

Synthetic Minor Determination and/or ~~X~~ Netting Determination
Permit To Install 01-12033

A. Source Description

Liberty Casting is a grey iron foundry located in Delaware County at 550 South Liberty Road. The facility is considered a Title V facility due to VOC and PM10.

B. Facility Emissions and Attainment Status

Delaware County is considered non-attainment under the recent ozone re-designation and non-attainment for PM2.5.

The Significant Modification evaluation in this permit determined that permitting actions proposed under 01-12033 (P058-P063: sand reclamation system and shakeout table), PTI 01-01350 (P057: flow coat core wash station), 01-01287 (P038: thermal sand reclaim unit), 01-12088 (P055: 5.5 tons/hr electric induction furnace, LRFU3) and 01-01344 (P056: installation of a sand mixer) do not constitute a Major Modification as defined by OAC rule 3745-31-01(III) when the synthetic minor restrictions are included. This permit action, 01-12033, specifies synthetic minor restrictions considered in this evaluation.

Additional permits are currently being processed for the facility that are not included in this evaluation. They do not meet the "project" definition and instead seek to make record keeping more consistent throughout the facility and more reflective of actual operations.

C. Source Emissions

Liberty Castings has proposed a new project that will replace existing sand reclamation and shakeout operations. This activity is being permitted in PTI 01-12033 (for the sand reclaim and shakeout operations) and will institute federally enforceable restrictions through this synthetic minor permit. This permit will institute federally enforceable restrictions on the facility's new shakeout system and sand reclamation system that replaces existing operations of one large shakeout table and one large sand reclamation system. The new PTE for the shakeout operations and sand reclamation systems will be limited by federally enforceable limitations of total sand processed, capture efficiency and control efficiency.

The federally enforceable restrictions will result in the following:

	PE	PM10	VOC
Total Permitting Action without Synthetic Minor	470.8	76.0	173.6
Total Permitting Action with Synthetic Minor	41.6	10.7	98.8
Total Significant Net Emissions Increase with Synthetic Minor	-151.4	-2.51	39.9
Significance Levels	25	15	40
Significant Increase from Permitting Action?	No	No	No

D. Conclusion

This project meets the definition of a Significant Modification, however the federally enforceable limitations in this permit along with 01-01350 will effectively restrict the emissions to levels below those which trigger a Significant Modification and non-attainment NSR for PE, PM10 and VOC. In order to track the emissions and operating time for each unit, the permittee shall maintain records of throughput and emissions on a rolling, 12-month basis.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL
DELAWARE COUNTY**

CERTIFIED MAIL

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov.
Center

Application No: 01-12033

Fac ID: 0121010003

DATE: 7/6/2006

Liberty Casting Company
Renee Olney
550 Liberty Road
Delaware, OH 43015

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$2700** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

CDO

DELAWARE COUNTY

PUBLIC NOTICE

**ISSUANCE OF DRAFT PERMIT TO INSTALL 01-12033 FOR AN AIR CONTAMINANT SOURCE FOR
Liberty Casting Company**

On 7/6/2006 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Liberty Casting Company**, located at **550 S. Liberty Road, Delaware, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 01-12033:

Shakeout and sand reclamation system.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Isaac Robinson, Ohio EPA, Central District Office, 3232 Alum Creek Drive, Columbus, OH 43207-3417
[(614)728-3778]



AGENCY

STATE OF OHIO ENVIRONMENTAL PROTECTION

**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 01-12033

Application Number: 01-12033
Facility ID: 0121010003
Permit Fee: **To be entered upon final issuance**
Name of Facility: Liberty Casting Company
Person to Contact: Renee Olney
Address: 550 Liberty Road
Delaware, OH 43015

Location of proposed air contaminant source(s) [emissions unit(s)]:
**550 S. Liberty Road
Delaware, Ohio**

Description of proposed emissions unit(s):
Shakeout and sand reclamation system.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Liberty Casting Company
PTI Application: 01-12033

Facility ID: 0121010003

Issued: To be entered upon final issuance
Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written

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reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain,

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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.

5. 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.

6. General Requirements

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

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7. Fees

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

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8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. 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.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. 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

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the Ohio EPA. Progress reports shall contain the following:

- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
- ii. 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.

10. Permit-To-Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. 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.

13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in

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**Issued: To be entered upon final issuance
this permit.**

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B. State Only Enforceable Permit-To-Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the 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 (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. 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.

4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of

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installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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

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C. Permit-To-Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	41.6
PM10	10.7
VOC	87.7

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. This evaluation was conducted to determine whether the proposed new project to replace existing sand reclamation and shakeout operations and installation of a new flow coat station constitute a Major Modification as defined by OAC rule 3745-31-01(III). This activity is being permitted in PTI 01-12033 (for the sand reclaim and shakeout operations) and PTI 01-01350 for the new flow coat core wash station. The new flow coat core wash station will institute restrictions that are consistent with the facility's inherent physical production limitation (due to plant size). In addition, the permit will document the installation of better control efficiency associated with the operations.

