



8/6/2014

Robin Halperin
 Southerly Wastewater Treatment Center
 3900 Euclid Ave
 Cleveland, OH 44115

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
 Facility ID: 1318172479
 Permit Number: P0117161
 Permit Type: Administrative Modification
 County: Cuyahoga

Certified Mail

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

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
 77 South High Street, 17th Floor
 Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF 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.

If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
CDAQ; Pennsylvania; Canada



FINAL

Division of Air Pollution Control
Permit-to-Install
for
Southerly Wastewater Treatment Center

Facility ID:	1318172479
Permit Number:	P0117161
Permit Type:	Administrative Modification
Issued:	8/6/2014
Effective:	8/6/2014



Division of Air Pollution Control
Permit-to-Install
for
Southerly Wastewater Treatment Center

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Authorization

Facility ID: 1318172479
Facility Description: Northeast Ohio Regional Sewer District POTW.
Application Number(s): M0002843
Permit Number: P0117161
Permit Description: Administrative modification of PTI 13-04701 for three fluidized bed incinerators (N009, N010, and N011) located at a publicly owned wastewater treatment plant. This permit modification includes a formula that restricts emissions based on the amount of dry sludge processed and natural gas consumed.
Permit Type: Administrative Modification
Permit Fee: \$1,125.00
Issue Date: 8/6/2014
Effective Date: 8/6/2014

This document constitutes issuance to:

Southerly Wastewater Treatment Center
6000 Canal Road
Cuyahoga Heights, OH 44125

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

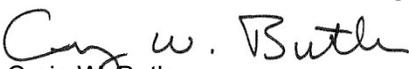
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality
2nd Floor
75 Erieview Plaza
Cleveland, OH 44114
(216)664-2297

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


Craig W. Butler
Director



Authorization (continued)

Permit Number: P0117161

Permit Description: Administrative modification of PTI 13-04701 for three fluidized bed incinerators (N009, N010, and N011) located at a publicly owned wastewater treatment plant. This permit modification includes a formula that restricts emissions based on the amount of dry sludge processed and natural gas consumed.

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

Group Name: Fluidized Bed Incinerators 1-3

Emissions Unit ID:	N009
Company Equipment ID:	FBI #1
Superseded Permit Number:	13-04701
General Permit Category andType:	Not Applicable
Emissions Unit ID:	N010
Company Equipment ID:	FBI #2
Superseded Permit Number:	13-04701
General Permit Category andType:	Not Applicable
Emissions Unit ID:	N011
Company Equipment ID:	FBI #3
Superseded Permit Number:	13-04701
General Permit Category andType:	Not Applicable



Final Permit-to-Install
Southerly Wastewater Treatment Center
Permit Number: P0117161
Facility ID: 1318172479
Effective Date: 8/6/2014

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) 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 Cleveland Division of Air Quality.



- (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 Cleveland Division of Air Quality. 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 to the Cleveland Division of Air Quality 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 Cleveland Division of Air Quality 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) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted



local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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.

- b) 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.
- c) The permittee shall submit progress reports to the Cleveland Division of Air Quality 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 Cleveland Division of Air Quality.
- 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 Cleveland Division of Air Quality. 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, 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) not exempt from the requirement to obtain a Permit-to-Install.

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 permittee 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 "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director 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.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

- 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 operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.



13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services" 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 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.



Final Permit-to-Install
Southerly Wastewater Treatment Center
Permit Number: P0117161
Facility ID: 1318172479
Effective Date:8/6/2014

B. Facility-Wide Terms and Conditions



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.
2. This air permit-to-install (PTI) shall cover the Sludge incinerator Project at the Northeast Ohio Regional Sewer District's Southerly Wastewater Treatment Center facility (Southerly) which involves replacement of its four multi-hearth sewage sludge incinerators (Ohio EPA emissions units 1318172479 N005, N006, N007 and N008) with three fluidized bed incinerators (N009, N010 and N011).

