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217/785-1705

CONSTRUCTION PERMIT -- REVISED
NSPS SOURCE

PERMITTEE

Metropolitan Biosolids Management, LLC
Attn: Steven Waters, President
6001 West Pershing Road
Stickney, Illinois 60804

Application No.: 04110024 I.D. No.: 031051APL
Applicant's Designation: Date Received: July 17, 2015
Subject: Biosolids Heat Drying Plant
Date Issued: November 6, 2015
Location: 6001 West Pershing Road, Stickney, Cook County

This permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a sludge drying plant as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1.0 Source Provisions

1.1 Introduction

The sludge drying plant (the plant) receives wet material (wet sludge/biosolids) by enclosed conveyors from the adjacent Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) Stickney Works. The wet material from MWRDGC's Stickney Works is a byproduct from the wastewater treatment process after the sewage sludge has been fully treated. The dried material produced at the plant is applied to land as a fertilizer. The plant is considered a single source with the MWRDGC's Stickney Works because of its location and operational and contractual relationship with the MWRDGC.

The plant consists of four enclosed drying lines. Each line includes wet material handling, an indirectly-heated dryer and dry material handling. The processing equipment is enclosed in a building with an air handling system that vents to an odor control scrubbing system. Three thermal oil heaters that can burn gaseous fuels and fuel oil heat the thermal oil that is used to supply heat to the dryers.

This revised permit changes certain requirements for the thermal oil heaters. It provides for burning of digester gas from the Stickney Works in at most a single thermal oil heater at any time rather than in all three of the heaters. This revised permit also no longer provides for the use of reclaimed oil in the heaters.

1.2 General Operating Requirements

a. The plant (four lines) shall not process more than 28,000 tons/month and 280,000 tons/year of wet material. Each line shall not process more than 220 tons/day of wet material.

b. The plant shall be operated in accordance with good air pollution control practices in order to minimize emissions and odors, including exhausting the dryers and other process equipment through a scrubber system or thermal oxidizer system.

1.3 General Emissions Standards Applicability

a. Each emission unit is subject to 35 IAC 212.123(a), which provides that no person shall cause or allow the emission of smoke or other particulate matter with an opacity greater than 30 percent into the atmosphere from any emission unit, except as provided in 35 IAC 212.123(b).

b. Each emission unit, other than the thermal oil heaters and the oil storage tanks, is subject to 35 IAC 218.301, which provides that no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission source, except as provided in the following exception: If no odor nuisance exists, this limitation shall apply only to photochemically reactive material.

c. Each process emission unit or group of like process emission units, other than the thermal oil heaters and the oil storage tanks, is subject to 35 IAC 212.321(b)(1), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321.

1.4 Non-applicability of Source Wide Regulations

a. Metropolitan Biosolids Management (MBM) has addressed the applicability of 40 CFR 52.21, Prevention of Significant Deterioration (PSD), 35 IAC Part 203, Major Stationary Sources Construction and Modification (MSSCAM), and 40 CFR 63.40 through 63.43. The limits established by this permit are intended to ensure that the proposed construction/modification addressed in this construction

permit does not constitute a major modification or major project pursuant to these rules.

b. This revised permit is also based on this revision not being a major modification for purposes of PSD or MSSCAM. This is because it will be accompanied by reductions in the permitted emissions of certain pollutants from this plant such that the plant will still not be a major project, as shown in Attachment 1.

1.5 Permit Consequences

a. i. This permit does not relieve the Permittee from responsibility to comply with all applicable Local, State and Federal Regulations, which are a part of the Illinois State Implementation Plan, as well as all other Local, State and Federal requirements.

ii. In particular, issuance of this permit does not relieve the Permittee from:

A. Compliance with applicable Illinois Rules for Water Pollution Control, including the obligation to obtain a permit from the Division of Water Pollution Control.

B. Compliance with applicable rules governing handling of wastes generated by this plant.

C. Compliance with Standard For the Use or Disposal of Sewage Sludge, 40 CFR 503, as applicable.

b. The Permittee is authorized to operate the thermal oil heaters under this revised construction permit until a Clean Air Act Permit Program (CAAPP) permit has been issued addressing the requirements of this revised construction permit provided that the Permittee performs the emission testing required by Condition 2.4.7-1 in a timely manner and the Permittee submits a timely application for a revised CAAPP permit for the plant that addresses the requirements of this revised construction permit. This condition supersedes Standard Condition 6.

