DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

A036726420

FACILITY: TECHNISAND COMPANY - BRIDGMAN		SRN / ID: A0367
LOCATION: 3840 LIVINGSTON RD, BRIDGMAN		DISTRICT: Kalamazoo
CITY: BRIDGMAN		COUNTY: BERRIEN
CONTACT: Wilma Ridley , Assistant Plant Manager		ACTIVITY DATE: 08/08/2014
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced Scheduled Inspection		
RESOLVED COMPLAINTS:		

On August 8, 2014 AQD staff (Matt Deskins and Mary Douglas) went to conduct an unannounced scheduled inspection of the Technisand facility located in Bridgman, Berrien County. The purpo of the inspection was to determine the facilities compliance with Renewable Operating Permit (ROP) No. MI-ROP-A0367-2011 and the PTIs issued since the last inspection (PTI Nos. 56-12, 73-12A, and 431-74C), as well as any other state and/or federal air regulations. Technisand's operations consist of two operations with one being the raw sand plant and the other the resin plant. The following will ultimately summarize each plant's operations, the various permits and permit conditions that apply to each of them, and the facilities compliance. Staff departed for the facility at approximately 9:00 a.m.

Staff arrived at the facility at approximately 10:05 a.m. and proceeded into the office area. Upon entering the office, staff introduced themselves and stated the purpose of the visit. Staff then asked if Scott Meyer was available since he was typically who staff has dealt with during past inspections. The employee staff was talking to was Wilma Ridley (Assistant Plant Manager) and she mentioned that Scott was no longer at that facility and that she had been covering his job responsibilities. She then asked what the inspection entailed and staff responded by mentioning that we needed to determine compliance with the facilities ROP and the other permits issued sin the last inspection along with a plant operation tour. Staff then gave her a business card and a copy of the DEQ's "Environmental Inspection Brochure". Wilma stated that she is familiar with t ROP but not with the recent permits issued. She mentioned that she would call Jim Ridley (EH& who could probably assist with a lot of our questions. She contacted him and he came in a few minutes later. Staff introduced themselves to Jim and mentioned the reason for the visit. It was then decided that we would go down to the other office that had a conference room available to start our inspection. Note: During our initial discussions, Wilma wasn't sure of a couple of staff questions so she phoned Bob Ledyard who at one time was the Regional Manager for Technisan He still has an office at the Bridgman location but now oversees sand operations at other facilitie Bob happened to be in the area so he came to the office and sat in on some of our discussions v Wilma and Jim. The following is a summary of staff's discussions with Wilma, Jim, and Bob and will be followed by the various conditions of the ROP, PTIs, and the facilities compliance status with them.

Note: During our conversation, Wilma mentioned that Joe Kany will be the new EH&S Coordinat for the facility starting shortly. He will be stationed out of one of their Ohio offices. Also, an employee named Chris (last name and title I forgot to get) assisted with the tour of Technisand's operations.

Prior to reviewing the records, staff started out by asking a few questions about plant operations and for any plant operation updates. According to Wilma and Jim, Technisand is currently operating one shift at the plant 5 days a week and are down to 10 hourly employees. They statec that the employee level is down because the Raw Sand Plant isn't being used except for the stor silos and all the other equipment (wet scrubber, sand dryer, etc.) has been mothballed since the no longer do sand mining at the facility. They said that all material (finished sand) is trucked int

the facility from other locations (mainly their Wexford, MI location) and loaded into the silos by a conveyor system. Jim said that business at the Resin Plant is still good but the foundry busines is still down (they don't like that type of sand). Staff then asked about other plant operations anc the equipment that was permitted since staff's last inspection had been installed. According to J the new resin plant (PTI No. 431-74C) hasn't had construction started on it and the project is still hold. The truck unloading (PTI No. 56-12) has been constructed because as mentioned earlier, tl is the only way they get their sand now. He said it has been in use for a couple of years. When staff asked about the PTI No. 73-12A for modifying Resin Line #3 and #5 so that reclaimed found sand could be used, neither Jim nor Wilma were sure if all the modifications had been made. Th mentioned that they don't reclaim any foundry sand and that they never put it into production aft trial operations. When Bob arrived and was asked about that PTI, he mentioned that all the modifications to the equipment were made but confirmed that the never put it into production fo using reclaimed foundry sand. Staff then mentioned that since they made the modifications, the should have modified their ROP to incorporate that PTI. Staff also mentioned that they might wa to incorporate PTI No. 56-12 as well even though all that would currently require is a Rule 215 off permit change be submitted since it doesn't affect any of the conditions in the current ROP. Will said she would look into it and get with staff if she has any questions. Please note that staff doesn't reference PTI No. 431-74C and its conditions below since they haven't started constructi on the new resin plant.

