Michigan Department of Environmental Quality
Air Quality Division

State Registration Number

A0367

RENEWABLE OPERATING PERMIT STAFF REPORT

ROP Number

MI-ROP-A0367-2011

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

SRN: A0367

Located at

3840 Livingston Road, Bridgman, Berrien County, Michigan 49106

Permit Number: MI-ROP-A0367-2011

Staff Report Date: January 3, 2011

Amended Date: February 18, 2011

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) requires that the Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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January 3, 2011 STAFF REPORT

Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with a ROP pursuant to Title V of the federal Clean Air Act of 1990 and Michigan's Administrative Rules for air pollution control pursuant to Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft permit terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft permit pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

Stationary Source Mailing Address:	Fairmount Minerals, LTD. Technisand, Inc. - Bridgman Facility 3840 Livingston Road Bridgman, Michigan 49106
Source Registration Number (SRN):	A0367
North American Industry Classification System (NAICS) Code:	212322
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201000034
Responsible Official:	Joseph Fodo, Vice President 269-926-9450
AQD Contact:	Matt Deskins, Environmental Quality Analyst 269-567-3542
Date Permit Application Received:	April 5, 2010
Date Application Was Administratively Complete:	Yes
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	January 3, 2011
Deadline for Public Comment:	February 2, 2011

Source Description

The Fairmount Minerals, Bridgman facility, receives, processes, and ships sand. At the Raw Sand Plant (plant #2) the sand is received, screened, dried, stored, and transferred to either rail car, truck, or the Resin Plant. At the Resin Plant (plants #3 and #5), the sand is heated and mixed with resin and sometimes other materials. It is then cooled, broken up, and stored before shipping via truck or rail car.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System in the **2009** submittal.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Nitrogen Oxides (NO_x)	7.9
Particulate Matter (PM)	6.9
Volatile Organic Compounds (VOCs)	4.2

**As listed pursuant to Section 112(b) of the federal Clean Air Act.

See Parts C and D in the draft ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in Berrien County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR), Part 70, because the potential to emit of any single hazardous air pollutant (HAP) regulated by the federal Clean Air Act, Section 112, is more than 10 tons per year and/or the potential to emit of all HAPs combined is more than 25 tons per year.

No emissions units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of Part 18, PSD of Air Quality of Act 451, because at the time of New Source Review (NSR) permitting, the potential to emit each criteria pollutant was less than 250 tons per year.

The stationary source is not subject to the New Source Performance Standards (NSPS) for Calciners and Dryers in Mineral Industries promulgated in 40 CFR, Part 60, Subparts A and UUU, because EU#2Dryer has not been modified or reconstructed. However, future modifications or reconstruction of this equipment may subject it to the NSPS requirements.

EUStoragePiles, EU#2Stacker, EU#2Dryer, EU#2Cooler, EU#2Final, EU#2Silos, and Resin Plant Line #3 installed prior to August 15, 1967. As a result, this equipment is considered "grandfathered" and is not subject to NSR permitting requirements. However, future modifications of this equipment may be subject to NSR.

Line #5 at the Resin Plant was permitted and the review included a toxics analysis under what is now Rules 224 and 225 for phenol and formaldehyde; therefore, some of the applicable requirements for this line are state enforceable only.

During the review of the working draft ROP, the stationary source contacted the AQD stating that they wanted to replace the current pollution control equipment (wet scrubber) under the flexible group FGMullers with a Recuperative Thermal Oxidizer (RTO). The stationary source submitted to the AQD a state permitting exemption analysis that indicated it met the permit exemption requirements cited under state air regulations Rule 336.1285(d) and Rule 336.1278. The AQD agreed with the analysis and updated the appropriate sections of the ROP to reflect updated emission unit descriptions, monitoring, testing, and recordkeeping requirements pertaining to the RTO. Also, the following emissions units had various pollution control equipment installed/modified on them in the past that met the state permit exemption requirements cited under Rule 336.1285(f) and Rule 336.1278:

EU#2Conveyors – In 1996 the facility added tunnel conveyors.
EU#2Dryer – In 1989 the facility added a cyclone; in 1999 a wet impingement scrubber.
EU#2Cooler – In 1989 the facility added two parallel cyclones; in 1999 the previously mentioned wet impingement scrubber.
EU#2Silos – In 2004 the facility added bin vents.
EU#3&5Silos – In 2004 the facility added bin vents.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

EU#2Dryer and EU#2Cooler at the stationary source are subject to the federal Compliance Assurance Monitoring rule under 40 CFR, Part 64. These emission units both have a control device and potential pre-control emissions of particulate matter greater than the major source threshold level.