The federally enforceable terms and conditions of PTIs 01-12033 and PTI 01-01350 have been included for the purpose of netting out of Non-Attainment New Source Review (NSR) and corresponding Ohio Administrative Code (OAC) regulations for volatile organic compounds (VOC), particulate emissions (PE) and particulate matter less than 2.5 microns (PM2.5). In order to verify that the emissions of these pollutants do not exceed the allowable emission rates described in the netting table below, the permittee must comply with the limitations specified in each emission unit's respective terms and conditions

Significant Modification Evaluation:

Objective: Determine if the permitting action proposed under 01-12033 (P058-P063: sand reclamation system and shakeout table), PTI 01-01350 (P057: flow coat core wash station), 01-01287 (P038: thermal sand reclaim unit), 01-12088 (P055: 5.5 tons/hr electric induction furnace, LRFU3) and 01-01344 (P056: installation of a sand mixer) constitute a Major Modification as defined by OAC rule 3745-31-01(III).

Methodology: In accordance with OAC rule 3745-31-01(SSS), one must use the following procedure for installation of new units.

Step 1. Calculate whether a significant emissions increase will occur.

- a. Calculate the sum of the difference between the potential to emit from each new emissions unit following completion of the NSR project and the baseline actual emissions of these units before the NSR project. [OAC rule 3745-31-01(III)(4)(b)]

Table I:
New Emissions Units -
potential to emit minus baseline actual*
(for this project-within past 12 months)

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P013	Shakeout Table <i>Shutdown in 01/06</i> <i>2 yr avg (2004&2005)</i>	94.8	14.3	36.9	-	-	-	94.8	14.3	36.9
P030	Sand Reclamation System <i>Shutdown in 01/06</i> <i>2 yr avg (2004&2005)</i>	94.8	14.3	-	-	-	-	94.8	14.3	-
P031	Furnace <i>Shutdown in 06/02</i> <i>2 yr avg (1998&1999)</i>	1.3	1.3	-	-	-	-	1.3	1.3	-
P027	Furnace 1&2 <i>Shutdown in 02/06</i> <i>2 yr avg (2004&2005)</i>	2.4	2.3	-	-	-	-	2.4	2.3	-
P045	Large core room sand mixer LRMX6 <i>Shutdown in 11/02</i> <i>2 yr avg (1998&1999)</i>	-	-	1.8	-	-	-	-	-	1.8
P048-P053	Combined flow coat mold/core wash stations <i>2 yr avg (2004&2005)</i>	-	-	39.4	-	-	19.2	-	-	20.2
Total net increases/decreases		193	32.2	78.1	-	-	19.2	193	32.2	58.9

Table IV:
Summary Table -
sum of Table II and Table III

	PE	PM10	VOC
Significant Emissions Increase	470.8	76.0	173.6
Contemporaneous Increases/Decreases	-193	-32.2	-58.9
Total Significant Net Emissions Increase	277.8	43.8	114.7
Trigger Levels	25	15	40
Significant Net Emissions Increase?	Yes	Yes	Yes

Therefore this project will result in a major modification because the NSR project causes a significant emissions increase and a significant net emissions increase. The permittee is proposing to accept synthetic minor limits for this project to avoid a major modification.

Table V:
Synthetic Minor Limitations*

Emission s Unit (EU)	Description	Permit no.	PE PTE (tpy)		PM10 PTE (tpy)		VOC PTE (tpy)	
			Pre	Post	Pre	Post	Pre	Post
P038	thermal sand reclaim unit	01-01287	2.5	2.5	2.5	2.5	0.1	0.1
P055	5.5 tons/hr electric induction furnace (LRFU3)	01-01288	4.3	2.7*	4.1	2.6*	-	-

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P056	Large Chromite Sand Mixer LRMX5	01-01344	-	-	-	-	61.5	5.0
P057	Large Chromite Area flow coat core wash station	01-01350	-	-	-	-	22.0	5.9
P058	Sand Reclamation System (LRRC 1)	01-12033	232.0	18.2	34.7	2.8	-	-
P059	Sand Reclamation System (LRRC 2)	01-12033	-	-	-	-	-	-
P060	Vibramill Shakeout (LRVM 1)	01-12033	232.0	18.2	34.7	2.8	90.0	87.8
P061	Vibramill Shakeout (LRVM 2)	01-12033	-	-	-	-	-	-
P062	Vibramill Shakeout (LRVM 3)	01-12033	-	-	-	-	-	-
P063	Vibramill Shakeout (LRVM 4)	01-12033	-	-	-	-	-	-
Total Synthetic Minor Limitations			-	41.6	-	10.7	-	98.8
Contemporaneous Increases/Decreases			-	-193	-	-32.2	-	-58.9
Total Increase			-	-151.4	-	-21.5	-	39.9
Trigger Levels			-	25	-	15	-	40
Significant Net Emissions Increase AFTER Synthetic Minor restrictions?			-	No	-	No	-	No

* "Post" emission rates listed above are based upon the federally enforceable allowable emission rate, not the projected actual.

**Table VI:
Summary Table -
Final Determination**

	PE	PM10	VOC
Total Permitting Action without Synthetic Minor	470.8	76.0	173.6
Total Permitting Action with Synthetic Minor	41.6	10.7	98.8
Total Significant Net Emissions Increase with Synthetic Minor	-151.4	-2.51	39.9
Significance Levels	25	15	40
Significant Increase from Permitting Action?	No	No	No

Therefore this project will not result in a major modification because the NSR project does not cause a significant emissions increase.

