



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

8/5/2013

Certified Mail

Dan Siler
Mill Creek WWTP
1600 Gest Street
Cincinnati, OH 45204-2096

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 1431070944
Permit Number: P0115155
Permit Type: Administrative Modification
County: Hamilton

No	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
Yes	CEMS
No	MACT/GACT
Yes	NSPS
Yes	NESHAPS
Yes	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Cincinnati Enquirer. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and Southwest Ohio Air Quality Agency
250 William Howard Taft Rd.
Cincinnati, OH 45219

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Southwest Ohio Air Quality Agency at (513)946-7777.

Sincerely,

Michael W. Ahern
Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 -Via E-Mail Notification
SWOAQA; Indiana; Kentucky



Permit Strategy Write-Up

This permit is an Administrative Modification for PTI 14-05837. PTI 14-05837 covered the installation of three fluidized bed sewage sludge incinerators at the Metropolitan Sewer District's Millcreek Waste Water Treatment Plant. PTI 14-05837 was appealed to the Environmental Review Appeals Commission, ERAC case No. 316041. The T&C of this permit settle issues raised in ERAC case No. 316041.

The Permit Strategy Write-Up and Synthetic Minor Determination from PTI 14-05837 is below.

The Mill Creek Waste Water Treatment Plant (MCTP) is located at 1600 Gest Street in Cincinnati, Hamilton County. The MCTP is a publicly owned treatment works consisting of a primary and secondary biological system for treating municipal sewage and industrial waste water. The facility receives dewatered sludge from its other locations and the treatment process at the MCTP location. The facility is considered a major source for multiple pollutants. The facility was issued a Title V operating permit on 01/08/03 which expires 01/08/08.

The MSD plans to replace its six multi-hearth sewage sludge incinerators with three fluidized bed (FB) incinerators. The three new incinerators will be identical units and have separate and dedicated scrubbers. The current capacity of the MCTP to process sewage sludge in the multi-hearth units is limited to 303 tons per day of dry sludge solids and 110,595 tpy. Each FB unit will have the rated capacity of 4 dry tons per hour. The total rated capacity of the MCTP to process sewage sludge after the incinerator replacement will be 288 tons per day of dry sludge solids.

MSD proposes to accept an enforceable limit on the total annual amount of dry sludge solids incinerated in the three FB units of 82,500 tpy. The enforceability of the annual throughput limitations will limit the net increase in annual emissions below the significant emission rate for each affected pollutant. The limits will make the replacement project a minor modification under State and federal PSD and NSR regulations.

The MCTP is located in Hamilton County, Ohio, which is currently non-attainment for VOCs (8-hour ozone standard), non-attainment for PM2.5, and attainment for all other criteria pollutants. For the purposes of this permit to install action, PM10 is considered a surrogate for PM2.5, therefore all PM10 netting determinations, modeling, and emission limitations are considered to be compliance with PM2.5 requirements.

For existing emissions units, the permittee supplied baseline actual emissions for incorporation into the netting calculations. For PE, PM10 and NOx the 24-month baseline period for actual emissions used by the permittee was 1/1998 to 12/1999. For SO2, CO and VOC the 24-month baseline period for actual emissions used by the permittee was 1/2003 to 12/2005. For lead the 24-month baseline period for actual emissions used by the permittee was 1/1996 to 12/1997. Following the NSR definitions in OAC rule 3745-31-01(III) and OAC rule 3745-31-01(O), the permittee used the actual baseline emissions combined with new and/or modified federally enforceable limitations to establish a potential to emit for the Incinerator Project which did not trigger non-attainment NSR or PSD as demonstrated in the table below:



Pollutant	Potential emissions / allowable limits, tpy	BAE for existing incinerators, tpy	Project net emissions, tpy	Major NSR significant emission rate
PM10	16.5	9.46	7.04	15
SO2	49.5	13.23	36.3	40
NOx	103.13	64.03	39.1	40
CO	70.13	512.51	-442.4	100
VOC	37.13	14.05	23.1	40
Lead	0.66	0.075	0.585	0.6

The conditions outlined in 503.40(c) of 40 CFR Part 503 Subpart E, have been met. For that reason the management practices in 503.45(a), the monitoring requirements for total hydrocarbon concentrations in 503.46(b) and the record keeping requirements for total hydrocarbon concentration in 503(c) and (n) do not apply.

40 CFR Part 503 Subpart E is not a program delegated to Ohio EPA. However, compliance with the requirements of that regulation is demonstrated by combustion temperature limitation, arsenic, cadmium, chromium and nickel limits, oxygen monitor of stack gas. Lead has been limited through the netting with a long term limit such that it will also comply with the limit calculated under 40 CFR 503.

The limit for particulate matter in the permit is 0.40 lb/ton, less than the 0.75 lb/ton threshold in 40 CFR Part 60 Subpart O, section 60.153(d). Therefore the monitoring and record keeping of the sludge charged, incinerator temperature, fuel flow and the daily sludge total solids and volatile solids testing outlined in this rule do not apply.