Southerly Wastewater Treatment Center (Southerly) is classified as a major stationary source under the federal Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) regulations. Therefore, we have reviewed the Incinerator Replacement Project to determine whether or not the project emissions exceed the respective significant rates based on potential to emit for the regulated NSR pollutants and if the significant rates are exceeded, whether or not there has been a significant emissions increase for those pollutants. It has been determined that the new incinerators fall under the definition of "replacement units" according to OAC rule 3745-31-01(GGGGG). Therefore, the actual-to-projected-actual "significant emissions" applicability test for existing emissions units described in OAC rule 3745-31-01(JJJ)(4)(a) was used. It has been determined that this project will not cause a significant increase of any regulated NSR pollutant and is not considered a "major modification". See the table below for the results of this "test".

Table I. Summary of the change in emissions by pollutant and comparison of Current Actual Baseline Emissions and Future Projected Actual Permitted Emissions: (tons/year)

Pollutant	CO	NOx	SO ₂	PM	PM ₁₀	PM _{2.5}	VOC	Lead
Current Baseline Actual Emissions (Existing Incinerator)	6.60	121.71	36.11	9.22	6.46	5.23	0.77	0.04
Future Projected Actual Emissions (New Incinerator)	74.33	159.69	70.16	16.88	16.88	13.37	29.16	0.41
Change	67.73	37.98	34.05	7.66	10.42	8.14	28.39	0.37
PSD/NNSR Significant Rate	100	40	40	25	15	10	40	0.6
PSD/NNSR Significant Net Emissions Review Required?	No	No	No	No	No	No	No	No

The Incinerator Replacement Project proposed for Southerly Wastewater Treatment Center will not be subject to major NSR as there will be no significant emission increases of any criteria pollutants.

3. It is currently anticipated, provided the final permit-to-install is issued, that construction of the facility's new Biosolids Handling and Incineration Complex will commence during the fourth quarter of 2009 and be completed during the third quarter of 2013.
4. There will be a period of transition after the start up of the new fluidized bed incinerators and prior to the existing multiple hearth incinerators going offline. This time will be used for bringing the new fluidized bed incinerators up to normal operating conditions and will be referred to as the shakedown period. The permittee has agreed that the shakedown period for each incinerator shall not exceed 180 operating days after initial start up. At the end of the shakedown period for each individual new fluidized bed incinerator, the status will be changed to operational.



5. The new fluidized bed incinerators will combust chemically conditioned sewage sludge (biosolids) plus skimmings, while the existing multiple hearth incinerators are only capable of combusting thermally conditioned biosolids. As a result:
 - a) the facility's new dewatering, chemical conditioning and conveyance systems will have to be in continuous operation before biosolids can be fed to the new fluidized bed incinerators and initial start-up can commence; and
 - b) there will be a period of time when thermally conditioned biosolids are being burned in a multiple hearth incinerator(s) and chemically conditioned biosolids are being burned in a fluidized bed incinerator(s).

6. The permittee has agreed to the following decommissioning schedule. Note: Once a multiple hearth incinerator goes offline, it will only be brought back online if the fluidized bed incinerator replacing it runs into unanticipated problems. The multiple hearth incinerator and the fluidized bed replacing it shall not operate simultaneously after the end of the 180-operating day shakedown period.
 - a) The permittee shall take one multiple hearth incinerator offline after the first fluidized bed incinerator has become operational, which is only after a reasonable shakedown period not to exceed 180 operating days.
 - b) The permittee shall take the second multiple hearth incinerator offline after the second fluidized bed incinerator has become operational, which is only after a reasonable shakedown period not to exceed 180 operating days.
 - c) The permittee shall take the last two multiple hearth incinerators offline after the third fluidized bed incinerator has become operational, which is only after a reasonable shakedown period not to exceed 180 operating days.
 - d) The permittee shall commence permanent decommissioning of the multiple hearth incinerators no later than one year after the 3-unit fluidized bed incinerator system becomes fully operational and has passed all compliance tests required by the permit-to-install.



Final Permit-to-Install
Southerly Wastewater Treatment Center
Permit Number: P0117161
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C. Emissions Unit Terms and Conditions



1. Emissions Unit Group -Fluidized Bed Incinerators 1-3: N009, N010, N011

EU ID	Operations, Property and/or Equipment Description
N009	100 dry tons per day fluidized bed incinerator No. 1; equipped with Venturi and Impingement scrubbers
N010	100 dry tons per day fluidized bed incinerator No. 2; equipped with Venturi and Impingement scrubbers
N011	100 dry tons per day fluidized bed incinerator No. 3; equipped with Venturi and Impingement scrubbers

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) g)(1).

