

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

EFFECTIVE DATE: May 13, 2011

ISSUED TO

Fairmount Minerals, LTD.
Technisand, Inc. - Bridgman Facility

State Registration Number (SRN): A0367

LOCATED AT

3840 Livingston Road, Bridgman, Michigan 49106

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-A0367-2011

Expiration Date: May 13, 2016

Administratively Complete ROP Renewal Application Due Between November 13, 2014 and
November 13, 2015

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-A0367-2011

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Natural Resources and Environment

Mary A. Douglas, Kalamazoo District Supervisor

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AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Natural Resources and Environment (MDNRE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined or subsumed, or is state only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in federally enforceable Source-Wide PTI No. MI-PTI-A0367-2011 pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. 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 conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq.,

and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Except as provided in Subrules 2, 3, and 4 of Rule 301, states in part; “a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of Rule 301(1)(a) or (b) unless otherwise specified in this ROP.” The grading of visible emissions shall be determined in accordance with Rule 303: **(R 336.1301(1) in pertinent part)**
 - a. A 6-minute average of 20 percent opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
 - b. A limit specified by an applicable federal new source performance standard.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.¹ **(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property.¹ **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner’s or operator’s expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1). **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(4))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate: **(R 336.1213(3)(b))**
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A responsible official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP: **(R 336.1213(3)(c))**
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
 - a. Submitting a certification by a responsible official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a responsible official which states that, "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete". The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a responsible official in a manner consistent with the CAA. **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied: **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
 - a. The applicable requirements are included and are specifically identified in the ROP.
 - b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
 - a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(9))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
- a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(7))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaiming, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F.
37. If the permittee is subject to 40 CFR, Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR, Part 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR, Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall comply with the requirements of 40 CFR, Part 68, no later than the latest of the following dates as provided in 40 CFR, Part 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR, Part 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR, Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR, Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule. ² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA. ² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDNRE. ² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months, or has been interrupted for 18 months, the applicable terms and conditions from that PTI shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDNRE, AQD, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI. ² **(R 336.1201(4))**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, N/A (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUStoragePiles	Raw Sand Plant #2: Open area stock piles of raw sand waiting to be dried.	1-1-1965	FGFugDust
EU#2Stacker	Raw Sand Plant #2: Conveys raw, undried sand to the storage piles.	1-1-1965	FGFugDust
EU#2Conveyors	Raw Sand Plant #2: Enclosed conveyors to transport raw sand to the dryer. Tunnel conveyors added in 1996.	1-1-1969 5-1996	FGFugDust
EU#2Dryer	Raw Sand Plant #2: Rotary raw sand dryer controlled by a cyclone (installed 1989) then a wet impingement scrubber (installed 11/99).	Pre-1967 6-1-1989 11-1999	FGRule331Rawsand
EU#2Cooler	Raw Sand Plant #2: Sand cooling process controlled by two parallel cyclones (installed 1989) then a wet impingement scrubber (installed 11/99).	Pre-1967 6-1-1989 11-1999	FGRule331Rawsand
EU#2Final	Raw Sand Plant #2: Equipment after the cooler that is controlled by a baghouse - enclosed conveyors, screens, and elevators.	Pre-1967	FGRule331Rawsand
EU#2Silos	Raw Sand Plant #2: Storage silos for dried, raw sand that are controlled by bin vents (installed 7/8/04).	1-1-1965 7-8-2004	FGRule331Rawsand
EU#2Truckload	Raw Sand Plant #2: Equipment for loading of raw, dried sand into trucks - conveyors and loading spouts. Baghouse was installed in 2002.	1-1-1969	FGRule331Rawsand
EU#2Railroad	Raw Sand Plant #2: Uncontrolled material handling equipment for the transfer, loading, and unloading of sand (railcars) - conveyors, elevators, transloaders, hoppers, and loading spouts.	1-1-1969	FGFugDust
EU#2Trucktraffic	Raw Sand Plant #2: Trucks delivering raw undried sand to the plant and transporting raw, dried sand off-site.	1-1-1965	FGFugDust
EU#2Coldcleaner	Raw Sand Plant #2: Cold cleaner in the maintenance area. Unit has been modified (date unknown); subject to Rule 707.	1975	FGColdcleaners