1.6 Annual Emission Report

a. With its Annual Emission Report required by 35 IAC Part 254, the Permittee shall report the following information for the previous year:

i. The amount of wet material processed by the plant (tons).

ii. If fuel(s) other than natural gas were used in the thermal oil heaters, the amount(s) of such other fuel(s) that were used, by type of fuel, and the percentage of the total heat input to the heaters provided by each type of fuel.

2.0 Unit Specific Conditions

2.1 Unit: Wet Material Handling

2.1.1 Description

The wet material will be received by enclosed conveyors from MWRD Stickney Works and will have a moisture content of approximately 75 percent. The wet material will first be stored in silos. The wet material will then be pumped from the silos to hoppers and then to mixers or "coaters", which will combine the wet material with material that has already been dried. The coaters will feed the dryers. The emissions associated with handling wet material in the transfer station, silos and the hoppers will be controlled by a common scrubber system.

2.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Wet Material Systems	Wet Material Stations (ST1-4), Silos (WBS1-4), Hoppers (DH1-4)	Odor Control Scrubber System (S-1)

2.1.3 Applicability Provisions and Applicable Regulations

a. An "affected unit" for the purpose of these unit-specific conditions is an emission unit described in Conditions 2.1.1 and 2.1.2.

2.1.4 Non-Applicability of Regulations of Concern

None

2.1.5 Operational Limits and Control Requirements

None

2.1.6 Emission Limitations

a. This permit is issued based on negligible emissions of volatile organic material (VOM), particulate matter (PM), and hydrogen sulfide (H_2S) from the affected units as controlled by the odor control scrubber system. For this purpose, emissions of each pollutant shall not exceed the nominal emission rates of 0.1 lbs/hour and 0.44 tons/year.

2.1.7 Testing Requirements

a. Within 90 days of initial startup of the affected units, the VOM, PM, and H_2S emissions from the scrubber system for the affected units, the inlet and outlet emissions from the scrubber system shall be measured by an approved testing service at the Permittee's expense during conditions that are representative of maximum emissions.

b. i. This testing shall be conducted in accordance with the general testing methods identified in Condition 3.1(a).

ii. The Permittee shall provide notification for testing in accordance with Conditions 3.1 (b) and (c).

iii. The Permittee shall submit the Final report in accordance with Condition 3.1 (d) and shall include the information specified in Condition 2.1.7.

2.1.8 Monitoring Requirements

a. The Permittee shall monitor the following operating parameter for the scrubber system for the affected units:

i. Scrubbant flow rate (gallons/minute); and

ii. Pressure drop across the scrubber.

2.1.9 Recordkeeping Requirements

a. The Permittee shall keep records of the amount of wet material received by the plant (tons/month and tons/year) and moisture content (% by weight), with supporting documentation.

b. The Permittee shall maintain a file that contains records of sampling and analysis that it conducts for the wet material received from MWRD Stickney Works for organics and heavy metal content, including lead. These records shall address both analyses conducted using standard USEPA Methods for the analysis of the sludge, as well as any alternative methodologies used by the Permittee for working purposes.

c. The Permittee shall maintain an operating and maintenance log for the affected units and associated scrubber system.

d. The Permittee shall maintain the following records related to emissions of VOM, PM, and H_2S from the affected units:

i. A current file containing the maximum emission rates from the affected units based on emission rates and control efficiencies obtained through most recent emissions testing, provided that compliance was demonstrated (lbs/hour).

ii. Monthly and annual emissions (tons/month and tons/year), with supporting calculations.

2.1.10 Reporting Requirements

a. The Permittee shall notify the Illinois EPA within 30 days of deviations of the affected units with applicable requirements. Reports shall describe the incident, the probable cause of such deviations, and any corrective actions or preventive measures taken.

2.2 Unit: Dryers and Coaters

2.2.1 Description

The wet material will be dried in four identical indirectly heated dryers in which wet material will not come into contact with combustion gases. Instead, the dryers will be heated by circulating hot thermal oil through tubes in each dryer.

The exhaust from each dryer will be vented to a condenser, separate Venturi scrubber, and then through a common thermal oxidizer system, which has a primary and back-up thermal oxidizer.