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

**Liberi
PTI A**

Emissions Unit ID: P058

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P058 - Sand Reclamation System (LRRC 1) controlled by baghouse LRDC 1	OAC rule 3745-31-05(A)(3) OAC rule 3745-17-07(A) OAC rule 3745-17-07(B)(1) OAC rule 3745-17-08(B)

Applicable Emissions
Limitations/Control
Measures

The baghouse serving emissions units P058, P061 and P062 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

There shall be no visible particulate emissions from the stack serving emissions units P058, P061 and P062.

Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

Stack and fugitive emissions from this emissions unit shall not exceed:

3.73 lbs particulate emissions (PE)/hr; and
0.56 lb particulate matter less than 10 microns in diameter (PM10)/hr.

The requirements of this rule shall also include compliance with the requirements of OAC 3745-31-05(C)(1).

See Section A.I.2.d and A.II.1 below.

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to the requirement specified in OAC rule 3745-31-05 (A)(3).

See Section A.I.2.a below.

See Section A.I.2.b below.

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** This emissions unit is exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(d).
- 2.b** This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive particulate emissions from this emissions unit.
- 2.c** The 3.73 pounds PE per hour and 0.56 pounds PM10 per hour emission limitations were written to reflect the potential to emit of this emissions unit as vented to the baghouse. Therefore, additional monitoring, record keeping, and reporting requirements are not necessary to demonstrate compliance with these emission limitations.
- 2.d** PE emissions shall not exceed 18.2 tons per rolling, 12-month period and PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.

II. Operational Restrictions

- 1. The maximum amount of sand processed by emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined, shall not exceed 146,333 tons per rolling, 12-month summation.

Since this is an existing operation, there are existing records of sand processed and therefore the amount of sand processed during the first 12 months does not need to be established.

- 2. The pressure drop across the baghouse shall be maintained within the range of 2 to 8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain monthly records of the following information for emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System,

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P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined:

- a. the amount of sand processed, in tons;
- b. the rolling, 12-month summation of sand processed, in tons; and
- c. the rolling, 12-month PE and PM10 emissions rate, in tons, calculated by summing the stack and fugitive emissions.

Stack emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) or 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test, and dividing by 2000 lbs/ton. Fugitive emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton or 0.54 lbs PM10/ton by amount not captured (1.0-0.95) and dividing by 2000 lbs/ton. The summed emissions are then doubled because all sand is sent through one of the Vibramill Shakeout operations (P060-P063) followed by one of the Sand Reclamation Systems (P058-P059).

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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.

3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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

Emissions Unit ID: P058

- e. any corrective actions taken to eliminate the visible emissions.
4. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. 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 across the baghouse on daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, sand processing rate limitation and PE and PM10 emission rate limitations from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
4. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
5. The permittee shall also submit annual reports that specify the total PE, PM10 and VOC emissions from P058, P059, P060, P061, P062 and P063, combined. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for these emissions units in the annual Fee Emission Report.

V. Testing Requirements

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Emissions Unit ID: P058

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1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

Emissions Unit ID: P058

- a. **Emission Limitation:**
The baghouse serving emissions units P058, P061 and P062 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.
- Applicable Compliance Method:**
Compliance shall be demonstrated based upon stack testing requirements specified in section A.V.2 below.
- b. **Emission Limitation:**
There shall be no visible particulate emissions from the stack serving this emissions unit.
- Applicable Compliance Method:**
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 9 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, 1997.
- c. **Emission Limitation:**
Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.
- Applicable Compliance Method:**
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 22 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, 1997.
- d. **Emission Limitation:**
PE shall not exceed 3.73 lbs/hr.
- Applicable Compliance Method:**
Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton by amount not captured (1.0-0.95).
- e. **Emission Limitation:**
PM10 shall not exceed 0.56 lb/hr.
- Applicable Compliance Method:**

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Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 0.54 lbs by amount not captured (1.0-0.95).

- f. Emission Limitation:
PE emissions shall not exceed 18.2 tons per rolling, 12-month period and PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the stack testing requirements and recordkeeping in Section A.III.1.c above.

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 60 days of permit issuance or start-up, whichever is earliest.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable emission rate limitation of 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases, and to determine the baghouse control efficiency.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Particulates	Method 5	40 <u>CFR</u> Part 60, Appendix A.
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Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency shall be determined by the percent reduction in mass emissions between the inlet and outlet of the control system.

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- d. The test(s) shall be conducted while the emissions units vented to the baghouse are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P058 - Sand Reclamation System (LRRC 1) controlled by baghouse LRDC 1	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P059 - Sand Reclamation System (LRRC 2) controlled by baghouse LRDC 2	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C)(1) (synthetic minor to avoid non-attainment provisions) OAC rule 3745-17-07(A) OAC rule 3745-17-07(B)(1) OAC rule 3745-17-08(B)

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Applicable Emissions
Limitations/Control
Measures

requirements of OAC
3745-31-05(C)(1).

See Section A.I.2.d and A.II.1
below.

