



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

**Permit ID: 2-6007-00140/00011**  
**Renewal Number: 1**  
**08/21/2009**

**Facility Identification Data**

Name: NYOFCO SLUDGE PELLETTIZATION FACILITY  
Address: 1108 OAK POINT AVE  
BRONX, NY 10474

**Owner/Firm**

Name: SYNAGRO-WWT INC  
Address: 1800 BERING DR STE 1000  
HOUSTON, TX 77057, USA  
Owner Classification: Corporation/Partnership

**Permit Contacts**

Division of Environmental Permits:  
Name: ELIZABETH A CLARKE  
Address: NYSDEC  
47-40 21ST ST  
LONG ISLAND CITY, NY 11101-5407  
Phone:7184824997

Division of Air Resources:  
Name: DIANA MENASHA  
Address: NYSDEC REGION 2 OFFICE  
HUNTERS POINT PLAZA  
LONG ISLAND CITY, NY 11101  
Phone:7184827263

Air Permitting Contact:  
Name: ALAN PARRY  
Address: NYOFCO SLUDGE PELLETTIZATION FACILITY  
1108 OAK POINT AVE  
BRONX, NY 10474  
Phone:7189917417

**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**

Title V Permit Renewal Application - 300 dry tons per day Sewage Plant Sludge Drying and Pelletization Facility.



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This is a Title V renewal that incorporates the two following Air State Facility (ASF) Permits:

1. DEC ID # 2-6007-00140/00013, issued on 12/06/2005 for the Odor Control Scrubber in the Tipping area, and
2. DEC ID # 2-6007-00140/00015, issued on 1/29/2007 for the Flue Gas Recirculation (FGR) on Drying Trains 4, 5 & 6.

The Title V Permit Renewal Application defines the following seven (7) Emission Units:

- Emission Unit U-00001 - Sludge Drying / Pelletization Train #1
- Emission Unit U-00002 - Sludge Drying / Pelletization Train #2
- Emission Unit U-00003 - Sludge Drying / Pelletization Train #3
- Emission Unit U-00004 - Sludge Drying / Pelletization Train #4
- Emission Unit U-00005 - Sludge Drying / Pelletization Train #5
- Emission Unit U-00006 - Sludge Drying / Pelletization Train #6
- Emission Unit U-00007 - Odor Scrubber for Main Building Ventilation

Emission Units U-00001, U-00002, U-00003, U-00004, U-00005 & U-00006 refer to the six (6) drying trains that process the wet sludge by drying and pelletizing the dried material for shipment to various customers. Each Unit includes a low NOx dryer burner, a dust cyclone, a high energy venturi scrubber for particulates, NOx and odor control, and a Regenerative Thermal Oxidizer (RTO) for Volatile Organic Compounds (VOC) destruction. In addition, Units U-00004, U-00005 & U-00006 each include a Flue Gas Recirculation (FGR) system for more enhanced control.

Emission Unit U-00007 is a wet chemical scrubber and air ventilation system, which is a major component of the tipping building's odor controls.

NYOFCo must perform stack tests to determine the emission rates of all six stacks (one stack for each of the six drying trains).

**Attainment Status**

NYOFCo SLUDGE PELLETIZATION FACILITY is located in the town of BRONX in the county of BRONX.

The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

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

\* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of



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nitrogen (NO<sub>x</sub>) which are ozone precursors.

\*\* NO<sub>x</sub> has a separate ambient air quality standard in addition to being an ozone precursor.

**Facility Description:**

The New York Organic Fertilizer Company (NYOFCo) facility is a plant that receives sludge from New York City's waste water treatment plants, and processes the sludge to produce pellets which are used as fertilizer. NYOFCo operates 8,760 hours per year and has the capacity to receive a maximum of 1,250 wet tons of sewage sludge with 24% solids content (which is equivalent to 300 dry tons per day). NYOFCo's primary Standard Industrial Classification code (SIC) is 5191- Farm Supplies, and the secondary SIC code is 4952 - Sewage Systems.

Sludge is delivered to the NYOFCo plant by trucks and is unloaded in the Tipping Area. Odors from the Tipping Area are controlled by a chemical odor scrubber.

The sludge from the Tipping Area is processed in six (6) sludge drying trains. Air emissions from each of the drying trains is controlled by a low NO<sub>x</sub> dryer burner, a dust cyclone, a high energy venturi scrubber for particulates, NO<sub>x</sub> and odor control, and a Regenerative Thermal Oxidizer (RTO) for VOC destruction.

The pellets, which are produced as the end products, are then loaded onto rail trains that transport the pellets for use as fertilizer.

**Permit Structure and Description of Operations**

The Title V permit for NYOFCO SLUDGE PELLETIZATION 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.

NYOFCO SLUDGE PELLETIZATION FACILITY is defined by the following emission unit(s):

Emission unit U00001 - Emission Unit U-00001 is one drying/pelletizing train with a daily capacity to process 50 - 70 dry tons sludge [208 - 291 wet tons with 24% solids content] or equivalent, depending on the moisture content of the sludge. The drying / pelletizing train includes the following equipment: wet cake storage bin, pin mixer, natural gas fired (primary fuel) combination air heater and triple pass rotary dryer utilizing one (1) Low NO<sub>x</sub> Burner with 30 million Btu heat input capacity, separator vessel, cyclone, venturi with separator, induced / forced draft fan, regenerative thermal oxidizer, induced draft fan, flue stack, pellet recycle bin, bucket elevators and a vibrating screen.



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From the "wet cake storage bin", wet sludge is transferred to the "pin mixer" where the solid content is raised to 70% prior to delivery to the "triple-pass rotary dryer" from which the material solid content is raised typically to 93% or higher. The dryer is 11 feet in diameter and mixes the solid material with hot air at temperatures ranging from 800 F to 900 F. The primary fuel is natural gas with the maximum rate about 29,412 cubic feet per hour. Kerosene and ultra low sulfur diesel fuel are secondary fuel alternatives. The solid material makes a triple pass through the rotary dryer with a retention period of 0.5 to 1.0 hours, depending on the flow rate.

The processed material and hot flue gases exit the rotary dryer into a "separator vessel" where the majority of the solid material is separated from the flue gas stream. The solid material from the vessel is transferred to the "vibrating screen," where product size material (2 - 3 millimeter in diameter) is segmented and sent to the "pellet storage load out facility" and oversized material is recycled through the "pellet recycle bin".

The flue gas exiting the separator vessel is directed to the "cyclone," where large particulate matter remaining in the gas stream is separated and combined with the solid material from the vessel. The flue gas leaving the cyclone is sent to a high-efficiency venturi scrubber / separator, where practically all of the particulate matter and ammonia gas are washed from the flue gas stream. The venturi scrubber provides both particulate emission control and odor control. Sulfuric acid is added to the scrubber liquor to enhance ammonia emission reduction for NOx control. (The solids component of the blow down from the scrubber recycle liquor is returned to the wet cake storage bin after dewatering.) The flue gas from the venturi scrubber is directed to the "regenerative thermal oxidizer" (RTO), where the gas temperature is increased to approximately 1600 degrees Fahrenheit for the destruction of volatile organic compounds [VOC], and subsequently cooled by preheating the incoming flue gas (regeneration), prior to exiting to the atmosphere via the flue stack. The RTO utilizes two (2) burners with a total maximum fuel consumption of 10,000 cubic feet per hour of natural gas at rated capacity. The stack temperature of the flue gas exhaust is about 360 degrees F.

Emission unit U00001 is associated with the following emission points (EP):

EP001

Process: PR1 is located at Building 001 - Process PR1 is the flow of the gas of drying train #1 beginning with cyclone #1 until exiting at RTO #1.