NSR modeling was performed and submitted for NOx which exceeded the 25 TPY increase threshold at 39.1 TPY and SO2 which exceeded the 25 TPY increase threshold at 36.3 TPY. The dispersion modeling showed that the net ambient concentrations were below the effective concentration goals set by the Ohio EPA with the exception of 24-hr. SO2. This exceedance was the result of downwash effects and occurred at 2 specific fence line receptors located next to the building. This satisfies the criteria for the exemption explained in Engineering Guide No. 69, Question 18.

Synthetic Minor Determination

A. Source Description

The Mill Creek Waste Water Treatment Plant is a publicly-owned treatment works (POTW) located in Cincinnati, Hamilton County consisting of primary and secondary biological systems for treating municipal and industrial wastewater. This facility is one of 7 major sewer treatment plants operated by MSD. In this project, MSD plans to replace its six multi-hearth sewage sludge incinerators (Ohio EPA emissions units 1431070944 N001, N002, N003, N004, N006 and N007) with three fluidized bed (FB) incinerators (N008, N009 and N010.)



B. Facility Emissions and Attainment Status

The Mill Creek facility is a major source where potential CO emissions are greater than 250 tons per year and potential NO_x and OC emissions are each greater than 100 tons per year. Potential PM and PM₁₀ emissions are under 100 ton per year. The SO₂ emissions are less than 250 tons per year.

C. Source Emissions

The current capacity of the facility to process sewage sludge in the multi-hearth units is limited to 303 tons per day of dry sludge solids and 110,595 tpy. Each new fluidized bed incinerator will have the rated capacity of 4 dry tons per hour. The total rated capacity of the new incinerators to process sewage sludge after the incinerator replacement will be 288 tons per day of dry sludge solids. The proposed enforceable limit on the total annual amount of dry sludge solids incinerated in the three FB units of 82,500 tpy. The enforceability of the annual throughput limits will limit the net increase in annual emissions below the significant emission rate for each affected pollutant. The limits will make the replacement project a minor modification under State and federal PSD and NSR regulations.

D. Conclusion

MSD proposes to accept an enforceable limit on the combined annual amount of dry sludge solids incinerated in the three incinerators of 82,500 tons. By MSD accepting the enforceability of this annual sludge throughput, the net increase in annual emissions due to the incinerator replacement will be below the respective significant for each affected pollutant. The incinerator replacement project is then a minor modification under State and federal PSD and NNSR regulations.

While the applicant designed the emissions limitations such that all criteria pollutants would be accounted for in the netting, only CO exceeds the PSD major source threshold and Nonattainment New Source Review would apply to VOC and NO_x (NO_x as related to the Ozone nonattainment area.) The remaining pollutants are currently below their respective major source thresholds and the proposed project will not trigger PSD and NSR by themselves.

PUBLIC NOTICE
Issuance of Draft Air Pollution Permit-To-Install
Mill Creek WWTP

Issue Date: 8/5/2013

Permit Number: P0115155

Permit Type: Administrative Modification

Permit Description: This permit is an Administrative Modification for PTI 14-05837. PTI 14-05837 covered the installation of three fluidized bed sewage sludge incinerators at the Metropolitan Sewer District's Millcreek Waste Water Treatment Plant. PTI 14-05837 was appealed to the Environmental Review Appeals Commission, ERAC case No. 316041. The T&C of this permit settle issues raised in ERAC case No. 316041.

Facility ID: 1431070944

Facility Location: Mill Creek WWTP
1600 Gest Street,
Cincinnati, OH 45204-2096

Facility Description: Sewage Treatment Facilities

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: Bonnie Pray, Southwest Ohio Air Quality Agency, 250 William Howard Taft Rd., Cincinnati, OH 45219. Ph: (513)946-7777



DRAFT

**Division of Air Pollution Control
Permit-to-Install
for
Mill Creek WWTP**

Facility ID:	1431070944
Permit Number:	P0115155
Permit Type:	Administrative Modification
Issued:	8/5/2013
Effective:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install
for
Mill Creek WWTP

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Draft Permit-to-Install
Mill Creek WWTP
Permit Number: P0115155
Facility ID: 1431070944

Effective Date: To be entered upon final issuance

Authorization

Facility ID: 1431070944
Facility Description: Metropolitan Sewer District of Greater Cincinnati waste water treatment plant
Application Number(s): M0002289
Permit Number: P0115155
Permit Description: This permit is an Administrative Modification for PTI 14-05837. PTI 14-05837 covered the installation of three fluidized bed sewage sludge incinerators at the Metropolitan Sewer District's Millcreek Waste Water Treatment Plant. PTI 14-05837 was appealed to the Environmental Review Appeals Commission, ERAC case No. 316041. The T&C of this permit settle issues raised in ERAC case No. 316041.
Permit Type: Administrative Modification
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 8/5/2013
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Mill Creek WWTP
1600 Gest Street
Cincinnati, OH 45204-2096

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Southwest Ohio Air Quality Agency
250 William Howard Taft Rd.
Cincinnati, OH 45219
(513)946-7777

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director



Authorization (continued)

