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

9/10/2013

Genevieve Damico *Via E-Mail Notification*
United States Environmental Protection Agency
Mail Code: AR-18J
77 West Jackson Blvd.
Chicago, IL 60604-3507

RE: PROPOSED AIR POLLUTION TITLE V PERMIT
Facility Name: DiGeronimo Aggregates LLC
Facility ID: 1318270383
Permit Type: Minor Permit Modification
Permit Number: P0107239

Dear Ms. Damico:

A proposed OAC Chapter 3745-77 Title V permit for the referenced facility has been issued for review by U.S. EPA. 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. If U.S. EPA does not object to this proposed permit, the permit will be processed for issuance as a final action not less than 45 days from the date of this letter. Please contact me at (614) 644-3631 by the end of the 45 day review period if you wish to object to the proposed permit.

Sincerely,

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

Cc: Cleveland Division of Air Quality

PROPOSED

Division of Air Pollution Control
Title V Permit
for
DiGeronimo Aggregates LLC

Facility ID:	1318270383
Permit Number:	P0107239
Permit Type:	Minor Permit Modification
Issued:	9/10/2013
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Division of Air Pollution Control
Title V Permit
for
DiGeronimo Aggregates LLC

Table of Contents

Authorization 1
A. Standard Terms and Conditions 2
1. Federally Enforceable Standard Terms and Conditions 3
2. Monitoring and Related Record Keeping and Reporting Requirements 3
3. Scheduled Maintenance 6
4. Risk Management Plans 6
5. Title IV Provisions 7
6. Severability Clause 7
7. General Requirements 7
8. Fees 8
9. Marketable Permit Programs 8
10. Reasonably Anticipated Operating Scenarios 9
11. Reopening for Cause 9
12. Federal and State Enforceability 9
13. Compliance Requirements 9
14. Permit Shield 11
15. Operational Flexibility 11
16. Emergencies 11
17. Off-Permit Changes 12
18. Compliance Method Requirements 12
19. Insignificant Activities or Emissions Levels 12
20. Permit to Install Requirement 13
21. Air Pollution Nuisance 13
22. Permanent Shutdown of an Emissions Unit 13
23. Title VI Provisions 13
24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only 14
25. Records Retention Requirements Under State Law Only 14
26. Inspections and Information Requests 14
27. Scheduled Maintenance/Malfunction Reporting 15
28. Permit Transfers 15

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

B. Facility-Wide Terms and Conditions 16

C. Emissions Unit Terms and Conditions 18

1. F001, Unpaved roadways and parking areas 19
2. F002, Mineral Extraction 23
3. F003, Storage piles 28
4. F004, Material handling 33
5. P012, Shale Crushing, Conveying and Screening System 37
6. P901, Rotary Kiln #4 49
7. P903, Traveling grate clinker cooler 75

Authorization

Facility ID:	1318270383
Facility Description:	Mining and processing of raw shale to expanded shale -- Haydite.
Application Number(s):	A0040648
Permit Number:	P0107239
Permit Description:	Title V Minor Permit Modification to address the PTI modification P0107238 issued on 3/16/2011 for P901. The permit modification was needed to establish synthetic minor permit limitations to restrict facility-wide NOx emissions below 99 tons/year to avoid OAC rule 3745-110 (NOx RACT Rule). Additional minor changes have been included in this Minor Permit Modification.
Permit Type:	Minor Permit Modification
Issue Date:	9/10/2013
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	P0095475

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

DiGeronimo Aggregates LLC
8900 Hemlock Road
Independence, OH 44131-0000

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 ErieviewPlaza
Cleveland, OH 44114
(216)664-2297

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Cleveland Division of Air Quality. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

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. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(Authority for term: ORC 3704.036(A))

2. 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 (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), 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.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 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.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c) The permittee shall submit required reports in the following manner:

(1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive

measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the

insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

(4) 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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

(5) Reports of any required monitoring and/or record keeping information shall be submitted to Cleveland Division of Air Quality.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

4. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

5. 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.

(Authority for term: OAC rule 3745-77-07(A)(5))

6. Severability Clause

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.

(Authority for term: OAC rule 3745-77-07(A)(6))

7. 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 reissuance, or modification, or for denial of a permit renewal application.

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, reopened, revoked, or revoked and reissued, for cause, in accordance with Standard Term and Condition A.11 below. 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, reopening 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.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. 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.

(Authority for term: OAC rule 3745-77-07(A)(8))

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

12. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that 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, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

(Authority for term: OAC rule 3745-77-07(B))

13. Compliance Requirements

a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V 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 paragraph (E) of OAC rule 3745-77-03.

(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 appropriate Ohio EPA District Office or local air 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.

d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

(1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

a. An identification of each term or condition of this permit that is the basis of the certification.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittent.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period.

e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

(3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

14. Permit Shield

a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))

17. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

18. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-07(A)(1))

21. 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.

(Authority for term: OAC rule 3745-77-07(A)(1))

22. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the responsible 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 responsible official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that 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 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

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

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

24. Reporting Requirements Related to Monitoring and Record Keeping RequirementsUnder State Law Only

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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.)

25. Records Retention RequirementsUnder State Law Only

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.

26. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

(Authority for term: OAC rule 3745-77-07(C))

27. 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 of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of 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 emissions unit(s) that is (are) served by such control system(s).

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

(Authority for term: OAC rule 3745-77-01(C))

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or

b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or

c) where the company's responsible official has certified that an emissions unit has been permanently shut down.

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. Pursuant to 40 CFR Part 64, the permittee has submitted, and the Ohio EPA has approved a compliance assurance monitoring plan for emissions units P901 (for sulfur dioxide emissions) and P903 (for particulate emissions) at this facility. The permittee shall comply with the provisions of the plan during any operation of the aforementioned emissions units.

   [Authority for term: 40 CFR Part 64]

3. The following insignificant emissions units are located at this facility:

   B001 - 61-HP emergency generator (Permit by rule PBR08240, issued 12/29/2010).

   Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

   [Authority for term: XXXX]

4. In order to avoid the requirements of OAC rule 3745-110 (NOx RACT rule), the total combined NOx emissions from P012, P901, and the 61 Hp diesel fuel emergency generator shall not exceed 99 tons per year, based upon a rolling, 12-month summation of the NOx emissions.

   [Authority for term: OAC rule 3745-77-07(A)(1)]

5. The permittee shall calculate and maintain monthly records of the total combined NOx emissions and the rolling, 12-month summation of NO_xemissions from P012, P901, and the 61 Hp diesel fuel emergency generator.

   [Authority for term: OAC rule 3745-77-07(C)(1)]

6. The permittee shall submit quarterly deviation (excursion) reports that identify the following:

   allexceedances of the rolling, 12-month summation of the NOx emission limitation for P012, P901, and the 61 Hp diesel fuel emergency generator combined.

   The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

   [Authority for term: OAC rule 3745-15-03(B)(1)(a), OAC rule 3745-15-03(C), and OAC rule 3745-77-07(A)(3)(c)]

7. Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

   [Authority for term: OAC rule 3745-77-07(A)(3)]

C. Emissions Unit Terms and Conditions

1. F001, Unpaved roadways and parking areas

Operations, Property and/or Equipment Description:

Unpaved roadways and parking areas.

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 operations(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. 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 3745-17-07(B)(5)	No visible emissions of fugitive dust except for 13 minutes during any 60-minute period.
b.	OAC rule 3745-17-08(B), (B)(2)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see b)(2)b. through b)(2)h.).

(2) Additional Terms and Conditions

a. The unpaved roadways and parking areas that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

unpaved roadways:
aggregate roadway between the main gate and the five load-out silos;
dirt roadway east of the five load-out silos;
dirt roadway adjacent to kiln #4;
dirt roadway from the shale pit to the primary crusher; and
overburden removal area

unpaved parking areas:
aggregate parking lot by the main gate; and
aggregate parking lot by the front office building

b. The permittee shall employ reasonably available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas with water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for an unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

d. Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled using appropriate dust control measures for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas specified in OAC rule 3745-17-07(B)(4).

e. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means. Any material carried off of the permittee's property and deposited onto public streets by vehicular traffic or by erosion by water, etc., shall be promptly removed and disposed of properly to minimize or prevent resuspension.

f. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

g. A maximum speed limit of 10 miles per hour shall be posted and enforced for all vehicles on all unpaved roadways as identified in b)(2)a.

h. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each of the unpaved roadway segments and each parking area in accordance with the following frequencies:

unpaved roadways: ALL
minimum inspection frequency: daily, when in operation

unpaved parking areas: ALL
minimum inspection frequency: daily, when in operation

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The permittee may, upon receipt of written approval from the Cleveland Division of Air Quality, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(4) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in (4)d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland Division of Air Quality that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. <u>Emission Limitation</u>:

No visible emissions of fugitive dust except for 13 minutes during any 60-minute period.