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) PTI 13-04701 issued on 10/14/2008	Particulate/PM ₁₀ emissions shall not exceed 1.67 lbs/hour. Sulfur Dioxide (SO ₂) emissions shall not exceed 7.08 lbs/hour. Volatile Organic Compound (VOC) emissions shall not exceed 2.92 lbs/hour. Nitrogen Oxides (NO _x) emissions shall not exceed 15.63 lbs/hour. Carbon Monoxide (CO) emissions shall not exceed 7.08 lbs/hour. See b)(2)a., b)(2)d., b)(2)g., and c)(4). The requirements of this rule also include compliance with the requirements of 40 CFR Part 60 Subpart O, 40 CFR Part 61 Subpart E, OAC rule 3745-21-08(B) and OAC rule 3745-31-05(D), except for lead emissions.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07 (A)(1)	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitations established pursuant to 40 CFR Part 60 Subpart O.
c.	OAC rule 3745-17-09	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3). See c)(1).
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)e.
e.	OAC rule 3745-31-05(D)	See b)(2)a., c)(2), and c)(4).
f.	OAC rule 3745-31-10(A)(1) "Future Projected Actual" emissions	See b)(2)f.
g.	40 Code of Federal Regulations (CFR) Part 60, Subpart O, New Source Performance Standards (NSPS)	Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average. The particulate emission limitation specified by this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
h.	40 CFR Part 61 Subpart E, (NESHAP)	Mercury (HG) emissions from the sewage sludge incinerator plant shall not exceed 7.1 lbs of mercury per 24-hour period.

(2) Additional Terms and Conditions

- a. The total, combined mass emissions from emissions units N009, N010 and N011, as a 12-month rolling summation, shall not exceed the following:
- PE 16.88 tons/year;
 - PM₁₀ 16.88 tons/year;
 - PM_{2.5} 13.37 tons/year;



SO₂ 70.16 tons/year;

VOC 29.16 tons/year;

NOx 159.69 tons/year;

CO 74.33 tons/year;

Lead 0.41 ton/year; and

Mercury 1.29 tons/year.

The permittee has proposed these federally enforceable emission limitations based on the total combined dry sludge feed rate and natural gas combustion amount to ensure that future projected actual emissions will not cause an increase above the major modification thresholds. See c)(2) below.

- b. 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.
- c. 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.
- d. 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.
- e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE/PM₁₀, PM_{2.5} and lead emissions from this air contaminant source since the calculated annual emission rate for these pollutants are each less than 10 tons per year taking into account the following federally enforceable limitation and voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee:
 - i. venturi and impingement tray scrubbers.

However, the permittee has voluntarily accepted a BAT limit for PE/PM₁₀ and PM_{2.5} for the purpose of avoiding PSD, NNSR, and satisfying Ohio EPA's minor source air dispersion modeling requirement.

- f. The permittee has proposed that the amount of emissions increase, which is the difference between the future projected actual emissions and current actual emissions, as a result of this project will be less than 40 tons NOx/year, less than 40 tons SO₂/year and less than 15 tons PM₁₀/year. In accordance with OAC rule 3745-31-10(A)(3), the permittee will have to maintain records for the next 5 years



that demonstrate that the amount of actual emissions increase stays below these major modification thresholds.

- g. 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.

- h. This emissions unit is not subject to the beryllium NESHAP (40 CFR Part 61, Subpart C) because the sewage sludge processed in this emissions unit does not contain any "beryllium containing waste". As defined in 40 CFR 61.31(g), "beryllium containing waste" means material contaminated with beryllium and/or beryllium compounds used or generated during any process or operation performed by a source subject to this subpart (40 CFR Part 61, Subpart C). See e)(12).

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.