Permit Number: P0115155

Permit Description: This permit is an Administrative Modification for PTI 14-05837. PTI 14-05837 covered the installation of three fluidized bed sewage sludge incinerators at the Metropolitan Sewer District's Millcreek Waste Water Treatment Plant. PTI 14-05837 was appealed to the Environmental Review Appeals Commission, ERAC case No. 316041. The T&C of this permit settle issues raised in ERAC case No. 316041.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Group Name: F.B. Sewage Sludge Incinerators

Emissions Unit ID:	N008
Company Equipment ID:	1431070944
Superseded Permit Number:	14-05837
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	N009
Company Equipment ID:	1431070944
Superseded Permit Number:	14-05837
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	N010
Company Equipment ID:	1431070944
Superseded Permit Number:	14-05837
General Permit Category and Type:	Not Applicable



Draft Permit-to-Install
Mill Creek WWTP
Permit Number: P0115155
Facility ID: 1431070944
Effective Date: To be entered upon final issuance

A. Standard Terms and Conditions



1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.



- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Southwest Ohio Air Quality Agency.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Southwest Ohio Air Quality Agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Southwest Ohio Air Quality Agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Southwest Ohio Air Quality Agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Southwest Ohio Air Quality Agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Southwest Ohio Air Quality Agency.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have



been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Southwest Ohio Air Quality Agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.



15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



Draft Permit-to-Install
Mill Creek WWTP
Permit Number: P0115155
Facility ID: 1431070944
Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions



Draft Permit-to-Install

Mill Creek WWTP

Permit Number: P0115155

Facility ID: 1431070944

Effective Date: To be entered upon final issuance

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.



Draft Permit-to-Install
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C. Emissions Unit Terms and Conditions



1. Emissions Unit Group - F.B. Sewage Sludge Incinerators: N008, N009, N010

EU ID	Operations, Property and/or Equipment Description
N008	4 dry ton per hour fluid bed incinerator No.1
N009	4 dry ton per hour fluid bed incinerator No. 2
N010	4 dry ton per hour fluid bed incinerator No. 3

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>Sulfur Dioxide (SO₂) emissions shall not exceed 4.8 lbs/hour and 115.2 lbs/day.</p> <p>Volatile Organic Compound (VOC) emissions shall not exceed 86.4 lbs/day.</p> <p>Nitrogen Oxides (NO_x) emissions shall not exceed 240.0 lbs/day.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 163.2 lbs/day.</p> <p>See b)(2)b., b)(2)f., c)(3), c)(4), and c)(6).</p> <p>The requirements of this rule also include compliance with the requirements of 40 CFR Part 60 Subpart O, 40 CFR Part 61 Subparts E, and OAC rule 3745-31-05(D), except for lead emissions.</p>
b.	40 Code of Federal Regulations (CFR) Part 60, Subpart O, New Source Performance Standards (NSPS)	<p>Visible particulate emissions shall not exceed 20 percent opacity.</p> <p>Particulate matter (PM) emissions shall not exceed 1.30 lb/ton of dry sewage sludge input.</p>



Effective Date: To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	40 CFR Part 61 Subpart E, National Emission Standards for Hazardous Air Pollutants (NESHAP)	Mercury (Hg) emissions from the sewage sludge incinerator plant shall not exceed 7.1 lbs of mercury per 24-hour period.
d.	OAC rule 3745-31-05(D) Synthetic Minor to Avoid Nonattainment New Source Review and Prevention of Significant Deterioration	See b)(2)a. and c)(2).
e.	OAC rule 3745-17-07	The emission limitations specified by this rule is less stringent than the emission limitations established pursuant to 40 CFR Part 60 Subpart O.
f.	OAC rule 3745-17-09	<p>The emission limitations specified by this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3), as effective 11/30/01.</p> <p>See c)(1).</p> <p>Once b)(2)h. is implemented, this emissions unit will be subject to the following limitation: PE shall not exceed 0.10 pound per one hundred pounds of liquid, semi-solid or solid refuse and salvageable material charged having a capacity equal to or greater than one hundred pounds per hour.</p>
g.	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
h.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>Particulate Emissions (PE) shall not exceed 1.6 lbs/hour, 0.40 lb/ton of dry sewage sludge input and 7 tons per year.</p> <p>Particulate Matter emissions 10 microns and less in diameter (PM10) shall not exceed 38.4 lbs/day and 7 tons per year.</p> <p>See b)(2)h.</p>
i.	OAC paragraph 3745-31-05(C), as effective 12/01/06	<p>Lead emissions shall not exceed 3.68 lbs/day and 0.67 ton/year.</p> <p>See b)(2)g.</p>



(2) Additional Terms and Conditions

- a. The total, combined mass emissions from emissions units N008, N009 and N010, as a 12-month rolling average, shall not exceed the following:
 - PE 16.5 tons/year;
 - PM10 16.5 tons/year;
 - SO2 49.5 tons/year;
 - VOC 37.2 tons/year;
 - NOx 103.2 tons/year;
 - CO 70.13 tons/year; and
 - Lead 0.67 ton/year.
- b. The total, combined mass emission from emissions units N008, N009, and N010 shall not exceed 1.29 tons/year of mercury.
- c. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of venturi and impingement tray scrubbers and compliance with throughput limitations, visible emission limitations and all mass emission limitations.
- d. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- e. The application and enforcement of the provisions of the National Emissions Standards for Hazardous Air Pollutants (NESHAP), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 61, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 61 are also federally enforceable.
- f. The monthly average concentration of carbon monoxide in the exit gas from this emissions unit, corrected for zero percent moisture and to seven percent oxygen, shall not exceed 100 parts per million on a volumetric basis.
- g. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the lead emissions from this air contaminant source since the calculated annual emission rate for lead emissions is less than 10 tons per year taking into account both the following federally enforceable limitation and voluntary restriction (including the used of any applicable air pollution control equipment) as proposed by the permittee:
 - i. 40 CFR Part 503; and
 - ii. venturi and impingement tray scrubbers.