<u>Applicable Compliance Method</u>:

Compliance with the visible emission limitation for the unpaved roadways and parking areas identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

[Authority for term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

2. F002, Mineral Extraction

Operations, Property and/or Equipment Description:

Open pit shale extraction

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 operations(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. 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
	Drilling operations equipped with a cyclone and baghouse	
a.	OAC rule 3745-17-08(B)(3)	The baghouse shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there are no visible particulate emissions from the baghouse exhaust stack, whichever is less stringent.
b.	OAC rule 3745-17-08(B)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see b)(2))
c.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average.
	Material transfer operations	
d.	OAC rule 3745-17-08(B)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see b)(2))

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average.
	Open pit blasting	
f.	OAC rule 3745-17-07(B)(1)	Not applicable pursuant to OAC rule 3745-17-07(B)(11)(b).
g.	OAC rule 3745-17-08(B)	Not applicable pursuant to OAC rule 3745-17-08(C)(1).

(2) Additional Terms and Conditions

a. The permittee shall employ the dust collection system, including the cyclone and baghouse, during all drilling operations to prevent fugitive dust from becoming airborne.

b. In order to minimize spillage and windage losses, the permittee shall not overload the haul trucks with extracted shale material.

c. Nothing in this section shall prohibit the permittee from employing other control measures to ensure compliance.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain daily records that document the date and the reason the dust collection system was not operated while drilling operations were conducted.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall perform daily checks, when the emissions unit is in operation, for visible emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions from the baghouse stack shall be noted in an operations log. If visible emissions from the baghouse stack are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. the total duration of any visible emission incident; and

c. any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required by the Ohio EPA or Cleveland Division of Air Quality, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA methods and procedures. The results of any required mass emission tests and visible emission readings shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The permittee shall perform daily checks, when the emissions unit is in operation, for any visible emissions of fugitive dust from the non-stack egress points serving this emissions unit. The presence or absence of any visible emissions of fugitive dust from this emissions unit shall be noted in an operations log. If visible emissions of fugitive dust from this emissions unit are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify each day during which the dust collection system was not operated while drilling operations were conducted. The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Cleveland DAQ by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive dust emissions were observed from the non-stack egress points serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions of fugitive dust. These reports shall be submitted to the Cleveland DAQ by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. <u>Emission Limitation</u>:

The baghouse shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there are no visible particulate emissions from the baghouse exhaust stack, whichever is less stringent.

<u>Applicable Compliance Method</u>:

Compliance with the no visible emission limit shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

[Authority for term: OAC rule 3745-77-07(C)(1)]

If the permittee cannot demonstrate compliance with the no visible emission limit then compliance with the gr/dscf limit shall be determined through emission testing conducted in accordance with Test Methods 1 - 5 of 40 CFR, Part 60 Appendix A and the procedures specified in OAC rule 3745-17-03(B)(7).

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(7)]

b. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average (for drilling operations and material transfer)

Applicable Compliance Method:

Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03. This compliance method shall be used whenever a compliance determination is warranted.

[Authority for term: OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(3)(a) and (B)(3)(b)]

g) Miscellaneous Requirements

(1) None.

3. F003, Storage piles

Operations, Property and/or Equipment Description:

Storage piles

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 operations(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. 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
	Load-in and load-out of storage piles (see b)(2)a. for identification of storage piles)	
a.	OAC rule 3745-17-07(B)(6)	No visible emissions of fugitive dust except for 13 minutes in any hour.
b.	OAC rule 3745-17-08(B),(B)(6)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see b)(2)b., b)(2)c., and b)(2)f.).
	Wind erosion from storage piles (see b)(2)a. for identification of storage piles)	
c.	OAC rule 3745-17-07(B)(6)	No visible emissions of fugitive dust except for 13 minutes in any hour.
d.	OAC rule 3745-17-08(B), (B)(6)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see b)(2)d. through b)(2)f.).

(2) Additional Terms and Conditions

a. The storage piles that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

finehaydite
medium haydite
coarse haydite
clinker

b. The permittee shall employ reasonably available control measures on all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the load-in and load-out material(s) with water and/or any other suitable dust suppression chemicals to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.

d. The permittee shall employ reasonably available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat each storage pile with water and/or any other suitable dust suppression chemicals via the spray tower at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

e. The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.

f. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each load-in operation at each storage pile in accordance with the following frequencies:

storage pile identification: ALL

minimum load-in inspection frequency: daily, when in operation

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile in accordance with the following frequencies:

storage pile identification: ALL

minimum load-out inspection frequency: daily, when in operation

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

storage pile identification: ALL

minimum wind erosion inspection frequency: daily, when in operation

[Authority for term: OAC rule 3745-77-07(C)(1)]

(4) No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(5) The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(6) The permittee may, upon receipt of written approval from the Cleveland Division of Air Quality, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(7) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in (7)d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland Division of Air Quality that identify the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

No visible emissions of fugitive dust except for 13 minutes in any hour.

Applicable Compliance Method:

Compliance with the visible emission limitations for the storage piles identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

[Authority for term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

4. F004, Material handling

Operations, Property and/or Equipment Description:

Expanded shale crushing, screening, and material handling.

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 operations(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. 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 3745-17-08(B)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see b)(2)b. through b)(2)d.)
b.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average.

(2) Additional Terms and Conditions

a. The crushing, screening, and material handling operations that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

cone crusher
screens
load-in hopper
bucket elevator
conveyor belts

b. The permittee shall employ reasonably available control measures for the above-identified material handling operations for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to apply sufficient water or chemical dust suppressant at the unloading station to control dust

emissions from all subsequent conveyors and transfer points to ensure compliance.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. For each material handling operation that is not adequately enclosed, the above-identified control measure shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure is necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure shall continue during the operation of the material handling operations until further observation confirms that use of the control measure is unnecessary.

d. Implementation of the above-mentioned control measure in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

Crushing, screening, and material handling operations:	Minimum inspection frequency:
Cone crusher	Daily, when in operation
Screens	Daily, when in operation
Bucket elevator	Daily, when in operation
Load-in hopper	Daily, when in operation
Conveyor belts	Daily, when in operation

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The above-mentioned inspections shall be performed during representative, normal operating conditions.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The permittee may, upon receipt of written approval from the Cleveland Division of Air Quality, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(4) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure;

c. the dates the control measure was implemented; and

d. on a calendar quarter basis, the total number of days the control measure was implemented.

The information in (4)d. shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland Division of Air Quality that identify the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. <u>Emission Limitation:</u>

Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average

Applicable Compliance Method:

Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03. This compliance method shall be used whenever a compliance determination is warranted.

g) Miscellaneous Requirements

(1) None.

5. P012, Shale Crushing, Conveying and Screening System

Operations, Property and/or Equipment Description:

Shale crushing, screening, and conveying system - 300 tons per hour mobile track raw shale processing plant including a front end loader, a (new) grizzly feeder, a (new) jaw (primary) crusher, a cone (new secondary) crusher, a Deister screen controlled by a baghouse, a Weekend front end loader, 21 conveyors (6 new), a vibrating feeder and a (new) 300 HP diesel engine.

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 operations(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. 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
Shale crushing, conveying and screening system		
a.	OAC rule 3745-17-07(A)(1) PTI #13-04724 issued 6/12/08	The visible particulate emission limitation specified by this rule is less stringent than the visible particulate emission limitation established pursuant to 40 CFR Part 60, Subpart OOO below.
b.	OAC rule 3745-17-07 (B)(1)	The visible fugitive emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to 40 CFR Part 60, Subpart OOO below.
c.	OAC rule 3745-17-08 (B)	See b)(2)b. through b)(2)d. below.
d.	OAC rule 3745-17-11(A)(2)	The particulate emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 60, Subpart OOO below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR Part 60 Subpart OOO	Particulate emissions from the Deister screen baghouse stack serving this emissions unit shall not exceed 0.05 grams per dry standard cubic meter (g/dscm) - this converts to: 0.022 grains per dry standard cubic feet (gr/dscf); Visible particulate emissions from the Deister screen baghouse stack shall not exceed 7% opacity, as a 6-minute average. Visible emissions of fugitive dust from points other than the crushers shall not exceed 10% opacity, as a 6-minute average. (See b)(2)a.) Visible emissions of fugitive dust from the jaw crusher and the cone crusher (both of which have no capture system) shall not exceed 15% opacity, as a 6-minute average.
f.	OAC rule 3745-31-05(D) Synthetic Minor to avoid PSD and Nonattainment NSR	2.23 tons/year* PM emissions 0.80 ton/year* PM_{10} emissions * per rolling, 12-month period See b)(2)a. below.
300 HP Diesel Fired Mobile Engine		
g.	OAC rule 3745-31-05(D) Synthetic Minor to avoid PSD and Nonattainment NSR	3.37 tons/year* particulate emissions 3.37 tons/year* PM_{10} emissions 8.55 tons/year* NO_xemissions 1.84 tons/year* CO emissions 0.57 ton/year* SO_2 emissions; and 0.68 ton/year* OC/VOC emissions * per rolling, 12-month period See b)(2)a. below.

