) (ii)	1-25, 1-26	Existing Large MWC's - emission limit for hydrogen chloride
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.33b(c) (1) (iii)	1-27	Existing Large MWC's - emission limit for dioxin/furan not utilizing an electrostatic precipitator
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.34b(a)	1-28	Existing Large MWC's - operating practices carbon monoxide limit
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.34b(b)	1-29, 1-30	Existing Large MWC's - operating practices MWC temperature requirements and unit load level
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.35b	1-31, 1-32, 1-33	Municipal waste combustor operator training and certification.
FACILITY	40CFR 60-Cb.36b	1-15	Emission guidelines for municipal waste combustor fugitive ash emissions.
U-UNITS/00001/MW1/INCIN	40CFR 60-Cb.38b	1-34	Compliance and performance testing.
FACILITY	40CFR 60-Cb.39b(a)	1-16	Chemical accident prevention provisions
FACILITY	40CFR 68	34	
FACILITY	40CFR 82-F	35	Protection of Stratospheric Ozone - recycling and emissions reduction
FACILITY	6NYCRR 200.3	1	Acceptable ambient air quality.
FACILITY	6NYCRR 200.6	1-1, 2	
FACILITY	6NYCRR 200.7	3	Unavoidable noncompliance and violations
FACILITY	6NYCRR 201-1.4	63	
FACILITY	6NYCRR 201-1.7	4	Prohibition of reintroduction of collected contaminants to the air
FACILITY	6NYCRR 201-1.8	1-2	
FACILITY	6NYCRR 201-3	6	Exemptions and Trivial Activities
FACILITY	6NYCRR 201-3.2 (a)	7	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-3.3 (a)	8	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6	9, 36, 37	Title V Permits and the Associated Permit Conditions
FACILITY	6NYCRR 201-6.5 (a) (4)	10	
FACILITY	6NYCRR 201-6.5 (a) (7)	11	



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FACILITY	6NYCRR 201-6.5 (c)	1-4, 13	Permit conditions for Recordkeeping and Reporting of Compliance Monitoring
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FACILITY	6NYCRR 231-2	1-6	New Source Review in Nonattainment Areas and Ozone Transport Region
FACILITY	6NYCRR 617.11 (d)	1-35, 1-36, 1-37	Decision-making and findings requirements

Applicability Discussion:

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

ECL 19-301.

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.

6NYCRR Part 200-6

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

6NYCRR Part 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

6NYCRR Part 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.

6NYCRR Part 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

6NYCRR Part 201-1.8

Prohibits the reintroduction of collected air contaminants to the outside air

6NYCRR Part 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.

6NYCRR Part 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.

6NYCRR Part 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.

6NYCRR 201-6.5(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.



6NYCRR 201-6.5(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.

6NYCRR 201-6.5(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.

6NYCRR Part 201-6.5(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.

6NYCRR Part 201-6.5(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.

6NYCRR Part 201-6.5(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.

6NYCRR 201-6.5(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.

6NYCRR Part 201-6.5(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.

6NYCRR 201-6.5(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.

6NYCRR Part 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.

6NYCRR Part 202-2.1

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

6NYCRR Part 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.

6NYCRR Part 211-2

This regulation prohibits any emissions of air contaminants to the outdoor atmosphere which may be detrimental to human, plant or animal life or to property, or which unreasonably interferes with the comfortable enjoyment of life or property regardless of the existence of any specific air quality standard or emission limit.

6 NYCRR Part 211.3

This condition requires that the opacity (i.e., the degree to which emissions other than water reduce the transmission of light) of the emissions from any air contamination source be less than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent.

6 NYCRR Part 215

Prohibits open fires at industrial and commercial sites.

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, HEMPSTEAD RESOURCE RECOVERY FACILITY has been determined to be subject to the following regulations:

40CFR 52-A.21 (j) (2)



BACT determinations are made on a case-by-case basis and can be no less stringent than any requirement that exists in the current State Implementation Plan (SIP) or 40 CFR 60 and 61. Emission and operational limitations required from a BACT determination will have to be entered into the special permit conditions, separately by the permit reviewer.

40CFR 60-Cb.33b (a) (1) (i)

This section sets forth the emission limit for particulate matter contained in the gases discharged to the atmosphere from a municipal waste combustor subject to the requirements of the Emission Guidelines, 40 CFR 60, Subpart Cb. The emission limit for particulate matter is 25 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.