[Authority for term: OAC 3745-17-09]

- (2) The total combined emissions from N009, N010, and N011 shall not exceed the following limitations, based upon a rolling, 12-month summation:

$$[(\text{Amount dry sludge feed tons/yr}) \times (0.40 \text{ lb PE/dry ton}) + (\text{Amount NG MMCF/yr}) \times (7.6 \text{ lbs PE/MMCF})] \times \text{ton}/2000 \text{ lbs} \leq 16.88 \text{ tons PE/yr}$$

$$[(\text{Amount dry sludge feed tons/yr}) \times (0.40 \text{ lb PM}_{10}/\text{dry ton}) + (\text{Amount NG MMCF/yr}) \times (7.6 \text{ lbs PM}_{10}/\text{MMCF})] \times \text{ton}/2000 \text{ lbs} \leq 16.88 \text{ tons PM}_{10}/\text{yr}$$

$$[(\text{Amount dry sludge feed tons/yr}) \times (0.32 \text{ lb PM}_{2.5}/\text{dry ton}) + (\text{Amount NG MMCF/yr}) \times (6.2 \text{ lbs PM}_{2.5}/\text{MMCF})] \times \text{ton}/2000 \text{ lbs} \leq 13.37 \text{ tons PM}_{2.5}/\text{yr}$$

$$[(\text{Amount dry sludge feed tons/yr}) \times (1.7 \text{ lbs SO}_2/\text{dry ton}) + (\text{Amount NG MMCF/yr}) \times (0.60 \text{ lb SO}_2/\text{MMCF})] \times \text{ton}/2000 \text{ lbs} \leq 70.16 \text{ tons SO}_2/\text{yr}$$

$$[(\text{Amount dry sludge feed tons/yr}) \times (0.70 \text{ lb VOC/dry ton}) + (\text{Amount NG MMCF/yr}) \times (5.5 \text{ lbs VOC/MMCF})] \times \text{ton}/2000 \text{ lbs} \leq 29.16 \text{ tons VOC/yr}$$



$$[(\text{Amount dry sludge feed tons/yr}) \times (3.75 \text{ lbsNOx/dry ton}) + (\text{Amount NG MMCF/yr}) \times (100 \text{ lbsNOx/MMCF})] \times \text{ton}/2000 \text{ lbs} \leq 159.69 \text{ tons NOx/yr}$$

$$[(\text{Amount dry sludge feed tons/yr}) \times (1.7 \text{ lbs CO/dry ton}) + (\text{Amount NG MMCF/yr}) \times (84 \text{ lbs CO/MMCF})] \times \text{ton}/2000 \text{ lbs} \leq 74.33 \text{ tons CO/yr}$$

$$[(\text{Amount dry sludge feed tons/yr}) \times (0.01 \text{ lb lead/dry ton}) + (\text{Amount NG MMCF/yr}) \times (0 \text{ lbs lead/MMCF})] \times \text{ton}/2000 \text{ lbs} \leq 0.41 \text{ ton lead/yr}$$

$$[(\text{Amount dry sludge feed tons/yr}) \times (0.022 \text{ lb mercury/dry ton}) + (\text{Amount NG MMCF/yr}) \times (0 \text{ lbs mercury/MMCF})] \times \text{ton}/2000 \text{ lbs} \leq 1.29 \text{ tons mercury/yr}$$

Where,

NG = natural gas

MMCF = million cubic feet

After stack testing is completed in accordance with f) below, emission factors derived from the average of the 3 test runs completed during the most recent stack test that demonstrated compliance shall be used in place of the emission factors noted above.

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 NOx emissions levels from emissions units N009, N010, and N011 combined specified in the following table:

Month(s)	Cumulative NOx Emissions (Tons)
1	17
1-2	30
1-3	43
1-4	56
1-5	69
1-6	82
1-7	95
1-8	108
1-9	121
1-10	134
1-11	147
1-12	160



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 NO_x emissions limitation for emissions units N009, N010 and N011 shall be based upon a rolling, 12-month summation of the total combined NO_x emissions for units N009, N010 and N011.

[Authority for term: OAC rule 3745-31-05(D)]

- (3) The permittee shall only use natural gas as the supplemental fuel for N009, N010 and N011.

[Authority for term: OAC rule 3745-31-05(D)]

- (4) The emissions from this emissions unit shall be vented to the Venturi and Impingement wet scrubbers at all times the emissions unit is in operation.

[Authority for term: OAC rule 3745-31-05(A)(3)]

- (5) 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.