(2) Additional Terms and Conditions

a. Permit to Install #13-04724 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. totally enclosed hood and baghouse for the screen;

ii. water/suppressant sprays at raw shale hopper; and

iii. restricting operation to 1,577 hours/year.

BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the crusher and generator emissions since the calculated annual emission rate for PM and PM_{10} emissions from the crushing operation and PM, PM_{10}, NO_x, CO, SO_2 and OC/VOC emissions from the generator is less than ten tons per year taking into account the permittee's request for voluntary restrictions to avoid BAT requirements and synthetic minor restrictions.

b. The permittee shall employ reasonably available control measures for the crushing operation for the purpose of ensuring compliance with the applicable requirements. In accordance with the permittee's permit application, the permittee has committed to employing water spray bars at the hopper charging point, after crushing operations, and at the end of each conveyor belt to ensure compliance. The permittee shall also minimize the free fall distance of the processed material. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

c. For each phase of the crushing operation that is not adequately enclosed, the control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the applicable requirements. Any required implementation of the control measure(s) shall continue during the operation of the crusher until further observation confirms that use of the control measure(s) is unnecessary.

d. The loading, crushing, screening, conveying and material handling operations of the shale processing plant that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

Front end loader to hopper (existing)
300 ton per hour Grizzly Feeder (new)
300 ton per hour Jaw Crusher (new)
6 ft x 24 ftDeister Screen with Baghouse (existing)
150 ton per hour Cone Crusher (new)
21 Conveyors (15 existing, 6 new)
Weekends Front End Loader (existing)
Vibrating Feeder to Kiln (existing)
300 HP Diesel Fired Mobile Engine

c) Operational Restrictions

(1) This emissions unit is restricted to a maximum raw shale feed rate of 394,200 tons per rolling, 12-month period.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI #13-04724]

(2) The permittee shall burn only No.2 fuel oil (diesel) with a sulfur content less than 0.5% by weight in the diesel engine and generator.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI #13-04724]

(3) The maximum annual operating hours for the diesel generator shall not exceed 1,577 hours, based upon a rolling, 12-month summation of the operating hours.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI #13-04724]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the monthly raw shale feed rate, in tons; and

b. the rolling, 12-month summation of the total raw shale feed rate for the emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(2) The permittee shall perform daily checks, when the emissions unit is in operation and when weather conditions allow, for any visible particulate emissions from the baghouse stack serving the 6' x 24' screening activity. The presence or absence of any visible emissions from the baghouse stack shall be noted in an operations log. If visible emissions from the baghouse stack are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(3) Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

Crushing, screening, and material handling operations:	Minimum inspection frequency:
Conveyor belts	Daily, when in operation
Front end loader to grizzly feeder	Daily, when in operation
300-ton per hour jaw crusher	Daily, when in operation
6' x 24' screen	Daily, when in operation
150-ton per hour cone crusher	Daily, when in operation

(4) The above-mentioned inspections shall be performed during representative, normal operating conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(5) The permittee may, upon receipt of written approval from the Cleveland Division of Air Quality, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(6) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure;

c. the dates the control measure was implemented; and

d. on a calendar quarter basis, the total number of days the control measure was implemented.

The information in (6)d. shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(7) For each day during which the permittee burns a fuel other than No.2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in the diesel generator.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(8) The permittee shall maintain monthly records of the following information for the diesel generator:

a. the operating hours for each month; and

b. the rolling, 12-month summation of the operating hours.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(9) For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of the diesel oil received and the oil supplier's (or permittee's) analyses for sulfur content, in parts per million and percent by weight. A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

The permittee shall perform, or require the supplier to perform, the analyses for sulfur content in accordance with 40 CFR Part 60, Appendix A, Method 19, or using the appropriate ASTM methods, such as D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) which identify all exceedances of the rolling, 12-month raw shale feed rate limitation, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative raw shale feed rate levels. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stack serving the 6' x 24' screening activity and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Cleveland DAQ by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(3) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that identify the following occurrences:

a. each day during which an inspection was not performed by the required frequency; and

b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.

The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(4) The permittee shall submit deviation (excursion) reports to the Cleveland DAQ that identify each day when a fuel other than No.2 fuel oil was burned in the diesel generator. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(5) The permittee shall submit deviation (excursion) reports to the Cleveland DAQ which identify all exceedances of the rolling, 12-month operating hours limitation for the diesel generator. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. <u>Emission Limitations</u>:

0.022 gr/dscf from the Deister screen baghouse stack

<u>Applicable Compliance Method:</u>

If required, compliance with this emission limit shall be determined by emission testing using Methods 1-5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

b. <u>Emission Limitation:</u>

Visible particulate emissions from the Deister screen baghouse stack shall not exceed 7% opacity, as a 6-minute average.

<u>Applicable Compliance Method:</u>

Compliance with the above visible emission limitation shall be determined through performance testing using Method 9 of 40 CFR, Part 60, Appendix A.

This compliance method shall be used whenever a compliance determination is warranted.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

c. Emission Limitation:

Visible emissions of fugitive dust from points other than the crushers shall not exceed 10% opacity, as a 6-minute average.

Applicable Compliance Method:

Compliance with the above visible emission limitation shall be determined through performance testing using Method 9 of 40 CFR, Part 60, Appendix A. See f)(2) below.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

d. Emission Limitation:

Visible emissions of fugitive dust from the Jaw and Cone crushers shall not exceed 15% opacity, as a 6-minute average.

Applicable Compliance Method:

Compliance with the above visible emission limitation shall be determined through performance testing using Method 9 of 40 CFR, Part 60, Appendix A. See f)(2) below.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

e. Emission Limitations:

2.23 tons/year of PM emissions from crushing operation per rolling, 12-month period.

0.80 tons/year of PM_{10} emissions from crushing operation per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual PM/PM_{10} emission limitation shall be determined using the controlled emission factors for crushing and material handling operations in AP-42, Chapter 11.19.2 (Crushed Stone Processing), Fifth Edition, dated 1/1995. These emission factors are being used because wet suppression is applied at the primary jaw crusher located in the pit and the normally high moisture content of the raw shale. The watering controlled emission factors from AP-42, are:

Operation	PM (lb/ton)	PM_{10} (lb/ton)
primary crushing	0.0012	0.00054
conveyors	0.00014	0.000046
screening	0.0022	0.00074

The uncontrolled emission factor for hopper loading is 0.000016 lb/ton for PM_{10}. For hopper loading PM emissions, multiply the PM_{10} emissions by a factor of 2.1. For hopper loading only multiply by (1 - 0.60) to account for the 60% watering emission control efficiency.

Compliance shall be determined by multiplying the emission factors identified above by the actual annual amount of material processed for each part of the process identified in term b)(2)d. (except the generator), divide by 2000 lbs/ton, and then sum total emissions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

f. Emission Limitation:

3.37 tons/year of PM emissions from the diesel fired generator per rolling, 12-month period;

3.37 tons/year of PM_{10} emissions from the diesel fired generator per rolling, 12-month period;

8.55 tons/year of NO_x emissions from the diesel fired generator per rolling, 12-month period;

1.84 tons/year of CO emissions from the diesel fired generator per rolling, 12-month period;

0.57 ton/year of SO_2 emissions from the diesel fired generator per rolling, 12-month period; and

0.68 ton/year of OC/VOC emissions from the diesel fired generator per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor (noted below) for each pollutant by 300 HP and then multiply by the actual number of hours the generator was operated during the rolling 12-month period, and dividing by 2000 lbs/ton. The actual number of hours the generator was operated shall be determined in accordance with the record keeping in d)(8).

The emission factors for the various pollutants taken from AP-42, Chapter 3.3.1 (Gasoline and Diesel Industrial Engines), Table 3.3-1, Fifth Edition, dated 10/1996 are as follows:

Pollutant	Emission Factor (lb/HP-hour)
NO_x	0.031
CO	0.00668 (after testing is completed, use emission factor developed from testing)
SO_2	0.00205
PM/PM_{10}	0.0022
OC/VOC	0.00247

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

(2) 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 days after initial startup.