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This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to install P0115155 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

- i. The use of venture and impingement tray scrubbers.
- h. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, these emission limitations/control measures no longer apply.
- c) Operational Restrictions
 - (1) The incinerator, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.
 - (2) The total combined dry sludge feed to emissions units N008, N009 and N010 shall not exceed 82,500 tons per year, based upon a rolling, 365 day summation of the daily dry sludge feed.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the cumulative dry sludge feed levels from emissions units N008, N009 and N010 specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Dry Sludge Feed (Tons)</u>
1	8928
1-2	17856
1-3	26784
1-4	35712
1-5	44640
1-6	53568
1-7	62496



1-8	71424
1-9	80352
1-10	82500
1-11	82500
1-12	82500

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual total combined dry sludge feed limitation for emissions units N008, N009 and N010 shall be based upon a rolling, daily summation of the total combined dry sludge feed for emissions units N008, N009 and N010.

- (3) The permittee shall operate this emissions unit in such a manner such that the daily mean operating combustion temperature for the sewage sludge incinerator shall not exceed the performance test combustion temperature by more than 20 percent.
- (4) Sewage sludge shall not be fired in this emissions unit if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.
- (5) Municipal solid waste shall not be fired in this emissions unit.
- (6) The permittee shall maintain a caustic injection system to ensure compliance with the SO₂ emission limitations contained in this permit. The caustic injection system shall be employed when the SO₂ emissions recorded in d)(12) exceed 90% of the allowable SO₂ emission limitation of 4.8 lbs/hr (4.3 lbs/hr SO₂). The caustic shall be added to the scrubber at a rate sufficient to demonstrate compliance with the lbs/hr emission limitation.

The permittee may conduct a 12-month SO₂ emission study after the issuance of this PTI. Should the permittee demonstrate the ability to maintain continuous compliance with the SO₂ emission limitation without the requirement to utilize the caustic injection system, the caustic addition system specified in this section may be removed from service after the requirements of e)(12) have been satisfied.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, calibrate, maintain and operate a monitoring device that continuously measures and records the pressure drop of the gas flow through the wet scrubbing device while this emissions unit is in operation. This device shall be certified by the manufacturer to be accurate within plus or minus 1 inch water gauge and shall be calibrated on an annual basis in accordance with the manufacturer's instructions. The permittee shall collect and record the following information and maintain in its files for a period of not less than five (5) years:
 - a. a continuous record of the pressure drop of the gas flow through the scrubber and the 15 minute average of the pressure drop;
 - b. records of the downtimes for the monitoring equipment when this emissions unit is in operation;



- c. records of monitoring equipment calibration checks; and
 - d. records of a pressure drop readings that were not at least 70 percent of the average pressure drop recorded during the most recent stack test which demonstrated the emissions unit to be in compliance shall be maintained.
- (2) The permittee shall properly install, calibrate, maintain and operate a monitoring device that continuously measures and records the oxygen content of the incinerator exhaust gas while this emissions unit is in operation. The oxygen monitor located upstream of any rabble shaft cooling air inlet into the incinerator exhaust gas stream, fan, ambient air damper or any other source of dilution air. The oxygen monitoring device shall be certified by the manufacturer to have a relative accuracy of plus or minus 5 percent over its operating range and shall be calibrated according to the methods prescribed by the manufacturer at least once each 24-hour operating period. The permittee shall collect and record the following information and maintain in its files for a period of not less than five (5) years:
- a. a continuous record of the oxygen content of the exhaust gas.
 - b. records of the downtimes for the monitoring equipment when this emissions unit is in operation;
 - c. records of monitoring equipment calibration checks; and
 - d. records of the average oxygen content in the incinerator exhaust gas for each period of one-hour duration or more that the oxygen content of the incinerator exhaust gas exceeds the average oxygen content measured during the most recent performance test which demonstrated the emissions unit to be in compliance by more than 3 percent and when the throughput is greater than or equal to 90% of the average compliance test value.
- (3) Prior to the installation of the continuous carbon monoxide (CO) monitoring system, the permittee shall submit, if not already submitted, information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a, as appropriate. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO monitoring system meets the requirements of Performance Specification 4 or 4a. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.