[Authority for term: OAC rule 3745-31-05(A)(3)]

- (6) No changes in the operation shall be made, which would potentially increase mercury emissions above that determined by the most recent source test, until a new emission level has been estimated by calculation and the results reported to the Administrator.

[Authority for term: 40 CFR 61.53]

- (7) Municipal solid waste shall not be fired in this emissions unit.

[Authority for term: OAC rule 3745-31-05]

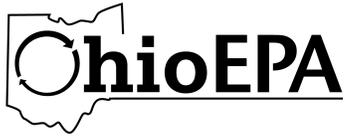
d) Monitoring and/or Recordkeeping Requirements

- (1) In accordance with OAC rule 3745-31-10(A)(3), the permittee shall maintain annual records for five (5) years after the issuance of this permit of the following:

- a. the amount of sludge, in dry tons, incinerated;
- b. the amount of natural gas, in million cubic feet (MMCF) consumed; and
- c. the total annual NO_x, SO₂ and PM₁₀ emissions for this emissions unit, calculated by multiplying the emissions factor for each pollutant determined from the most recent stack test by the annual amount of dry sludge incinerated.

[Authority for term: OAC rule 3745-31-10(A)(3)]

- (2) 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 reduction of more than 30 percent from the average pressure drop recorded during the most recent stack test which demonstrated the emissions unit to be in compliance shall be maintained.

[Authority for term: 40 CFR 60.153, 40 CFR 60.155 and 40 CFR 60.7]

- (3) 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 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.

[Authority for term: 40 CFR 60.153, 40 CFR 60.155 and 40 CFR 60.7]

- (4) Prior to the installation of the continuous carbon monoxide (CO) monitoring system, the permittee shall submit 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 and/or the Cleveland Division of Air Quality (Cleveland DAQ) 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 conditions hardware, analyzers, and data processing hardware and software.

[Authority for term: OAC rule 3745-31-05(A)(3), 40 CFR Part 60, Appendix B.]

- (5) 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).

[Authority for term: OAC rule 3745-31-05(A)(3) and 40 CFR Part 60]



- (6) 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.

[Authority for term: 40 CFR 60.153]

- (7) 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.

[Authority for term: OAC rule 3745-31-05(A)(3)]

- (8) 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 the 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.

[Authority for term: 40 CFR 60.153]

- (9) The frequency of monitoring for arsenic, cadmium, chromium, lead, and nickel in sewage sludge fed to the 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 arsenic, cadmium, chromium, lead, and nickel.

[Authority for term: ORC 3704.03(F)(4) and OAC rule 3745-114]

- (10) The permittee shall develop the following information and retain that information for a period of five years:

- a. the concentration of lead, arsenic, cadmium, chromium and nickel in the sewage sludge fed to the sewage sludge incinerator;
- b. information that indicates the requirements in the National Emission Standard for beryllium in Subpart C of 40 CFR Part 61 are met;
- c. information that indicates the requirements in the National Emission Standard for mercury in Subpart E of 40 CFR Part 61 are met;
- d. the daily mean operating combustion temperatures for the sewage sludge incinerator;
- e. values for the air pollution control device operating parameters;
- f. the oxygen concentration and information used to measure moisture content in the exit gas from the sewage sludge incinerator stack;



- g. the sewage sludge feed rate;
- h. the stack height for the sewage sludge incinerator;
- i. the dispersion factor for the site where the sewage sludge incinerator is located;
- j. the control efficiency for arsenic, cadmium, chromium, lead, and nickel for each sewage sludge incinerator; and
- k. the risk specific concentration for chromium calculated using the equation for 40 CFR Part 503.43(d), if applicable.

[Authority for term: ORC 3704.03(F)(4), OAC rule 3745-114 and OAC rule 3745-31-05(A)(3)]

- (11) If the mercury emissions exceed 3.5 lbs per 24-hour period for this facility, the permittee 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)(2) and (4). 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).

[Authority for term: 40 CFR Part 61.55(a)]

- (12) The permittee shall provide access to the sludge charged so that a well-mixed representative grab sample of the sludge can be obtained.