40CFR 60-Cb.33b (a) (1) (iii)

This section sets forth the emission limit for opacity exhibited by the gases discharged to the atmosphere from a municipal waste combustor subject to the requirements of the Emission Guidelines, 40 CFR 60, Subpart Cb. The emission limit for opacity is 10 percent (6 minute average).

40CFR 60-Cb.33b (a) (2) (i)

This section sets forth the emission limit for cadmium contained in the gases discharged to the atmosphere from a municipal waste combustor subject to the requirements of the Emission Guidelines, 40 CFR 60, Subpart Cb. The emission limit for cadmium is 35 micrograms per dry standard cubic meter, corrected to 7 percent oxygen.

40CFR 60-Cb.33b (a) (3)

This section sets forth the emission limit for mercury contained in the gases discharged to the atmosphere from a municipal waste combustor subject to the requirements of the Emission Guidelines, 40 CFR 60, Subpart Cb. The emission limit for mercury is 50 micrograms per dry standard cubic meter or 15 percent of the potential mercury emission concentration (an 85 - percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent.

40CFR 60-Cb.33b (a) (4)

This section sets forth the emission limit for lead contained in the gases discharged to the atmosphere from a municipal waste combustor subject to the requirements of the Emission Guidelines, 40 CFR 60, Subpart Cb. The emission limit for lead is 400 micrograms per dry standard cubic meter, corrected to 7 percent oxygen.

40CFR 60-Cb.33b (b) (3) (i)

This section sets forth the emission limit for sulfur dioxide contained in the gases discharged to the atmosphere from a municipal waste combustor subject to the requirements of the Emission Guidelines, 40 CFR 60, Subpart Cb. The emission limit for sulfur dioxide is 29 parts per million by volume or 25 percent of the potential sulfur dioxide emission concentration (75 - percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent. Compliance with this emission limit is based on a 24 - hour daily geometric mean.

40CFR 60-Cb.33b (b) (3) (ii)

This section sets forth the emission limit for hydrogen chloride contained in the gases discharged to the atmosphere from a municipal waste combustor subject to the requirements of the Emission Guidelines, 40 CFR 60, Subpart Cb. The emission limit for hydrogen chloride is 29 parts per million by volume or 5 percent of the potential hydrogen chloride emission concentration (95 - percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent.

40CFR 60-Cb.33b (c) (1) (iii)

This section sets forth the emission limit for dioxins/furans contained in the gases discharged to the atmosphere from



a municipal waste combustor subject to the requirements of the Emission Guidelines, 40 CFR 60, Subpart Cb which does not employ an electrostatic precipitator-based emission control system. The emission limit for dioxins/furans is 30 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen

40CFR 60-Cb.34b (a)

This section sets forth emission limits for carbon monoxide, by municipal waste combustor technology, for carbon monoxide contained in the gases discharged to the atmosphere from a municipal waste combustor subject to the requirements of the Emission Guidelines, 40 CFR 60, Subpart Cb. Limits are established as follows: 100 parts per million by volume (ppmv) for mass burn waterwall, mass burn refractory, mass burn rotary refractory, and fluidized-bed MWCs; 250 ppmv for mass burn rotary waterwall MWCs; 50 ppmv for modular starved - air and excess air MWCs; 150 ppmv mixed fuel-fired pulverized coal/refuse derived fuel (RDF) MWCs; 200 ppmv for spreader stoker mixed fuel-fired pulverized coal/RDF and RDF stoker MWCs, all corrected to 7 percent oxygen (dry basis).

40CFR 60-Cb.34b (b)

This section sets forth municipal waste combustor operating practices which include maximum load level and temperature requirements. The operating range for the combustor must be no more than 110 percent of the maximum load level demonstrated during the most recent performance test demonstrating compliance with the applicable dioxin/furan limit. The temperature at the inlet of the particulate matter control device must be no more than 17degrees C (30.6 F) above the maximum demonstrated particulate matter control device temperature measured during the most recent dioxin/furan performance test demonstrating compliance with the applicable dioxin/furan limit.

40CFR 60-Cb.35b

This section requires that the applicant develop and update on a yearly basis a site-specific operating manual that must, at a minimum, address the elements of municipal waste combustor unit operation specified in 40 CFR 60.54b of Subpart Eb.

In addition, a training program is required to review the operating manual with each person who has responsibilities affecting the operation of a municipal waste combustor including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers.

This section also requires that each chief facility operator and shift supervisor obtain and maintain a current provisional operator certification from either the American Society of Mechanical Engineers (QRO-1-1994) or from another certification program acceptable to the Department.