- (4) The permittee shall install, calibrate, maintain and operate equipment to continuously monitor and record CO emissions in the exit gas from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60. The permittee shall maintain records of data obtained by the continuous CO monitoring system for a period of five years including, but not limited to:
- a. emissions of CO in parts per million on an instantaneous (one-minute) basis;
 - b. emissions of CO in all units of the applicable standard(s) in the appropriate averaging period;
 - c. results of quarterly cylinder gas audits;
 - d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
 - e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
 - f. hours of operation of the emissions unit, continuous CO monitoring system, and control equipment;
 - g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO monitoring system;
 - h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO monitoring system; as well as,
 - i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).
- (5) The permittee shall install, calibrate, maintain, and operate a flow measuring device which can be used to determine the mass of sludge charged to the incinerator. The flow measuring device shall be certified by the manufacturer to have an accuracy of plus or minus 5 percent over its operating range.

The permittee shall collect and record the following information and maintain in its files for a period of not less than five (5) years:

- a. the daily total tons of dry sludge fed to emissions units N008, N009 and N010; and
- b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 365-day summation of the sludge charge rates.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative sludge charge rate for each calendar month.



- (6) The permittee shall install, calibrate, maintain and operate an instrument that continuously measures and records information used to determine the moisture content in the sewage sludge incinerator stack exit gas for this sewage sludge incinerator.
- (7) The permittee shall install, calibrate, maintain and operate continuous temperature measuring devices to measure and record temperatures in the bed and outlet of the fluidized bed incinerator. Each temperature measuring device shall be certified by the manufacturer to have an accuracy of plus or minus 5 percent over its operating range. The permittee shall record operation of a sewage sludge incinerator when the daily mean operating combustion temperature for the fluidized bed incinerator exceeds the performance test combustion temperature by more than 20 percent.
- (8) The frequency of monitoring for lead in sewage sludge fed to a sewage sludge incinerator shall be once per month (12 times per year.) After the sewage sludge has been monitored for two years the Ohio EPA may reduce the frequency of monitoring for lead.
- (9) The permittee shall develop the following information and retain that information for a period of five years:
 - a. the concentration of lead in the sewage sludge fed to the sewage sludge incinerator;
 - b. information that indicates the requirements in the National Emission Standard for mercury in Subpart E of 40 CFR Part 61 are met;
 - c. the daily mean operating combustion temperatures for the sewage sludge incinerator;
 - d. values for the air pollution control device operating parameters;
 - e. the oxygen concentration and information used to measure moisture content in the exit gas from the sewage sludge incinerator stack;
 - f. the sewage sludge feed rate;
 - g. the stack height for the sewage sludge incinerator;
 - h. the dispersion factor for the site where the sewage sludge incinerator is located; and
 - i. the control efficiency for lead for each sewage sludge incinerator.
- (10) All the sources for which mercury emissions exceed 3.5 lbs per 24-hour period shall monitor mercury emissions at intervals of at least once per year by use of Method 105 of Appendix B or the procedures specified in 40 CFR Part 61.53(d). The results of monitoring shall be reported and retained according to 40 CFR Part 61.53(d)(5) and (6) or 40 CFR Part 61.54(f) and (g).



- (11) The permittee shall provide access to the sludge charged so that a well-mixed representative grab sample of the sludge can be obtained.
- (12) The permittee shall install, operate, and maintain equipment to continuously monitor and record SO₂ emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous SO₂ monitoring system including, but not limited to:

- a. emissions of SO₂ in parts per million on an instantaneous (one-minute) basis;
- b. emissions of SO₂ in pounds per hour and in all units of the applicable standard(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous SO₂ monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO₂ monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO₂ monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

- (13) Prior to the installation of the continuous SO₂ monitoring system, the permittee shall submit, if not already submitted, information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous SO₂ monitoring system meets the requirements of Performance Specifications 2 and 6. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.



Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

[40 CFR 60.13] and [40 CFR Part 60, Appendix B]

- (14) Each continuous SO₂ monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. At least 45 days before commencing certification testing of the continuous SO₂ monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of SO₂ emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO₂ monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

- (15) The permittee shall collect and record the following information regarding the caustic injection system:
- a. the time and date the caustic injection system was employed to maintain compliance with the lbs/hr SO₂ emission limitation as specified in c)(6);
 - b. the caustic injection feed rate when employed; and
 - c. any times the hourly SO₂ emission limitations were exceeded and the caustic addition system was not employed.

As provided for in c)(6), should the permittee discontinue the use of the caustic injection system, the information required in to be kept in d)(15) shall no longer be required. The requirement to discontinue collecting this data shall terminate upon written approval by the Southwest Ohio Air Quality Agency as specified in e)(12).

e) Reporting Requirements

- (1) This facility shall submit semi-annual deviation reports which provide records of the operating conditions of the fluidized bed incinerator for each calendar day when:
- a. for each period of 15 minute duration or more, where the total pressure drop across the scrubber system was not at least 70 percent of the average pressure drop recorded during the most recent stack test which demonstrated the emissions unit to be in compliance shall be maintained.



- b. the oxygen content of incinerator exhaust gas exceeds the average oxygen content measured during the most recent performance test by more than three (3) percent for any 1-hour period and when sludge throughput is greater than or equal to 90% of the average compliance test value.

These semi-annual reports shall be submitted by January 30 and July 30 of each year and shall cover the previous six calendar months (January through June and July through December, respectively).