[Authority for term: 40 CFR 60.153(a)(2)]

- (13) The permittee shall collect and record the following information on a monthly basis for emissions units N009, N010, and N011 combined:
 - a. the amount of dry sludge processed, in tons;
 - b. the amount of natural gas consumption, in million cubic feet (MMCF); and
 - c. the rolling 12-month summation of emissions for PE, PM₁₀, PM_{2.5}, SO₂, VOC, NO_x, CO, lead and mercury, in tons/yr, determined in accordance with c)(2) above.

Also, during the first 12 calendar months of operation, the permittee shall record the cumulative NO_x emission rate for each calendar month for N009, N010, and N011 combined.

[Authority for term: OAC rule 3745-31-05(D)]

e) Reporting Requirements

- (1) This facility shall submit semi-annual deviation reports to the Cleveland Division of Air Quality (Cleveland DAQ) 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, the total pressure drop across the scrubber system is less than 30 percent of the average scrubber pressure drop measured during the most recent performance test; and
- 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.

These semi-annual reports shall be submitted by January 30 and July 31 of each year and shall cover the previous six calendar months (January through June and July through December, respectively).

[Authority for term: 40 CFR 60.155(a)]

- (2) 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 Cleveland DAQ, 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 31, April 30, July 31 and October 31 of each year and shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous CO and other associated monitors;
 - iii. the location of the continuous CO monitor;
 - iv. the exceedance report as detailed in (a) above;
 - v. the total CO emissions for the calendar quarter (tons);
 - vi. the total operating time (hours) of the emissions unit;
 - vii. the total operating time of the continuous CO monitoring system while the emissions unit was in operation;
 - viii. the monthly average carbon monoxide concentration in the exit gas;



- ix. results and dates of quarterly cylinder gas audits;
- x. results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- xi. the results of any relative accuracy test audit showing the continuous CO monitor out-of-control and the compliant results following any corrective actions;
- xii. 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
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xii) and (xiii).

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.

[Authority for term: OAC rule 3745-31-05(A)(3) and 40 CFR 60.7]

- (3) The permittee shall submit deviation (excursion) reports to the Cleveland DAQ that identify all exceedances of the rolling 12-month emission limitations for PE, PM₁₀, SO₂, NO_x, VOC, CO, Lead, and Mercury for emissions units N009, N010 and N011, combined, as specified in b)(2)a. The deviation reports shall be submitted within 30 days after the deviations occurs.

[Authority for term: OAC rule 3745-31-05(D)]

- (4) The permittee shall submit an annual report to the Cleveland DAQ that provides the information required in d)(10) by February 19 of each year.

[Authority for term: OAC rule 3745-31-05(A)(3)]

- (5) Deviation (excursion) reports shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-31-05]

- (6) Pursuant to the NSPS and NESHAP, the source owner-operator is hereby advised of the requirement to report the following at the appropriate times for each incinerator:
 - 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:

Department of Public Health

Division of Air Quality

75 Erievue Plaza, 2nd Fl.

Cleveland, Ohio 44114-1839

[Authority for term: 40 CFR Parts 60 and 61]

- (7) If the average particulate matter emission rate exceeds 0.75 lb 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).

[Authority for term: 40 CFR 60.155]

- (8) In accordance with OAC rule 3745-31-10(A)(5), the permittee shall submit a deviation report to the Cleveland DAQ if the actual annual emissions, in tons/year, exceed the baseline actual emissions by a significant amount for NO_x, SO₂ or PM₁₀ as noted in Section b)(2)g. above and if such emissions differ from the preconstruction projection as documented and maintained pursuant to OAC rule 3745-31-10(A)(1)(c). Such report shall be submitted within 60 days after the end of such year. This condition will remain in effect for five years after the issuance date of this permit.

[Authority for term: OAC rule 3745-31-10(A)(5)]

- (9) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-31-05 and is based on term c)(3)]

- (10) 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.

[Authority for term: 40 CFR Part 61 Subpart C]

f) Testing Requirements

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



a. Emission Limitation:

Visible emissions from any stack servicing this emissions unit shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method(s):

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA Method 9.

b. Emission Limitation:

1.67 lbs/hr of particulate/PM₁₀ emissions

Applicable Compliance Method(s):

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 5, 201 and 202. The results of the emissions test shall be reported in terms of pounds per hour.

c. Emission Limitation:

16.88 tons/year of particulate/PM₁₀ emissions from emissions units N009, N010 and N011 combined.