The drying process is accomplished with natural gas (primary fuel) or back up fuels (ultra-low sulfur diesel or kerosene) with air pollution control serving the dryer trains. The Emission Sources and air pollution control devices are as follows for dryer train 1 (Emission Unit U-00001):

1. Each train is equipped with a dryer to dry the sludge.
2. A cyclone then follows for particulate control.
3. A wet scrubber with acid feed then follows for additional particulate, ammonia and NOx control.
4. A regenerative thermal oxidizer (RTO) then follows for VOC control.

Emission unit U00002 - Emission Unit U-00002 is one drying/pelletizing train with a daily capacity to process 50 - 70 dry tons sludge [208 - 291 wet tons with 24% solids content] or equivalent, depending on the moisture content of the sludge. The drying / pelletizing train includes the following equipment: wet cake storage bin, pin mixer, natural gas fired (primary fuel) combination air heater and triple pass rotary dryer utilizing one (1) Low NOx Burner with 30 million Btu heat input capacity, separator vessel, cyclone, venturi with separator, induced / forced draft fan, regenerative thermal oxidizer, induced draft fan, flue stack, pellet recycle bin, bucket elevators and a vibrating screen.

From the "wet cake storage bin", wet sludge is transferred to the "pin mixer" where the solid content is raised to 70% prior to delivery to the "triple-pass rotary dryer" from which the material solid content is raised typically to 93% or higher. The dryer is 11 feet in diameter and mixes the solid material with hot air



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at temperatures ranging from 800 F to 900 F. The primary fuel is natural gas with the maximum rate about 29,412 cubic feet per hour. Kerosene and ultra low sulfur diesel fuel are secondary fuel alternatives. The solid material makes a triple pass through the rotary dryer with a retention period of 0.5 to 1.0 hours, depending on the flow rate.

The processed material and hot flue gases exit the rotary dryer into a "separator vessel" where the majority of the solid material is separated from the flue gas stream. The solid material from the vessel is transferred to the "vibrating screen," where product size material (2 - 3 millimeter in diameter) is segmented and sent to the "pellet storage load out facility" and oversized material is recycled through the "pellet recycle bin".

The flue gas exiting the separator vessel is directed to the "cyclone," where large particulate matter remaining in the gas stream is separated and combined with the solid material from the vessel. The flue gas leaving the cyclone is sent to a high-efficiency venturi scrubber / separator, where practically all of the particulate matter and ammonia gas are washed from the flue gas stream. The venturi scrubber provides both particulate emission control and odor control. Sulfuric acid is added to the scrubber liquor to enhance ammonia emission reduction for NO<sub>x</sub> control. (The solids component of the blow down from the scrubber recycle liquor is returned to the wet cake storage bin after dewatering.) The flue gas from the venturi scrubber is directed to the "regenerative thermal oxidizer" (RTO), where the gas temperature is increased to approximately 1600 degrees Fahrenheit for the destruction of volatile organic compounds (VOCs), and subsequently cooled by preheating the incoming flue gas [regeneration], prior to exiting to the atmosphere via the flue stack. The RTO utilizes two (2) burners with a total maximum fuel consumption of 10,000 cubic feet per hour of natural gas at rated capacity. The stack temperature of the flue gas exhaust is about 360 degrees F.

Emission unit U00002 is associated with the following emission points (EP):  
EP002

Process: PR2 is located at Building 001 - Process PR2 is the flow of the gas of drying train #2 beginning with cyclone #2 until exiting at RTO #2.

The drying process is accomplished with natural gas (primary fuel) or back up fuels (ultra-low sulfur diesel or kerosene) with air pollution control serving the dryer trains. The Emission Sources and air pollution control devices are as follows for dryer train 2 (Emission Unit U-00002):

1. Each train is equipped with a dryer to dry the sludge.
2. A cyclone then follows for particulate control.
3. A wet scrubber with acid feed then follows for additional particulate, ammonia and NO<sub>x</sub> control.
4. A regenerative thermal oxidizer (RTO) then follows for VOC control.

Emission unit U00003 - Emission Unit U-00003 is one drying/pelletizing train with a daily capacity to process 50 - 70 dry tons sludge [208 - 291 wet tons with 24% solids content] or equivalent, depending on the moisture content of the sludge. The drying / pelletizing train includes the following equipment: wet cake storage bin, pin mixer, natural gas fired (primary fuel) combination air heater and triple pass rotary dryer utilizing one (1) Low NO<sub>x</sub> Burner with 30 million Btu heat input capacity, separator vessel, cyclone, venturi with separator, induced / forced draft fan, regenerative thermal oxidizer, induced draft fan, flue stack, pellet recycle bin, bucket elevators and a vibrating screen.

From the "wet cake storage bin", wet sludge is transferred to the "pin mixer" where the solid content is raised to 70% prior to delivery to the "triple-pass rotary dryer" from which the material solid content is raised typically to 93% or higher. The dryer is 11 feet in diameter and mixes the solid material with hot air at temperatures ranging from 800 F to 900 F. The primary fuel is natural gas with the maximum rate about 29,412 cubic feet per hour. Kerosene and ultra low sulfur diesel fuel are secondary fuel alternatives. The solid material makes a triple pass through the rotary dryer with a retention period of 0.5 to 1.0 hours,



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depending on the flow rate.

The processed material and hot flue gases exit the rotary dryer into a "separator vessel" where the majority of the solid material is separated from the flue gas stream. The solid material from the vessel is transferred to the "vibrating screen," where product size material (2 - 3 millimeter in diameter) is segmented and sent to the "pellet storage load out facility" and oversized material is recycled through the "pellet recycle bin".

The flue gas exiting the separator vessel is directed to the "cyclone," where large particulate matter remaining in the gas stream is separated and combined with the solid material from the vessel. The flue gas leaving the cyclone is sent to a high-efficiency venturi scrubber / separator, where practically all of the particulate matter and ammonia gas are washed from the flue gas stream. The venturi scrubber provides both particulate emission control and odor control. Sulfuric acid is added to the scrubber liquor to enhance ammonia emission reduction for NO<sub>x</sub> control. (The solids component of the blow down from the scrubber recycle liquor is returned to the wet cake storage bin after dewatering.) The flue gas from the venturi scrubber is directed to the "regenerative thermal oxidizer" (RTO), where the gas temperature is increased to approximately 1600 degrees Fahrenheit for the destruction of volatile organic compounds (VOCs), and subsequently cooled by preheating the incoming flue gas (regeneration), prior to exiting to the atmosphere via the flue stack. The RTO utilizes two (2) burners with a total maximum fuel consumption of 10,000 cubic feet per hour of natural gas at rated capacity. The stack temperature of the flue gas exhaust is about 360 degrees F.

Emission unit U00003 is associated with the following emission points (EP):  
EP003

Process: PR3 is located at Building 001 - Process PR3 is the flow of the gas of drying train #3 beginning with cyclone #3 until exiting at RTO #3.

The drying process is accomplished with natural gas (primary fuel) or back up fuels (ultra-low sulfur diesel or kerosene) with air pollution control serving the dryer trains. The Emission Sources and air pollution control devices are as follows for dryer train 3 (Emission Unit U-00003):

1. Each train is equipped with a dryer to dry the sludge.
2. A cyclone then follows for particulate control.
3. A wet scrubber with acid feed then follows for additional particulate, ammonia and NO<sub>x</sub> control.
4. A regenerative thermal oxidizer (RTO) then follows for VOC control.