40CFR 60-Cb.36b

This section sets forth the emission limit for municipal waste combustor fugitive ash emissions. It requires that discharge to the atmosphere of visible emissions of combustion ash from the ash conveying system (including conveyor transfer points) may not exceed 5 percent of the observation period (i.e. 9 minutes per 3-hour period), as determined by EPA Reference Method 22 observations. This emission limit does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, it does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems. This emission limit does not apply during maintenance and repair of ash conveying systems.

40CFR 60-Cb.38b

This section sets forth compliance and performance testing requirements for municipal waste combustors.



40CFR 60-Cb.39b (a)

This section requires that the applicant meet the municipal waste combustor reporting and recordkeeping provisions listed in 40 CFR 60.59b of Subpart Eb, as applicable.

6NYCRR 200 .3

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

6NYCRR 201-3

Subpart 201-3 contains a listing of exempt and trivial activities. Neither exemptions nor trivial activities appear in state facility permits. Exempt activities are required to be listed in an attachment to the Title V permit application while trivial activities need not be listed in either the Title V application or permit. Emissions from exempt and trivial activities must be taken into account when determining Title V applicability.

6NYCRR 201-6.5 (a) (4)

This is a mandatory condition that requires the owner or operator of the facility to furnish information, requested by the Department, to determine compliance with this permit.

6NYCRR 201-6.5 (a) (7)

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

6NYCRR 201-6.5 (a) (8)

This is a mandatory condition that allows the Department to inspect the facility to determine compliance with this permit.

6NYCRR 201-6.5 (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.

6NYCRR 201-6.5 (d) (5)

This condition requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted semiannually.

6NYCRR 201-6.5 (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.

6NYCRR 201-7

This regulation sets forth an emission cap that cannot be exceeded by the facility. In this permit that cap is 1457 tons per year of oxides of nitrogen.

6NYCRR 202-1.2

This regulation specifies that the department is to be notified at least 30 days in advance of any required stack test. The notification is to include a list of the procedures to be used that are acceptable to the department and time and location of tests. Finally, free access to observe the stack test is to be provided to the department's representative.



6NYCRR 202-1.3

This regulation requires that any emission testing, sampling and analytical determination used to determine compliance must use methods acceptable to the department. Acceptable test methods may include but are not limited to the reference methods found in 40 CFR Part 60 appendix A and Part 61, appendix B. Alternate methods may be also be used provided they are determined to be acceptable by the department. Finally, unless otherwise specified, all emission test reports must be submitted within 60 days after completion of testing.

6NYCRR 219-7.2

Section 219-7.2 sets forth annual compliance requirements including stack testing procedures to demonstrate compliance with a mercury emission limitation of 28 micrograms/dscm (corrected to 7% oxygen) or 85% removal, whichever is less stringent, for each municipal waste combustor unit.

6NYCRR 231-2

The provisions of Subpart 231-2 apply to new or modified major facilities. The contaminants of concern state-wide are nitrogen oxides and volatile organic compounds since New York State is located in the ozone transport region and because there are ozone non-attainment areas within the state.

6NYCRR 617 .11 (d)

617.11 DECISION-MAKING AND FINDINGS REQUIREMENTS.

(a) Prior to the lead agency's decision on an action that has been the subject of a final EIS, it shall afford agencies and the public a reasonable time period (not less than 10 calendar days) in which to consider the final EIS before issuing its written findings statement. If a project modification or change of circumstance related to the project requires a lead or involved agency to substantively modify its decision, findings may be amended and filed in accordance with subdivision 617.12(b) of this Part.

(b) In the case of an action involving an applicant, the lead agency's filing of a written findings statement and decision on whether or not to fund or approve an action must be made within 30 calendar days after the filing of the final EIS.

(c) No involved agency may make a final decision to undertake, fund, approve or disapprove an action that has been the subject of a final EIS, until the time period provided in subdivision 617.11(a) of this section has passed and the agency has made a written findings statement. Findings and a decision may be made simultaneously.

(d) Findings must:

- (1) consider the relevant environmental impacts, facts and conclusions disclosed in the final EIS;
- (2) weigh and balance relevant environmental impacts with social, economic and other considerations;
- (3) provide a rationale for the agency's decision;
- (4) certify that the requirements of this Part have been met;
- (5) certify that consistent with social, economic and other essential considerations from among the reasonable alternatives available, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures that were identified as practicable.