Applicable Compliance Method(s):

Compliance with the annual emission limit shall be determined by multiplying the emission factor derived from the average of the 3 test runs completed during most recent stack test that demonstrated compliance in terms of lbs PE/ton dry sludge times the actual amount of tons dry sludge/year incinerated and divided by 2000 lbs/ton. If natural gas is not consumed during the stack test but is used during other times of the year, then the contribution of emissions generated due to natural gas combustion shall be determined in accordance with c)(2) above.

d. Emission Limitation:

13.37 tons/year of PM_{2.5} emissions from emissions units N009, N010 and N011 combined.

Applicable Compliance Method(s):

Compliance with the annual emission limit shall be determined by multiplying the emission factor obtained in c. above by 81%, times the actual amount of tons dry sludge/year incinerated and divided by 2000 lbs/ton. The emissions factors for PM_{2.5} emissions from fluidized bed incinerators as listed in Section 2.2, Table 2.2-11 of AP-42, are 81% of the PM₁₀ emissions factors. Therefore, the emissions factors determined for particulate/PM₁₀ emissions derived from the most recent stack test shall be multiplied by 81% in order to calculate an



emissions factor for PM_{2.5} emissions. If natural gas is not consumed during the stack test but is used during other times of the year, then the contribution of emissions generated due to natural gas combustion shall be determined in accordance with c)(2) above.

e. Emission Limitation:

7.08 lbs/hr of SO₂ emissions

Applicable Compliance Method(s):

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6. The results of the emissions test shall be reported in terms of pounds per hour.

f. Emission Limitation:

70.16 tons/year of SO₂ emissions from emissions units N009, N010 and N011 combined.

Applicable Compliance Method(s):

Compliance with the annual emission limit shall be determined by multiplying the emission factor derived from the average of the 3 test runs completed during most recent stack test that demonstrated compliance in terms of lbs SO₂/ton dry sludge times the actual amount of tons dry sludge/year incinerated and divided by 2000 lbs/ton. If natural gas is not consumed during the stack test but is used during other times of the year, then the contribution of emissions generated due to natural gas combustion shall be determined in accordance with c)(2) above.

g. Emission Limitation:

2.92 lbs/hour VOC emissions

Applicable Compliance Method(s):

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 25 or 25a. The results of the emissions test shall be reported in terms of pounds per hour.

h. Emission Limitation:

29.16 tons/year of VOC emissions from emissions units N009, N010 and N011 combined.

Applicable Compliance Method(s):

Compliance with the annual emission limit shall be determined by multiplying the emission factor derived from the average of the 3 test runs completed during



most recent stack test demonstrating compliance in terms of lbs VOC/ton of dry sludge times the actual amount of tons dry sludge/year incinerated and divided by 2000 lbs/ton. If natural gas is not consumed during the stack test but is used during other times of the year, then the contribution of emissions generated due to natural gas combustion shall be determined in accordance with c)(2) above.

i. Emission Limitation:

15.63 lbs/hr of NO_x emissions

Applicable Compliance Method(s):

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7. The results of the emissions test shall be reported in terms of pounds per hour.

j. Emission Limitation:

159.69 tons/year of NO_x emissions from emissions units N009, N010 and N011 combined.

Applicable Compliance Method(s):

Compliance with the annual emission limit shall be determined by multiplying the emission factor derived from the most recent stack test demonstrating compliance in terms of lbs NO_x/ton dry sludge times the actual amount of tons dry sludge/year incinerated and divided by 2000 lbs/ton. If natural gas is not consumed during the stack test but is used during other times of the year, then the contribution of emissions generated due to natural gas combustion shall be determined in accordance with c)(2) above.

k. Emission Limitation:

7.08 lbs/hr of CO emissions

Applicable Compliance Method(s):

Compliance with the CO emission limitation shall be determined through monitoring and record keeping specified in d)(5).

If required by Ohio EPA or Cleveland DAQ, compliance shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 10. The results of the emissions test shall be reported in terms of pounds per hour.

l. Emission Limitation:

74.33 tons/year of CO emissions from units N009, N010 and N011 combined.