The baghouse serving
emissions units P059,
P060 and P063 shall
achieve an outlet
emission rate of not
greater than 0.030 grain
of particulate emissions
per dry standard cubic
foot of exhaust gases.

The emission limitation specified
by this rule is less stringent than
the emission limitation
established pursuant to the
requirement specified in OAC
rule 3745-31-05 (A)(3).

There shall be no visible
particulate emissions
from the stack serving
emissions units P059,
P060 and P063.

See Section A.I.2.a below.

See Section A.I.2.b below.

Visible emissions of
fugitive dust shall
not exceed 10 percent
opacity, as a 3-
minute average from any
non-stack egress point.

Stack and fugitive
emissions from this
emissions unit shall not
exceed:

3.73 lbs particulate
emissions (PE)/hr; and
0.56 lb particulate matter
less than 10 microns in
diameter (PM10)/hr.

The requirements of this
rule shall also include
compliance with the

2. Additional Terms and Conditions

- 2.a** This emissions unit is exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(d).
- 2.b** This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive particulate emissions from this emissions unit.
- 2.c** The 3.73 pounds PE per hour and 0.56 pounds PM10 per hour emission limitations were written to reflect the potential to emit of this emissions unit as vented to the baghouse. Therefore, additional monitoring, record keeping, and reporting requirements are not necessary to demonstrate compliance with these emission limitations.
- 2.d** PE emissions shall not exceed 18.2 tons per rolling, 12-month period and PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.

II. Operational Restrictions

- 1. The maximum amount of sand processed by emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined, shall not exceed 146,333 tons per rolling, 12-month summation.

Since this is an existing operation, there are existing records of sand processed and therefore the amount of sand processed during the first 12 months does not need to be established.

- 2. The pressure drop across the baghouse shall be maintained within the range of 2 to 8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain monthly records of the following information for emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined:
 - a. the amount of sand processed, in tons;

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- b. the rolling, 12-month summation of sand processed, in tons; and
- c. the rolling, 12-month PE and PM10 emissions rate, in tons, calculated by summing the stack and fugitive emissions.

Stack emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) or 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test, and dividing by 2000 lbs/ton. Fugitive emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton or 0.54 lbs PM10/ton by amount not captured (1.0-0.95) and dividing by 2000 lbs/ton. The summed emissions are then doubled because all sand is sent through one of the Vibramill Shakeout operations (P060-P063) followed by one of the Sand Reclamation Systems (P058-P059).

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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 eliminate the visible emissions.
4. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in

Emissions Unit ID: P059

accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, sand processing rate limitation and PE and PM10 emission rate limitations from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
4. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
5. The permittee shall also submit annual reports that specify the total PE, PM10 and VOC emissions from P058, P059, P060, P061, P062 and P063, combined. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for these emissions units in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

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- a. Emission Limitation:
The baghouse serving emissions units P059, P060 and P063 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:
Compliance shall be demonstrated based upon stack testing requirements specified in section A.V.2 below.
- b. Emission Limitation:
There shall be no visible particulate emissions from the stack serving this emissions unit.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 9 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, 1997.
- c. Emission Limitation:
Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 22 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, 1997.
- d. Emission Limitation:
PE shall not exceed 3.73 lbs/hr.

Applicable Compliance Method:
Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton by amount not captured (1.0-0.95).

- e. Emission Limitation:
 PM10 shall not exceed 0.56 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 0.54 lbs by amount not captured (1.0-0.95).

- f. Emission Limitation:
 PE emissions shall not exceed 18.2 tons per rolling, 12-month period and PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the stack testing requirements and recordkeeping in Section A.III.1.c above.

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 60 days of permit issuance or start-up, whichever is earliest.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable emission rate limitation of 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases, and to determine the baghouse control efficiency.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Particulates Method 5 40 CFR Part 60, Appendix A.

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

The control efficiency shall be determined by the percent reduction in mass emissions between the inlet and outlet of the control system.

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- d. The test(s) shall be conducted while the emissions units vented to the baghouse are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P059 - Sand Reclamation System (LRRC 2) controlled by baghouse LRDC 2	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P060

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P060 - Vibramill Shakeout No.1 (LRVM 1) controlled by baghouse LRDC 2	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C)(1) (synthetic minor to avoid non-attainment provisions) OAC rule 3745-17-07(A) OAC rule 3745-17-07(B)(1) OAC rule 3745-17-08(B) OAC rule 3745-21-07(G)

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Applicable Emissions
Limitations/Control
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rule shall also include compliance with the requirements of OAC 3745-31-05(C)(1).

The baghouse serving emissions units P059, P060 and P063 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

See Section A.I.2.d and A.II.1 below.

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to the requirement specified in OAC rule 3745-31-05 (A)(3).

There shall be no visible particulate emissions from the stack serving emissions units P059, P060 and P063.

See Section A.I.2.a below.

See Section A.I.2.b below.

Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

See Section A.I.2.e below.

Stack and fugitive emissions from this emissions unit shall not exceed:

- 3.73 lbs particulate emissions (PE)/hr;
- 0.56 lb particulate matter less than 10 microns in diameter (PM10)/hr; and
- 18 lbs volatile organic compounds (VOC)/hr.