Emission unit U00004 - Emission Unit U-00004 is one drying/pelletizing train with a daily capacity to process 50 - 70 dry tons sludge [208 - 291 wet tons with 24% solids content] or equivalent, depending on the moisture content of the sludge. The drying / pelletizing train includes the following equipment: wet cake storage bin, pin mixer, natural gas fired (primary fuel) combination air heater and triple pass rotary dryer utilizing one (1) Low NO<sub>x</sub> Burner with 30 million Btu heat input capacity, separator vessel, cyclone, venturi with separator, induced / forced draft fan, regenerative thermal oxidizer, induced draft fan, flue stack, pellet recycle bin, bucket elevators and a vibrating screen.

From the "wet cake storage bin", wet sludge is transferred to the "pin mixer" where the solid content is raised to 70% prior to delivery to the "triple-pass rotary dryer" from which the material solid content is raised typically to 93% or higher. The dryer is 11 feet in diameter and mixes the solid material with hot air at temperatures ranging from 800 F to 900 F. The primary fuel is natural gas with the maximum rate about 29,412 cubic feet per hour. Kerosene and ultra low sulfur diesel fuel are secondary fuel alternatives. The solid material makes a triple pass through the rotary dryer with a retention period of 0.5 to 1.0 hours, depending on the flow rate.

The processed material and hot flue gases exit the rotary dryer into a "separator vessel" where the majority



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of the solid material is separated from the flue gas stream. The solid material from the vessel is transferred to the "vibrating screen," where product size material (2 - 3 millimeter in diameter) is segmented and sent to the "pellet storage load out facility" and oversized material is recycled through the "pellet recycle bin".

The flue gas exiting the separator vessel is directed to the "cyclone," where large particulate matter remaining in the gas stream is separated and combined with the solid material from the vessel. The flue gas leaving the cyclone is sent to a high-efficiency venturi scrubber / condenser-separator, where practically all of the particulate matter and ammonia gas are washed from the flue gas stream. The venturi scrubber provides both particulate emission control and odor control. Sulfuric acid is added to the scrubber liquor to enhance ammonia emission reduction for NO<sub>x</sub> control. (The solids component of the blow down from the scrubber recycle liquor is returned to the wet cake storage bin after dewatering.)

The flue gas from the venturi scrubber is split with about 50% by volume recirculated to "gas fired air heater," and the remaining 50% directed to the "regenerative thermal oxidizer" (RTO). The installation of "flue gas recirculation" [FGR] as part of Emission Unit U-00004 was completed on March 21, 2005, and is operational.

In the RTO, the gas temperature is increased to approximately 1600 degrees Fahrenheit for the destruction of volatile organic compounds (VOC), and subsequently cooled by preheating the incoming flue gas (regeneration), prior to exiting to the atmosphere via the flue stack. The RTO utilizes two (2) burners with a total maximum fuel consumption of 10,000 cubic feet per hour of natural gas at rated capacity. The stack temperature of the flue gas exhaust is about 360 degrees F.

The RTO equipment for EU4, EU5, and EU6 are connected by a manifold with isolation dampers such that each individual oxidizer can be operated with Emission Unit U-00004, and/or Emission Unit U-00005 and/or Emission Unit U-00006.

Emission unit U00004 is associated with the following emission points (EP):  
EP004

Process: PR4 is located at Building 001 - Process PR4 is the air flow after the flue gas recirculation (FGR) from the sludge drying trains 4, and/or 5 and/or 6 to RTO Unit 4. The flue gas from the train is conveyed through an air pollution control train with its own individual vent. The individual vent is housed in a single stack (Emission Point 00004).

The drying process is accomplished with natural gas (primary fuel) or back up fuels (ultra low sulfur diesel or kerosene) with air pollution control serving the dryer trains. The Emission Sources and air pollution control devices are as follows for dryer train 4 (Emission Unit U-00004):

1. Each dryer train is equipped with a dryer using natural gas (back up fuel is ultra-low sulfur diesel or kerosene),
2. The sludge drying process results in carry over to the flue gas of trace pollutants present in the sludge itself,
3. A cyclone then follows for particulate control (Emission Control CYC04),
4. A wet scrubber with acid feed then follows for additional particulate, ammonia and NO<sub>x</sub> control (Emission Control SCR04),
5. A regenerative thermal oxidizer (RTO) then follows for VOC control (Emission Control RTOX4, or RTOX5, or RTOX6),



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6. Emission Units U-00004, U-00005 and U-00006 are connected to a manifold with isolation dampers such that one, two or three of these three emission units may be routed to a single RTO (Emission Control RTOX4, or RTOX5, or RTOX6).

Emission unit U00005 - Emission Unit U-00005 is one drying/pelletizing train with a daily capacity to process 50 - 70 dry tons sludge [208 - 291 wet tons with 24% solids content] or equivalent, depending on the moisture content of the sludge. The drying / pelletizing train includes the following equipment: wet cake storage bin, pin mixer, natural gas fired (primary fuel) combination air heater and triple pass rotary dryer utilizing one (1) Low NOx Burner with 30 million Btu heat input capacity, separator vessel, cyclone, venturi with separator, induced / forced draft fan, regenerative thermal oxidizer, induced draft fan, flue stack, pellet recycle bin, bucket elevators and a vibrating screen.

From the "wet cake storage bin", wet sludge is transferred to the "pin mixer" where the solid content is raised to 70% prior to delivery to the "triple-pass rotary dryer" from which the material solid content is raised typically to 93% or higher. The dryer is 11 feet in diameter and mixes the solid material with hot air at temperatures ranging from 800 F to 900 F. The primary fuel is natural gas with the maximum rate about 29,412 cubic feet per hour. Kerosene and ultra low sulfur diesel fuel are secondary fuel alternatives. The solid material makes a triple pass through the rotary dryer with a retention period of 0.5 to 1.0 hours, depending on the flow rate.

The processed material and hot flue gases exit the rotary dryer into a "separator vessel" where the majority of the solid material is separated from the flue gas stream. The solid material from the vessel is transferred to the "vibrating screen," where product size material (2 - 3 millimeter in diameter) is segmented and sent to the "pellet storage load out facility" and oversized material is recycled through the "pellet recycle bin".

The flue gas exiting the separator vessel is directed to the "cyclone," where large particulate matter remaining in the gas stream is separated and combined with the solid material from the vessel. The flue gas leaving the cyclone is sent to a high-efficiency venturi scrubber / condenser-separator where practically all of the particulate matter and ammonia gas are washed from the flue gas stream. The venturi scrubber provides both particulate emission control and odor control. Sulfuric acid is added to the scrubber liquor to enhance ammonia emission reduction for NOx control. (The solids component of the blow down from the scrubber recycle liquor is returned to the wet cake storage bin after dewatering.)

The flue gas from the venturi scrubber is split with about 50% by volume recirculated to "gas fired air heater," and the remaining 50% directed to the "regenerative thermal oxidizer" (RTO). The installation of "flue gas recirculation" [FGR] as part of Emission Unit U-00005 was completed on November 11, 2005, and is operational.

In the RTO, the gas temperature is increased to approximately 1600 degrees Fahrenheit for the destruction of volatile organic compounds [VOC], and subsequently cooled by preheating the incoming flue gas [regeneration], prior to exiting to the atmosphere via the flue stack. The RTO utilizes two (2) burners with a total maximum fuel consumption of 10,000 cubic feet per hour of natural gas at rated capacity. The stack temperature of the flue gas exhaust is about 360 degrees F.

The RTO equipment for Emission Unit U-00004, U-00005, and U-00006 are connected by a manifold with isolation dampers such that each individual oxidizer can be operated with Emission Unit U-00004, and/or Emission Unit U-00005, and/or Emission Unit U-00006.