The four coaters are used to mix previously dried material with new wet material, which produces a feed material for the dryers with a moderate moisture content, suitable for effective drying. The emissions from each coater will also be vented through the associated dryer control system.

The separation hoppers receive the dried material coming out of each dryer, some of which is sent on to the pellet coolers with the remainder sent back to the coaters.

2.2.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Drying System	Dryers (HD1-4), Coaters (CT1-4), Separation Hoppers (SH-1-4)	Condensers (CD1-4), Venturi Scrubbers (VS1-4), Thermal Oxidizer (TO1 or TO2)

2.2.3 Applicability Provisions and Applicable Regulations

a. An "affected unit" for the purpose of these unit-specific conditions is a unit as described in Conditions 2.2.1 and 2.2.2.

2.2.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected dryers not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Mercury, 40 CFR Part 61, Subpart E, because the dryers are heated indirectly.

2.2.5 Operational Limits and Control Requirements

a. The affected dryers shall be heated indirectly.

b. The control system for each affected unit shall be in operation at all times when the affected unit is being operated.

c. The thermal oxidizer combustion chamber shall be preheated to working temperature before beginning operation of the affected units. Until emission testing is performed, the minimum working temperature shall be at least 1400°F or the manufacturer's recommended temperature, whichever is higher. After testing is performed, the minimum temperature shall be the temperature during testing that demonstrates compliance. This temperature shall be maintained during operation of the affected units.

2.2.6 Emission Limitations

Emissions from the affected units, including combustion emissions from the associated thermal oxidizer, shall not exceed the following limits:

Pollutant	Limit (Lbs/Hour)	Limit (Tons/Year)
VOM	0.10	0.44
PM*	0.50	2.19
PM_{10}**	1.15	5.04
NO_x	1.91	8.35
CO	1.00	4.33
SO_2	1.52	6.66
Lead	0.01	0.05

* Filterable particulate only

** Including both filterable and condensable particulate

2.2.7 Testing Requirements

a. i. Within 90 days of initial startup of the affected units, the VOM, PM, PM_{10}, NO_x, SO_2 and metals emissions from the thermal oxidizer system for the affected units shall be measured by an approved testing service at the Permittee's expense during conditions that are representative of maximum emissions.

ii. In addition to the emission testing required above, the Permittee shall perform emission tests as requested by the Illinois EPA for the affected units within 90 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA.

Note: Revised requirements for periodic emission testing may be established in the CAAPP Permit for the plant.

b. i. This testing shall be conducted in accordance with general testing methods identified in Condition 3.1(a).

ii. The Permittee shall provide notification for testing in accordance with Conditions 3.1(b) and (c).

iii. The Permittee shall submit the Final report in accordance with Condition 3.1 (d) and shall include the information specified in Condition 2.2.7.

2.2.8 Monitoring Requirements

a. The Permittee shall monitor temperature of the exhaust gas leaving each condenser.

b. The Permittee shall monitor the following operating parameters for the Venturi scrubber for each affected dryer:

i. Scrubbant flow rate (gallons/minute); and

ii. Pressure drop across the scrubber.

c. The Permittee shall install, calibrate, operate and maintain a continuous monitoring device on the thermal oxidizers according to vendor specifications at all times the thermal oxidizer is in use. The monitoring device shall monitor the combustion chamber temperature of the thermal oxidizers.

2.2.9 Recordkeeping Requirements

a. The Permittee shall maintain records of the amount of wet material processed by the affected dryers, measured as wet material delivered to the coaters (tons/day, tons/month, and tons/year).

b. The Permittee shall maintain an operating and maintenance log for each control device.

c. The Permittee shall collect and record all of the following information each day for the thermal oxidizer, pursuant to 35 IAC 218.105:

i. Temperature monitoring data;

ii. A log of the operating time for the capture system, control device, monitoring equipment and the associated emission units; and

iii. A maintenance log for the capture system, control device and monitoring equipment detailing all routine and nonroutine maintenance performed including dates and duration of any outages.

d. The Permittee shall maintain the following records related to emissions of VOM, PM, PM_{10}, NO_x, CO SO_2 and lead from the affected units:

i. A current file containing the maximum emission rates from the affected units based on emission rates and control efficiencies obtained through most recent emissions testing, provided that compliance was demonstrated (lbs/hour); and

ii. Monthly and annual emissions, (tons/month and tons/year), along with supporting calculations.