The following is what staff noted during the on-site inspection and during the records review for Raw Sand Plant (Emission Unit FGRule331RawSand). As mentioned earlier, the plant is currentl mothballed with none of the equipment is being used outside the silos and conveyors so please see previous inspection reports if interested in what the operations were at the Raw Sand Plant. Also, staff deleted anything that was listed as non-applicable in the permits. Lastly, following thi flexible group will be the conditions of PTI No. 56-12 (Truck Unloading) since it utilizes the silos a the Raw Sand Plant.

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#2Coo - 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 Requirement
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(.
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(.

AQD Comment: Compliance. The facility did PM testing in 2000 and the equipment showed it the limit. We have not requested testing since and the facility is doing the monitoring require show compliance with the emission limits.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. To ensure proper operation of the wet scrubber and compliance with R 336.1331(1), the scrub 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((2), 40 CFR 64.6(c)(1))

AQD Comment: Compliance. The equipment is currently shutdown.

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 336.1213(3))

AQD Comment: Compliance. The equipment is currently shutdown.

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 operat as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (See Appendix 3B) (40 CFR 64.7(d))

AQD Comment: Compliance. The equipment is currently shutdown.

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 an the pressure drop. (R 336.1213(3))

AQD Comment: Compliance. The facility is monitoring this weekly and recording the appropriat information when in use.

2. For each day that EU#2Cooler and EU#2Dryer is in use the permittee shall monitor the scrubb 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 monitori 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

AQD Comment: Compliance. The equipment is currently shutdown.

3. Proper operation of the wet scrubber shall be verified by trained personnel using documente 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 correct any problems identified during an inspection. (40 CFR 64.6(c)(1)and (2))

AQD Comment: Compliance. The equipment is currently shutdown.

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))

AQD Comment: Compliance. The facility has historically kept these documents in their record keeping binder and/or in the office area.

5. The permittee shall perform and document corrective actions taken if the scrubber inlet wate flow rate drops below 36 gpm. (See Appendix 3B) (40 CFR 64.7(d))

AQD Comment: Compliance. The equipment is currently shutdown.

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))

AQD Comment: Compliance. When in use, the baghouse readings have been betweein 2.6 and 8 inches according to records reviewed by staff.

7. The permittee shall perform a 6-minute visible emission check once a week on EU#2Silos dur 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))

AQD Comment: Compliance. The facility has been doing this when the equipment is in use.

VII. REPORTING

AQD Comment: The facility has been complying with the reporting requirements listed in 1 throu 4 below. A Quality Improvement Plan (QIP) had not been required.

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.12 (3)(c)(ii))

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part The report shall be postmarked or received by the appropriate AQD District Office by March 15 fo 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 th 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 applicable) of exceedances and excursions and the corrective actions taken;

b. Summary information on the number, duration, and cause (including unknown cause applicable) for monitor downtime incidents (other than for calibration checks);

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

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))

AQD Comment: Compliance. The facility hasn't needed to submit any proposed modifications f monitoring requirements and the equipment is currently shutdown.

2. The permittee shall, at all times, maintain the wet scrubber monitor, including but not limited maintaining necessary parts for routine repairs of the monitoring equipment. (40 CFR 64.7(b))

AQD Comment: Compliance. The equipment is currently shutdown but in the past they've kept replacement parts in the maintenance garage.

3. The permittee shall comply with all applicable requirements of 40 CFR Part 64. (40 CFR 64.7(((3))

AQD Comment: Compliance. The facility appears to be complying with this regulation because wet scrubber is currently shutdown.