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU#3Heater	Gas fired unit that heats the sand as it circulates through the heat zone in buckets. Controlled by a cyclone and baghouse F.	1-1-1967	FGRule331Resin
EU#3Muller	Pugmill equipment used to mix heated sand with resin and other materials. Controlled by a recuperative thermal oxidizer (installed 11/10).	1-1-1967 11-2010	FGMullers
EU#3Deagglom	Equipment for shaking, vibrating, and breaking of resin coated sand from EU#3Muller to prevent clumping. Exhausts to baghouse C.	1-1-1967	FGRule331Resin
EU#3Cooler	A fluidized bed system to cool the sand after the #3 deagglomerator. Exhausts to a cyclone then baghouse C.	1-1-1967	FGRule331Resin
EU#3FScreen	Line #3 final screening process controlled by baghouse C.	1-1-1967	FGRule331Resin
EU#5Heater	Gas fired unit that heats the sand as it circulates through the heat zone in buckets. Controlled by a cyclone and baghouse F.	1-1-1975	FGRule331Resin
EU#5Muller	Pugmill equipment used to mix heated sand with resin and other materials. Controlled by a recuperative thermal oxidizer (installed 11/10).	1-1-1975 11-2010	FGMullers
EU#5Deagglom	Shakes and vibrates the resin coated sand from the pugmill to break it and prevent clumping. Exhausts to the recuperative thermal oxidizer (installed 11/10).	1-1-1975 11-2010	FGRule331Resin
EU#5Cooler	A fluidized bed system to cool the sand after the #5 deagglomerator. Exhausts to a cyclone then baghouse C.	1-1-1975	FGRule331Resin
EU#5FScreen	Line #5 final screening process controlled by baghouse C.	1-1-1975	FGRule331Resin
EU#3&5Silos	Raw and resin coated sand storage silos at the resin plant. Controlled by bin vents (installed 7/8/04).	1-1-1967 7-8-2004	FGRule331Resin
EU#3&5RawCnvys	Uncontrolled material handling equipment for transfer of sand from Plant #2 to the resin plant.	1-1-1967	FGFugDust
EU#3&5Cnvys	Uncontrolled material handling equipment for transfer of sand after EU#3&5RawCnvys and prior to EU#3&5Cnvyr&Hprs.	1-1-1967	FGFugDust
EU#3&5Cnvyr&Hprs	Uncontrolled material handling and storage equipment in the resin plant after EU#3&5Cnvys.	1-1-1967	FGFugDust
EU#3&5Load	Uncontrolled equipment associated with resin sand loading operations - conveyors, elevators, and loading spouts.	1-1-1967	FGFugDust
EU#3&5Coldcleaner	Cold cleaner in the maintenance area. Unit has been modified (date unknown); subject to Rule 707.	1975	FGColdcleaners

D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGRule331Rawsand	Equipment at the raw sand plant that is subject to Rule 331.	EU#2Dryer, EU#2Cooler, EU#2Final, EU#2Truckload, EU#2Silos
FGMullers	Mullers #3 and #5 that are jointly controlled by a recuperative thermal oxidizer.	EU#3Muller, EU#5Muller
FGRule331Resin	Equipment at the resin plant subject to Rule 331, excluding FGMullers and including equipment controlled by baghouses and silos controlled with individual bin vents.	EU#3Heater, EU#3Deagglom, EU#3Cooler, EU#3FScreen, EU#5Heater, EU#5Deagglom, EU#5Cooler, EU#5FScreen, EU#3&5Silos
FGFugDust	Material handling equipment at the facility that is included in the fugitive dust plan.	EUStoragePiles, EU#2Conveyors, EU#2Stacker, EU#2Railroad, EU#2Trucktraffic, EU#3&5Cnvys, EU#3&5Load, EU#3&5RawCnvys, EU#3&5Cnvyr&Hprs,
FGColdcleaners	Cold cleaners at the raw sand plant subject to Rule 707.	EU#2Coldcleaner, EU#3&5Coldcleaner

FGRule331RawSand
FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Equipment at the raw sand plant (Plant #2) that is subject to Rule 331.