2.2.10 Reporting Requirements

a. The Permittee shall notify the Illinois EPA, within 30 days, of deviations of the affected units with applicable requirements and within 10 days of a failure of the interlock system or alarm, which allowed continued operation without control devices in operation. Reports shall describe the incident, the probable cause of such deviations, and any corrective actions or preventive measures taken.

b. The Permittee shall submit semi-annual reports to the Illinois EPA for the amount of wet material processed by the dryers, total tons and tons per day, monthly average (operating days only) for each month during the reporting period.

2.3 Unit: Dried Material Handling

2.3.1 Description

The dried material from each separation hopper will be transferred to a pellet cooler and classifying screen. Dry material pellets of the proper size will then be sent to a pellet storage silo. Oversized and undersized biosolids will be sent to a collection hopper and recycled back to the coaters. The emissions from the pellet coolers will be controlled by dedicated bag filters, which are ducted to the thermal oxidizer system for the dryers (refer to Condition 2.2). The emissions from the classifying screens, collection hoppers, pellet silos, and truck loading building will be controlled by two bag filter systems which are ducted to the odor control scrubber system for wet material handling (refer to Condition 2.1).

2.3.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Dry Material Operations	Pellet Coolers (PCO1-4),	Bag Filters (BF1-4), Thermal Oxidizer (TO1 or TO2)
	Truck Loading Building, Classifying Screens (CS1-4), Collection Hoppers (CH1-4), Pellet Storage Silos (PS1-4)	Bag Filter (BF1A or BF2A), Odor Control Scrubber System

2.3.3 Applicability Provisions and Applicable Regulations

a. An "affected unit" for the purpose of these unit-specific conditions is an emission unit described in Conditions 2.3.1 and 2.3.2.

2.3.4 Non-Applicability of Regulations of Concern

None

2.3.5 Operational Limits and Control Requirements

None

2.3.6 Emission Limitations

None

(Emissions from these affected units are addressed in the emission limitations of Conditions 2.1.6 and 2.2.6.)

2.3.7 Testing Requirements

None

2.3.8 Instrumentation Requirements

a. i. The Permittee shall equip baghouse(s) for the affected unit with instrumentation to measure the pressure drop across the baghouse.

ii. The Permittee shall record the pressure drop of each baghouse on at least a daily basis.

2.3.9 Recordkeeping Requirements

a. The Permittee shall maintain operating log(s) and maintenance inspection, and repair log(s) for the affected units and filter systems.

2.3.10 Reporting Requirements

a. The Permittee shall notify the Illinois EPA, within 30 days, of deviations of the affected units with applicable requirements. Reports shall describe the incident, the probable cause of such deviations, and any corrective actions or preventive measures taken.

2.4 Unit: Thermal Oil Heaters

2.4.1 Description

The thermal oil circulated through the dryers is heated in three thermal oil heaters that can fire gaseous fuels (natural gas and digester gas from the Stickney Works) and fuel oil. The heaters are equipped with low NO_x burners for the control of nitrogen oxide (NO_x) emissions.

This revised permit provides for burning of digester gas in at most one thermal oil heater at any time. This revised permit also no longer provides for burning of reclaimed oil, which the heaters were originally developed to burn. It also no longer addresses the scrubber system that was installed for control of emissions from burning reclaimed oil in the heaters, which system was removed from service when the heaters began burning natural gas.

2.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
3 Heaters (TOH 1 - 3)	Thermal Oil Heaters, fired with natural gas, digester gas or fuel oil, nominal capacity 27 mmBtu/hr each	Low-NO_x burners

2.4.3 Applicability Provisions and Applicable Regulations

a. An "affected heater" for the purpose of these unit-specific conditions is a heater described in Conditions 2.4.1 and 2.4.2.

b. Each affected heater is subject to the New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Dc, and the General Provisions of the NSPS, 40 CFR 60 Subpart A. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA.

c. Each affected heater is subject to 35 IAC 212.206, which provides that no person shall cause or allow the emission of particulate matter (PM) into the atmosphere in any one hour period to exceed 0.15 kg of particulate matter per MW-hr of actual heat input from combustion units using liquid fuel (0.10 lbs/mmBtu).

d. Each affected heater is subject 35 IAC 214.122(b), which provides that no person shall cause or allow

the emission of sulfur dioxide (SO_2) into the atmosphere in any one hour period from a fuel combustion emission unit to exceed 0.46 kg of SO_2 per MW-hour of actual heat input from burning distillate fuel oil (0.3 lbs/mmBtu).

e. Each affected heater is subject to 35 IAC 216.121, which provides that no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission unit to exceed 200 ppm, corrected to 50 percent excess air.