(e) No state agency may make a final decision on an action that has been the subject of a final EIS and is located in the coastal area until the agency has made a written finding that the action is consistent with applicable policies set forth in 19 NYCRR 600.5. When the Secretary of State has approved a local government waterfront revitalization program, no state agency may make a final decision on an action, that is likely to affect the achievement of the policies and purposes of such program, until the agency has made a written finding that the action is consistent to the maximum extent practicable with that local waterfront revitalization program.



Permit Review Report

Permit ID: 1-2820-01727/00028

Renewal Number: 1

Modification Number: 1 08/26/2008

Compliance Certification

Summary of monitoring activities at HEMPSTEAD RESOURCE RECOVERY FACILITY:

Location Facility/EU/EP/Process/ES	Cond No.	Type of Monitoring
FACILITY	1-7	continuous emission monitoring (cem)
FACILITY	1-8	monitoring of process or control device parameters as surrogate
FACILITY	1-9	continuous emission monitoring (cem)
FACILITY	1-10	intermittent emission testing
FACILITY	1-11	intermittent emission testing
FACILITY	1-12	intermittent emission testing
FACILITY	1-13	continuous emission monitoring (cem)
FACILITY	1-14	monitoring of process or control device parameters as surrogate
U-UNITS/00001/MW1/INCIN	1-17	intermittent emission testing
U-UNITS/00001/MW1/INCIN	1-18	monitoring of process or control device parameters as surrogate
U-UNITS/00001/MW1/INCIN	1-19	intermittent emission testing
U-UNITS/00001/MW1/INCIN	1-20	intermittent emission testing
U-UNITS/00001/MW1/INCIN	1-21	intermittent emission testing
U-UNITS/00001/MW1/INCIN	1-22	intermittent emission testing
U-UNITS/00001/MW1/INCIN	1-23	continuous emission monitoring (cem)
U-UNITS/00001/MW1/INCIN	1-24	continuous emission monitoring (cem)
U-UNITS/00001/MW1/INCIN	1-25	intermittent emission testing
U-UNITS/00001/MW1/INCIN	1-26	intermittent emission testing
U-UNITS/00001/MW1/INCIN	1-27	intermittent emission testing
U-UNITS/00001/MW1/INCIN	1-28	continuous emission monitoring (cem)
U-UNITS/00001/MW1/INCIN	1-29	monitoring of process or control device parameters as surrogate
U-UNITS/00001/MW1/INCIN	1-30	monitoring of process or control device parameters as surrogate
U-UNITS/00001/MW1/INCIN	1-33	record keeping/maintenance procedures
FACILITY	1-15	monitoring of process or control device parameters as surrogate
FACILITY	1-16	record keeping/maintenance procedures
FACILITY	1-4	record keeping/maintenance procedures
FACILITY	15	record keeping/maintenance procedures
FACILITY	17	record keeping/maintenance procedures
FACILITY	1-6	continuous emission monitoring (cem)
FACILITY	23	record keeping/maintenance procedures
U-UNITS/00001/MW1/INCIN	1-38	intermittent emission testing
U-UNITS/00001/MW1/INCIN	1-39	intermittent emission testing
FACILITY	1-35	continuous emission monitoring (cem)
FACILITY	1-36	record keeping/maintenance procedures
FACILITY	1-37	record keeping/maintenance procedures



Basis for Monitoring

Basis of Monitoring

Hempstead Resource Recovery Facility

40CFR 60.34b(b), NSPS Subpart Cb, 40CFR 52.21(j)(2) Subpart A & 6NYCRR Part 617.11(d)

Parameter Monitored: STEAM LOAD LEVEL

Applicable Contaminants: All

The maximum load level in the form of steam production in kilo-pounds per hour is recorded during the most recent performance test demonstrating compliance with the applicable dioxin/furan limit. The facility is allowed to go up to 110% of the recorded value. The steam production is considered as the critical baseline operating parameter as it reflects the total municipal solid waste consumed at the facility. The federal rule considers violation of dioxin/furan when the maximum (110% of the stack-tested rate) steam load level is exceeded. Facility is equipped with steam flow measurement device and continuous monitoring of the steam flow.

40CFR 60.34b(b), NSPS Subpart Cb, 40CFR 52.21(j)(2) Subpart A & 6NYCRR Part 617.11(d)

Monitoring Parameter: FLUE GAS TEMPERATURE

Applicable Contaminants: dioxin/furan, PAH, PCB, trace metals

A maximum temperature of flue gas at the inlet to particulate control device is a surrogate parameter for dioxin and semi-volatile organics. It also ensures that condensation of any metal takes place in the particulate control device before exiting the stack. Facility is equipped with thermocouples to monitor the temperature.