This term is taken from PTI 13-04724 issued on 6/12/08. Construction has not been completed at this time; the facility has not installed the permanent generator or additional conveyor belts. At the time of completion the facility shall conduct the testing as stated above.

b. The emission testing shall be conducted to demonstrate compliance with opacity emission limitations for the primary crusher and transfer points listed in b)(2)d. of these terms and conditions with an emission limitation of 10% (transfer points), 15%(crushers) and 20% (generator) opacity and subject to 40 CFR Part 60, Subpart OOO. The emission testing is not required for wet screening operations and subsequent screening operations, and belt conveyors that process saturated material in the production line up to, but not including the next crusher, grinding mill or storage bin, or for screening operations, and belt conveyors in the production line downstream of wet mining operations, that process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

c. The following test method(s) shall be employed to demonstrate compliance: for particulate emissions Method 9 of 40 CFR Part 60, Appendix A and the procedures in Section 60.11 of 40 CFR Part 60, subpart A, with the following additions:

i. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

ii. The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

iii. For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

d. When demonstrating compliance with the fugitive emissions standard for any crusher at which a capture system is not used as described under Section 60.672(c) of 40 CFR Part 60, Subpart OOO, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

i. There are no individual readings greater than 10 percent opacity; and

ii. There are no more than 3 readings of 10 percent for the 1-hour period.

e. When demonstrating compliance with the fugitive emissions standard for the transfer points listed in b)(2)d. of these terms and conditions with an emission limitation of 10% opacity and subject to 40 CFR Part 60, subpart OOO, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

i. There are no individual readings greater than 10 percent opacity; and

ii. There are no more than 3 readings of 10 percent for the 1-hour period.

f. 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 Division of Air Quality.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland Division of Air Quality. 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 Division of Air Quality refusal to accept the results of the emission test(s).

Personnel from the Cleveland Division of Air Quality 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.

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 Division of Air Quality within 30 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 Division of Air Quality.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04724]

g) Miscellaneous Requirements

(1) None.

6. P901, Rotary Kiln #4

Operations, Property and/or Equipment Description:

Rotary Kiln #4 - Existing 45 tons raw shale/hr capacity rotary kiln for the production of expanded shale, modified to use coal as the primary fuel equipped with low-NOx burner or equivalent technology and a new baghouse to control PE, PM_{10}, Pb, Hg, As, Cd and Cr emissions. A lime slurry injection system is employed to control SO2, HF and HCl emissions via the same baghouse. In addition to coal, this emissions unit also uses re-refined used #4 fuel oil and/or natural gas as backup fuels.

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 operations(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. 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 # P0107238 issued 3/16/2011.	Particulate emissions (PE) and particulate matter emissions less than 10 microns in diameter (PM_{10} emissions), filterable plus condensable, from the baghouse stack serving this emissions unit shall not exceed 32.94 lbs/hour and 121.13 tons per rolling, 12-months. Visible emissions of fugitive dust shall not exceed 10% opacity as a 6-minute average from any non-stack egress point at this emissions unit. The permittee shall employ best available control measures to minimize or eliminate visible emissions of fugitive dust. See b)(2)a. below. Nitrogen oxides emissions from this emissions unit shall not exceed 45.0 lbs/hr.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Carbon monoxide (CO) emissions from this emissions unit shall not exceed 41.1 lbs/hr. Organic and volatile organic compound emissions from this emissions unit shall not exceed 0.50 lb/hr. Emissions of hydrogen chloride (HCl) from this emissions unit shall not exceed 0.44 lb/hr. The requirements of this rule also includes compliance with the requirements of OAC rule 3745-18-06(E)(1), OAC rule 3745-31-05(D), and 40 CFR Part 60, Subpart UUU. See c)(1) below.
b.	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to NSPS 40 CFR Part 60 Subpart UUU.
c.	OAC rule 3745-17-07(B)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-08(B)	The control requirements specified or established by this rule are equivalent to or less stringent than the control requirements established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-11(B)(1)	The PE limitation specified in this rule is less stringent than the particulate emission limitations established pursuant to 40 CFR Part 60, Subpart UUU and OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-18-06(E)(1)	Sulfur dioxide emissions from this emissions unit shall not exceed 270.2 lbs/hr.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	OAC rule 3745-31-05(D) Synthetic Minor to avoid Modeling, PSD, Nonattainment NSR, and OAC rule 3745-110 (NO_x RACT rule).	797.84 tons SO_2/rolling, 12-months; 90.0 tons NO_x/rolling, 12-months; 82.18 tons CO/rolling, 12-months; 1.1 ton OC/VOC/rolling, 12-months; 0.89 ton HCl/rolling, 12-months. See c)(3) and c)(4) below
h.	40 CFR Part 60 Subpart UUU	PE/PM_{10} (filterable) shall not exceed 0.040 gr/dscf; and Visible particulate emissions from the baghouse stack shall not exceed 10% opacity as a 6-minute block average.

(2) Additional Terms and Conditions

a. Best available control measures consisting of sufficient air flow pulled from the downstream end of the rotary kiln to achieve 99% or better capture of fugitive emissions. The permittee shall operate and maintain a system for the capture and collection of particulate emissions from this emissions unit that shall be sufficient to minimize or eliminate visible emissions of fugitive dust from this emissions unit.

b. With the exception of OC/VOC emissions, the emissions limits established above are based on burning coal which is the worst-case fuel that generates the highest emissions. The OC/VOC emission limit was established based on burning natural gas which results in the highest emission rate.

c) Operational Restrictions

(1) The permittee shall employ pulverized coal to fire the burners associated with this emissions unit at a rate that shall not exceed 3.69 tons/hour, in order to comply with OAC rule 3745-18-06(E).

[Authority for term: OAC rule 3745-77-07(A)(1), 40 CFR Part 64.3(a)(2), OAC rule 3745-18-06(E)(1) and PTI #P0107238]

(2) The sulfur content of the coal burned shall not exceed 2.5% by weight dry basis. Compliance with this specification shall be determined using the analytical results proved by the permittee or coal supplier on a grab sample taken per shipment and analyzed as part of a monthly composite analysis.

[Authority for term: OAC rule 3745-77-07(A)(1), 40 CFR Part 64.3(a)(2), OAC rule 3745-18-06(E)(1) and PTI #P0107328]

(3) The maximum annual coal firing rate for emissions unit P901 shall not exceed 14,754 tons coal per year, based on a rolling, 12-month summation of the coal firing rates.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI #P0107328]

(4) The maximum annual rate of processing shale for emissions unit P901 shall not exceed 350,000 tons shale per year, based on a rolling, 12-month summation of the shale processing rates.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI #P0107328]

(5) The pressure drop across the baghouse shall be maintained within the range of 0.50 to 10.0 inches of water while the emissions unit is in operation.

[Authority for term: OAC rule 3745-77-07(A)(1), 40 CFR Part 64.3(a)(2) and PTI #P0107328]

(6) The permittee shall maintain the forced draft fan at the shale charging chute to the kiln and the baghouse fan in good working order to prevent shale fines from becoming airborne.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI #P0107328]

(7) The lime injection system shall be continuously maintained, while the emissions unit is operating, on a monthly average basis at 300 lbs/hr or at a pounds/hour of lime established during the most recent SO_2 compliance test that demonstrated compliance.

[Authority for term: OAC rule 3745-77-07(A)(1), 40 CFR Part 64.3(a)(2) and PTI #P0107328]

(8) The permittee shall use only lime slurry as a wet sorbent in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI #P0107328]

(9) All re-refined used #4 fuel oil burned in the emissions unit shall meet the following specifications:

Contaminant / Property:	Allowable Specification:
arsenic	5 ppm, maximum
cadmium	2 ppm, maximum
chromium	10 ppm, maximum
lead	100 ppm, maximum
PCB's	< 50 ppm, maximum
total halogens	1000 ppm, maximum *
mercury	1 ppm, maximum
flash point	100 degrees F, minimum
heat content	135,000 Btu/gallon
sulfur	0.5 percent

* Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under 40 CFR Part 266.40(c) and OAC rule 3745-279.

[Authority for term: OAC rule 3745-77-07(A)(1) and Ohio EPA letter dated February 27, 2003 addressing the "capable of accommodating" determination for re-refined used #4 fuel oil]

d) Monitoring and/or Recordkeeping Requirements:

(1) The permittee shall monitor and record the coal firing rate either electronically or in an operations log on an hourly basis. The permittee shall properly operate, and maintain equipment to monitor the coal firing rate while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). [Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(2) Requirements for the Sampling and Analysis of the Coal Burned:

The permittee shall collect or require the coal supplier to collect a representative grab sample of each shipment of coal that is received for burning in this emissions unit. The permittee or the coal supplier shall consolidate all grab samples collected during the previous month into one monthly composite sample. The permittee or the coal supplier shall conduct monthly composite testing of the grab samples taken per shipment during the previous month. The permittee shall perform or require the supplier to perform the coal sampling in accordance with ASTM methods D2234, Collection of a Gross Coal Sample of Coal, and analyze the coal sample for sulfur content (percent by weight) and heat content (Btu/pound of coal) for each monthly composite sample. The analytical methods to be used to determine the sulfur content and heat shall be: ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke using High Temperature Tube Furnace Combustion Methods; and ASTM method A2015, Gross Caloric Value of Coal and Coke by the Isothermal Bomb Calorimeter, or ASTM method D1989, Standard Test Method for Gross Caloric Value of Coal and Coke by microprocessor Controlled Isoperibol Calorimeters, respectively. Alternative, equivalent methods may be used upon written approval by the Cleveland Division of Air Quality.