2.4.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected heaters not being subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD, since this plant and MWRDGC Stickney Works together are not a major source for emissions of hazardous air pollutants.

b. This permit is issued based on each affected heater not being subject to the requirements of 35 IAC 217 Subparts D and F for NO_x emissions because the potential NO_x emissions of each heater do not meet the applicability criteria in 35 IAC 217.150(a)(1)(B), i.e., NO_x emission equal to or greater than 15 tons per year and 5 tons per ozone season.

2.4.5 Operational Limits and Control Requirements

a. i. The maximum heat input rate of each affected heater shall not exceed 27 million Btu/hour.

ii. A. The total amount of fuel burned in the affected heaters shall not exceed 62,490 million Btu/month and 624,900 million Btu/year.

B. The amount of oil fired in the affected heaters shall not exceed 437,000 gallons/month and 4,370,000 gallons/year.

b. i. Each affected heater shall be equipped, operated, and maintained with low-NO_x burners.

ii. Digester gas shall not be burned in more than one affected heater at a time. Reclaimed oil shall not be fired in any of the affected heaters.

Note: This condition replaces Condition 4.3.2(k)(i)(C) of CAAPP Permit 08090012, which required use of the scrubber if reclaimed oil or digester gas was being burned in any affected heater.

iii. The affected heaters, including the burners, shall be operated and maintained in accordance with good air pollution control practices to minimize emissions.

iv. The affected heaters shall be operated and maintained in accordance with written procedures developed and maintained by the Permittee, which procedures shall appropriately address the burning of different fuels in the heaters.

c. The sulfur content of fuel oil burned by the affected heaters shall not exceed 15 ppm by weight.

Note: Pursuant to the NSPS, 40 CFR 60.42c(d), the affected heaters shall not burn fuel that contains greater than 0.5 weight percent sulfur.

2.4.6 Emission Limitations

a. i. The emissions from each affected heater, in pounds/million Btu heat input (lbs/mmBtu), shall not exceed the following limits:

Pollutant	Limit	
	Oil	Gas
VOM	0.002	0.006
PM/PM_{10}*	0.0082	0.008
NO_x	0.100	0.050
CO	0.035	0.082
Formaldehyde	0.00043	0.0001

* Including both filterable and condensable emissions.

ii. The SO_2 emissions of an affected heater that is burning digester gas shall not exceed 0.071 lbs/mmBtu.

Note: The above limit replaces the limit in Condition 4.3.2(f)(i)(C)(II) of CAAPP Permit #08090012, which limited SO_2 emissions of an affected heater from burning of gaseous fuel to 0.010 lbs/mmBtu.

b. Total emissions from the affected heaters shall not exceed the following limits:

Pollutant	Limit	
	Tons/Month	Tons/Year
VOM	0.19	1.86
PM/PM_{10}*	0.26	2.56
NO_x	3.12	31.25
CO	2.83	28.33
SO_2	0.87	8.65
Formaldehyde	0.013	0.13

* Including both filterable and condensable particulates.

2.4.7-1 Emission Testing Requirements

a. The Permittee shall have emission testing performed for the affected heaters as follows:

i. If digester gas is burned in an affected heater, as provided for by this revised permit, testing for the VOM, NO_x, CO and formaldehyde emissions from an affected heater while burning digester gas shall be performed within 180 days of the date that digester gas is first burned in an affected heater pursuant to this revised permit.

ii. In addition to the emission testing required above, within 90 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA, emission testing shall be performed for affected heater(s) for pollutants and fuel(s) specified by the Illinois EPA in its request.