Emission unit U00005 is associated with the following emission points (EP):  
EP005

Process: PR5 is located at Building 001 - Process PR5 is the air flow after the flue gas recirculation (FGR) from the sludge drying trains 4, and/or 5 and/or 6 to RTO Unit 5. The flue gas from the train is



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conveyed through an air pollution control train with its own individual vent. The individual vent is housed in a single stack (Emission Point 00005).

The drying process is accomplished with natural gas (primary fuel) or back up fuels (ultra low sulfur diesel or kerosene) with air pollution control serving the dryer trains. The Emission Sources and air pollution control devices are as follows for dryer train 5 (Emission Unit U-00005):

1. Each dryer train is equipped with a dryer using natural gas (back up fuel is ultra-low sulfur diesel or kerosene),
2. The sludge drying process results in carry over to the flue gas of trace pollutants present in the sludge itself,
3. A cyclone then follows for particulate control (Emission Control CYC05),
4. A wet scrubber with acid feed then follows for additional particulate, ammonia and NOx control (Emission Control SCR05),
5. A regenerative thermal oxidizer (RTO) then follows for VOC control (Emission Control RTOX4, or RTOX5, or RTOX6),
6. Emission Units U-00004, U-00005 and U-00006 will be connected to a manifold with isolation dampers such that one, two or three of these three emission units may be routed to a single RTO (Emission Control RTOX4, or RTOX5, or RTOX6).

Emission unit U00006 - Emission Unit U-00006 is one drying/pelletizing train with a daily capacity to process 50 - 70 dry tons sludge [208 - 291 wet tons with 24% solids content] or equivalent, depending on the moisture content of the sludge. The drying / pelletizing train includes the following equipment: wet cake storage bin, pin mixer, natural gas fired (primary fuel) combination air heater and triple pass rotary dryer utilizing one (1) Low NOx Burner with 30 million Btu heat input capacity, separator vessel, cyclone, venturi with separator, induced / forced draft fan, regenerative thermal oxidizer, induced draft fan, flue stack, pellet recycle bin, bucket elevators and a vibrating screen.

From the "wet cake storage bin", wet sludge is transferred to the "pin mixer" where the solid content is raised to 70% prior to delivery to the "triple-pass rotary dryer" from which the material solid content is raised typically to 93% or higher. The dryer is 11 feet in diameter and mixes the solid material with hot air at temperatures ranging from 800 F to 900 F. The primary fuel is natural gas with the maximum rate about 29,412 cubic feet per hour. Kerosene and ultra low sulfur diesel fuel are secondary fuel alternatives. The solid material makes a triple pass through the rotary dryer with a retention period of 0.5 to 1.0 hours, depending on the flow rate.

The processed material and hot flue gases exit the rotary dryer into a "separator vessel" where the majority of the solid material is separated from the flue gas stream. The solid material from the vessel is transferred to the "vibrating screen," where product size material (2 - 3 millimeter in diameter) is segmented and sent to the "pellet storage load out facility" and oversized material is recycled through the "pellet recycle bin".

The flue gas exiting the separator vessel is directed to the "cyclone," where large particulate matter remaining in the gas stream is separated and combined with the solid material from the vessel. The flue gas leaving the cyclone is sent to a high-efficiency venturi scrubber / condenser-separator, where practically all of the particulate matter and ammonia gas are washed from the flue gas stream. The venturi scrubber provides both particulate emission control and odor control. Sulfuric acid is added to the scrubber



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liquor to enhance ammonia emission reduction for NO<sub>x</sub> control. (The solids component of the blow down from the scrubber recycle liquor is returned to the wet cake storage bin after dewatering.)

The flue gas from the venturi scrubber is split with about 50% by volume recirculated to "gas fired air heater," and the remaining 50% directed to the "regenerative thermal oxidizer" (RTO). The installation of "flue gas recirculation" [FGR] as part of Emission Unit U-00006 was completed on November 7, 2007, and is operational.

In the RTO, the gas temperature is increased to approximately 1600 degrees Fahrenheit for the destruction of volatile organic compounds [VOCs], and subsequently cooled by preheating the incoming flue gas [regeneration], prior to exiting to the atmosphere via the flue stack. The RTO utilizes two (2) burners with a total maximum fuel consumption of 10,000 cubic feet per hour of natural gas at rated capacity. The stack temperature of the flue gas exhaust is about 360 degrees F.

The RTO equipment for Emission Unit U-00004, U-00005, and U-00006 are connected by a manifold with isolation dampers such that each individual oxidizer can be operated with Emission Unit U-00004, and/or Emission Unit U-00005, and/or Emission Unit U-00006.

Emission unit U00006 is associated with the following emission points (EP):

EP006

Process: PR6 is located at Building 001 - Process PR6 is the air flow after the flue gas recirculation (FGR) from the sludge drying trains 4, and/or 5 and/or 6 to RTO Unit 6. The flue gas from the train is conveyed through an air pollution control train with its own individual vent. The individual vent is housed in a single stack (Emission Point 00006).

The drying process is accomplished with natural gas (primary fuel) or back up fuels (ultra low sulfur diesel or kerosene) with air pollution control serving the dryer trains. The Emission Sources and air pollution control devices are as follows for dryer train 6 (Emission Unit U-00006):

1. Each dryer train is equipped with a dryer using natural gas (back up fuel is ultra-low sulfur diesel or kerosene),
2. The sludge drying process results in carry over to the flue gas of trace pollutants present in the sludge itself,
3. A cyclone then follows for particulate control (Emission Control CYC06),
4. A wet scrubber with acid feed then follows for additional particulate, ammonia and NO<sub>x</sub> control (Emission Control SCR06),
5. A regenerative thermal oxidizer (RTO) then follows for VOC control (Emission Control RTOX4, or RTOX5, or RTOX6),
6. Emission Units U-00004, U-00005 and U-00006 will be connected to a manifold with isolation dampers such that one, two or three of these three emission units may be routed to a single RTO (Emission Control RTOX4, or RTOX5, or RTOX6).

Emission unit U00007 - Emission Unit U-00007 is an air ventilation system for the Main Building, including the tipping floor and pelletization process area, with a 50,000 cubic feet per minute 3-stage sulfuric acid, hypochlorite and sodium hydroxide chemical odor scrubber. The air ventilation system with the chemical scrubber controls odors from the tipping area.



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The odor control chemical scrubber is a three-stage design gas-liquid contact tower. Ventilated air from the tipping floor, and air from the pelletizing process area that is not utilized as combustion air, is directed to the scrubber via common duct and an induced/forced draft fan. The ventilated air enters the scrubber at the bottom and travels upwards through three-stage scrubbing treatment before exiting to the atmosphere via a stack located at the top of the scrubber. The first (bottom) stage removes ammonia through wet scrubbing with recirculation water with proper pH adjustment. The second stage removes reduced sulfur compounds with a recirculated sodium hypochlorite solution to provide for a high oxidation/reduction potential (ORP). Fresh reagent is directly added to this stage as needed. The third stage is a polishing washing operation, a once-through scrubbing with either a low flow caustic solution or only water during low concentration conditions that includes a mist elimination device to prevent water droplets from exiting the stack.

The installation of the odor control chemical scrubber as Emission Unit U-00007 was completed on August 16, 2006, and is operational.

Emission unit U00007 is associated with the following emission points (EP):  
EP007

Process: ODR is located at Grade level/Outdoor, Building 001 - Air ventilated from the tipping area will be treated in a three-stage chemical scrubber with sodium hydroxide, sulfuric acid and sodium hypochlorite prior to being emitted into the atmosphere. The three-stage chemical scrubber consists of three stages: STAG1, STAG2, and STAG3. STAG1 is an Emission Control to control the ammonia emissions, STAG2 is an Emission Control for reduced sulfur compounds, and STAG3 is for polishing/washing.