Please refer to Parts B, C, and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Source-wide Permit to Install (PTI)

Rule 214a requires the issuance of a Source-wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-A0367-2005 are identified in Appendix 6 of the ROP.

PTI Number			
PTI No. 431-74	PTI No. 431-74A	PTI No. 142-89	

Equivalent Requirements

The following table lists explanations of any equivalent requirements included in the draft permit pursuant to Rule 213(2)(c). Equivalent requirements are enforceable applicable requirements that are equivalent to the applicable requirements contained in the original PTI, a Consent Order/Judgment, and/or the State Implementation Plan.

Emission Unit/Flexible Group ID	Equivalent Requirement Discussion

Emission Unit/Flexible Group ID	Equivalent Requirement Discussion
EU#2Cooler	PTI 142-89, Special Condition 14, contained requirements for stack height and diameter. This condition is obsolete because the wet scrubber has been added and the emissions now go through that stack. The stack referenced in the permit is no longer used; therefore, this applicable requirement was not included in the permit.

Non-applicable Requirements

Part E of the draft ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the draft ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft ROP

There were no processes listed in the ROP application as exempt devices under Rule 212(4). Exempt devices are not subject to any process-specific emission limits or standards in any applicable requirement.

Draft ROP Terms/Conditions Not Agreed to by Applicant

This permit does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

Action Taken by the MDEQ

The AQD proposes to approve this permit. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft permit and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Ms. Mary Douglas, Kalamazoo District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

February 18, 2011 STAFF REPORT ADDENDUM

Purpose

A Staff Report dated January 3, 2011, was developed in order to set forth the applicable requirements and factual basis for the draft ROP terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official:	Joseph Fodo, Vice President 269-926-9450
AQD Contact:	Matt Deskins, Environmental Quality Analyst 269-567-3542

Summary of Pertinent Comments

Comment: All emissions from both Muller #3, Muller #5, and the resin coating process must pass through the thermal oxidizer.

Muller #3 was installed in 1967 before promulgation of air quality regulations and is; therefore, considered grandfathered equipment. The AQD cannot put new restrictions or requirements on grandfathered equipment.

Comment: No grandfathering of toxic or carcinogenic VOCs from Muller #3.

Muller #3 was installed in 1967 before promulgation of air quality regulations and is; therefore, considered grandfathered equipment. The AQD cannot put new restrictions or requirements on grandfathered equipment.

Comment: Require emission testing of #3 deagglomerator. The VOCs from the process may be insignificant, but still desirable.

The #3 deagglommerator was installed in 1967 before promulgation of air quality regulations and is; therefore, considered grandfathered equipment. The AQD cannot put new restrictions or requirements on grandfathered equipment.

Comment: Testing of uncontrolled emissions to verify Best Available Control Technology in use.

The AQD cannot require a BACT analysis through the ROP process.

NOTE: Additional comments related to zoning issues were received, but were not pertinent to the ROP.

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May 13, 2011 STAFF REPORT ADDENDUM

Purpose

A Staff Report dated January 3, 2011, was developed in order to set forth the applicable requirements and factual basis for the draft ROP terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the proposed ROP during the 45-day EPA comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the proposed ROP resulting from these pertinent comments.

General Information

Responsible Official:	Mr. Joseph Fodo, Vice President 269-926-9450
AQD Contact:	Mr. Matt Deskins, Environmental Quality Analyst 269-567-3542

Summary of Pertinent Comments

1. The ROP, FGRule331RawSand, III. Process/Operational Restrictions. Paragraph 3 includes a general statement, and references 40 CFR 64.7(d) as the underlying applicable requirement. In its entirety, 40 CFR 64.7(d) states:

   > (d) *Response to excursions or exceedances.* (1) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction; and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation; recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

   This requirement, as included in the permit, does not include all of these provisions. In addition, the permit should include any specific actions necessary during the excursion of the scrubber water flow rate. Also, the permit must address the specific actions necessary in regards to the control device and not just the emissions units (the proposed permit condition refers only to the emission unit).