b. i. These tests shall be performed by an approved testing service at the Permittee's expense during conditions that are representative of maximum emissions. For purposes of testing when burning digester gas, if during the time period within which testing must be performed digester gas cannot yet be burned in an affected heater at the maximum firing rate, the Permittee shall have testing performed while digester gas is being burned at a rate that is at least 90 percent of the rate that has been reliably achieved during normal operation of the heater(s) with digester gas.

ii. This emission testing shall be conducted in accordance with general testing methods identified in Condition 3.1(a).

iii. The Permittee shall provide notification for testing in accordance with Conditions 3.1(b) and (c).

iv. The Permittee shall submit the Final Report in accordance with Condition 3.1(d) and shall include the information specified in Condition 2.4.7(c).

c. When emission testing is conducted for the burning of digester gas in an affected heater, the Permittee shall have representative samples of the digester gas being burned by the affected heater taken and analyzed in accordance with Condition 2.4.7-2 (b) and report the results of this analysis with the Final Report for this emission testing.

2.4.7-2 Fuel Sampling and Analysis Requirements

a. Reserved

Note: In the original permit, this condition contained sampling and analysis requirements related to the use of reclaimed oil by the affected heaters.

b. i. The Permittee shall take representative samples of the digester gas burned in the affected heaters on a regular basis and have the samples analyzed for heat content (Btu/scf) and sulfur content (ppm by volume) by a qualified laboratory using appropriate ASTM or equivalent methods.

ii. For this purpose, the initial sample shall be taken prior to burning digester gas pursuant to this revised permit and subsequent samples shall be taken as follows:

A. On at least a monthly basis, until six consecutive samples show that the sulfur content of the digester gas is such that the maximum equivalent SO_2 emission rate, assuming complete conversion of sulfur to SO2, is no more than 0.060 lbs/mmBtu.

B. On at least an annual basis for as long as digester gas is routinely burned in the heaters, provided that sampling and

analysis in accordance with Condition 2.4.7-2(b)(ii)(A) shall resume if a sample shows an equivalent SO_2 emission rate greater than 0.060 lbs/mmBtu.

C. Within 30 days of a written request from the Illinois EPA.

c. The Permittee shall keep records for the results of these analyses and the collection of samples.

2.4.8 Instrumentation Requirements

a. The Permittee shall operate and maintain a meter to measure the amount of digester gas received from the Stickney Works. The Permittee shall keep records for the amount of digester gas that is received on at least a monthly basis.

2.4.9 Recordkeeping Requirements

a. The Permittee shall keep a file with documentation for the maximum firing rate(s) of each affected heater (million Btu/hour), with supporting documentation.

b. Reserved

Note: In the original permit, this condition contained recordkeeping requirements related to the use of reclaimed oil by the affected heaters.

c. The Permittee shall keep records for shipments of fuel oil received at the plant to confirm compliance with Condition 2.4.5(c), including:

i. Name of supplier;

ii. Date received; and

iii. Amount received.

d. The Permittee shall maintain records of fuel usage of the affected heaters by type of fuel (gallons or cubic feet/month and gallons or cubic feet/year) and the percentage of the heat input, on a Btu basis, provided to the affected heaters by different fuels on a calendar year basis, with supporting calculations.

e. Reserved

Note: In the original permit, this condition contained recordkeeping requirements related to the scrubber system for the affected heaters.

f. The Permittee shall maintain the following logs or other records for the affected heaters:

i. Operating log(s) that, at a minimum, shall include the following information:

A. Information identifying periods when heater(s) were not in service.

B. For periods when heater(s) were in service and operating normally, relevant process information to generally confirm normal operation and to confirm that digester gas is being burned in at most one heater at any time

C. For periods when heater(s) were in service and not operating normally, identification of each such period, with detailed information describing the operation of the unit(s) and the potential consequences for additional emissions from the unit(s), with explanation.

ii. Inspection, maintenance and repair log(s) that, at minimum, shall include the following information:

A. Identification of equipment, with date, time, responsible employee and type of activity.

B. For inspections, a description of the inspection, findings, and any recommended actions, with reason.

C. For maintenance and repair activity, a description actions taken, reason for action, e.g., preventative measure or corrective action as a result of inspection, and the condition of equipment following completion of the activity.