SPECIAL CONDITIONS of PTI No. 56-12 (Truck Unloading)

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group I
EU#2TRKUNLOADPIT	Raw Sand Plant #2 truck unloading pit. Trucks will unload pre-dried sand for processing at the facility in an unloading pit which is housed in a drive-through building.	TBD	FG#2NEWTRKUN
EU#2TRKUNLOADCNV	Raw Sand Plant #2 truck unloading belt conveyor. TCI 30 inch belt conveyor to transfer the pre-dried sand from the unloading pit to existing equipment at the raw sand plant.	TBD	FG#2NEWTRKUN
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG#2NEWTRKUNLD	Raw Sand Plant #2 truck unloading pit and belt conveyor for pre-dried sand handling.	EU#2TRKUNLOADPIT, EU#2TRKUNLOADCNV

The following conditions apply to: FG#2NEWTRKUNLD

DESCRIPTION: Raw Sand Plant #2 truck unloading pit and belt conveyor for pre-dried sand handling.

Emission Units: EU#2TRKUNLOADPIT, EU#2TRKUNLOADCNV

I. EMISSION LIMITS

1. Visible emissions from all wheel loaders and all truck traffic, operated in conjunction with FG#2NEWTRKUNLD, shall not exceed five (5) percent opacity. (R 336.1301, R 336.2803, R 336.28(40 CFR 52.21(c) & (d))

AQD Comment: Compliance. No truck unloading occurred while staff was present but the facili mentioned that opacity hasn't been an issue because the trucks unload slowly.

II. MATERIAL LIMITS

1. The permittee shall not unload more than 2,400 tons of material per day nor 876,000 tons of material through FG#2NEWTRKUNLD per 12-month rolling time period as determined at the end each calendar month. (R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))

AQD Comment: Compliance. Although they didn't have this information in a proper recordkeep format, the facility is well under these limits. They said they average around six 50 tons loads of sand per week. Staff reminded them to start keeping the records in a daily and 12 month rolling format.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG#2NEWTRKUNLD unless the fugitive dust control plan specified in Appendix 9 of ROP number MI-ROP-A0367-2011 has been implemented and is maintained. (R 336.1371, Act 451 324.5524)

AQD Comment: Compliance. The facility appears to be following this. They keep track of the da time, employee, and area swept.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD Distr Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))

AQD Comment: Compliance. Staff reminded them to keep their records in an appropriate forma

2. The permittee shall keep daily and monthly records of the amount of material unloaded throu FG#2NEWTRKUNLD. Further the permittee shall calculate on a monthly basis, the yearly throughput rate based upon the most recent 12-month rolling time period. The permittee shall k records of the amount of material processed on file and make them available to the Department upon request. (R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))

AQD Comment: Compliance. Staff reminded them to keep their records in an appropriate forma

3. The permittee shall verify the presence of visible emissions by taking six-minute visible emission readings from all wheel loaders and all truck traffic operated in conjunction with FG#2NEWTRKUNLD a minimum of once per calendar month. If, during the initial 6 months, no visible emissions are observed, the permittee may petition the District Supervisor, Air Quality Division to reduce the frequency of visible emission readings to once each calendar quarter. If, a any time, visible emissions are observed, the permittee shall resume readings on a monthly basi and shall review all operating and maintenance activities along with keeping records of correctiv actions taken. Once 6 months of no visible emissions observation is maintained, the permittee m resume quarterly readings. Either a certified or non-certified reader shall take each visible emiss reading during routine operating conditions. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:

a) The permittee shall perform the six-minute visible emission readings at least once every minutes until emissions are no longer visible or until emissions have been observed for m than two hours.

b) If visible emissions have been observed for more than two hours, a certified reader s determine the opacity using Federal Reference Test Method 9D as defined in Section 324.55 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection 1994 PA 451, as amended (Act 451).

c) If the results of the Federal Reference Test Method 9D visible emission observation indica violation of the opacity standard specified in SC I.1, the permittee shall immediately init corrective actions. (R 336.1301, R 336.1303, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance. They are doing VEs and none have been documented to date. The do the readings weekly.

4. The permittee shall keep, in a satisfactory manner, records of all visible emission readings fr FG#2NEWTRKUNLD. At a minimum, records shall include the date, time, name of observer/read whether the reader is certified, and status of visible emissions. The permittee shall keep all reco on file and make them available to the Department upon request. (R 336.1301, R 336.1303, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance. The facility is doing this.

The following is a summary of the operations that occur at the Resin Plant.