The requirements of this

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** This emissions unit is exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(d).
- 2.b** This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive particulate emissions from this emissions unit.
- 2.c** The 3.73 pounds PE per hour, 0.56 pounds PM10 per hour and 18.0 pounds VOC per hour emission limitations were written to reflect the potential to emit of this emissions unit as vented to the baghouse. Therefore, additional monitoring, record keeping, and reporting requirements are not necessary to demonstrate compliance with these emission limitations.
- 2.d** PE emissions shall not exceed 18.2 tons per rolling, 12-month period, PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period, and VOC emissions shall not exceed 87.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.
- 2.e** The emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2) do not apply to emissions units that do not apply a liquid organic material.

II. Operational Restrictions

1. The maximum amount of sand processed by emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined, shall not exceed 146,333 tons per rolling, 12-month summation.

Since this is an existing operation, there are existing records of sand processed and therefore the amount of sand processed during the first 12 months does not need to be established.

2. The pressure drop across the baghouse shall be maintained within the range of 2 to 8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined:
 - a. the amount of sand processed, in tons;
 - b. the rolling, 12-month summation of sand processed, in tons; and
 - c. the rolling, 12-month PE, PM10 and VOC emissions rate, in tons, calculated by summing the stack and fugitive emissions.

Stack emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) or 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test, and dividing by 2000 lbs/ton. Fugitive emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton or 0.54 lbs PM10/ton by amount not captured (1.0-0.95) and dividing by 2000 lbs/ton. The summed PE and PM10 emissions are then doubled because all sand is sent through one of the Vibramill Shakeout operations (P060-P063) followed by one of the Sand Reclamation Systems (P058-P059). VOC emissions shall be determined by multiplying the amount of sand processed (b) by 1.2 lbs VOC/ton (Fire6.25, 12/05, SCC 30400350) and dividing by 2000 lbs/ton.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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

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- abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
4. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. 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 across the baghouse on daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, sand processing rate limitation, PE, PM10 and VOC emission rate limitations from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
4. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
5. The permittee shall also submit annual reports that specify the total PE, PM10 and

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VOC emissions from P058, P059, P060, P061, P062 and P063, combined. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for these emissions units in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. **Emission Limitation:**
The baghouse serving emissions units P059, P060 and P063 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:
Compliance shall be demonstrated based upon stack testing requirements specified in section A.V.2 below.
 - b. **Emission Limitation:**
There shall be no visible particulate emissions from the stack serving this emissions unit.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 9 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, 1997.
 - c. **Emission Limitation:**
Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 22 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, 1997.
 - d. **Emission Limitation:**
PE shall not exceed 3.73 lbs/hr.

Applicable Compliance Method:
Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) by

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amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton by amount not captured (1.0-0.95).

- e. Emission Limitation:
PM10 shall not exceed 0.56 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 0.54 lbs by amount not captured (1.0-0.95).

- f. Emission Limitation:
VOC shall not exceed 18 lbs/hr.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the amount of sand processed (b) by 1.2 lbs VOC/ton (Fire6.25, 12/05, SCC 30400350) and dividing by 2000 lbs/ton.

- g. Emission Limitation:
PE emissions shall not exceed 18.2 tons per rolling, 12-month period, PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period, and VOC emissions shall not exceed 87.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the stack testing requirements and recordkeeping in Section III.1.c above.

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 60 days of permit issuance or start-up, whichever is earliest.
- b. The emission testing shall be conducted to demonstrate compliance with the

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allowable emission rate limitation of 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases, and to determine the baghouse control efficiency.

- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Particulates	Method 5	40 <u>CFR</u> Part 60, Appendix A.
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Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency shall be determined by the percent reduction in mass emissions between the inlet and outlet of the control system.

- d. The test(s) shall be conducted while the emissions units vented to the baghouse are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

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VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P060 - Vibramill Shakeout No.1 (LRVM 1) controlled by baghouse LRDC 2	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P061 - Vibramill Shakeout No.2 (LRVM 2) controlled by baghouse LRDC 1	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C)(1) (synthetic minor to avoid non-attainment provisions) OAC rule 3745-17-07(A) OAC rule 3745-17-07(B)(1) OAC rule 3745-17-08(B) OAC rule 3745-21-07(G)

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Limitations/Control
Measures

rule shall also include compliance with the requirements of OAC 3745-31-05(C)(1).

The baghouse serving emissions units P058, P061 and P062 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

See Section A.I.2.d and A.II.1 below.

There shall be no visible particulate emissions from the stack serving emissions units P058, P061 and P062.

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to the requirement specified in OAC rule 3745-31-05 (A)(3).

See Section A.I.2.a below.

See Section A.I.2.b below.

Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

See Section A.I.2.e below.

Stack and fugitive emissions from this emissions unit shall not exceed:

3.73 lbs particulate emissions (PE)/hr;
0.56 lb particulate matter less than 10 microns in diameter (PM10)/hr; and
18 lbs volatile organic compounds (VOC)/hr.