[Authority for term: OAC rule 3745-18-04(D)(3)(b), OAC rule 3745-77-07(A) and(C)(1) and PTI #P0107238]

(3) Record Keeping Requirements for Coal Usage and Quality:

For each shipment of coal received for burning in this emissions unit, the permittee shall maintain records of the total quantity of coal received, and the permittee's or coal supplier's analysis for sulfur content.

(4) The permittee shall collect and record the following information each month for emissions unit P901:

a. the tons of coal fired into the kiln daily and the total tons per month; and

b. the rolling, 12-month summation of the coal fired, in tons.

[Authority for term: OAC rule 3745-18-04(D)(3)(b), OAC rule 3745-77-07(A) and (C)(1) and PTI #P0107238]

(5) The permittee shall collect and record the following information each month for emissions unit P901:

a. the weight of shale processed, in tons, and the total tons per month; and

b. the rolling, 12-month summation of the shale processed, in tons.

[Authority for term: OAC rule 3745-18-04(D)(3)(b), OAC rule 3745-77-07(A) and (C)(1) and PTI #P0107238]

(6) The permittee shall properly operate and maintain equipment to continuously monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 64.3(a)(2), and 40 CFR 64.7(b)], 40 CFR Part 64.9(b), and PTI #P0107238]

(7) The permittee shall maintain records when the forced draft fan at the shale charging chute to the kiln or the baghouse fan did not operate while the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(8) The permittee shall collect and record the following information each month for this emissions unit:

a. the number of hours the emissions unit was in operation;

b. the total monthly feed rate of lime, in pounds; and

c. the average hourly feed rate of line calculated as the total monthly feed rate of lime divided by the number of hours the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI #P0107328]

(9) For each day during which the permittee uses a wet sorbent other than lime slurry, the permittee shall maintain a record of the type and quantity of wet sorbent used in this emissions unit.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI #P0107328]

(10) The permittee shall perform weekly checks, when the emissions unit is processing materials and when the weather conditions allow, for any visible emissions of fugitive dust (excluding uncombined water vapor) from the non-stack egress points serving this emissions unit. The presence or absence of any visible emissions shall be recorded electronically or in an operations log. If visible emissions are observed, the permittee shall also record the following:

a. the location and color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(11) Pursuant to 40 CFR 60.734(a), the permittee shall calibrate, maintain, and operate a continuous monitoring system to measure and record the opacity of emissions discharged into the atmosphere from the stack of the baghouse. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR 60.13.

Prior to the installation of the continuous opacity 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 1 for approval by the Ohio EPA, Central Office.

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.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 60.734(a) and PTI #P0107328]

(12) The permittee shall operate, and maintain a continuous opacity monitoring system to continuously monitor and record the opacity of the particulate emissions from this emissions unit. 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 opacity monitoring system including, but not limited to:

a. percent opacity on an instantaneous (one-minute) and 6-minute block average basis;

b. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

c. hours of operation of the emissions unit, continuous opacity monitoring system, and control equipment;

d. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous opacity monitoring system;

e. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous opacity monitoring system; as well as,

f. the reason (if known) and the corrective actions taken (if any) for each such event in d. and e.

Pursuant to 40 CFR 60.735(a), records of the measurements required in 40 CFR 60.734 (continuous opacity monitoring system) shall be retained for at least two (2) years.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(13) The permittee shall collect and record the following information each month during which coal was burned for this emissions unit:

a. the number of hours the emissions unit was in operation (hrs/month);

b. the total monthly amount of shale processed and the coal fired, in tons; and

c. the average hourly SO_2 emission rate calculated in accordance with the following equation (lbs/hr):

lb SO_2/hr = [tons shale processed x lb SO_2/ton shale + tons coal fired x 100 lbs SO_2/ton coal] / (hours of operation) x (1 - control efficiency)

The uncontrolled emission factor for shale shall be calculated using the difference in sulfur content between the shale and the finished product in accordance with the test methods identified in term d)(14) below and the following equation:

lb SO_2/ton shale = [sulfur content of raw shale - sulfur content of finished product] x (2000 lbs/ton) x (64 lbs SO_2/mole) / (32 lbs sulfur/mole)

The uncontrolled emission factor for coal was calculated assuming that all of the sulfur in the coal is oxidized to SO2. The permittee shall use the control efficiency determined from the most recent stack test that demonstrated compliance with the allowable hourly emission rate.

(14) The permittee shall collect and record the following information each month, during which re-refined used #4 oil and/or natural gas is burned for this emissions unit:

a. the number of hours this emissions unit was in operation;

b. the total monthly amount of shale processed (ton), and the amount of natural gas (mmcf) and/or re-refined used #4 oil (gallons); and

c. the average hourly SO_2 emission rate calculated in accordance with the following equations:

For natural gas:

lb SO_2/hr = [tons shale processed x lb SO_2/ton shale + mmcf natural gas fired x 0.6 lb SO_2/mmcf] / (hours of operation) x (1- control efficiency)

For re-refined used #4 oil:

lb SO_2/hr = [tons shale processed x lb SO_2/ton shale + gallons of #4 oil fired x 113 lb SO_2/1,000-gallons] / (hours of operation) x (1- control efficiency)

The uncontrolled emission factor for shale shall be calculated using the difference in sulfur content between the shale and the finished product in accordance with the test methods identified in term d)(15) below and the following equation:

lb SO_2/ton shale = [sulfur content of raw shale - sulfur content of finished product] x (2000 lbs/ton) x (64 lbs SO_2/mole) / (32 lbs sulfur/mole)

The permittee shall use the control efficiency determined from the most recent stack test that demonstrated compliance with the allowable hourly emission rate.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(15) The weighted average sulfur content of the raw and expanded (Haydite) shale processed in the kiln shall be determined not less than once per month and compliance with the SO_2 emission limit verified by using the analytical results obtained. The permittee shall use analytical methods EPA Method 6010B or ASTM method D4292 to determine the sulfur content.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(16) The CAM plan for this emissions unit has been developed for sulfur dioxide emissions utilizing a baghouse with lime slurry injection. The CAM performance indicators for the baghouse and lime slurry controlling this emissions unit are:

a. hourly monitoring of the coal firing rate;

b. monthly analysis of the sulfur content of the coal;

c. maintain rolling, 12-month records of the amount of coal burned and weight of shale processed;

d. the static pressure drop across the baghouse, which was established in accordance with the manufacturer's recommendations, and visible emissions checks;

e. the average hourly lime injection rate determined monthly;

f. the average hourly SO2 emission rate calculated monthly based on amount of shale processed and fuel burned; and

g. the average sulfur content of the raw and expanded shale determined not less than once per month.

When the performance indicators are operating outside the indicator ranges, the permittee shall take corrective action to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions and comply with the reporting requirements specified in e)(12) below. The emissions unit and control equipment shall be run in accordance with the approved CAM Plan, or any approved revision of the Plan. In addition to periodic monitoring of the operating parameters, the permittee also has an inspection/preventative maintenance program for the baghouse and capture system. Based on the results of the inspection/preventative maintenance program, repairs to the baghouse and capture system shall be made as needed. If the current CAM indicators and/or the baghouse and capture system inspection/preventative maintenance program is determined to be inadequate, the permittee will develop a Quality Improvement Plan.

The baghouse shall not be configured to have bypass capability.

[Authority for term: OAC 3745-77-07(A)(3)(a) and (b), 40 CFR 64.3(a), 64.6(c), 64.7(d), and 64.8]

(17) At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

The following spare parts have been identified by DiGeronimo as necessary to have in stock:

Part Name	TML Part #	System Location	Stacking Quantity
Fuse (1.25A)	527441	Optical Head PS Board	5
Fuse (5.0A)	527418	Optical Head	5

Fuse (2A)	527438	Enhanced Pemote& Multi I/O	6
Purge Filters	528873	Purge System	12
Wipes	550026	General	1 Box
Lens Cleaning fluid	530023	General	1 Bottle
Dessicator (Head)	997788	Optical Head Assembly	1
Purge Switch	528312SP	Optical Head & Retro	1
Battery	550047	Optical Head Mother Board	1
Optical Amplifier PCB	1860-0400-01	Optical Head	1
Control Module PCB	515441	Optical Head	1
Power Supply PCB	1860-1100-02	Optical Head	1
Cal Mechanism Drive Assembly	1860-0125-01	Optical Head	1
Blower Motor	980142	Purge System	1
Power Supply PCB	1-803-0300-02	Enhanced Remote Panel	1
Viton O-Ring	700233	Optical Head	1

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 64.7(b)]

(18) After approval of monitoring under this part, if the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the part 70 or 71 permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 64.7(e)]

(19) Baghouse operating parameters shall be re-verified as a result of any changes to the operating conditions of the baghouse or emissions unit. In addition to periodic monitoring of the baghouse operating parameters, the permittee shall also perform the following inspections:

a. checking the bags / filters for deterioration or degradation on a semi-annual basis;

b. checking the cleaning system for proper operation on a weekly basis; and

c. checking the hoppers and conveyance systems for proper operation on a weekly basis.