40CFR 60.34b(a), NSPS Subpart Cb, 40CFR 52.21(j)(2) Subpart A & 6NYCRR Part 617.11(d)

Monitoring Parameter: COMBUSTION ZONE TEMPERATURE

Applicable Contaminants: dioxin/furan, PAH, PCB

The facility is required to maintain a minimum of 1500 degrees Fahrenheit after the last point of overfire air injection to ensure good combustion, destruction of organics and elimination of formation of any product of incomplete combustion. Facility is equipped with thermocouples to monitor the temperature.

40CFR 60.34b(a), NSPS Subpart Cb, 40CFR 52.21(j)(2) Subpart A & 6NYCRR Part 617.11(d)

Monitoring Parameter: CARBON MONOXIDE (CO)

Applicable Contaminants: dioxin/furan, PAH, PCB

Carbon monoxide (CO) is an indicator of good combustion. It is a critical operation ensuring destruction of organics and elimination of any formation of product of incomplete combustion. The facility is equipped with a continuous emission monitoring system (CEMS) to monitor the CO emissions. The CEMS analyzers require annual certification and quarterly audit in accordance with 40CFR60, Appendix B & F.

40CFR 60.33b(a)(1)(iii), NSPS Subpart Cb, 40CFR 52.21(j)(2) Subpart A & 6NYCRR Part 617.11(d)

Parameter Monitored: OPACITY

Applicable Contaminant(s): PARTICULATES, metals

Opacity is an indicator of Particulate matters as well as metals. Facility shall maintain and operate a continuous opacity monitor (COM) in accordance with 40CFR60, Appendix B, Performance Specification 1 to demonstrate compliance with 10% opacity limit. In case of COM failure, the facility is required to demonstrate compliance using EPA Method 9 visual emission. Both COM and Method 9 are acceptable methods of monitoring opacity by the Department and USEPA. In addition, the facility is equipped with an alarm system to alert the operator in case the opacity spikes so that corrective measurements take place as soon as possible to alleviate any excursion.



40CFR 60.36b, NSPS Subpart Cb

Parameter Monitored: FUGITIVE EMISSION

EPA Method 22 is used to monitor any discharge to the atmosphere of visible emissions of combustion ash from the ash conveying system (including conveyor transfer points). Method 22 is an acceptable method of monitoring fugitive emission by both the Department and USEPA.

40CFR 60.33b(a)(1)(i), NSPS Subpart Cb

Regulated Contaminant(s): PARTICULATES (PM)

The facility is equipped with reverse air baghouse to control PM emissions. EPA Method 5 is an acceptable stack test method by USEPA to measure PM, which is performed annually for each flue train. Baghouses are equipped with pressure differential monitoring devices to detect any plugged or ripped bag. The instantaneous pressure drop across each module are recorded daily, the across the inlet and outlet of the entire baghouse are recorded continuously, and the number of compartment in the use in the baghouse are recorded. In addition, the facility is restricted to 10% Opacity limit is a surrogate parameter for particulate. Opacity is monitored on a continuous basis.

40CFR 60.33b(a)(2)(i), NSPS Subpart Cb & 40CFR 52.21(j)(2), Subpart A

Regulated Contaminant(s): CADMIUM

Method 29 is the prescribed stack test method by USEPA to measure metals, which is conducted annually for each flue train. The facility is restricted to maximum acid gas scrubber outlet and particulate control inlet temperatures as demonstrated by annual stack testing. This ensures condensation of metals within the baghouse. Temperatures are monitored continuously and can be used as surrogate measurement parameter.

40CFR 60.33b(a)(4), NSPS Subpart Cb & 40CFR 52.21(j)(2), Subpart A

Regulated Contaminant(s): LEAD

Method 29 is the prescribed stack test method by USEPA to measure metals, which is conducted annually for each flue train. Facility is restricted to maximum acid gas scrubber outlet and particulate control inlet temperatures as demonstrated by annual stack testing. This ensures condensation of metals within the baghouse. Temperatures are monitored continuously and can be used as surrogate measurement parameter.