**Title V/Major Source Status**

NYOFSCO SLUDGE PELLETIZATION FACILITY is subject to Title V requirements. This determination is based on the following information:

The NYOFSCO Sludge Pelletization Facility emits Nitrogen Oxides (NOx) in excess of 25 tons per year; it also emits volatile organic compounds (VOCs) in excess of 25 tons per year. In a severe non-attainment area for ozone (such as New York City), an air pollution source is a major source when it emits NOx and/or VOCs in excess of 25 tons per year.major\_src\_status

**Program Applicability**

The following chart summarizes the applicability of NYOFSCO SLUDGE PELLETIZATION FACILITY with regards to the principal air pollution regulatory programs:

| <b>Regulatory Program</b>      | <b>Applicability</b> |
|--------------------------------|----------------------|
| PSD                            | NO                   |
| NSR (non-attainment)           | NO                   |
| NESHAP (40 CFR Part 61)        | YES                  |
| NESHAP (MACT - 40 CFR Part 63) | NO                   |
| NSPS                           | NO                   |
| TITLE IV                       | NO                   |



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|          |     |
|----------|-----|
| TITLE V  | YES |
| TITLE VI | NO  |
| RACT     | YES |
| 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



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empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

**Compliance Status**

Facility is in compliance with all requirements.

**SIC Codes**

SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

**SIC Code**

**Description**

|      |                  |
|------|------------------|
| 4952 | SEWERAGE SYSTEMS |
| 5191 | FARM SUPPLIES    |

**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**

|             |   |
|-------------|---|
| 3-01-045-01 | CHEMICAL MANUFACTURING<br>CHEMICAL MANUFACTURING - ORGANIC FERTILIZER<br>General: Mixing/Handling |
| 3-01-205-03 | CHEMICAL MANUFACTURING<br>CHEMICAL MANUFACTURING - PROPYLENE OXIDE<br>Vent Gas Scrubber Vent      |

**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

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term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

| Cas No.     | Contaminant Name                                       | PTE    |                   |
|-------------|--|--------|-------------------|
|             |  | lbs/yr | Range             |
| 000117-84-0 | 1,2-BENZENEDICARBOXYLIC ACID DIOETHYL ESTER (C24H38O4) | > 0    | but < 2.5 tpy     |
| 000084-74-2 | 1,2-BENZENEDICARBOXYLIC ACID, DIBUTYL ESTER            | > 0    | but < 10 tpy      |
| 000091-57-6 | 2-METHYL NAPHTHALENE                                   | > 0    | but < 2.5 tpy     |
| 000083-32-9 | ACENAPHTHENE   | > 0    | but < 10 tpy      |
| 000208-96-8 | ACENAPHTHYLENE   | > 0    | but < 10 tpy      |
| 007664-41-7 | AMMONIA  | > 0    | but < 2.5 tpy     |
| 000120-12-7 | ANTHRACENE   | > 0    | but < 10 tpy      |
| 007440-38-2 | ARSENIC  | > 0    | but < 10 tpy      |
| 007440-39-3 | BARIUM   | > 0    | but < 2.5 tpy     |
| 000192-97-2 | BENZO (E) PYRENE                                       | > 0    | but < 2.5 tpy     |
| 000056-55-3 | BENZO(A)ANTHRACENE                                     | > 0    | but < 10 tpy      |
| 000050-32-8 | BENZO(A)PYRENE   | > 0    | but < 10 tpy      |
| 000205-99-2 | BENZO[B]FLUORANTHENE                                   | > 0    | but < 10 tpy      |
| 000191-24-2 | BENZO[G,H,I]PERYLENE                                   | > 0    | but < 10 tpy      |
| 000207-08-9 | BENZO[K]FLUORANTHENE                                   | > 0    | but < 10 tpy      |
| 000117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE                            | > 0    | but < 10 tpy      |
| 000075-15-0 | CARBON DISULFIDE                                       | > 0    | but < 10 tpy      |
| 000630-08-0 | CARBON MONOXIDE  | >= 50  | tpy but < 100 tpy |
| 007440-47-3 | CHROMIUM   | > 0    | but < 10 tpy      |
| 018540-29-9 | CHROMIUM(VI)   | > 0    | but < 10 tpy      |
| 000218-01-9 | CHRYSENE   | > 0    | but < 10 tpy      |
| 007440-48-4 | COBALT   | > 0    | but < 10 tpy      |
| 007440-50-8 | COPPER   | > 0    | but < 2.5 tpy     |
| 000053-70-3 | DIBENZ[A,H]ANTHRACENE                                  | > 0    | but < 10 tpy      |
| 000198-55-0 | DIBENZ[DE,KL]ANTHRACENE                                | > 0    | but < 2.5 tpy     |
| 000206-44-0 | FLUORANTHENE   | > 0    | but < 10 tpy      |
| 000086-73-7 | FLUORENE   | > 0    | but < 10 tpy      |
| 000050-00-0 | FORMALDEHYDE   | > 0    | but < 10 tpy      |
| 0NY100-00-0 | HAP  | > 0    | but < 2.5 tpy     |
| 007647-01-0 | HYDROGEN CHLORIDE                                      | > 0    | but < 10 tpy      |
| 007783-06-4 | HYDROGEN SULFIDE                                       | > 0    | but < 2.5 tpy     |
| 000193-39-5 | INDENO[1,2,3-CD]PYRENE                                 | > 0    | but < 10 tpy      |
| 007439-92-1 | LEAD   | > 0    | but < 10 tpy      |
| 007439-96-5 | MANGANESE  | > 0    | but < 10 tpy      |
| 007439-97-6 | MERCURY  | > 0    | but < 10 tpy      |
| 007439-98-7 | MOLYBDENUM   | > 0    | but < 2.5 tpy     |
| 000091-20-3 | NAPHTHALENE  | > 0    | but < 10 tpy      |
| 007440-02-0 | NICKEL METAL AND                                       | > 0    | but < 10 tpy      |



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|             |   |                         |
|-------------|---|-------------------------|
| 010102-44-0 | INSOLUBLE COMPOUNDS<br>NITROGEN DIOXIDE | >= 50 tpy but < 100 tpy |
| 0NY210-00-0 | OXIDES OF NITROGEN                      | >= 50 tpy but < 100 tpy |
| 0NY075-00-0 | PARTICULATES                            | >= 10 tpy but < 25 tpy  |
| 000085-01-8 | PHENANTHRENE                            | > 0 but < 10 tpy        |
| 0NY075-00-5 | PM-10                                   | >= 10 tpy but < 25 tpy  |
| 000129-00-0 | PYRENE                                  | > 0 but < 10 tpy        |
| 0NY501-00-0 | REDUCED SULFUR<br>COMPOUNDS             | > 0 but < 2.5 tpy       |
| 007446-09-5 | SULFUR DIOXIDE                          | >= 25 tpy but < 40 tpy  |
| 000108-88-3 | TOLUENE                                 | > 0 but < 10 tpy        |
| 0NY500-00-0 | TOTAL REDUCED SULFUR                    | > 0 but < 2.5 tpy       |
| 007440-62-2 | VANADIUM                                | > 0 but < 2.5 tpy       |
| 0NY998-00-0 | VOC                                     | >= 40 tpy but < 50 tpy  |

**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)**



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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 - 6 NYCRR 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



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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