MDEQ Changes Made: The facility submitted a new CAM plan to include the emission unit EU#2Dryer since it is also controlled by the wet scrubber, as well as what equipment they would inspect if an excursion should occur. The corrective actions and equipment to inspect were incorporated as Appendix 3B of the ROP. Also, the following changes were made under the emission unit FGRule331RawSand: Under condition III.3, the DEQ included EU#2Dryer and the scrubber into this condition, as well as condition VI.2. Lastly, under condition VI.5, the DEQ changed the underlying applicable requirement from state rule 336.1213(3) to the federal CAM citation of 64.7(d).

2. The ROP, Part E, Non-Applicable Requirements. The non-applicability justification for EU#2Dryer is insufficient. Any non-applicability determinations based on whether the source has been modified or reconstructed is limited to MDEQ's determination that specific changes made at a certain point in time were not modifications or reconstruction. The non-applicability determination for EU#2Dryer must either be removed or revised to provide a non-applicability analysis only for specific changes to the equipment.

MDEQ Changes Made: The non-applicability determination regarding EU#2Dryer was removed.

3. Staff Report, Source-wide Permit to Install. No PTIs are listed here, but the Equivalent Requirements section of the staff report references PTI 142-89. In addition, the Regulatory Analysis section indicates that "Line #5 at the Resin plant was permitted." The PTI section of the staff report should list all PTIs, and the ROP should include all applicable PTI requirements.

   Also, are there other PTIs in addition to 142-89 that should be identified? The ROP's Emission Unit Summary Table identifies installation/modifications dates of 1996, 1998, 1999, 2004, and 2010. The 2010 modification might be exempt, as discussed in the staff report, but the other modifications are not addressed.

MDEQ Changes Made: Two additional permits to install that were previously issued and voided after the initial ROP issuance have been added to the PTI section of the staff report. Also, a discussion on the installation/modification dates to the various emission units has been included to address that issue

4. The ROP, FGRule331RawSand. The Monitoring/Testing Method column in the Emission Limit table should reference the specific relevant requirements identified in subsections III, VI, and VII, and not General Condition 13.

   Also, should EU#2Cooler and EU#2Dryer be listed together in the Emission Limit table, as they are both controlled by the cyclones and the web scrubber, and are subject to CAM? Should some of the other emissions units be listed separately in the table so that the references to the Monitoring/Testing Methods are clear for each unit?

   Similarly, should conditions III.3 and VI.2 refer to EU#2Dryer, as well as EU#2Cooler?

MDEQ Changes Made: All the above comments were incorporated into the ROP except separately listing the emission units EU#2Final, EU#2Truckload, and EU#2Silos in the Emission Limit table.

5. The ROP, FGMullers. The Monitoring/Testing Method column in the Emission Limit table for particulates should reference the specific relevant requirements identified in subsections V and VI, and not General Condition 13.

MDEQ Changes Made: The specific requirements are now referenced and not General Condition 13.

6. The ROP, FGRule331Resin. The Monitoring/Testing Method column in the Emission Limit table should reference the specific relevant requirements identified in subsection VI, and not General Condition 13.

MDEQ Changes Made: The specific requirements are now referenced and not General Condition 13.

7. Please ensure that the source's current 40 CF, Part 64, CAM plan and Rule 371 fugitive dust plan is available on the Michigan Air Permit System ROP source documentation on the Internet.

MDEQ Changes Made: Updated plans have and will be posted on the Internet from now on during the public and USEPA comment periods.

8. The staff report stated that the ROP renewal application was received on April 23, 2010. If this was the case, the facility would have lost its application shield.

MDEQ Change Made: The application was actually received on April 5, 2010, but they submitted the application again on April 23, 2010, to correct some database errors. It was inadvertently logged in again and that date was mistakenly used as the date received.

Changes to the February 19, 2011 Proposed ROP

See changes that were made above following the comments made by the USEPA.