Based on the results of the monitoring and inspection program, repairs to the baghouse shall be made as needed. If the current CAM indicators and/or the baghouse inspection program is considered inadequate, the permittee shall develop a Quality Improvement Plan.

[Authority for term: OAC 3745-77-07(A)(3)(a) and (b), 40 CFR 64.3(a), 64.6(c), 64.7(d), and 64.8]

(20) At least once per week, the permittee shall confirm that dust is being removed from the rotary kiln baghouse hoppers through visual inspection or equivalent means of ensuring the proper functioning of removal mechanisms.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 64.7]

(21) At least once per month, the permittee shall perform a check of the bag cleaning mechanisms for proper functioning through visual inspection or equivalent means.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 64.7]

(22) The permittee shall receive a chemical analysis with each shipment of re-refined oil from the supplier. The analysis shall identify the name and address of the supplier, the supplier's USEPA identification number, and the following information:

a. date of shipment or delivery;

b. quantity of oil received;

c. the Btu value of the oil;

d. the flash point of the oil;

e. the arsenic content;

f. the cadmium content;

g. the chromium content;

h. the lead content;

i. the PCB content;

j. the total halogen content;

k. the mercury content; and

l. the sulfur content.

Each analysis shall be kept in a readily accessible location for at least 5 years and shall be made available to the Cleveland Division of Air Quality upon verbal or written request. The Director, or any authorized representative of the Director, may require or may conduct periodic, detailed chemical analyses through an independent laboratory of any oil shipment received by this facility, of any oil stored at this facility, or of any oil sampled at the kiln.

[Authority for term: OAC rule 3745-77-07(A)(1) and Ohio EPA letter dated February 27, 2003 addressing the "capable of accommodating" determination for re-refined used #4 fuel oil]

(23) For each day during which the permittee burns a fuel other than coal, re-refined used #4 fuel oil and/or natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly coal firing rate deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify all periods of time during which the hourly coal firing rate did not comply with the allowable rate specified above. The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(2) Reporting Requirements for the Coal Usage and Quality Data:

The permittee shall submit to the Cleveland DAQ, on a quarterly basis, copies of the permittee's or coal supplier's analyses (wet and/or dry) of each monthly composite sample of coal. The permittee's or coal supplier's analyses shall document the sulfur content (percent by weight) and heat content (Btu/lb) of each monthly composite sample of coal. The following information shall also be included with the copies of the permittee's or coal supplier's analyses:

a. the total quantity of coal received in each shipment (tons); and

b. the weighted* average sulfur content.

* In proportion to the quantity of coal received in each shipment during the calendar month.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the coal shipments received during the previous calendar quarters.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(3) The permittee shall submit deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify all exceedances of the rolling, 12-month coal firing rate limitation for P901. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(4) The permittee shall submit deviation (excursion) reported to the Cleveland Division of Air Quality (Cleveland DAQ) that identify all exceedances of the rolling, 12-month shale processing rate limitation for P901. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC 3745-77-07(A)(3)(a)(ii) and PTI #P0107238]

(5) The permittee shall submit quarterly pressure drop deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(6) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that identify all periods of time during which the forced draft fan at the shale charging chute and/or the baghouse fan did not operate while the emissions unit was in operation. The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(7) The permittee shall submit deviation (excursion) reports to the Cleveland DAQ that identify each month during which the average hourly feed rate of the lime was not maintained at or above the required level specified above. Each report shall be submitted within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(8) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that identify each day when a wet sorbent other than lime slurry was used in this emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(9) The permittee shall submit semiannual written reports that:

a. identify all days during which any visible emissions of fugitive dust were observed from the non-stack egress points serving this emissions unit; and

b. describe any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Cleveland DAQ by January 31 and July 31 of each year and shall cover the previous six-month period.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(10) The permittee shall submit quarterly written reports to the Cleveland DAQ of exceedances of control device operating parameters required to be monitored by 40 CFR 60.734 of Subpart UUU. For the purpose of these reports, exceedances are defined as follows: all 6-minute block averages during which the average opacity from dry control devices is greater than 10 percent.

The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous opacity 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 Cleveland Division of Air Quality, documenting all instances of opacity values in excess of any limitation specified in this permit, 40 CFR Part 60, OAC rule 3745-17-07, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude (percent opacity) of each 6-minute block average exceeding the applicable opacity limitation(s), as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. If there are no exceedances 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 opacity monitor;

iii. the location of the continuous opacity monitor;

iv. the exceedance report as detailed in (a) above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous opacity monitoring system while the emissions unit was in operation;

vii. the date, time, and duration of any/each malfunction* of the continuous opacity monitoring system, emissions unit, and/or control equipment;

viii. the date, time, and duration of any downtime* of the continuous opacity monitoring system and/or control equipment while the emissions unit was in operation; and

ix. the reason (if known) and the corrective actions taken (if any) for each event in vii and viii.

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 the opacity limit.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 60.734 and PTI #P0107238]

(11) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that identify any month during which the average hourly SO_2 emission rate (from d)(13) and d)(14)) exceeded 270.2 pounds SO_2 per hour and the actual average hourly SO_2 emission rate for each such month and document any corrective action taken to restore operation of the emissions unit, or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(12) The permittee shall submit annual reports to the Cleveland DAQ that specify, for the baghouse stack, the total particulate and PM_{10} emissions, nitrogen oxides, carbon monoxide, volatile organic compounds, sulfur dioxide, and HCl emissions, in tons, from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emissions Report.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR Part 64.7(d), 40 CFR Part 64.9(a) and PTI #P0107238]

(13) The permittee shall submit to the Cleveland DAQ, on a quarterly basis, copies of the permittee's sulfur analysis of the shale for each month in the quarter. The permittee's sulfur analyses shall document the sulfur content (percent) of both the raw shale and the expanded (Haydite) shale for each month. The following information shall also be included with the copies of the permittee's sulfur analyses:

a. the total quantity of raw shale processed (tons) during each calendar month;

b. the weighted* average sulfur content (percent) of the raw shale processed during each calendar month; and

c. the weighted* average sulfur content (percent) of the Haydite produced during each calendar month.

* Determined in accordance with term d)(15).

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July through September) and shall cover the shale processed, unless an alternative schedule has been established and approved by the Cleveland DAQ).

(14) The permittee shall submit deviation (excursion) reports to the Cleveland DAQ that identify each day when a fuel other than coal, re-refined used #4 fuel oil and/or 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 3745-77-07(C)(1)]

(15) The permittee shall submit quarterly deviation (excursion) reports to the Cleveland DAQ that identify any deviations of the re-refined used #4 fuel oil specifications identified in c)(9) of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1) and Ohio EPA letter dated February 27, 2003 addressing the "capable of accommodating" determination for re-refined used #4 fuel oil]

(16) The permittee shall submit all reports in accordance with the Standard Terms and Conditions of this permit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. <u>Emission Limitations</u>:

PE and PM_{10} emissions (filterable plus condensable) from the baghouse stack serving this emissions unit shall not exceed 32.94 lbs/hour (assume all PE is PM_{10}).

<u>Applicable Compliance Method</u>:

The pound per hour limit was established in accordance with the following calculation:

PE (filterable + condensable) (lbs/hr) = (200 lbs PE/ton coal x 3.69 tons coal/hr + 130 lbs PE/ton shale x 45 tons/hr) x (1 - 99.5/100) = 32.94 lbs/hr

Compliance shall be determined by performing a stack test using USEPA methods 1 through 5, 201 OR 201A, and Method 202 (as appropriate) of 40 CFR Part 60, Appendix A for particulates.

Alternatively, compliance may be determined using an emission factor determined from the most recent stack test which demonstrated compliance with the pound/hour limitation.