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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**

| <b>Location<br/>Facility/EU/EP/Process/ES</b> | <b>Regulation</b> | <b>Condition</b> | <b>Short Description</b>   |
|---|-------------------|------------------|--|
| ---   |                   |                  |  |
| FACILITY                                      |                   | 44               | Powers and Duties of the Department with respect to air pollution control  |
| FACILITY                                      | 40CFR 61-E. 52(b) | 41               | Standard for Mercury: Mercury Ore Processing, chlorine gas production, and sludge incineration-emission standard |



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|                         |                          |                            |  |
|-------------------------|--------------------------|----------------------------|--|
| FACILITY                | 40CFR 68                 | 21                         | Chemical accident prevention provisions                                    |
| FACILITY                | 40CFR 82-F               | 22                         | Protection of Stratospheric Ozone - recycling and emissions reduction      |
| FACILITY                | 6NYCRR 200.6             | 1                          | Acceptable ambient air quality.  |
| FACILITY                | 6NYCRR 200.7             | 10, 23, 24, 25             | Maintenance of equipment.  |
| FACILITY                | 6NYCRR 201-1.10(b)       | 46                         | Permitting - public access to records kept for Title V permitting          |
| FACILITY                | 6NYCRR 201-1.4           | 45                         | Unavoidable noncompliance and violations                                   |
| FACILITY                | 6NYCRR 201-1.5           | 26, 27, 28                 | Emergency defense  |
| 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             | 29, 42, 43                 | Title V Permits and the Associated Permit Conditions                       |
| FACILITY                | 6NYCRR 201-6.5(a)(4)     | 15                         | General conditions   |
| FACILITY                | 6NYCRR 201-6.5(a)(7)     | 2                          | General conditions   |
| FACILITY                | 6NYCRR 201-6.5(a)(8)     | 16                         | Fees   |
| FACILITY                | 6NYCRR 201-6.5(c)        | 3                          | General conditions   |
| FACILITY                | 6NYCRR 201-6.5(c)(2)     | 4                          | Permit conditions for Recordkeeping and Reporting of Compliance Monitoring |
| FACILITY                | 6NYCRR 201-6.5(c)(3)(ii) | 5                          | Permit conditions for Recordkeeping and Reporting of Compliance Monitoring |
| FACILITY                | 6NYCRR 201-6.5(d)(5)     | 17                         | Permit conditions for Recordkeeping and Reporting of Compliance Monitoring |
| FACILITY                | 6NYCRR 201-6.5(e)        | 6                          | Compliance schedules   |
| FACILITY                | 6NYCRR 201-6.5(f)(6)     | 18                         | Compliance Certification   |
| FACILITY                | 6NYCRR 202-1.1           | 19, 30, 31, 32, 33, 34, 35 | Off Permit Changes   |
| FACILITY                | 6NYCRR 202-1.3           | 36, 37, 38                 | Required emissions tests.  |
| FACILITY                | 6NYCRR 202-2.1           | 7                          | Acceptable procedures.   |
| FACILITY                | 6NYCRR 202-2.5           | 8                          | Emission Statements - Applicability  |
| FACILITY                | 6NYCRR 211.2             | 47, 48, 49, 50, 51         | Emission Statements - record keeping requirements.                         |
| U-00007/EP007/ODR/OXRDP | 6NYCRR 211.2             | 63                         | General Prohibitions - air pollution prohibited.                           |
|                         |                          |                            | General Prohibitions - air pollution                                       |



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|                             |                 |                           |  |
|-----------------------------|-----------------|---------------------------|--|
| U-<br>00007/EP007/ODR/STAG1 | 6NYCRR 211.2    | 64                        | prohibited.<br>General Prohibitions<br>- air pollution<br>prohibited.                          |
| U-<br>00007/EP007/ODR/STAG2 | 6NYCRR 211.2    | 65                        | General Prohibitions<br>- air pollution<br>prohibited.   |
| FACILITY                    | 6NYCRR 211.3    | 20                        | General Prohibitions<br>- visible emissions<br>limited   |
| FACILITY                    | 6NYCRR 212.10   | 60                        | NOx and VOC RACT<br>required at major<br>facilities  |
| FACILITY                    | 6NYCRR 212.4    | 52, 53, 54, 55, 56,<br>57 | General Process<br>Emission Sources -<br>emissions from new<br>sources and/or<br>modifications |
| FACILITY                    | 6NYCRR 212.4(a) | 39, 58, 59                | General Process<br>Emission Sources -<br>emissions from new<br>sources and/or<br>modifications |
| FACILITY                    | 6NYCRR 212.6(a) | 40                        | General Process<br>Emission Sources -<br>opacity of emissions<br>limited                       |
| FACILITY                    | 6NYCRR 215      | 9                         | Open Fires   |
| FACILITY                    | 6NYCRR 225-1.8  | 61                        | Reports, sampling and<br>analysis.   |
| FACILITY                    | 6NYCRR 257-1.4  | 62                        | Air Quality Standards<br>general - compliance  |

**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 201-1.5

An enforcement action may be avoided if the facility can demonstrate that an emergency situation occurred which resulted in an emission limitation or permit violation. The following information would



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constitute evidence of an emergency situation: a properly signed operating log recorded during the actual event which; identifies the cause(s) of the emergency, indicates that all equipment was operating properly at the time, the person responsible took all reasonable steps to minimize the exceedance or violation, and that the department was notified of the emergency within 2 working days of the event.

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 201-1.10(b)

Any permit application, compliance plan, permit, and monitoring and compliance certification report that is submitted as part of the Title V permit process must be made available to the public as per requirements set forth under 6 NYCRR Part 616 - Public Access to Records and section 114(c) of the Clean Air Act Amendments of 1990.

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)



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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



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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, NYOFCO SLUDGE PELLETIZATION FACILITY has been determined to be subject to the following regulations:

40CFR 61-E.52 (b)

This regulation sets the standard for mercury emissions from sludge incineration plants and/or sludge drying plants that process wastewater treatment plant sludges. The emission standard is less than 3,200 grams of mercury per day.

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 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



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days after completion of testing.

6NYCRR 212 .10

This regulation is for NOx and VOC RACT required at major facilities. This regulation requires major facilities to install NOx RACT, which has been determined to be low NOx burners. The direct combustion unit for the control of NOx must be functioning at all times the process is in operation.

This regulation requires major facilities for volatile organic compound to install and be equipped with reasonably available control technology (RACT) with a capture system and a control device with an overall removal efficiency of at least 81%.

6NYCRR 212 .4

This rule requires compliance with the degree of control specified in Tables 2, 3 and 4 for new (after July 1, 1973) process emission sources.

6NYCRR 212 .4 (a)

This rule requires compliance with the degree of control specified in Tables 2, 3 and 4 for new (after July 1, 1973) process emission sources.

6NYCRR 212 .6 (a)

This rule specifies an opacity limitation of less than 20% for any six consecutive minute period for all process emission sources.

6NYCRR 225-1.8

This regulation requires an 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.

This regulation establishes the following prohibitions::

- (a) No person shall permit, suffer or allow the emission of contaminants from an emission source which alone or in combination with emissions from other sources cause contravention of air quality standards promulgated in this Part.
- (b) Notwithstanding the existence of specific standards, emissions of odorous, toxic, or deleterious substance in concentrations or of such duration that will affect human health or well-being, or unreasonably interfere with the enjoyment of property, or unreasonably and adversely affect plant or animal life shall not be permitted.