The requirements of this

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** This emissions unit is exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(d).
- 2.b** This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive particulate emissions from this emissions unit.
- 2.c** The 3.73 pounds PE per hour, 0.56 pounds PM10 per hour and 18.0 pounds VOC per hour emission limitations were written to reflect the potential to emit of this emissions unit as vented to the baghouse. Therefore, additional monitoring, record keeping, and reporting requirements are not necessary to demonstrate compliance with these emission limitations.
- 2.d** PE emissions shall not exceed 18.2 tons per rolling, 12-month period, PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period, and VOC emissions shall not exceed 87.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.
- 2.e** The emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2) do not apply to emissions units that do not apply a liquid organic material.

II. Operational Restrictions

1. The maximum amount of sand processed by emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined, shall not exceed 146,333 tons per rolling, 12-month summation.

Since this is an existing operation, there are existing records of sand processed and therefore the amount of sand processed during the first 12 months does not need to be established.

2. The pressure drop across the baghouse shall be maintained within the range of 2 to 8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined:
 - a. the amount of sand processed, in tons;
 - b. the rolling, 12-month summation of sand processed, in tons; and
 - c. the rolling, 12-month PE, PM10 and VOC emissions rate, in tons, calculated by summing the stack and fugitive emissions.

Stack emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) or 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test, and dividing by 2000 lbs/ton. Fugitive emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton or 0.54 lbs PM10/ton by amount not captured (1.0-0.95) and dividing by 2000 lbs/ton. The summed PE and PM10 emissions are then doubled because all sand is sent through one of the Vibramill Shakeout operations (P060-P063) followed by one of the Sand Reclamation Systems (P058-P059). VOC emissions shall be determined by multiplying the amount of sand processed (b) by 1.2 lbs VOC/ton (Fire6.25, 12/05, SCC 30400350) and dividing by 2000 lbs/ton.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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

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- abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
4. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. 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 across the baghouse on daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, sand processing rate limitation, PE, PM10 and VOC emission rate limitations from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
4. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
5. The permittee shall also submit annual reports that specify the total PE, PM10 and

Emissions Unit ID: P061

VOC emissions from P058, P059, P060, P061, P062 and P063, combined. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for these emissions units in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. **Emission Limitation:**
The baghouse serving emissions units P058, P061 and P062 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:
Compliance shall be demonstrated based upon stack testing requirements specified in section A.V.2 below.
 - b. **Emission Limitation:**
There shall be no visible particulate emissions from the stack serving this emissions unit.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 9 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, 1997.
 - c. **Emission Limitation:**
Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 22 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, 1997.
 - d. **Emission Limitation:**
PE shall not exceed 3.73 lbs/hr.

Applicable Compliance Method:
Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) by

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amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton by amount not captured (1.0-0.95).

- e. Emission Limitation:
PM10 shall not exceed 0.56 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 0.54 lbs by amount not captured (1.0-0.95).

- f. Emission Limitation:
VOC shall not exceed 18 lbs/hr.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the amount of sand processed (b) by 1.2 lbs VOC/ton (Fire6.25, 12/05, SCC 30400350) and dividing by 2000 lbs/ton.

- g. Emission Limitation:
PE emissions shall not exceed 18.2 tons per rolling, 12-month period, PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period, and VOC emissions shall not exceed 87.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the stack testing requirements and recordkeeping in Section A.III.1.c above.

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 60 days of permit issuance or start-up, whichever is earliest.
- b. The emission testing shall be conducted to demonstrate compliance with the

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allowable emission rate limitation of 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases, and to determine the baghouse control efficiency.

- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Particulates	Method 5	40 <u>CFR</u> Part 60, Appendix A.
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Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency shall be determined by the percent reduction in mass emissions between the inlet and outlet of the control system.

- d. The test(s) shall be conducted while the emissions units vented to the baghouse are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

Liberty Casting Company
PTI Application: 01-12022
Issue

Facility ID: 0121010003

Emissions Unit ID: P061

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P061

Issued: To be entered upon final issuance

B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P061 - Vibramill Shakeout No.2 (LRVM 2) controlled by baghouse LRDC 1	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P061

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Emissions Unit ID: P062

Issued: To be entered upon final issuance

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P062 - Vibramill Shakeout No.3 (LRVM 3) controlled by baghouse LRDC 1	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C)(1) (synthetic minor to avoid non-attainment provisions) OAC rule 3745-17-07(A) OAC rule 3745-17-07(B)(1) OAC rule 3745-17-08(B) OAC rule 3745-21-07(G)

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Emissions Unit ID: P062

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Applicable Emissions
Limitations/Control
Measures

rule shall also include compliance with the requirements of OAC 3745-31-05(C)(1).

The baghouse serving emissions units P058, P061 and P062 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

See Section A.I.2.d and A.II.1 below.

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to the requirement specified in OAC rule 3745-31-05 (A)(3).

There shall be no visible particulate emissions from the stack serving emissions units P058, P061 and P062.

See Section A.I.2.a below.

See Section A.I.2.b below.

Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

See Section A.I.2.e below.

Stack and fugitive emissions from this emissions unit shall not exceed:

- 3.73 lbs particulate emissions (PE)/hr;
- 0.56 lb particulate matter less than 10 microns in diameter (PM10)/hr; and
- 18 lbs volatile organic compounds (VOC)/hr.