The resin plant receives sand via conveyors from the silos at the raw sand plant. The sand is sto in various silos depending on its grade. The silos are all equipped with bin filters at the top. Fro the silos it gets conveyed to a hopper that will blend the various grades of sand together if required. It comes out of this process in 1000 pound batches where it then enters a heater. The emissions from this process are controlled by a cyclone and baghouse (Designated as Baghous F). From the heater the sand goes into either one of two pugmills (Mullers #3 and #5) where the resin mixture gets added and is mixed (Note: Line #3 now has a continuous mixer). The emissio from this process are controlled by the thermal oxidizer that was installed in 2010. From the pugmills the resin coated sand enters a deagglomerator that shakes and vibrates the resin to prevent clumping. The emissions from the #5 deaglommerator exhaust to the thermal oxidizer while the emissions from the #3 deaglommerator ultimately exhaust to Baghouse C. Baghouse (one time was a cyclone and two parallel baghouses but now it consists of the cyclone and a Donaldson Torit baghouse. From the deagglomerator the resin coated sand discharges into a bucket elevator where it will go through a fluidized bed cooler to cool the sand. The emissions from this process are controlled by cyclone and Baghouse C. From the cooler the resin coated sand goes through final screening which separates the sand by size for distribution to various storage silos. Bucket elevators deliver the sand to the silos. The final screening emissions are controlled by Baghouse C.

The following is what staff noted after a records review of the resin plant (Emission Units FGRule331Resin and FGMullers). The conditions listed below came from PTI No. 73-12A since th permit modified the emission units listed under FGRule331Resin and FGMullers of the ROP. Sta deleted anything that was stated as non-applicable.

SPECIAL CONDITIONS of PTI No. 73-12A

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group
EU#3HEATER	Resin Plant 1, Processing Line 3 - 4.0 MMBtu/hr natural gas fired heater that heats raw sand prior to resin coating. Emissions controlled by a cyclone then a new baghouse (SV#3HEATERNEW).	1-1-1967 9-5-2012	FGRULE331RES
EU#3CONTMIXER	Resin Plant 1, Processing Line 3 – continuous mixer used to prevent clumping of the resin coated sand prior to cooling and screening processes. Emissions controlled by the Resin Plant 1 recuperative thermal oxidizer (RTO).	9-5-2012	FGMULLERS
EU#3LUMPSCREEN	Resin Plant 1, Processing Line 3 – screening process for resin coated sand coming from the hot sand elevator to the sand cooler. Emissions controlled by baghouse C.	9-5-2012	FGRULE331RES
EU#3LUMPBREAKER	Resin Plant 1, Processing Line 3 – equipment for mechanically breaking up clumps of resin coated sand not passing through the screen. Broken up sand is then sent back to the hot sand elevator. Emissions controlled by baghouse C.	9-5-2012	FGRULE331RES
EU#3DEAGGLOM	Equipment for shaking, vibrating, and breaking of resin coated sand from EU#3MULLER to prevent clumping. Emissions controlled by baghouse C.	1-1-1967	FGRULE331RES
EU#3COOLER	Resin Plant 1, Processing Line 3 – fluidized bed system to cool the sand after the Line 3 continuous mixer. Emissions controlled by a cyclone then baghouse C.	1-1-1967	FGRULE331RES
EU#3FSCREEN	Resin Plant 1, Processing Line 3 – final screening process controlled by baghouse C.	1-1-1967	FGRULE331RES
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 8-XX-2013	FGRULE331RES

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group I
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	FGMULLERS
EU#5COOLER	Resin Plant 1, Processing Line 5 – fluidized bed system to cool the sand after the #5 deagglomerator. Exhausts to a cyclone then baghouse C.	1-1-1975	FGRULE331RES
EU#5FSCREEN	Resin Plant 1, Processing Line 5 – final screening process controlled by baghouse C.	1-1-1975	FGRULE331RES
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	FGRULE331RES
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#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
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGRULE331RESIN	Equipment at Resin Plant 1 subject to Rule 331, excluding FGMullers, including equipment controlled by cyclones and baghouses and silos controlled with individual bin vents.	EU#3HEATER, EU#3LUMPSCREEN, EU#3LUMPBREAKER, EU#3DEAGGLOM, EU#3COOLER, EU#3FSCREEN, EU#5HEATER, EU#5COOLER, EU#5FSCREEN, EU#3&5SILOS
FGMULLERS	Mullers #3 and #5, Continuous Mixer #3, and Deagglomerator #5 that are jointly controlled by the Resin Plant 1 recuperative thermal oxidizer.	EU#3MULLER, EU#5MULLER, EU#3CONTMIXER, EU#5DEAGGLOM