Emission Units: EU#2Dryer, EU#2Cooler, EU#2Final, EU#2Truckload, EU#2Silos

POLLUTION CONTROL EQUIPMENT: Stack G (EU#2Dryer - cyclone then wet scrubber, EU#2Cooler - two parallel cyclones then wet scrubber); EU#2Final - baghouse; EU#2Truckload - baghouse; EU#2Silos - bin vents

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate	0.10 pounds ²	Per 1000# exhaust gas, on a dry gas basis	EU#2Cooler EU#2Dryer	III.1 VI.2 VI.3	R 336.1331(1)(a), Table 31(J)
2. Particulate	0.10 pounds	Per 1000# exhaust gas, on a dry gas basis	EU#2Final EU#2Truckload EU#2Silos	VI.1 VI.7	R 336.1331(1)(a), Table 31(J)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
N/A					

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. To ensure proper operation of the wet scrubber and compliance with R 336.1331(1), the scrubber shall be operated with a minimum inlet water flow rate of 36 gallons per minute. An excursion occurs if the inlet water flow rate is less than 36 gallons per minute. **(R 336.1213(3), 40 CFR 64.6(c)(2), 40 CFR 64.6(c)(1))**
2. The permittee shall maintain the scrubber inlet water flow meter device in proper operating condition, according to the manufacturer's recommendations, and calibrate the meter measuring device at least annually. The minimum accuracy is +/-5% of the measured value. **(40 CFR 64.7(b), R 336.1213(3))**
3. Upon detecting an excursion of the scrubber water flow rate, the permittee shall restore operation of the scrubber for EU#2Cooler and EU#2Dryer to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. **(See Appendix 3B) (40 CFR 64.7(d))**

See Appendix 3B

IV. DESIGN/EQUIPMENT PARAMETER(S)

N/A

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

N/A

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor the pressure drop across the baghouses for EU#2Truckload and EU#2Final once a week. The permittee shall record the date and time, the stack, the observer and the pressure drop. **(R 336.1213(3))**
2. For each day that EU#2Cooler and EU#2Dryer is in use the permittee shall monitor the scrubber inlet water flow rate. The permittee shall record the date, time, observer and the flow rate. Data collected during malfunctions, repairs, and QA/QC activities shall not be used to satisfy monitoring requirements. **(R 336.1213(3), 40 CFR 64.6(c)(1), 40 CFR 64.6(c)(3), 40 CFR 64.7(a), 40 CFR 64.7(c))**
3. Proper operation of the wet scrubber shall be verified by trained personnel using documented inspection and maintenance procedures. An excursion occurs if the inspection or documented maintenance procedures are not adhered to or if corrective action is not initiated within 24 hours to correct any problems identified during an inspection. **(40 CFR 64.6(c)(1)and (2))**
4. A copy of the inspection and maintenance plan for the wet scrubber and baghouses shall be kept on-site and made available to AQD staff upon request. **(R 336.1213(3))**
5. The permittee shall perform and document corrective actions taken if the scrubber inlet water flow rate drops below 36 gpm. **(See Appendix 3B) (40 CFR 64.7(d))**
6. The permittee shall perform and document corrective actions taken if the baghouse pressure drop is outside the normal range of 2-8 inches water column. **(R 336.1213(3))**
7. The permittee shall perform a 6-minute visible emission check once a week on EU#2Silos during loading or unloading. The emission check shall be performed and documented according to the procedure in Appendix 3. **(See Appendix 3A) (R 336.1213(3))**

See Appendices 3A and 3B

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The report required in VII.2 above shall include the following for the wet scrubber:
 - a. Summary information on the number, duration, and cause (including unknown cause, if applicable) of exceedances and excursions and the corrective actions taken;
 - b. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than for calibration checks);