The potential to emit PE when burning natural gas or #4 re-refined used oil is less than the allowable limit established; therefore, compliance will be assumed when burning these fuels. The emission factor for natural gas is 7.6 lbs PE/mmcf and the emission factor for #4 fuel oil is 8.3 lbs PE/1000 gallons (filterable + condensable). These emission factors were obtained from AP-42, Compilation of Air Pollutant Emission Factors, Volume 1, Fifth Edition, (July 1998) Sections 1.3 and 1.4 respectively. If required, when burning natural gas or #4 re-refined used oil, compliance shall be determined by performing a stack test using USEPA methods 1 through 5, 201 or 201A, and Method 202 (as appropriate) of 40 CFR Part 60, Appendix A for particulates.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

b. Emission Limitations:

PE and PM_{10} (filterable plus condensable) emissions from the baghouse stack serving this emissions unit shall not exceed 121.13 TPY (assume all PE is PM_{10}).

Applicable Compliance Method:

The annual emission limitations were established by using the following equation:

PE (TPY) = (200 lbs PE/ton coal x 14,754 tons coal/yr + 130 lbs PE/ton shale x 350,000 tons shale/yr) x (1 -99.5/100) / 2000 lbs/ton = 121.13 TPY

Compliance shall be determined based on the recordkeeping and reporting for the annual coal and shale usage and emission factors developed from the most recent stack test that demonstrated compliance (if available).

The potential to emit PE when burning natural gas or #4 re-refined used oil at the restricted annual shale processing rate is less than the allowable limit established; therefore, compliance with the annual limit will be assumed when burning these fuels provided compliance is maintained with the annual restriction on shale processed.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

c. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 10% opacity as a 6-minute block average from any non-stack egress point.

Applicable Compliance Method:

Compliance with the visible fugitive emission limitations shall be determined by performing an opacity performance test using USEPA Method 9 of 40 CFR Part 60, Appendix A by observing the non-stack egress points serving this emissions unit. This compliance method shall be used whenever a compliance determination is warranted.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

d. Emission Limitation:

Nitrogen oxides emissions from this emissions unit shall not exceed 45.0 lbs/hr.

Applicable Compliance Method:

The pound per hour emission limit was established using the maximum coal burning rate from the following equation:

NO_x(lbs/hr) = 12.2 lbsNO_x/ton coal x 3.69 tons coal/hr = 45.0 lbsNO_x/hr.

Where the emission factor of 12.2 lbsNO_x/ton of coal is provided by the burner manufacturer. The potential to emit NO_x for natural gas and #4 fuel oil are each less than for coal; therefore, compliance will be assumed when burning these fuels. The emission factor for natural gas is 50 lbNO_x/mmcf and the emission factor for #4 fuel oil is 20 lbsNO_x/1000 gallons. These emission factors were obtained from AP-42, Compilation of Air Pollutant Emission Factors, Volume 1, Fifth Edition, (July 1998) Sections 1.3 and 1.4 respectively.

Compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 7 or 7E of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

e. Emission Limitation:

Carbon monoxide emissions from this emissions unit shall not exceed 41.1 lbs/hr.

Applicable Compliance Method:

Compliance shall be determined in accordance with the following equation:

CO (lbs/hr) = 11.14 lbs CO/ton coal x 3.69 tons coal/hr = 41.1 lbs CO/hour.

Where the emission factor of 11.14 lbs CO/ton of coal is based on the October 14, 2005 stack test. The stack test determined that for natural gas and oil 1.50

moles of CO are emitted per mole of NO_x. It is assumed that the same ratio will hold true for coal. Therefore, the CO emission factor is calculated as follows:

CO (lbs/ton coal) = 12.2 lbsNO_x/ton coal x 1.5 mole CO/mole NO_x x 28 lbs CO/mole CO / 46 lbsNO_x/mole NO_x = 11.14 lbs CO/ton of coal

The potential to emit CO for natural gas and #4 fuel oil are each less than for coal; therefore, compliance will be assumed when burning these fuels. The emission factor for natural gas is 84 lbs CO/mmcf and the emission factor for #4 fuel oil is 5 lbs CO/1000 gallons. These emission factors were obtained from AP-42, Compilation of Air Pollutant Emission Factors, Volume 1, Fifth Edition, (July 1998) Sections 1.3 and 1.4 respectively.

Compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

f. Emission Limitation:

Organic and volatile organic compound emissions from this emissions unit shall not exceed 0.50 lb/hr.

Applicable Compliance Method:

The only significant amount of OC/VOC produced is in the combustion of natural gas. The pound per hour limit was established from the AP-42, Compilation of Air Pollutant Emission Factors, Volume 1, Fifth Edition, (July 1998), Table 1.4-2, Section 1.4 emission factor (5.5 lbs VOC/mmcf) for VOC in natural gas combustion in accordance with the following calculation:

VOC (lbs/hr) = 5.5 lbs VOC/mmcf x 0.09 mmcf/hr = 0.50 lb VOC/hr

The potential to emit OC/VOC for coal and #4 fuel oil are each less than for natural gas; therefore, compliance will be assumed when burning these fuels. The emission factor for coal is 0.05 lb OC/ton coal and the emission factor for #4 fuel oil is 0.252 lb OC/1000 gallons. These emission factors were obtained from AP-42, Compilation of Air Pollutant Emission Factors, Volume 1, Fifth Edition, (July 1998) Sections 1.1 and 1.4 respectively.

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 25 or 25A of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

g. Emission Limitation:

Hydrogen Chloride (HCl) emissions from this emissions unit shall not exceed 0.44 lb/hr.

Applicable Compliance Method:

The only significant amount of HCl produced is in the combustion of coal. The pound per hour and tons per year limits were established from the AP-42, Compilation of Air Pollutant Emission Factors, Volume 1, Fifth Edition, (July 1998), Table 1.1-15, Section 1.1, Page 1.1-36 emission factor for HCl in coal combustion in accordance with the following calculations:

HCl (lbs/hr) = 1.2 (lbUnc. HCl/ton coal) * 3.69 (tons coal/hr)(0.1) = 0.44 lbHCl/hr.

There are no HCl emission factors for natural gas and #4 fuel oil combustion; therefore, compliance will be assumed when burning these fuels.

If required, compliance shall be determined by performing a stack test using USEPA test methods 1 through 4 and 26 or 26A of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

h. Emission Limitation:

Sulfur dioxide emissions from this emissions unit shall not exceed 270.2 lbs/hr.

Applicable Compliance Method:

Compliance shall be based on the record keeping specified in d)(13) and d)(14) of these terms and conditions.

In addition, compliance shall also be determined by performing a stack test using USEPA test methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

i. Emission Limitation for P901:

797.84 tons SO_2/rolling, 12-months;
90.0 tons NO_x/rolling, 12-months;
82.18 tons CO/ rolling, 12-months;
1.1 tons OC/VOC/rolling, 12-months;
0.89 ton HCl/ rolling, 12-months;

Applicable Compliance Method

Compliance shall be determined based on the record keeping and reporting in d)(3) and (4) and e)(2), and (3) respectively for the total annual coal fired and shale processed and using the following equations:

tons SO_2 = [100 lbs SO_2/ton coal x tons coal/year + lb SO_2/ton shale x tons shale/year] x (1-control efficiency) / 2,000 lbs/ton

tonsNO_x= (12.2 lbsNOx/ton coal) x (tons coal/year) / (2,000 lbs/ton)

tons CO = (11.14 lbs CO/ton coal) x (tons coal/year) / (2,000 lbs/ton)

tons OC/VOC = (5.5 lbs OC/VOC/mmcf gas) x (mmcf gas/year) / (2,000 lbs/ton)

tonsHCl = (1.2 lbsHCl/ton coal) x (tons coal/year (0.1)/2,000 lbs/ton.

Where:

Tons coal/year = the actual amount of coal burned during any rolling, 12-month period;

The uncontrolled SO2 emission factor for shale shall be calculated using the difference in sulfur content between the shale and the finished product in accordance with the test methods identified in term d)(15) and the following equation:

lb SO_2/ton shale = [sulfur content of raw shale - sulfur content of finished product] x (2,000 lbs/ton) x (64 lbs SO_2/mole) / (32 lbs sulfur/mole)

The permittee shall use the control efficiency determined from the most recent stack test that demonstrated compliance with the allowable hourly emission rate.

Alternatively, except for SO_2, compliance may be determined using an emission factor (in lbs/ton coal burned) for each pollutant above that was determined from the most recent stack test which demonstrated compliance with the hourly emission limits for each pollutant.

Except for OC/VOC, the potential to emit for nature gas and #4 fuel oil are each less than for coal; therefore, compliance will be assumed when burning these fuels. The potential to emit for OC/VOC for coal and #4 fuel oil are each less than natural gas; therefore, compliance will be assumed when burning these fuels.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #13-04605]

j. Emission Limitations:

PE/PM10 shall not exceed 0.040 gr/dscf (filterable)

Applicable Compliance Method:

Compliance shall be determined by performing a stack test using USEPA methods 1 through 4 and Methods 5 of 40 CFR Part 60, Appendix A for particulates.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

k. Emission Limitations:

Visible PE emissions shall not exceed 10% opacity as a 6-minute block average at any time for stack emissions.