**Non Applicability Analysis**

**List of non-applicable rules and regulations:**

| <b>Location</b> | <b>Short Description</b> | <b>Regulation</b> |
|-----------------|--------------------------|-------------------|
|-----------------|--------------------------|-------------------|





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|                         |    |   |
|-------------------------|----|---|
| FACILITY                | 49 | procedures<br>record keeping/maintenance<br>procedures                |
| FACILITY                | 50 | record keeping/maintenance<br>procedures                              |
| FACILITY                | 51 | record keeping/maintenance<br>procedures                              |
| U-00007/EP007/ODR/OXRDP | 63 | monitoring of process or<br>control device parameters as<br>surrogate |
| U-00007/EP007/ODR/STAG1 | 64 | monitoring of process or<br>control device parameters as<br>surrogate |
| U-00007/EP007/ODR/STAG2 | 65 | monitoring of process or<br>control device parameters as<br>surrogate |
| FACILITY                | 60 | intermittent emission<br>testing                                      |
| FACILITY                | 52 | record keeping/maintenance<br>procedures                              |
| FACILITY                | 53 | intermittent emission<br>testing                                      |
| FACILITY                | 54 | intermittent emission<br>testing                                      |
| FACILITY                | 55 | monitoring of process or<br>control device parameters as<br>surrogate |
| FACILITY                | 56 | monitoring of process or<br>control device parameters as<br>surrogate |
| FACILITY                | 57 | monitoring of process or<br>control device parameters as<br>surrogate |
| FACILITY                | 39 | intermittent emission<br>testing                                      |
| FACILITY                | 58 | intermittent emission<br>testing                                      |
| FACILITY                | 59 | intermittent emission<br>testing                                      |
| FACILITY                | 40 | continuous emission<br>monitoring (cem)                               |
| FACILITY                | 61 | record keeping/maintenance<br>procedures                              |
| FACILITY                | 62 | work practice involving<br>specific operations                        |

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**Basis for Monitoring**

This facility is subject to the requirements of Title V and is required to comply with the following monitoring conditions:

**Conditions 23, 24, and 25 for 6 NYCRR 200.7:** When the silica coating accumulates around the ceramic media, the pressure drop across the RTO increases, thereby degrading the heat transfer ability of the ceramic media. In order to prevent deterioration in the thermal efficiency of the RTOs, NYOFCo is required to clean the ceramic media by first vacuuming the ceramic media with a high powered vacuum machine, and then washing the ceramic media with water. The cleaning process must be performed under the



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following conditions:

- i. Condition 23: Whenever the hours of operation reach a maximum of 3,000 hours for dryer trains 1, 2, and 3, or
- ii. Condition 24: Whenever the hours of operation reach a maximum of 6,000 hours for dryer trains 4, 5, and 6. Dryer trains 4, 5, and 6 have a Flue Gas Recirculating system that enables them to operate longer before being cleaned, or
- iii. Condition 25: Whenever the daily average pressure drop across the RTOs increases to more than 32 inches of water.

A log shall be maintained recording the date, hours of operation since the previous cleaning, and the daily average pressure drop across the RTO prior to the cleaning. The log shall be made available to the Department for inspection.

A log shall also be kept of the daily average pressure drop in each RTO and made available to the Department for inspection.

**Conditions 26, 27, and 28 for 6 NYCRR 201-1.5:** In order to minimize the Sulfur Dioxide emissions from the facility, this condition will prohibit the use of kerosene except under emergency situations or upon request by their supplier (Con Edison) to curtail natural gas usage. The shortages usually occur only in periods of cold weather. The secondary (back-up) fuels to be used in the event of an interruption of natural gas supply are either kerosene or ultra low sulfur diesel. NYOFCo is limited to the following conditions:

- i. Condition 26: 508,133 gallons per year of kerosene or ultra low sulfur diesel, and
- ii. Condition 27: 25,406 gallons per day of kerosene or ultra low sulfur diesel, and
- iii. Condition 28: 1,200 gallons per hour of kerosene or ultra low sulfur diesel.

**Condition 29:** Identifies the seven (7) Emissions Units at NYOFCo.

**Condition 30 for 6 NYCRR 202-1.1:** Requires NYOFCo to perform a test to prove that it meets the criteria of a Permanent Total Enclosure building. This is necessary to ensure that odors do not escape to the outdoors.

**Conditions 31, 32, and 33 for 6 NYCRR 202-1.1:** In order to determine which contaminants may be possibly emitted to the outdoor atmosphere, NYOFCo is required to sample the sludge that it processes. Results of this sampling will be used to determine which additional contaminants should be evaluated during the next stack test. NYOFCo is required to sample the sludge for the following compounds:

- i. Condition 31: Chlorinated pesticides, and



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- ii. Condition 32: Organophosphorous pesticides, and
- iii. Condition 33: Phenolic compounds and Nonylphenol.

**Condition 34 for 6 NYCRR 202-1.1:** Lists the contaminants that are required to be stack tested. The list of contaminants to be tested in the future is subject to change based on sludge analysis (performed by NYOFCo or any other government agency or reliable source), stack test results, scientific research, or development of a stack testing protocol approved by the Environmental Protection Agency for PM-2.5.

**Condition 35 for 6 NYCRR 202-1.1:** Based on the stack test results of Condition 34, NYOFCo is required to perform an Air Guide-1 analysis to determine the ambient air impact of each of the contaminants in order to ensure that they do not exceed the Annual Guideline Concentrations (AGCs) and the Short-term Guideline Concentrations (SGCs). The AGCs and SGCs are values established by the American Conference of Governmental Industrial Hygienists (ACGIH) and represent concentrations that will not cause adverse health effects under repeated exposure.

**Conditions 36, 37, and 38 for 6 NYCRR 202-1.3:** Specify the procedures for submitting stack test reports.

**Condition 39 for 6 NYCRR 212.4(a):** VOCs and NO<sub>x</sub> are precursors to ozone. Since the New York Metropolitan Area is non-attainment for ozone, the Environmental Rating for VOC was determined to be "A" and the BACT degree of control required has been established to be 96%. NYOFCo is required to perform a stack test to demonstrate that it meets the 96% degree of control requirement. This degree of control was determined during the stack testing conducted in 1994. See related Conditions 52 & 53.

**Condition 40 for 6 NYCRR 212.6(a):** This condition specifies an opacity limitation of 20% for any six consecutive minute period for all process emission sources using CEMS. Exceedances of this standard must be reported and investigated to determine the cause in order to undertake corrective measures.

**Condition 41 for 40 CFR 61-E.52(b):** USEPA regulations for sludge drying plants limit the Mercury emissions to 3,200 grams per 24-hour period. This Mercury emission limit is equivalent to 10.0 pounds per year. However, NYSDEC has established a more restrictive emission standard based on NY State's Part 212 (see Condition 55 below).

**Conditions 42 and 43 for 6 NYCRR 201-6:** Identify the emission points, processes, and contaminants which are specifically regulated. While all contaminants are generically regulated under the general provisions of Part 212, specific standards have been established for Mercury, Hydrogen Sulfide, Particulates, Nitrogen Oxides, and Volatile Organic Compounds.



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**Condition 44 for ECL 19-0301:** While all contaminants are generically regulated under the general provisions of Part 212, specific standards have been established for Mercury, Hydrogen Sulfide, Particulates, Nitrogen Oxides, and Volatile Organic Compounds.

**Condition 45 for 6 NYCRR 201-1.4:** Specifies the procedures and recordkeeping which NYOFCo must undertake when ever an unavoidable violation occurs. These procedures are standard and apply to every facility in NY State.

**Condition 46 for 6 NYCRR 201-1.10(b):** In order to satisfy the community's interest in NYOFCo's permit compliance, this condition requires NYOFCo to place into a public repository documents such as odor response monitor's complaints and inspection quarterly reports on odor, stack test reports, and current permits.