- c. If a Quality Improvement Plan (QIP) has been required, a description of the actions taken to implement the QIP during the reporting period. The report shall include documentation that the plan has been implemented and has reduced the likelihood of similar levels of excursions or exceedances occurring. **(40 CFR 64.9)**□

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
N/A			

IX. OTHER REQUIREMENT(S)

- 1. The permittee shall notify the appropriate District Office of the AQD of the need to modify the wet scrubber monitoring requirements if the approved monitoring is found to be inadequate and shall submit a proposed modification to the requirements if appropriate. **(40 CFR 64.7(e))**
- 2. The permittee shall, at all times, maintain the wet scrubber monitor, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. **(40 CFR 64.7(b))**
- 3. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR 64.7(c)(3))**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGMullers
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION: Pugmills for resin lines #3 and #5 where heated sand is mixed with resin and sometimes other material.

Emission Unit: EU#3Muller, EU#5Muller

POLLUTION CONTROL EQUIPMENT: Recuperative Thermal Oxidizer (RTO)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Formaldehyde	5.34 mg ⁻¹	Per meter cubed, corrected to 70°F & 29.92 inches Hg	EU#5Muller	IV.1 IV.2 V.1 VI.1	R 336.1225(1)
2. Phenol	149.5 mg ⁻¹	Per meter cubed, corrected to 70°F & 29.92 inches Hg	EU#5Muller	IV.1 IV.2 V.1 VI.1	R 336.1225(1)
3. Particulate	0.10 pounds	Per 1000# exhaust gas, on a dry gas basis	FGMullers	VI.2	R 336.1331(1)(a), Table 31(J)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
N/A					

III. PROCESS/OPERATIONAL RESTRICTION(S)

- There shall be no visible emissions from EU#5Muller.² (R 336.1301(1)(c))

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate FGMullers unless the recuperative thermal oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the recuperative thermal oxidizer includes maintaining a minimum combustion chamber temperature of 1400°F and a minimum retention time of 0.5 seconds. As an alternative, a lower minimum operating temperature may be established based on the results of the most recent successful performance test. Under this alternative, the performance testing must demonstrate compliance with the EU#5Muller emission limits while both the #3Muller and #5Muller are in operation. (R 336.1205, R 336.1224, R 336.1225, R 336.1299, R 336.1702, R 336.1901, R 336.1910, Part 6 Rules, Part 7 Rules)
- The permittee shall install, calibrate, maintain and operate in a satisfactory manner a temperature monitoring device in the combustion chamber of the recuperative thermal oxidizer to monitor and record the temperature on a continuous basis, during operation of FGMullers. (R 336.1205, R 336.1224, R 336.1225, R 336.1299, R 336.1702, R 336.1901) Use with MR 350 and MR 850

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years: **(R 336.1213(3)(b)(ii))**

1. No later than 180 days after issuance of this permit, the permittee shall verify phenol and formaldehyde emission rates from EU#5Muller and the particulate emission rate from FGMullers, by testing at owner's expense, in accordance with Department requirements. **(R 336.1213(3))**
2. The permittee shall submit a complete test protocol to the AQD for approval at least 30 days prior to the anticipated test date. **(R 336.1213(3))**
3. The permittee shall notify the District Supervisor or the Technical Programs Unit no less than 7 days prior to the anticipated test date. **(R 336.2001(3))**
4. The permittee shall submit a complete test report of the test results to the AQD District Supervisor or the Technical Programs Unit within 60 days following the last date of the test. **(R 336.2001(4))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years: **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor, in a satisfactory manner, the temperature in the recuperative thermal oxidizer on a continuous basis in a manner and with instrumentation acceptable to the Air Quality Division. **(R 336.1205, R 336.1224, R 336.1225, R 336.1299, R 336.1702, R 336.1901)**
2. The permittee shall perform a 6-minute visible emission check once a week on FGMullers during routine maximum operating conditions. The emission check shall be performed and documented according to the procedure in Appendix 3A. **(R 336.1213(3))**
3. A copy of an inspection and maintenance plan for the recuperative thermal oxidizer shall be kept on-site and made available to AQD staff upon request. **(R 336.1213(3))**
4. The permittee shall keep, in a satisfactory manner, continuous records of the temperature in the recuperative thermal oxidizer. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1299, R 336.1702, R 336.1901)**

See Appendix 3A

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
SV-3/5-RTO	39.75 ¹	64.2 ¹	R 336.1225(1)

IX. OTHER REQUIREMENT(S)

N/A

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGRule331Resin
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION: Sources at the Resin Plant, except FGMullers, that are subject to Rule 331.