g. The Permittee shall maintain the following records related to emissions of VOM, CO, NO_x, SO_2, PM and PM_{10}, from the affected heaters:

i. A file, which shall be kept current, containing the maximum emission rates of each pollutant (lbs/mmBtu) from the affected heaters for each fuel that is burned, along with supporting documentation and calculations. For pollutants for which emission testing has been performed, these rates shall be based on emission rates measured in the most recent emissions testing. For SO_2 emissions of digester gas, the rate shall be based on sampling and analysis of digested gas for its sulfur and heat content. For other pollutants, the rates shall be based on emission data provided by the manufacturer or appropriate emission factors developed by USEPA.

ii. Monthly and annual emissions of each pollutant, (tons/month and tons/year), along with supporting calculations.

iii. The NO_x emissions of each affected heater on an annual basis (tons per calendar year) and on a seasonal basis (tons for the period of May through September of each year, inclusive), with supporting data and calculations.

2.4.10 Reporting Requirements

a. The Permittee shall notify the Illinois EPA within 30 days of deviations of the affected heaters with applicable requirements. Reports shall describe the incident, the probable cause of such deviations, and any corrective actions or preventive measures taken.

b. The Permittee shall notify the Illinois EPA within 30 days of the following dates:

i. The date that digester gas is first burned in an affected heater pursuant to this revised permit.

ii. The date that fuel oil is first burned in an affected heater pursuant to this revised permit.

2.5 Unit: Oil Storage Tanks

2.5.1 Description

The oil storage tanks will store fuel oil for the thermal oil heaters addressed in Part 2.4 of this permit. The conditions in this Part 2.5 address the storage of this fuel oil.

2.5.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Tanks	Fuel Oil Storage Tanks, Nominal Capacity of 50,000 Gallons Each (ROS1-2)	None

2.5.3 Applicability Provisions and Applicable Regulations

a. An "affected tank" for the purpose of these unit-specific conditions, is a fuel oil storage tank described in Conditions 2.5.1 and 2.5.2.

b. Each affected tank is subject to the NSPS for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60 Subparts Kb. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA.

2.5.4 Non-Applicability of Regulations of Concern

a. Except as provided in Condition 2.5.9(a) (see also 40 CFR 60.116b), pursuant to 40 CFR 60.110b(b) the affected tanks are not subject to the general provisions of NSPS Subpart Kb, since the storage vessels are used to store a volatile organic liquid with a maximum true vapor pressure less than 3.5 kPa.

2.5.5 Operational Limits and Control Requirements

a. The affected tanks shall be operated in accordance with good air pollution control practices in order to minimize emissions and odors.

2.5.6 Emission Limitations

a. This permit is issued based on negligible emissions of VOM from the affected tanks. For this purpose,

emissions from all such units shall not exceed a nominal emission rate of 0.44 tons/year.

2.5.7 Testing Requirements

None

2.5.8 Monitoring Requirements

None

2.5.9 Recordkeeping Requirements

a. The Permittee shall keep readily accessible records showing the dimension of the two tanks (ROS1-2) and an analysis showing the capacity of the storage vessels. This record shall be kept for the life of the source pursuant to 40 CFR 60.116b(a) and 60.116b(b).

b. The permit shall maintain a file that contains the identification and maximum vapor pressure of the materials stored in the affected tanks.

c. The Permittee shall maintain records of VOM emissions for the affected tanks, (lbs/month and tons/year) determined by published USEPA Methods e.g., Tanks, with supporting documentation.

d. The Permittee shall maintain an operating and maintenance log for the affected tanks.

2.5.10 Reporting Requirements

a. The Permittee shall notify the Illinois EPA, within 30 days, of deviations of the affected tanks with applicable requirements. Reports shall describe the incident, the probable cause of such deviations, and any corrective actions or preventive measures taken.

3.0 General Requirements

3.1 a. The following methods and procedures shall be used for testing of emissions, unless another USEPA Method is approved by the Illinois EPA: Refer to 40 CFR 60, Appendix A, for USEPA test methods.

