State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
DELAWARE COUNTY

Street Address:
122 S. Front Street

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

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 01-12033
Fac ID: 0121010003
DATE: 8/15/2006

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

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

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.

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

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

Sincerely,

Michael W. Ahern

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

CC: **USEPA** **CDO**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 8/15/2006**
Terms and Conditions	**Effective Date: 8/15/2006**

FINAL PERMIT TO INSTALL 01-12033

Application Number:	01-12033
Facility ID:	0121010003
Permit Fee:	**$2700**
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

Joseph P. Koncelik

Director

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 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, 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.

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.

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 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 <u>obtained before</u> 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 this permit.

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 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)

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.

C. Permit-To-Install Summary of Allowable Emissions

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

Pollutant	Tons Per Year
PE	41.6
PM10	10.7
VOC	87.7

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 (NNSR) 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)

Emission Units (EU)	EU Description	PTE following completion (tpy)			Difference (tpy)		
		PE	PM10	VOC	PE	PM10	VOC
P038	thermal sand reclaim unit	2.5	2.5	0.1	2.5	2.5	0.1
P055	5.5 tons/hr electric induction furnace (LRFU3)	4.3	4.1	-	4.3	4.1	-
P056	Large Chromite Sand Mixer LRMX5	-	-	61.5	-	-	61.5
P057	Large Chromite Area flow coat core wash station	-	-	22.0	-	-	22.0
P058	Sand Reclamation System (LRRC 1)	232.0	34.7	-	232.0	34.7	-
P059	Sand Reclamation System (LRRC 2)	-	-	-	-	-	-
P060	Vibramill Shakeout (LRVM 1)	232.0	34.7	90.0	232.0	34.7	90.0
P061	Vibramill Shakeout (LRVM 2)	-	-	-	-	-	-
P062	Vibramill Shakeout (LRVM 3)	-	-	-	-	-	-
P063	Vibramill Shakeout (LRVM 4)	-	-	-	-	-	-
Total emissions increases for new or modified emissions units (project as defined within past 12 months) (tons)		**470.8**	**76**	**173.6**	470.8	**76**	**173.6**

b. If the values are greater than the significance level for the pollutants in question, then a significant emissions increase has occurred. (Based upon Table II, a Significant Modification will occur.)

Table II:
Summary Table

	PE	PM10	VOC
New Emissions Units	470.8	76.0	173.6
Trigger Levels	25	15	40
Significant Emissions Increase?	Yes	Yes	Yes

Step 2. Calculate whether a net emissions increase will occur.

a. With respect to any regulated NSR pollutant emitted by a major stationary source, the amount by which the sum of (1) an increase in emissions; and (2) contemporaneous increases/decreases, exceeds zero. [OAC rule 3745-31-01(SSS)]

Table III:
Contemporaneous Increases/Decreases
and Shutdowns during 5 year period

Emission Units (EU)	EU Description	**2 yr Average Actual (tpy)**			**Projected Actual (tpy)**			**Difference (tpy)**		
		PE	PM10	VOC	PE	PM10	VOC	PE	PM10	VOC
P013	Shakeout Table *Shutdown in 01/06* *2 yr avg (2004&2005)*	94.8	14.3	36.9	-	-	-	94.8	14.3	36.9
P030	Sand Reclamation System *Shutdown in 01/06* *2 yr avg (2004&2005)*	94.8	14.3	-	-	-	-	94.8	14.3	-
P031	Furnace *Shutdown in 06/02* *2 yr avg (1998&1999)*	1.3	1.3	-	-	-	-	1.3	1.3	-
P027	Furnace 1&2 *Shutdown in 02/06* *2 yr avg (2004&2005)*	2.4	2.3	-	-	-	-	2.4	2.3	-
P045	Large core room sand mixer LRMX6 *Shutdown in 11/02* *2 yr avg (1998&1999)*	-	-	1.8	-	-	-	-	-	1.8
P048-P053	Combined flow coat mold/core wash stations *2 yr avg (2004&2005)*	-	-	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.

Emissions Unit ID: P058

Table V:
Synthetic Minor Limitations*

Emissions Unit (EU)	Description	Permit no.	PE PTE (tpy) Pre	PE PTE (tpy) Post	PM10 PTE (tpy) Pre	PM10 PTE (tpy) Post	VOC PTE (tpy) Pre	VOC PTE (tpy) 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*	-	-
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

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P058 - Sand Reclamation System (LRRC 1) controlled by baghouse LRDC 1 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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)

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.	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.
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 than10 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.	

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;
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 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:

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:

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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P058 - Sand Reclamation System (LRRC 1) controlled by baghouse LRDC 1 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P059 - Sand Reclamation System (LRRC 2) controlled by baghouse LRDC 2 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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)

Applicable Emissions Limitations/Control Measures	
	compliance with the 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.
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.b below.
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 than10 microns in diameter (PM10)/hr.	
The requirements of this rule shall also include	

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;

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 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:

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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P059 - Sand Reclamation System (LRRC 2) controlled by baghouse LRDC 2 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P060 - Vibramill Shakeout No.1 (LRVM 1) controlled by baghouse LRDC 2 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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)

Applicable Emissions Limitations/Control Measures	
	The requirements of this 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 than10 microns in diameter (PM10)/hr; and 18 lbs volatile organic compounds (VOC)/hr.	

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 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 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.

Emissions Unit ID: P060

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:
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 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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P060 - Vibramill Shakeout No.1 (LRVM 1) controlled by baghouse LRDC 2 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P061 - Vibramill Shakeout No.2 (LRVM 2) controlled by baghouse LRDC 1 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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)

Applicable Emissions Limitations/Control Measures	
	The requirements of this 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 than10 microns in diameter (PM10)/hr; and 18 lbs volatile organic compounds (VOC)/hr.	

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 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 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 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 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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P061 - Vibramill Shakeout No.2 (LRVM 2) controlled by baghouse LRDC 1 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P062 - Vibramill Shakeout No.3 (LRVM 3) controlled by baghouse LRDC 1 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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)

Applicable Emissions Limitations/Control Measures	
	The requirements of this 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 than10 microns in diameter (PM10)/hr; and 18 lbs volatile organic compounds (VOC)/hr.	

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 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 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 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 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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P062 - Vibramill Shakeout No.3 (LRVM 3) controlled by baghouse LRDC 1(installation or modification of this emissions unit commenced prior to August 3, 2006)	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

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P063 - Vibramill Shakeout No.4 (LRVM 4) controlled by baghouse LRDC 2 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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)

Applicable Emissions Limitations/Control Measures	
	The requirements of this 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 than10 microns in diameter (PM10)/hr; and 18 lbs volatile organic compounds (VOC)/hr.	

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 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 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 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 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.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P063 - Vibramill Shakeout No.4 (LRVM 4) controlled by baghouse LRDC 2 (installation or modification of this emissions unit commenced prior to August 3, 2006)	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