The following conditions apply to: FGRULE331RESIN

DESCRIPTION: Equipment at Resin Plant 1 subject to Rule 331 including equipment controlled b cyclones and baghouses and silos controlled with individual bin vents

Emission Units: EU#3HEATER, EU#3LUMPSCREEN, EU#3LUMPBREAKER, EU#3DEAGGLOM, EU#3COOLER, EU#3FSCREEN, EU#5HEATER, EU#5COOLER, EU#5FSCREEN, EU#3&5SILOS

POLLUTION CONTROL EQUIPMENT: Cyclone and New Baghouse (EU#3HEATER), Bin Vents (EU#3&5SILOS), Baghouse C (EU#3LUMPSCREEN, EU#3LUMPBREAKER, EU#3DEAGGLOM, EU#3COOLER, EU#3FSCREEN, EU#5COOLER, EU#5FSCREEN), Cyclone and Baghouse F (EU#5HEATER)

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.10 lbs per 1000 lbs of exhaust gas[a]	Test Protocol*	All FGRULE331RESIN exhaust vents	GC 13	R 336.1331
2. PM10	1.0 pph	Test Protocol*	EU#3HEATER	GC 13	40 CFR 52.21 (c) (d)
3. PM2.5	1.0 pph	Test Protocol*	EU#3HEATER	GC 13	40 CFR 52.21 (c) (d)
4. Benzene	0.073 pph	Test Protocol*	EU#3HEATER or EU#5HEATER (whenever unit is processing reclaimed foundry sand)	GC 13	R 336.1225(3)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
5. Formaldehyde	0.01 pph	Test Protocol*	EU#3HEATER or EU#5HEATER (whenever unit is processing reclaimed foundry sand)	GC 13	R 336.1225(2)

*Test Protocol shall specify averaging time
[a]Calculated on a dry gas basis

AQD Comment: Compliance. The AQD has not requested testing on this equipment and the faci hasn't put the reclaimed foundry sand process into production.

II. MATERIAL LIMITS

1. The permittee shall burn only natural gas in EU#3HEATER. (R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance. The facility only burns natural gas.

2. The permittee shall not process more than 78,840 tons of reclaimed foundry sand combined through EU#3HEATER and EU#5HEATER per year based on a 12-month rolling time period as determined at the end of each calendar month. (R 336.1225, R 336.1702(a))

AQD Comment: Compliance. The facility did some trial runs but never put the use of reclaimed foundry sand into their production.

3. The permittee shall not process more than 105,120 tons of total sand (reclaimed foundry sani and raw sand) through EU#3HEATER per year based on a 12-month rolling time period as determined at the end of each calendar month. (R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52 (c) & (d))

AQD Comment: Compliance. The facility did some trial runs but never put the use of reclaimed foundry sand into their production.

4. The permittee shall not process more than 175,200 tons of total sand (reclaimed foundry sani and raw sand) through EU#5HEATER per year based on a 12-month rolling time period as determined at the end of each calendar month. (R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52 (c) & (d))

AQD Comment: Compliance. The facility did some trial runs but never put the use of reclaimed foundry sand into their production.

5. The permittee shall not process reclaimed foundry sand in both EU#3HEATER and EU#5HEATER at the same time. (R 336.1225, R 336.1702(a))

AQD Comment: Compliance. The facility did some trial runs but never put the use of reclaimed foundry sand into their production.

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU#3HEATER unless the cyclone and new baghouse is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the baghouse pressure drop in accordance with manufacturer's specifications. (R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance. The facility appears be monitoring and operating the pollution control equipment properly.

2. The permittee shall equip and maintain the new EU#3HEATER baghouse with a device which measures the pressure drop. (R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance.

3. The permittee shall not operate FGRULE331RESIN equipment controlled by baghouse C unle baghouse C is installed, maintained, and operated in a satisfactory manner. Satisfactory operati includes maintaining the baghouse pressure drop in accordance with manufacturer's specifications. (R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance. The facility appears be monitoring and operating the pollution control equipment properly.

4. The permittee shall equip and maintain baghouse C with a device which measures the pressu drop. (R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance.