The requirements of this

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** This emissions unit is exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(d).
- 2.b** This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive particulate emissions from this emissions unit.
- 2.c** The 3.73 pounds PE per hour, 0.56 pounds PM10 per hour and 18.0 pounds VOC per hour emission limitations were written to reflect the potential to emit of this emissions unit as vented to the baghouse. Therefore, additional monitoring, record keeping, and reporting requirements are not necessary to demonstrate compliance with these emission limitations.
- 2.d** PE emissions shall not exceed 18.2 tons per rolling, 12-month period, PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period, and VOC emissions shall not exceed 87.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.
- 2.e** The emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2) do not apply to emissions units that do not apply a liquid organic material.

II. Operational Restrictions

1. The maximum amount of sand processed by emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined, shall not exceed 146,333 tons per rolling, 12-month summation.

Since this is an existing operation, there are existing records of sand processed and therefore the amount of sand processed during the first 12 months does not need to be established.

2. The pressure drop across the baghouse shall be maintained within the range of 2 to 8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined:
 - a. the amount of sand processed, in tons;
 - b. the rolling, 12-month summation of sand processed, in tons; and
 - c. the rolling, 12-month PE, PM10 and VOC emissions rate, in tons, calculated by summing the stack and fugitive emissions.

Stack emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) or 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test, and dividing by 2000 lbs/ton. Fugitive emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton or 0.54 lbs PM10/ton by amount not captured (1.0-0.95) and dividing by 2000 lbs/ton. The summed PE and PM10 emissions are then doubled because all sand is sent through one of the Vibramill Shakeout operations (P060-P063) followed by one of the Sand Reclamation Systems (P058-P059). VOC emissions shall be determined by multiplying the amount of sand processed (b) by 1.2 lbs VOC/ton (Fire6.25, 12/05, SCC 30400350) and dividing by 2000 lbs/ton.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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

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- abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
4. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. 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 across the baghouse on daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, sand processing rate limitation, PE, PM10 and VOC emission rate limitations from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
4. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
5. The permittee shall also submit annual reports that specify the total PE, PM10 and

Emissions Unit ID: P062

VOC emissions from P058, P059, P060, P061, P062 and P063, combined. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for these emissions units in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. **Emission Limitation:**
The baghouse serving emissions units P058, P061 and P062 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:
Compliance shall be demonstrated based upon stack testing requirements specified in section A.V.2 below.
 - b. **Emission Limitation:**
There shall be no visible particulate emissions from the stack serving this emissions unit.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 9 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, 1997.
 - c. **Emission Limitation:**
Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 22 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, 1997.
 - d. **Emission Limitation:**
PE shall not exceed 3.73 lbs/hr.

Applicable Compliance Method:
Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) by

Emissions Unit ID: P062

amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton by amount not captured (1.0-0.95).

- e. Emission Limitation:
 PM10 shall not exceed 0.56 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 0.54 lbs by amount not captured (1.0-0.95).

- f. Emission Limitation:
 VOC shall not exceed 18 lbs/hr.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the amount of sand processed (b) by 1.2 lbs VOC/ton (Fire6.25, 12/05, SCC 30400350) and dividing by 2000 lbs/ton.

- g. Emission Limitation:
 PE emissions shall not exceed 18.2 tons per rolling, 12-month period, PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period, and VOC emissions shall not exceed 87.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the stack testing requirements and recordkeeping in Section III.1.c above.

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 60 days of permit issuance or start-up, whichever is earliest.
 - b. The emission testing shall be conducted to demonstrate compliance with the

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allowable emission rate limitation of 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases, and to determine the baghouse control efficiency.

- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Particulates	Method 5	40 <u>CFR</u> Part 60, Appendix A.
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Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency shall be determined by the percent reduction in mass emissions between the inlet and outlet of the control system.

- d. The test(s) shall be conducted while the emissions units vented to the baghouse are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

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PTI Application: 01-12022
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Facility ID: 0121010003

Emissions Unit ID: P062

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P062

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B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P062 - Vibramill Shakeout No.3 (LRVM 3) controlled by baghouse LRDC 1	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Emissions Unit ID: P062

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Emissions Unit ID: P063

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P063 - Vibramill Shakeout No.4 (LRVM 4) controlled by baghouse LRDC 2	OAC rule 3745-31-05(A)(3)	OAC rule 3745-31-05(C)(1) (synthetic minor to avoid non-attainment provisions) OAC rule 3745-17-07(A) OAC rule 3745-17-07(B)(1) OAC rule 3745-17-08(B) OAC rule 3745-21-07(G)

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Emissions Unit ID: P063

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Applicable Emissions
Limitations/Control
Measures

rule shall also include compliance with the requirements of OAC 3745-31-05(C)(1).

The baghouse serving emissions units P059, P060 and P063 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

See Section A.I.2.d and A.II.1 below.

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to the requirement specified in OAC rule 3745-31-05 (A)(3).

There shall be no visible particulate emissions from the stack serving emissions units P059, P060 and P063.

See Section A.I.2.a below.

See Section A.I.2.b below.

Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

See Section A.I.2.e below.

Stack and fugitive emissions from this emissions unit shall not exceed:

- 3.73 lbs particulate emissions (PE)/hr;
- 0.56 lb particulate matter less than 10 microns in diameter (PM10)/hr; and
- 18 lbs volatile organic compounds (VOC)/hr.