40CFR 60.33b(a)(3), NSPS Subpart Cb & 40CFR 52.21(j)(2), Subpart A & 6NYCRR Part 219-7.2

Parameter Monitored: CARBON FEED RATE

Regulated Contaminant(s): MERCURY

Method 29 is the prescribed stack test method by USEPA to measure mercury, which is performed annually for each flue train. During the annual stack test, facility conductes sampling of mercury at both the inlet and outlet locations to determine the percent removal efficinecy. The facility didn't require to install any additional mercury control equipment as the facility continues to demonstrate compliance with the mercury limit concentration limit or the percent reduction.

40CFR 60.33b(b)(3)(i), NSPS Subpart Cb & 40CFR 52.21(j)(2), Subpart A

Regulated Contaminant(s): SULFUR DIOXIDE (SO₂)

Facility is equipped with acid gas scrubber to control SO₂ and with a continuous emission monitoring system (CEMS) to monitor the SO₂ emissions. The CEMS analyzers require annual certification and quarterly audit in accordance with 40CFR60, Appendix B & F. These ensure that the analyzers are functioning properly and recording the date accurately. The facility is also required to measure the percent removal of SO₂. Dilution water in gallons per minute and reagent chemicals (lime slurry) in gallons per minute in the acid gas scrubber is continuously monitored as part of the scrubber operation. These can be used as surrogate parameters in case of the CEMS failure.



40CFR 60.33b(b)(3)(ii), NSPS Subpart Cb & 40CFR 52.21(j)(2), Subpart A

Regulated Contaminant(s): HYDROGEN CHLORIDE (HCL)

Facility is equipped with acid gas scrubber to control this contaminant. Method 26 or 26A is the prescribed stack test method by USEPA to measure HCL, which is performed annually for each flue train. Facility is also equipped with a continuous emission monitoring system (CEMS) to monitor the SO₂ emissions. SO₂ is considered as surrogate parameter for HCL. The facility is also required to measure the percent removal of HCL during stack test.

40CFR 60.33b(c)(1)(iii) & 60.34b, NSPS Subpart Cb & 40CFR 52.21(j)(2), Subpart A

Regulated Contaminant(s): 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN

Method 23 is the prescribed stack test method by USEPA to measure dioxins and furans, which is performed annually for each flue train. Steam load level, as required by 40CFR 60.34b, NSPS Subpart Cb, is used as surrogate parameter. Facility is restricted to operate at a load level no greater than 110 percent of the maximum demonstrated municipal waste combustor unit load (highest 4-hour block arithmetic average unit steam load (measured in pounds per hour) achieved during the most recent performance test during which compliance with the dioxin/furan emission limit was achieved. The facility is also restricted to a minimum combustion zone temperature of 1500 degrees F after the overfire air injection point. Maintaining the minimum combustion zone temperature ensures destruction of any organic compounds.

40CFR 60.33b(d), NSPS Subpart Cb, 40CFR 52.21(j)(2), Subpart A and 6NYCRR Part 231-2

Regulated Contaminant(s): OXIDES OF NITROGEN (NO_x)

The facility is equipped with Selective Non-catalytic Reduction (SNCR) using urea injection to control NO_x emissions. The facility is equipped with a continuous emission monitoring system (CEMS) to monitor the NO_x emissions. The CEMS analyzers require annual certification and quarterly audit in accordance with 40CFR60, Appendix B & F. These ensure that the analyzers are functioning properly and recording the date accurately. As part of the SNCR operation, the facility monitors the urea flow rate, flue gas temperature and pressure of the system. In case of the failure of CEMS, these parameters can be utilized as surrogate measurements.

6NYCRR Part 617.11(d)

Regulated Contaminant(s): Arsenic, Beryllium, Cadmium, Chromium, Lead, Mercury AND Nickel

Facility is restricted to maximum acid gas scrubber outlet and particulate control inlet temperatures as demonstrated by annual stack testing. This ensures condensation of metals within the baghouse. Method 29 is the prescribed stack test method by USEPA to measure metals, which is performed annually for each flue train. Temperatures and opacity are monitored continuously and can be used as surrogate measurement parameters.

6NYCRR Part 617.11(d)

Regulated Contaminant(s): POLYCHLORINATED BIPHENYL (PCB)

EPA Method 23 is an acceptable stack test method by USEPA to measure PCB, which is performed annually alternating for each flue train as performed for dioxins/furan tests.

6NYCRR Part 617.11(d)

Regulated Contaminant(s): POLYCYCLIC AROMATIC HYDROCARBONS (PAH)

EPA Method 23 is an acceptable stack test method by USEPA to measure PAH by a stack test, which is performed annually alternating for each flue train as performed for dioxins/furan tests.

New York State Department of Environmental Conservation



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