5. The permittee shall not operate EU#5HEATER unless the cyclone and baghouse F are instal maintained, and operated in a satisfactory manner. Satisfactory operation includes maintair the baghouse pressure drop in accordance with manufacturer's specifications. (R 336.1: R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance. The facility appears be monitoring and operating the pollution control equipment properly.

6. The permittee shall equip and maintain baghouse F with a device which measures the pressu drop. (R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD Distı Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance.

2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of reclaimed foundry sand and total sand processed through EU#3HEATE and EU#5HEATER. All records shall be kept on file and made available to the Department upon request. (R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21 (c) & (d))

AQD Comment: Compliance. The facility did some trial runs but never put the use of reclaimed foundry sand into their production.

3. The permittee shall keep, in a satisfactory manner, weekly records of the pressure drop acros the new EU#3HEATER baghouse on file at the facility and make them available to the Departmen

upon request. The permittee shall record the date, time, stack, observer and pressure drop. (R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance. The facility is taking weekly readings.

4. The permittee shall keep, in a satisfactory manner, weekly records of the pressure drop acro baghouse C on file at the facility and make them available to the Department upon request. The permittee shall
record the date, time, stack, observer and pressure drop. (R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance. The facility is taking weekly readings.

5. The permittee shall keep, in a satisfactory manner, weekly records of the pressure drop acro baghouse F on file at the facility and make them available to the Department upon request. The permittee shall
record the date, time, stack, observer and pressure drop. (R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))

AQD Comment: Compliance. The facility is taking weekly readings.

6. The permittee shall perform and document corrective actions taken if any baghouse pressure drop is outside the normal range. (R 336.1910)

AQD Comment: Compliance. The facility takes corrective action and documents any maintenar that is done.

7. 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 accordin to the procedure in Appendix 3A of ROP #MI-ROP-A0367-2011, or subsequent revision. (R 336.13 R 336.1303, R 336.1331, R 336.1910)

AQD Comment: Compliance. The facility is taking weekly readings.

8. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the times that each EU#3HEATER and EU#5HEATER process reclaimed foundry sand. All records shall be kept on file and made available to the Department upon request. (R 336.122 R 336.1702(a))

AQD Comment: Compliance. The facility did some trial runs but never put the use of reclaimed foundry sand into their production.

VII. REPORTING

1. The permittee shall notify the Department if a change in land use occurs for property classifi as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than on year after the due date of the plan submittal. (R 336.1225(4))

AQD Comment: Compliance. N/A at present time.

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV#3HEATERNEW	12	65	R 336.1225, 40 CFR 52.21(& (d)
2. SVSTACKC	36	65.25	R 336.1225, 40 CFR 52.21(& (d)
3. SVSTACKF	16	16	R 336.1225, 40 CFR 52.21(& (d)

AQD Comment: Compliance. The stacks appear to meet the diameter and height requirements listed above.

The following conditions apply to: FGMULLERS

DESCRIPTION: Mullers #3 and #5, Continuous Mixer #3, and Deagglomerator #5 that are jointly controlled by the Resin Plant 1 recuperative thermal oxidizer.

Emission Units: EU#3MULLER, EU#5MULLER, EU#3CONTMIXER, EU#5DEAGGLOM

POLLUTION CONTROL EQUIPMENT: Resin Plant 1 RTO

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requiremen
1. Formaldehyde	0.23 pph	Test Protocol*	FGMULLERS (SV3/5RTO)	GC 13, SC V.1	R 336.1225(
2. Phenol	5.8 pph	Test Protocol*	FGMULLERS (SV3/5RTO)	GC 13, SC V.1	R 336.1225
3. PM	0.10 lbs per 1000 lbs of exhaust gas[a]	Test Protocol*	FGMULLERS	GC 13	R 336.1331

*Test Protocol shall specify averaging time

[a]Calculated on a dry gas basis

AQD Comment: Compliance. The facility tested for the above pollutants in November of 2011 a installation of the RTO and passed. Testing of these pollutants will probably be requested again the AQD in the next ROP renewal cycle.

4. There shall be no visible emissions from EU#5MULLER. (R 336.1301(1)(c))

AQD Comment: Compliance. VEs haven't been documented and this muller wasn't operating during staff's inspection.