Applicable Compliance Method:

Compliance with the visible emission limitations shall be determined from the results of the continuous opacity monitor or by performing an opacity performance test using USEPA Method 9 of 40 CFR Part 60, Appendix A. This compliance method shall be used whenever a compliance determination is warranted.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 12 months prior to the expiration of this permit while the emissions unit is burning coal.

The emission testing shall be conducted to demonstrate compliance with the allowable particulate (filterable plus condensable), opacity (stack and fugitive), SO_2, NO_x and CO emission limitations.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate, opacity (stack and fugitive), SO_2, NO_x, and CO:

particulate: methods 1 through 5, 201 or 201A and Method 202 (as appropriate) of 40 CFR Part 60, Appendix A;

SO_2: methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A;

NO_x: methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A;

opacity: pursuant to 40 CFR Part 60.736 (b)(2), method 9 of 40 CFR Part 60, Appendix A and the procedures in paragraph 60.11; and

CO: methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.

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

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 Division of Air Quality (Cleveland DAQ). The minimum sample volume collected during each run shall be 60 dscf. The temperature of the kiln shall be monitored and recorded during each test run. The stack test shall be performed in accordance with the requirements established in 40 CFR Part 60.736.

Pursuant to 40 CFR Part 60.736, the sampling time and volume for each test run in Method 5 shall be at least 2 hours and 1.70 dscm (60.03 dscf) and method 9 and the procedures in paragraph 60.11 shall be used to determine opacity from stack emissions.

The type of coal used for the stack tests shall be of the same type (especially the content of fines in the coal) and in the same condition as that was used prior to the tests and that will be used after the tests.

Not later than 60 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).

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.

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 30days 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 3745-77-07(C)(1) and PTI #P0107238]

g) Miscellaneous Requirements

(1) The continuous opacity monitoring system must meet the testing requirements of 40 CFR Part 60.

Within 60 days after installation of the opacity monitor, the permittee shall conduct certification tests on the continuous opacity monitoring system equipment pursuant to 40 CFR Part 60, Appendix B, Performance Specification 1 and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the Cleveland Division of Air Quality 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 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 opacity 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 Specification 1; ORC section 3704.03(I); and ASTM D 6216-98. The letter/document of certification of the continuous opacity monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Cleveland Division of Air Quality upon request.

Ongoing compliance with the opacity limitation 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: 40 CFR 60.734(a), OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous opacity monitoring system, designed to ensure continuous valid and representative readings of opacity and compliance with 40 CFR Part 60. The plan shall include, at a minimum, procedures for conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring that Performance Specification 1 is maintained on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for inspection during regular office hours.

[Authority for term: 40 CFR Part 60, OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(3) If DiGeronimo demonstrates marginal compliance with the allowable hourly SO2 emission limitation, then DiGeronimo shall install, operate and maintain an SO2 continuous emission monitor (CEM) within 180 days after completion of the stack test report. For purposes of this requirement, marginal compliance shall be defined as the actual emission rate determined from stack testing that is greater than 90% of the allowable mass rate of emission. Given the variability of the sulfur content of coal and shale, a demonstration of marginal compliance shall result in continuous emission monitoring that is necessary to ensure that the emissions unit is routinely operating in compliance with an applicable mass emission limitation.

Prior to the installation of the continuous SO_2 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 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous SO_2 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 Cleveland Division of Air Quality upon request.

In the event that an SO_2 CEM is needed, the terms and conditions of this permit, if needed, shall be modified to reflect the installation and operation of an SO_2 CEM.

[Authority for term: 40 CFR Part 60, OAC rule 3745-77-07(C)(1) and PTI #P0107238]

(4) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the requirements of C.6.d)(2) and C.6.e)(2) of this Title V permit are as stringent as or more stringent than the requirements contained in Permit-to-Install No.P0107238, issued on 3/16/2011. The requirements for the specified terms contained in the above-referenced Permit-to-Install are subsumed into the requirements of this operating permit, so that compliance with these Title V requirements constitutes compliance with the underlying requirements in the Permit-to-Install.

7. P903, Traveling grate clinker cooler

Operations, Property and/or Equipment Description:

Traveling grate clinker cooler – controlled with a multiclone

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 operations(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. 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 3745-17-07(A)	Visible particulate emissions from the multiclone stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11 Table I	43.6 pounds per hour of particulate emissions from the multiclone stack.

(2) Additional Terms and Conditions

a. DiGeronimo Aggregates engaged a stack testing firm to evaluate the feasibility of testing for particulate emissions at the multiclone inlet duct for the purpose of determining the uncontrolled mass rate of emissions. Upon review of the sampling location the testing firm concluded that the sampling location did not meet 40 CFR 60, Appendix A, Method 1, Section 11.1.1 criteria because it is located in a transitional section of duct work where the duct expands to connect to the multiclone. The testing firm also concluded that the Alternative Measurement Site Selection Procedure contained in 40 CFR 60, Appendix A, Method 1, Section 11.5.1 could not be performed at the multiclone inlet because the particulate-laden gas stream would clog the small flow sensing orifices of the 3-D pitot. Consequently, OAC rule 3745-17-11 Figure II does not apply because the uncontrolled mass rate of emissions cannot be ascertained. The allowable particulate limit derived from OAC rule 3745-17-11 Table 1 is 43.6 lbs PE/hr.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly operate, and maintain equipment to continuously monitor and record the pressure drop, in inches of water, across the multiclone during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop on a daily basis.

The acceptable range for the pressure drop across the multiclone is 1.0 to 6.0 inches of water.

This range is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality. The permittee may request revisions to the range based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the range will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall perform daily checks, when this emissions unit is in operation, for visible emissions from the multiclone stack serving this emissions unit. The presence or absence of any visible emissions from the multiclone stack shall be noted in an operations log. If visible emissions from the multiclone stack are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions. If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor

corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The CAM plan for this emissions unit has been developed for particulate emissions utilizing a multiclone. The CAM performance indicators for the multiclone controlling this emissions unit are:

a. the inlet flow rate shall be maintained between the range of 25,444 and 65,532 cfm at 68 degrees Fahrenheit (wet basis).

When the performance indicators are operating outside the indicator ranges, the permittee shall take corrective action to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions and comply with the reporting requirements specified in e)(1) below. The emissions unit and control equipment shall be run in accordance with the approved CAM Plan, or any approved revision of the Plan. In addition to periodic monitoring of the operating parameters, the permittee also has an inspection/preventative maintenance program for the multiclone and capture system. Based on the results of the inspection/preventative maintenance program, repairs to the multiclone and capture system shall be made as needed. If the current CAM indicators and/or the multiclone and capture system inspection/preventative maintenance program is determined to be inadequate, the permittee will develop a Quality Improvement Plan.

The multiclone shall not be configured to have bypass capability.

[Authority for term: OAC 3745-77-07(A)(3)(a) and (b), 40 CFR 64.3(a), 64.6(c), 64.7(d), and 64.8]

(4) At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

DiGeronimo shall keep a Magnehelic pressure gauge in stock as a replacement spare part.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 64.7(b)]

(5) After approval of monitoring under this part, if the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the part 70 or 71 permit to address the necessary monitoring changes. Such a modification may

include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 64.7(e)]

(6) Multiclone operating parameters shall be re-verified as a result of any changes to the operating conditions of the multiclone or emissions unit. In addition to periodic monitoring of the multiclone operating parameters, the permittee also has an inspection and maintenance program for the multiclone, including but not limited to:

a. checking the multiclone for deterioration or degradation;

b. checking the cleaning system for proper operation; and

c. checking the hoppers and conveyance systems for proper operation.

Based on the results of the monitoring and inspection program, repairs to the multiclone shall be made as needed. If the current CAM indicators and/or the baghouse inspection program is considered inadequate, the permittee shall develop a Quality Improvement Plan.

[Authority for term: OAC 3745-77-07(A)(3)(a) and (b), 40 CFR 64.3(a), 64.6(c), 64.7(d), and 64.8]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify the following information concerning the operation of the control equipment during the operation of this emissions unit: each period of time when the pressure drop across the multiclone or the inlet flow rate was outside of the range specified in d)(1) and d)(3).

These quarterly deviation reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the multiclone stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Cleveland DAQ by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation

Visible particulate emissions from the multiclone stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9. This compliance method shall be used whenever a compliance determination is warranted.

[Authority for term: OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

43.6 pounds per hour of particulate emissions

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 12 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulates by performing multiclone outlet emission testing.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1-5 of 40 CFR Part 60, Appendix A

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

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 Division of Air Quality (Cleveland DAQ).

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 Ohio EPA's or local air agency's refusal to accept the results of the emission test(s).

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.

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 30 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 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.