Applicable Compliance Method(s):

Compliance with the CO emission limitation shall be determined through monitoring and record keeping specified in d)(5). The permittee shall use the CO monitoring data, averaged over a 12-month operating period to develop an emission factor in lbs CO/ton. Multiply the emission factor by the actual amount of dry sludge, in tons/year and divide by 2000. If natural gas is not consumed during the stack test but is used during other times of the year, then the contribution of emissions generated due to natural gas combustion shall be determined in accordance with c)(2) above.

m. Emission Limitation:

Lead emissions from emissions units N009, N010 and N011 combined shall not exceed 0.41 TPY of lead emissions.

Applicable Compliance Method(s):

The emission limit of 0.41 TPY of lead emissions specified in b)(2)a. was based on an emission estimation proposed by the facility based on historic information. It was derived from multiplying 0.01 lb lead/dry ton times the allowable tons dry sludge per year incinerated and divided by 2000. The permittee shall use the most recent sampling data, per d)(9), to establish the emission factor in lb lead/dry ton. Multiply the new emission factor by the actual amount of dry sludge in tons/year and divide by 2000.

n. Emission Limitation:

Mercury emissions from emissions units N009, N010 and N011 combined shall not exceed 7.1 lbs/day and 1.29 TPY.

Applicable Compliance Method(s):

Compliance shall be demonstrated by the emissions testing or sludge sampling as described below.

The ton/year limitation can be calculated by multiplying the emission factor derived from the most recent stack or sludge test that demonstrated compliance in terms of lbs Mercury/ton dry sludge times the actual tons dry sludge/year incinerated and divided by 2000 lbs/ton.

[Authority for term: OAC rule 3745-31-05 and 40 CFR Parts 60 and 61]

- (2) As specified in 40 CFR 60.8, each performance test shall consist of at least three separate runs under the same operating conditions.

[Authority for term: 40 CFR 60.8]



- (3) All continuous monitoring systems and monitoring devices shall be operational, and calibrated prior to conducting performance test.

[Authority for term: 40 CFR 60]

- (4) The performance test shall be conducted under representative sewage sludge incinerator conditions at or near the highest expected sewage sludge feed rate within the design capacity of the sewage sludge incinerator.

[Authority for term: 40 CFR 60]

- (5) The permittee shall conduct, or have conducted, emissions testing for emissions units N009, N010 and N011 for mercury to comply with 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;

The test shall be performed within 90 days of the emissions unit becoming operational. The emissions unit shall become operational after a reasonable shakedown period not to exceed 180 operating days after initial start up. See Section B.3.

The Cleveland DAQ 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 Cleveland DAQ by a registered letter dispatched before the close of 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.

or;

- b. A sludge sampling test using Method 105 of Appendix B and paragraph 61.54 of 40 CFR 61.

The sludge test shall be performed within 90 days of the emissions unit becoming operational. The emissions unit shall become operational after a reasonable shakedown period not to exceed 180 operating days after initial start up. See Section B.3.

Cleveland DAQ 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.

[Authority for term: 40 CFR 61.54 a-g]

- (6) Within 180 days of the start up of this emissions unit, 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 Cleveland DAQ 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 EP, one copy to Cleveland DAQ 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.

[Authority for term: OAC rule 3745-31-05(A)(3)]

- (7) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 90 days of the emissions unit becoming operational. The emissions unit shall become operational after a reasonable shakedown period not to exceed 180 operating days after initial start up. See Section B.3.
 - b. The emission testing shall be conducted to demonstrate compliance with the PE, PM₁₀, SO₂, VOC, NO_x and visible opacity emission limitations.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Particulate: Methods 1-4 and 5 of 40 CFR Part 60, Appendix A;

PM₁₀: Methods 1-4, 201 and 202 of 40 CFR Part 60, Appendix A;



SO₂: Methods 1-4 and 6 of 40 CFR Part 60, Appendix A;

VOC: Methods 1-4 and 25 or 25a of 40 CFR Part 60, Appendix A;

NO_x: Methods 1-4 and 7 of 40 CFR Part 60, Appendix A; and

Visible emissions: Method 9 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).
- f. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 60 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Cleveland DAQ.

[Authority for term: OAC rule 3745-31-05]

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

[Authority for term: ORC 3704.03(F)(3)(c) and (F)(4), and OAC 3745-114]