- (2) The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 365 day total combined dry sludge feed limitation for emissions units N008, N009 and N010 and exceedances of the total combined dry sludge feed limitation for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit.
- (3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous CO monitoring system:
 - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Southwest Ohio Air Quality Agency, documenting all instances of CO emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-21, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.
 - b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
 - i. the facility name and address;
 - ii. the exceedance report as detailed in (a) above;
 - iii. the total CO emissions for the calendar quarter (tons);
 - iv. the total operating time (hours) of the emissions unit;
 - v. the total operating time of the continuous CO monitoring system while the emissions unit was in operation;
 - vi. the monthly average carbon monoxide concentration in the exit gas;
 - vii. results and dates of quarterly cylinder gas audits;
 - viii. results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));



- ix. the results of any relative accuracy test audit showing the continuous CO monitor out-of-control and the compliant results following any corrective actions;
- x. the date, time, and duration of any/each malfunction* of the continuous CO monitoring system, emissions unit, and/or control equipment;
- xi. the date, time, and duration of any downtime* of the continuous CO monitoring system and/or control equipment while the emissions unit was in operation; and
- xii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(x) and (xi).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

- (4) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for PE, PM10, SO₂, NO_x, VOC, CO and Lead for emissions units N008, N009 and N010, combined, as specified in b)(2)a.
- (5) The permittee shall submit an annual report to the Southwest Ohio Air Quality Agency that provides the information required in d)(9) by February 15 of each year. This report should cover the previous calendar years operation.
- (6) Deviation (excursion) reports shall be submitted in accordance with the reporting requirements specified in Standard Terms and Conditions, Section A of this permit.
- (7) Pursuant to the NSPS and NESHAP, the source owner-operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. construction date (no later than 30 days after such date);
 - b. actual start-up date (within 15 days after such date); and
 - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Southwest Ohio Air Quality Agency

250 William Howard Taft Road

Cincinnati, Ohio 45219



- (8) If the average particulate matter emission rate exceeds 0.75 lb of PE per ton of dry sludge input, the permittee shall submit the reports required as specified in 40 CFR Part 60.155(a) (1)(ii) and (b).
- (9) The permittee shall submit an annual statement that, to the best of its knowledge, the sewage sludge processed in this emissions unit does not contain any "beryllium containing waste". As the basis for this statement, the permittee shall annually review the latest version of the Ohio Toxic Release Inventory to confirm that there is no facility located within the permittee's service area that reported a release of beryllium or beryllium containing compounds and discharged its wastewater to this facility. If the facility receives sludge from outside its service area then it shall review the Ohio Toxic Release Inventory for the service area for that wastewater facility they are receiving the sludge from.
- (10) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO₂ monitoring system:
 - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Southwest Ohio Air Quality Agency, documenting all instances of SO₂ emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
 - b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
 - i. the facility name and address;
 - ii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iii. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
 - iv. the total operating time (hours) of the emissions unit;
 - v. the total operating time of the continuous SO₂ monitoring system while the emissions unit was in operation;
 - vi. results and date of quarterly cylinder gas audits;



- vii. unless previously submitted, results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- viii. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO₂ monitor out-of-control and the compliant results following any corrective actions;
- ix. the date, time, and duration of any/each malfunction** of the continuous SO₂ monitoring system, emissions unit, and/or control equipment;
- x. the date, time, and duration of any downtime** of the continuous SO₂ monitoring system and/or control equipment while the emissions unit was in operation; and
- xi. the reason (if known) and the corrective actions taken (if any) for each event in (b)(ix) and (x).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit.

- (11) The permittee shall submit quarterly reports containing the following information:
- a. the time and date the caustic injection system was employed to maintain compliance with the lbs/hr SO₂ emission limitation as specified in c)(6);
 - b. the caustic injection feed rate when employed; and
 - c. any times the hourly SO₂ emission limitations were exceeded and the caustic addition system was not employed.

As provided for in c)(6), should the permittee discontinue the use of the caustic injection system, the report required to be submitted in d)(11) shall terminate. The requirement to discontinue submitting this report shall terminate upon written approval by the Southwest Ohio Air Quality Agency as specified in e)(12).

- (12) Per c)(6), the permittee may conduct a 12-month evaluation of the scrubber/caustic injection system to determine its ability to maintain compliance with the lbs/hr SO₂ emission limitation. Should the permittee wish to discontinue the requirement to maintain a caustic injection system, the permittee shall send a written report to the Southwest Ohio Air Quality Agency detailing why the caustic injection system is no longer required. At a minimum this report shall summarize the information collected and recorded in d)(15) for the 12-month study period. The Southwest Ohio Air Quality



Agency will determine if the caustic injection system can be removed from service after the review of this report and provide a written response to the request.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

Particulate Emissions (PE) shall not exceed 1.6 lbs/hour, 0.40 lb/ton of dry sewage sludge, and 7 tons per year from this emissions unit. PE from emissions units N008, N009 and N010 shall not exceed 16.5 TPY.