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FGMULLERS unless the Resin Plant 1 RTO is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the RTO includes a minimum VOC destruction efficiency of 95 percent (by weight), and maintaining a minimum

combustion chamber temperature of 1400 °F and a minimum retention time of 0.5 seconds. As a alternative, a lower minimum operating temperature may be established based on the results of t most recent successful performance test. (R 336.1224, R 336.1225, R 336.1702, R 336.1910)

AQD Comment: Compliance. Records reviewed by staff on paper and on the computer indicate temperature is usually around 1440 degrees F. See Attached.

2. The permittee shall install, maintain, and operate, in a satisfactory manner, a device which continuously measures the combustion chamber temperature of the Resin Plant 1 RTO. (R 336.1224, R 336.1225, R 336.1702, R 336.1910)

AQD Comment: Compliance. The data is recorded by their computer program that monitors the whole resin plant operations. They are also having personnel checking and recording the temperature once per shift just to be sure.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. Upon request by the AQD District Supervisor, the permittee shall verify formaldehyde and phenol emission rates from FGMULLERS by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must appro the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

AQD Comment: Compliance. The AQD hasn't requested testing in regards to the PTI but a testi condition will probably be included in the next ROP renewal cycle.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD Distr Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1225, R 336.1702, R 336.1910)

AQD Comment: Compliance.

2. The permittee shall monitor and record, in a satisfactory manner, the temperature in the combustion chamber of the Resin Plant 1 RTO during operation of FGMULLERS. Temperature d recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. (R 336.1225, R 336.1702, R 336.1910)

AQD Comment: Compliance. The data is recorded by their computer program that monitors the whole resin plant operations. They are also having personnel checking and recording the temperature once per shift just to be sure.

3. The permittee shall keep, in a satisfactory manner, operating temperature records for the Res Plant 1 RTO as required by SC VI.2. The permittee shall keep all records and calculations on file the facility and make them available to the Department upon request. (R 336.1225, R 336.1702, R 336.1910)

AQD Comment: Compliance. The data is recorded by their computer program that monitors the whole resin plant operations. It can pull up previous dates and times.

4. 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 of ROP #MI-ROP-A0367-2011, or subsequent revision. (R 336.1301, R 336.1303, R 336.1331, R 336.1910)

AQD Comment: Compliance. The facility is doing this and records indicate none have been observed.

5. A copy of an inspection and maintenance plan for the Resin Plant 1 recuperative thermal oxidizer shall be kept on-site and made available to AQD staff upon request. (R 336.1225, R 336.1702, R 336.1910, R 336.1911)

AQD Comment: Compliance. Staff did not request to see this during this inspection but the faci has historically kept these documents in their record keeping binder or office area.

VII. REPORTING

1. The permittee shall notify the Department if a change in land use occurs for property classifie as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than on year after the due date of the plan submittal. (R 336.1225(4))

AQD Comment: Compliance. N/A at the present time.

VIII. STACK/VENT RESTRICTIONS

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 Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV3/5RTO	39.75	65	R 336.1225, 40 CFR 52.21(c & (d)

AQD Comment: Compliance. The RTO stack appears to meet the diameter and height requirements listed above.

NOTE: THERE ARE TWO EMISSION UNITS (FGFugDust and FGColdcleaners) THAT APPLY TO BOTH THE RAW SAND PLANT AND THE RESIN PLANT. I DID NOT COPY THE TABLES AND INSTEAD JUST INCLUDED A BRIEF SUMMARY OF WHAT WAS OBSERVED IN REGARDS TO THI MAIN REQUIREMENTS OF EACH.

The facility has a fugitive dust plan as required and they are documenting the date, time, area swept, and the name of the employee who did it. The facility historically has had two coldcleane one at the raw sand plant and another at the resin plant. Staff forgot to look at the one in the Res Plant but did look at the one in the maintenance garage. It had its lid closed and instructions posted. They are both serviced by Safety Kleen and a look at the MSDS did not show it containec any of the chemicals listed in the ROP. Staff thanked Wilma and Chris for their time and departe the facility at approximately 1:10 p.m.

The facility appears to be in COMPLIANCE with the terms and conditions of MI-ROP-A0367-2011 and their PTIs at the present time. However, the facility does need to modify their ROP to

incorporate PTI No. 73-12A into it and advised them to incorporate PTI 56-12 while they're at it, although technically they only need to submit an off-permit change for that one.

NAME Matt Dahn DATE 8-14-14 SUPERVISOR MD 8/27/2014