**Conditions 47, 48, 49, 50 and 51 for 6 NYCRR 211.2:** These conditions require NYOFCo to undertake various steps to monitor, report, and minimize odors.

- i. Condition 47: States the general authority for DEC to regulate odors from any facility.
- ii. Condition 48: Requires NYOFCo to notify NYSDEC and the District Manager of the Bronx Community Board #2 by e-mail within 24 hours when the odor scrubber in the tipping building or the negative pressure alarm for the tipping building or the process building is not operating. The purpose is to enable NYSDEC and the community's public official to be aware of the situation and to facilitate responses to potential citizen complaints.
- iii. Condition 49: Requires NYOFCo to establish a new 24-hours-a-day odor monitoring system (OMS). The establishment of this system will improve odor monitoring and provide a means through which the residents of the community can report an odor incident, so that its cause can be investigated and resolved as soon as possible.
- iv. Condition 50: Under terms of its initial Title V Permit, NYOFCo is required to investigate odor complaints according to the July 1, 2002 "Plan for Controlling, Monitoring and recording Odor Incidents," including all appendices and attachments except that for the period or periods in which the Odor Monitoring System (OMS) required by Condition #49 is implemented, the OMS shall be implemented in lieu of this Plan's community inspection provision (Odor Monitoring: Self-Monitoring: Independent Consultant Monitoring and Responding to Odor Complaints). All other provisions, including regarding regular maintenance of pollution control systems and monthly odor sampling from the inlet and outlet of the RTOs and Odor Scrubber remain in effect. Reports of the monthly odor sampling from the inlet and outlet of the RTOs and Odor



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Scrubber shall be provided to DEC in a timely manner.

v. Condition 51: NYOFCo must maintain negative pressure to ensure that odors do not escape to the outdoors. Negative pressure will be monitored via a differential pressure transmitter, or other technology acceptable to the Department, which will activate the sound of an alarm to alert nearby workers to remind them to close the door, and alert the facility's operator in the control room each time the negative pressure is compromised.

See associated Condition 30 which requires NYOFCo to perform a test to prove that it meets the criteria of a Permanent Total Enclosure building.

**Condition 52 for 6 NYCRR 212.4:** VOCs and NO<sub>x</sub> are precursors to ozone. Since the New York Metropolitan Area is non-attainment for ozone, NYOFCo is required to continuously monitor the emissions of VOC through the use of CEMS (Continuous Emission Monitoring System). NYOFCo is required to conduct maintenance and calibrations of the VOC monitoring equipment to be sure that the readings are accurate. The total VOC emissions are limited by Conditions 39 and 53 of this permit.

**Condition 53 for 6 NYCRR 212.4:** VOCs and NO<sub>x</sub> are precursors to ozone. Since the New York Metropolitan Area is non-attainment for ozone, the Environmental Rating for VOC was determined to be "A" and the BACT emissions has been established to 9.57 lbs/hr from all (6) RTOs, or the degree of air cleaning for VOC emitted from each of the six (6) RTOs is at least 96% . NYOFCo is required to perform a stack test to demonstrate that it meets the 9.57 lbs/hr VOC limit or the 96% degree of air cleaning. These limitations were determined during the stack testing conducted in 1994. See related Conditions 39 & 52.

**Condition 54 for 6 NYCRR 212.4:** Due to its odorous properties, Hydrogen Sulfide has been determined to be a contaminant of concern. (See related Condition 58). The Environmental Rating for Hydrogen Sulfide was determined to be "A" and the BACT has established the degree of air cleaning required to be 96% from each of the six (6) RTOs, or 0.2475 lbs/hr from all (6) RTOs. NYOFCo is required to perform a stack test to demonstrate that it meets the 96% degree of control requirement, or the 0.2475 lbs/hr emission limit from all six (6) RTOs. These limitations were determined during the stack testing conducted in 1994. See related Condition 58.

**Condition 55 for 6 NYCRR 212.4:** Due to its high toxicity, Mercury has been determined to be a contaminant of concern. (See associated Conditions 41 and 44.) While Federal regulations have established a Federal standard of 3,200 grams per 24-hour period, NYSDEC has established a more restrictive emission standard based on NY State's Part 212. NY State has established an Environmental Rating of "A" and has established a mercury emission limit of 10.0 lbs/year for the facility based upon previous



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stack tests.

**Condition 56 for 6 NYCRR 212.4:** To ensure proper operation of the control equipment for controlling Particulates, the pressure drop of the gas flow across the wet venturi scrubber and cyclone in each of the six (6) dryer trains shall be a minimum of 18 inches of water. The pressure drop shall be continuously monitored and recorded.

**Condition 57 for 6 NYCRR 212.4:** To ensure proper operation of the control equipment for destroying VOCs, eliminating odor, and reducing NO<sub>x</sub>, NYOFCo shall continuously monitor and record the temperature of the operating RTOs. The monitor shall automatically sound a warning signal when the temperature falls below 1600 degrees Fahrenheit. The process control shall cause the operation to cease automatically when the temperature falls below 1585 degrees Fahrenheit.

**Condition 58 for 6 NYCRR 212.4(a):** Due to its odorous properties, Hydrogen Sulfide has been determined to be a contaminant of concern. (See associated Condition 54.) The Environmental Rating for Hydrogen Sulfide was determined to be "A" and the BACT has been established to be 0.2475 lbs/hr from all (6) RTOs, or the degree of air cleaning for H<sub>2</sub>S emitted from each of the six (6) RTOs is at least 96%. NYOFCo is required to perform a stack test to demonstrate that it meets the 0.2475 lbs/hr emission limit or the 96% degree of air cleaning. These limitations were determined during the stack testing conducted in 1994. See related Condition 54.

**Condition 59 for 6 NYCRR 212.4(a):** Due to the high incidences of asthma in the South Bronx and to health impacts on the community, Particulates have been determined to be a contaminant of concern. (See associated Condition 44.) The Environmental Rating for Particulates was determined to be "A" and the BACT degree of control required has been established to be 0.008 grains per dry standard cubic foot of undiluted exhaust gas corrected to 1% CO<sub>2</sub>.

**Condition 60 for 6 NYCRR 212.10:** VOCs and NO<sub>x</sub> are precursors to ozone. Since the New York Metropolitan Area is non-attainment for ozone, the Environmental Rating for NO<sub>x</sub> was determined to be "A". The emission limit for NO<sub>x</sub> has been established to be 19.2 lbs/hr. This limitation was determined during the stack testing conducted in 1994.

**Condition 61 for 6 NYCRR 225-1.8:** This condition requires NYOFCo to submit reports to the commissioner containing fuel analysis data, information on the quantity of the fuel received and 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 62 for 6 NYCRR 257-1.4:** The sulfur content of the back-up fuel shall be less than 0.04% by weight. Compliance shall be determined by fuel sampling or by



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supplier certification. To minimize the Sulfur Dioxide emissions from the facility, the secondary (back-up) fuels to be used in the event of an interruption of natural gas supply are either kerosene with 0.04 % by weight sulfur content or ultra low sulfur diesel. See associated Conditions 26, 27, and 28.

**Condition 63, 64, and 65 for 6 NYCRR 211.2:** These conditions apply to the scrubber that controls odorous emissions at the Tipping Building.

- i. Condition 63: The Oxidation Reduction Potential in the Odor Scrubber shall not be less than 550 millivolts.
- ii. Condition 64: The pH in Stage I of the Odor Scrubber shall not exceed 5.0.
- iii. Condition 65: The pH in Stage II of the Odor Scrubber shall not fall below 9.0.