The requirements of this

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** This emissions unit is exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(d).
- 2.b** This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive particulate emissions from this emissions unit.
- 2.c** The 3.73 pounds PE per hour, 0.56 pounds PM10 per hour and 18.0 pounds VOC per hour emission limitations were written to reflect the potential to emit of this emissions unit as vented to the baghouse. Therefore, additional monitoring, record keeping, and reporting requirements are not necessary to demonstrate compliance with these emission limitations.
- 2.d** PE emissions shall not exceed 18.2 tons per rolling, 12-month period, PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period, and VOC emissions shall not exceed 87.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.
- 2.e** The emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2) do not apply to emissions units that do not apply a liquid organic material.

II. Operational Restrictions

1. The maximum amount of sand processed by emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined, shall not exceed 146,333 tons per rolling, 12-month summation.

Since this is an existing operation, there are existing records of sand processed and therefore the amount of sand processed during the first 12 months does not need to be established.

2. The pressure drop across the baghouse shall be maintained within the range of 2 to 8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined:
 - a. the amount of sand processed, in tons;
 - b. the rolling, 12-month summation of sand processed, in tons; and
 - c. the rolling, 12-month PE, PM10 and VOC emissions rate, in tons, calculated by summing the stack and fugitive emissions.

Stack emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) or 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test, and dividing by 2000 lbs/ton. Fugitive emissions can be determined by multiplying the amount of sand processed (b) by 3.6 lbs PE/ton or 0.54 lbs PM10/ton by amount not captured (1.0-0.95) and dividing by 2000 lbs/ton. The summed PE and PM10 emissions are then doubled because all sand is sent through one of the Vibramill Shakeout operations (P060-P063) followed by one of the Sand Reclamation Systems (P058-P059). VOC emissions shall be determined by multiplying the amount of sand processed (b) by 1.2 lbs VOC/ton (Fire6.25, 12/05, SCC 30400350) and dividing by 2000 lbs/ton.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions 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

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- abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
4. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. 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 across the baghouse on daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, sand processing rate limitation, PE, PM10 and VOC emission rate limitations from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions, Section A of this permit.
4. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
5. The permittee shall also submit annual reports that specify the total PE, PM10 and

Emissions Unit ID: P063

VOC emissions from P058, P059, P060, P061, P062 and P063, combined. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for these emissions units in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. **Emission Limitation:**
The baghouse serving emissions units P059, P060 and P063 shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:
Compliance shall be demonstrated based upon stack testing requirements specified in section A.V.2 below.
 - b. **Emission Limitation:**
There shall be no visible particulate emissions from the stack serving this emissions unit.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 9 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, 1997.
 - c. **Emission Limitation:**
Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average from any non-stack egress point.

Applicable Compliance Method:
If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Test Method 22 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, 1997.
 - d. **Emission Limitation:**
PE shall not exceed 3.73 lbs/hr.

Applicable Compliance Method:
Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton (AP-42, 12.10-7, 01/95) by

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amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 3.6 lbs PE/ton by amount not captured (1.0-0.95).

- e. Emission Limitation:
 PM10 shall not exceed 0.56 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated by summing the stack and fugitive emissions. Stack emissions can be determined by multiplying the maximum amount of sand processed, 15 tons/hr, by 0.54 lbs PM10/ton (Fire6.25, 30400350, 12/05) by amount captured (1.0-0.05) by control efficiency of (1.0-0.98) or as demonstrated during a recent stack test. Fugitive emissions can be determined by multiplying the amount of sand processed, 15 tons/hr, by 0.54 lbs by amount not captured (1.0-0.95).

- f. Emission Limitation:
 VOC shall not exceed 18 lbs/hr.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the amount of sand processed (b) by 1.2 lbs VOC/ton (Fire6.25, 12/05, SCC 30400350) and dividing by 2000 lbs/ton.

- g. Emission Limitation:
 PE emissions shall not exceed 18.2 tons per rolling, 12-month period, PM10 emissions shall not exceed 2.8 tons per rolling, 12-month period, and VOC emissions shall not exceed 87.8 tons per rolling, 12-month period from emissions units P058: Sand Reclamation System (LRRC 1), P059: Sand Reclamation System, P060: Vibramill Shakeout No.1 (LRVM 1), P061: Vibramill Shakeout No.2 (LRVM 2), P062: Vibramill Shakeout No.3 (LRVM 3), and P063: Vibramill Shakeout No.4 (LRVM 4), combined.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the stack testing requirements and recordkeeping in Section A.III.1.c above.

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 60 days of permit issuance or start-up, whichever is earliest.
 - b. The emission testing shall be conducted to demonstrate compliance with the

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allowable emission rate limitation of 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases, and to determine the baghouse control efficiency.

- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Particulates	Method 5	40 <u>CFR</u> Part 60, Appendix A.
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Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency shall be determined by the percent reduction in mass emissions between the inlet and outlet of the control system.

- d. The test(s) shall be conducted while the emissions units vented to the baghouse are operating at or near maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

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VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P063 - Vibramill Shakeout No.4 (LRVM 4) controlled by baghouse LRDC 2	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None