Emission Unit: Stack F (for EU#3Heater and EU#5Heater); Stack C (for EU#3Deagglom, EU#3Cooler, EU#3FScreen, EU#5Cooler, and EU#5FScreen); EU#3&5Silos; Stack 3/5-RTO (for EU#5 Deagglom)

POLLUTION CONTROL EQUIPMENT: Stack F - cyclone and baghouse; Stack C - cyclone, baghouses (two in parallel); EU#3 and #5Silos - bin vents; Stack 3/5-RTO

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
Particulate	0.10 pounds	Per 1000# exhaust gas, on a dry gas basis	FGRule331Resin	VI.1 VI.2 VI.3	R 336.1331(1)(a), Table 31(J)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
N/A					

III. PROCESS/OPERATIONAL RESTRICTION(S)

N/A

IV. DESIGN/EQUIPMENT PARAMETER(S)

N/A

V. TESTING/SAMPLING

N/A

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years: **(R 336.1213(3)(b)(ii))**

1. The permittee shall weekly monitor the pressure drop across the baghouses for Stack F and Stack C. The permittee shall record the date, time, the stack, the observer and the pressure drop. **(R 336.1213(3))**
2. The permittee shall perform and document corrective actions taken if the baghouse pressure drop is outside the normal range. Normal range for the stack F baghouse and the stack C Sly baghouse is 2-6 inches water column. Normal range for the stack C Torit baghouse is 0.75-5 inches water column. **(R 336.1213(3))**
3. The permittee shall perform a 6-minute visible emission check once a week on EU#3&5Silos during loading or unloading. The emission check shall be performed and documented according to the procedure in Appendix 3A. **(R 336.1213(3))**

See Appendix 3A

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
N/A			

IX. OTHER REQUIREMENT(S)

N/A

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGFugDust
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION: Material handling equipment at the facility that is subject to a fugitive dust plan.

Emission Unit: EUStoragePiles, EU#2Conveyors, EU#2Stacker, EU#2Railroad, EUTrucktraffic, EU#3&5Cnvys, EU#3&5RawCnvys, EU#3&5Cnvyr&Hprs, EU#3&5Load

POLLUTION CONTROL EQUIPMENT: N/A

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
N/A					

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
N/A					

III. PROCESS/OPERATIONAL RESTRICTION(S)

The permittee shall not operate the equipment in FGFugDust unless the fugitive dust plan referenced in Appendix 9 has been implemented and maintained. (R 336.1371)

IV. DESIGN/EQUIPMENT PARAMETER(S)

N/A

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

N/A

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall keep a record of the date, time, area swept, and name of the personnel performing the activity for the sweeping required in the fugitive dust plan in Appendix 9. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
N/A			

IX. OTHER REQUIREMENT(S)

N/A

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGCOLDCLEANERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h), or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: N/A

I. EMISSION LIMIT(S)

N/A

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(h))**
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**
5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees fahrenheit, then the cold cleaner must comply with at least one of the following provisions:
 - a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**
 - b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**
 - c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

N/A

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years: **(R 336.1213(3)(b)(ii))**

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**
2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
 - a. A serial number, model number, or other unique identifier for each cold cleaner.
 - b. The date the unit was installed, manufactured or that it commenced operation.
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(h).
 - d. The applicable Rule 201 exemption.
 - e. The Reid vapor pressure of each solvent used.
 - f. If applicable, the option chosen to comply with Rule 707(2).
3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**
4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

N/A

IX. OTHER REQUIREMENT(S)

N/A

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to the specified emission unit(s) and/or flexible group(s). This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii). If the permittee makes a change that affects the basis of the non-applicability determination, the permit shield established as a result of that non-applicability decision is no longer valid for that emission unit or flexible group.