Applicable Compliance Methods:

Compliance with the emission limitation of 1.6 lbs/hour of PE specified in b) shall be demonstrated by multiplying the emission factor from the PTI application number 14-05837 submitted April 24, 2006 of 0.40 lb of PE/ton of dry sludge input by the maximum sludge feed rate of 4 tons per hour. If required, compliance with the hourly PE limitation and the PE limitation in terms of lb/ton of dry sewage sludge processed shall be demonstrated using Methods 1 through 5 in 40 CFR 60, Appendix A.

The emission limitation of 7 TPY of PE was calculated based upon the potential to emit using above the pounds per hour limitation.

The emission limitation of 16.5 TPY of PE was calculated by multiplying the emission factor from the PTI application number 14-05837 submitted April 24, 2006 of 0.40 lb of PE/ton of dry sludge input by the maximum allowable cumulative sludge feed rate of 82,500 tons per year and dividing by 2000 lbs/ton.

b. Emission Limitations:

Particulate Matter emissions 10 microns and less in diameter (PM10) shall not exceed 38.4 lbs/day and 7 TPY of PM10 from this emissions unit. PM10 emissions from emissions units N008, N009 and N010 shall not exceed 16.5 TPY.

Applicable Compliance Methods:

The emission limitation of 38.4 lbs/day of PM10 specified in b) was calculated by multiplying the emission factor from the PTI application number 14-05837 submitted April 24, 2006 of 0.40 lb of PM10/ton of dry sludge input by the maximum sludge feed rate of 96 tons per day.

The emission limitation of 7 TPY of PE was calculated based upon the potential to emit using above the pounds per day limitation.



The emission limitation of 16.5 TPY of PM₁₀ was calculated by multiplying the emission factor from the PTI application number 14-05837 submitted April 24, 2006 of 0.40 lb of PM₁₀/ton of dry sludge input by the maximum allowable cumulative sludge feed rate of 82,500 tons per year and dividing by 2000 lbs/ton.

c. Emission Limitations:

Sulfur Dioxide (SO₂) emissions shall not exceed 4.8 lbs/hour and 115.2 lbs/day from this emissions unit. SO₂ emissions from emissions units N008, N009 and N010 shall not exceed 49.5 TPY.

Applicable Compliance Methods:

Compliance with the emission limitation of 4.8 lbs/hour of SO₂ specified in b) shall be demonstrated by the information collected and recorded in d)(12)(b). Compliance with the lbs/day and TPY emission limitations may be demonstrated by the summation of the hourly SO₂ emissions over the appropriate time frame.

If required, compliance with the hourly SO₂ emission limitation and the SO₂ limitation in terms of lb/ton of dry sewage sludge processed shall be demonstrated using Methods 1 through 4 and 6 in 40 CFR 60, Appendix A.

d. Emission Limitations:

Carbon Monoxide (CO) emissions shall not exceed 163.2 lbs/day from this emissions unit. CO emissions from emissions units N008, N009 and N010 shall not exceed 70.13 TPY.

Applicable Compliance Methods:

Ongoing compliance with the emission limitation of 163.2 lbs/day of CO specified in b) shall be demonstrated by the information collected and recorded in d)(4)(b). Compliance with the TPY emission limitations may be demonstrated by the summation of the hourly CO emissions over the appropriate time frame.

If required, compliance with the hourly CO emission limitation shall be demonstrated using Methods 1 through 4 and 10 of 40 CFR 60, Appendix A.

e. Emission Limitations:

Nitrogen Oxides (NO_x) emissions shall not exceed 240.0 lbs/day from this emissions unit. NO_x emissions from emissions units N008, N009 and N010 shall not exceed 103.2 TPY.

Applicable Compliance Methods:

The emission limitation of 240.0 lbs/day of NO_x specified in b) was calculated by multiplying the emission factor from the PTI application number 14-05837 submitted April 24, 2006 of 2.50 lbs of NO_x/ton of dry sludge input by the maximum sludge feed rate of 96 tons per day. If required, compliance with the NO_x emission limitation and the NO_x limitation in terms of lb/ton of dry sewage



sludge processed shall be demonstrated using Methods 1 through 4 and 7 in 40 CFR 60, Appendix A. The emission limitation of 103.2 TPY of NO_x was calculated by multiplying the emission factor from the PTI application number 14-05837 submitted April 24, 2006 of 2.50 lbs of NO_x/ton of dry sludge input by the maximum allowable cumulative sludge feed rate of 82,500 tons per year and dividing by 2000 lbs/ton.

f. Emission Limitations:

Volatile Organic Compound (VOC) emissions shall not exceed 86.4 lbs/day from this emissions unit. VOC emissions from emissions units N008, N009 and N010 shall not exceed 37.2 TPY.

Applicable Compliance Methods:

The emission limitation of 86.4 lbs/day of VOC specified in b) was calculated by multiplying the emission factor from the PTI application number 14-05837 submitted April 24, 2006 of 0.90 lb of VOC/ton of dry sludge input by the maximum sludge feed rate of 96 tons per day. If required, compliance with the VOC emission limitation and the VOC limitation in terms of lb/ton of dry sewage sludge processed shall be demonstrated using Methods 1 through 4 and 25a in 40 CFR 60, Appendix A. The emission limitation of 37.2 TPY of VOC was calculated by multiplying the emission factor from the PTI application number 14-05837 submitted April 24, 2006 of 0.90 lb of VOC/ton of dry sludge input by the maximum allowable cumulative sludge feed rate of 82,500 tons per year and dividing by 2000 lbs/ton.

g. Emission Limitations:

Lead emissions from emissions units N008, N009 and N010 shall not exceed 3.68 lbs/day and 0.67 TPY.