Location of Sample Points:	USEPA Method 1
Gas Flow and Velocity:	USEPA Method 2
Flue Gas Weight:	USEPA Method 3
Moisture:	USEPA Method 4
Particulate Matter	USEPA Method 5
PM_{10}	USEPA Methods 5 and 202
Sulfur Dioxide	USEPA Method 6, 6a, 6b, or 6c
Nitrogen Oxides	USEPA Method 7
Opacity	USEAP Method 9
Carbon Monoxide	USEPA Method 10
Volatile Organic Material	USEPA Method 18 and 25 or 25A (if outlet VOM cont. < 50 ppmv as carbon, non-methane)
Metals, Including Lead	USEPA Method 29
Formaldehyde	USEPA Method 320*

* Equivalent test methods may be proposed by the Permittee and approved by the Illinois EPA.

b. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing, including as a minimum:

i. The person(s) who will be performing sampling and analysis and their experience with similar tests.

ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the emission unit and any control equipment will be determined.

iii. The specific determinations of emissions and operations that will be made, including sampling and monitoring locations.

iv. The test method(s) that will be used, with the specific analysis method, if the method can be used with different analysis methods.

v. The format and content of the Source Test Report.

c. The Illinois EPA shall be notified prior to the testing to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of thirty days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

d. Copies of the Final Report(s) for the completed testing shall be submitted to the Illinois EPA within 45 days after the test results are compiled and finalized. The Final Report shall include as a minimum:

i. A summary of results;

ii. General information;

iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule;

iv. Detailed description of test conditions, including the following:

A. Process information, i.e., mode(s) of operation, process rate, fuel usage rates, raw material composition, e.g. fuel or raw material consumption.

B. Specific control equipment information, i.e., equipment condition and operating parameters during testing.

C. If the emission testing was conducted for an affected heater while burning digester gas, the SO_2 emission rate of the heater in lbs/mmBtu and lbs/hour, based on sampling and analysis of the digester gas in accordance with Condition 4.4.7-2(b)(i), with supporting documentation.

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.

3.2 a. Each required continuous monitoring device shall be equipped with a data recording device.

b. i. The required continuous monitoring systems shall be connected to interlocks that discontinue operation of the associated emission units in the event of failure of the control device.

ii. Each required continuous monitoring system shall be equipped with an alarm (audio or visual) that can be set to go off at a particular value of the monitored parameter. These alarm(s) shall be used if operation of the associated emission unit is not interlocked with the data recorded by the continuous monitoring system.

b. The Permittee shall keep a log for the operation and maintenance for each continuous monitoring device.

3.3 All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

3.4 a. Two copies of reports and notifications required by this permit shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

b. One copy of each test notification or final test reports shall be sent to the Illinois EPA's source monitoring unit at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Source Monitoring Unit 9511
9511 West Harrison
Des Plaines, Illinois 60016

If you have any questions on this permit, please call Bob Smet at 217/785-1705.

Raymond E. Pilapil

Raymond E. Pilapil
Acting Manager, Permit Section
Division of Air Pollution Control

REP:RPS:psj

ATTACHMENT 1

Summary of Permitted Emissions (Tons/Year)*

Equipment/Process	PM/PM_{10}**	NO_x	CO	SO_2	VOM	Lead	Formaldehyde
Sewage Sludge Handling	0.44	----	----	----	0.44	----	----
Dryers	5.04	8.35	4.33	6.66	0.44	0.05	----
Thermal Oil Heaters	2.56	31.25	28.33	8.65	1.86	----	0.13
Oil Storage Tanks	----	-----	-----	-----	0.44	----	----
Road Dust	1.00	-----	-----	-----	----	----	----
Total	9.04	39.60	32.64	15.31	3.18	0.05	0.13

* As this revised permit no longer provides that the thermal oil heaters may burn reclaimed oil, this summary of the permitted emissions of the plant reflects reductions in the plant's permitted emissions of SO_2 and lead. It also no longer addresses emissions of hydrogen chloride, which were associated with burning of reclaimed oil in the heaters.

** These limits also ensure that emissions of $PM_{2.5}$ are not significant, i.e., 10 tons per year or more.

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
P. O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.

2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act, and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.

4. The Permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:

   a. to enter the Permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,

   b. to have access to and copy any records required to be kept under the terms and conditions of this permit,

   c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,

   d. to obtain and remove samples of any discharge or emission of pollutants, and

   e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:

   a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,

   b. does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,

   c. does not release the Permittee from compliance with the other applicable statues and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,

   d. does not take into consideration or attest to the structural stability of any units or parts of the project, and

e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.

6. a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.

   b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.

7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:

   a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or

   b. upon finding that any standard or special conditions have been violated, or

   c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.