Emission Unit/Flexible Group ID	Non-Applicable Requirement	Justification
A0367	40 CFR 60 Subpart OOO	The facility does not crush or grind non-metallic minerals.
FGColdcleaners	40 CFR 63 Subpart T	Facility does not use halogenated solvents in their coldcleaners.

APPENDICES

Appendix 1. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Natural Resources and Environment	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
gr	Grains	psig	Pounds per square inch gauge
HAP	Hazardous Air Pollutant	PeTE	Permanent Total Enclosure
Hg	Mercury	PTI	Permit to Install
hr	Hour	RACT	Reasonable Available Control Technology
HP	Horsepower	ROP	Renewable Operating Permit
H ₂ S	Hydrogen Sulfide	SC	Special Condition
HVLP	High Volume Low Pressure *	scf	Standard cubic feet
ID	Identification (Number)	sec	Seconds
IRSL	Initial Risk Screening Level	SCR	Selective Catalytic Reduction
ITSL	Initial Threshold Screening Level	SO ₂	Sulfur Dioxide
LAER	Lowest Achievable Emission Rate	SRN	State Registration Number
lb	Pound	TAC	Toxic Air Contaminant
m	Meter	Temp	Temperature
MACT	Maximum Achievable Control Technology	THC	Total Hydrocarbons
MAERS	Michigan Air Emissions Reporting System	tpy	Tons per year
MAP	Malfunction Abatement Plan	µg	Microgram
MDNRE	Michigan Department of Natural Resources and Environment	VE	Visible Emissions
mg	Milligram	VOC	Volatile Organic Compounds
mm	Millimeter	yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

Appendix 3A. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGRule331Rawsand (EU#2Silos), FGMullers, and FGRule331Resin (EU#3&5Silos):

1. The permittee shall record the results of a weekly 6-minute visible emission check of each stack. The visible inspection shall consist of a visual survey of each stack to identify if there are visible emissions, other than condensed water vapor. Visible emissions shall be recorded as "observed" or "not observed."
2. The visible emission check shall simply verify the presence or absence of visible emissions and need not follow the procedures specified in Federal Reference Test Method 9. Therefore, multiple stacks may be observed simultaneously.
3. Each visible emission check shall be taken during maximum routine operating conditions during daylight hours.
4. If visible emissions are observed, the permittee shall immediately verify if the equipment and/or control device is operating according to manufacturer's specifications or other site-specific acceptable operating conditions. If the equipment or control device is not operating properly the permittee shall take corrective action immediately to eliminate the excess emissions.
5. Record the date and time of the visible emissions check, the stack(s) observed, the observer, whether or not VEs were observed, and, if yes, the follow-up taken.

Appendix 3B. Corrective Actions for Wet Scrubber

Corrective actions shall include minimizing the period of any startup, shutdown, or malfunction, and taking any necessary corrections to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedence (other than those caused by excused startup or shutdown conditions. Such actions may include initial inspection and evaluation on the following systems: pumps, gauges, monitors, plumbing systems, and electrical systems. Any corrective actions taken shall be recorded and documented to indicate that proper operation within the indicator range has returned to normal without operator action or with follow-up actions.

Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5. Testing Procedures

There are no specific testing requirement plans or procedures for this ROP. Therefore, this appendix is not applicable.

Appendix 6. Permits to Install

The following table lists any PTIs issued since the effective date of previously issued ROP No. A0367-MI-ROP-2005. This includes any PTI that were incorporated into the Source-Wide PTI No. MI-PTI-A0367-2005 through amendments or modifications and any PTI that remained off-permit until this ROP renewal.

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
N/A		

Appendix 7. Emission Calculations

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDNRE Report Certification form (EQP 5736) and MDNRE Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

Appendix 9. Fugitive Dust Plan

The permittee submitted an acceptable fugitive dust plan for the facility on July 8, 2005. The permittee shall maintain an acceptable fugitive dust plan and submit modifications upon request of the AQD District Supervisor.