Applicable Compliance Method:

The emission limitation of 0.67 TPY lead was calculated by multiplying the daily emission rate of 3.68 lbs/day of lead, which was derived from the methodology in 40 CFR Part 503.43 Subpart E and submitted with the PTI application number 14-05837 on April 24, 2006, by 365 days per year plant operation and dividing by 2000 lbs/ton.

h. Emission Limitations:

Mercury emissions from emissions units N008, N009 and N010 shall not exceed 7.1 lbs/day and 1.29 TPY.

Applicable Compliance Methods:

The emission limitation of 7.1 lbs/day of mercury specified in b) was based on 40 CFR 61.52(b), Subpart E. The emission limitation is applicable as facility-wide limitations. Compliance shall be demonstrated by the emission testing or sludge



sampling as described below. The emission limitation of 1.29 TPY of mercury was calculated by multiplying the allowable daily emission rate of 7.1 lbs/day of mercury by 365 days per year and dividing by 2000 lbs/ton.

- (2) As specified in 40 CFR 60.8, each performance test shall consist of at least three separate runs at the same operating conditions.
- (3) All continuous monitoring systems and monitoring devices shall be operational, and calibrated prior to conducting performance tests.
- (4) The performance test shall be conducted under representative sewage sludge incinerator conditions at the highest expected sewage sludge feed rate within the design capacity of the sewage sludge incinerator.
- (5) If not already completed, the permittee shall conduct, or have conducted, emissions testing for emissions units N008, N009 and N010 for mercury to comply with the initial testing requirements of 40 CFR 61, Subpart E by either performing an emissions test or by performing sludge sampling:

- a. An emissions test using Method 101A in Appendix B; or the test shall be performed within 90 days of final permit issuance. The Southwest Ohio Air Quality Agency shall be notified at least 30 days prior to an emissions test.

Samples shall be taken over such a period or periods as are necessary to determine accurately the maximum emissions which will occur in a 24-hour period. Samples shall be analyzed and emissions determined within 30 days after the emissions unit performance stack test. All determinations shall be reported to the Southwest Ohio Air Quality Agency by a registered letter dispatched before the close of the next business day following such determination. Records of emissions test results and other data needed to determine total emissions shall be retained at the source and shall be made available for inspection for a minimum of five years.

- b. A sludge sampling test using Method 105 of Appendix B and paragraph 61.53 of 40 CFR 61.

The sludge test shall be performed within 90 days of final permit issuance. The Southwest Ohio Air Quality Agency shall be notified at least 30 days prior to the sludge test.

Sludge shall be sampled, the sludge charging rate shall be determined and the sludge analysis shall be performed according to 40 CFR 61.54(c).

Mercury emissions shall be determined according to 40 CFR 61.54(d).

All sludge samples shall be analyzed for mercury content within 30 days after the sludge sample is collected.

Records of sludge sampling, sludge charging rate and other data needed to determine mercury content of the wastewater treatment plant sludge shall be



retained at the source and shall be made available for inspection of a minimum of five years.

- (6) Compliance with the visible particulate emission limitation specified in 40 CFR 61.52(b) shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.
- (7) If not already completed, within 90 days of final permit issuance, the permittee shall conduct certification tests of the continuous CO monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specification 4 or 4a (as appropriate); and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the Southwest Ohio Air Quality Agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the Southwest Ohio Air Quality Agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 4 or 4a (as appropriate) and ORC section 3704.03(I).

Ongoing compliance with the CO emission limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record Keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

- (8) If not already completed, within 90 days of permit issuance, the permittee shall conduct or have conducted an initial emissions test to demonstrate compliance with the PE, SO₂, VOC and NO_x emission limitations.

Personnel from the Ohio EPA Central Office and the Southwest Ohio Air Quality Agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the Southwest Ohio Air Quality Agency and one copy to Ohio EPA Central Office and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

- (9) Compliance with the requirement to maintain the combustion temperature as specified in c)(3) shall be determined through monitoring and record keeping specified in d)(7).



g) Miscellaneous Requirements

(1) The following is a summary of the netting emissions in tons per year (TPY).

Pollutant	Potential emissions allowable limits in tpy	Baseline emissions for existing incinerators in tpy	Project net emissions, in tpy	Major NSR significant emission rate in tpy
PM	16.5	8.75	7.75	25
PM10	16.5	9.46	7.04	15
SO2	49.5	13.23	36.3	40
NOx	103.13	64.03	39.1	40
CO	70.13	512.51	-442.4	100
VOC	37.13	14.05	23.1	40
Lead	0.67	0.075	0.595	0.6

(2) Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous CO monitoring system, designed to ensure continuous valid and representative readings of CO emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

(3) The permittee has permanently shut down emissions units N001, N002, N003, N004, N006, and N007.