

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Self Initiated Inspection**

A243726266

FACILITY: Quikrete	SRN / ID: A2437
LOCATION: 20 N PARK ST, COMSTOCK PARK	DISTRICT: Grand Rapids
CITY: COMSTOCK PARK	COUNTY: KENT
CONTACT: Jeremy Burt , Plant Manager	ACTIVITY DATE: 07/21/2014
STAFF: Jenifer Dixon	SOURCE CLASS: MINOR
SUBJECT: The purpose of this inspection was to complete a self-initiated inspection based on several instances of excess opacity from the two dust collectors on-site that were observed by AQD staff starting May 1, 2014.	
<b>RESOLVED COMPLAINTS:</b>	

This was an unannounced inspection. An "Environmental Inspections" brochure was provided at the time of the inspection.

The purpose of this inspection was to complete a self-initiated inspection based on several instances of excess opacity from the two dust collectors on-site that were observed by AQD staff starting May 1, 2014. The inspection was also used to determine the facility's compliance with all applicable Air Quality Rules and Regulations, Permit No.s 22-72, 219-72, 417-75, and 74-80 as well as all other applicable Air Quality Rules and Regulations.

JD and April Lazarro (AL), Air Quality Division, arrived in the area of the facility at approximately 10:00AM and departed at 11:15AM. Mr. Jeremy Burt, Plant Manager, provided pertinent information regarding the facility and the operations contained therein during the time of the inspection as well as operational information and records after the inspection via e-mail.

Quikrete produces bagged concrete and hardscape products for sale to retailers. The facility has two main product facilities – Building 1 has two bagging lines, one for cement and one for mortar. Building 2 also has two bagging lines, the Sand Line for silica sand and the O-Line for wet materials.

Building 1 has a dryer that is controlled by a pulsejet baghouse with a stack as well as another baghouse on the bagging portion. The dryer is natural gas fired and typically runs in the temperature range of 180°F to 220°F in order to dry the materials before they enter the bagging process.

### **PERMIT NO. 22-72**

The application associated with this permit number indicates the installation of a bin vent - Ruemelin Dust Collector, with 280 ft<sup>2</sup> of cloth area. Based on the information Mr. Burt supplied, there is a bin vent on Cement #2 that was installed in 1972 and appears to be the control indicated in the application. There are no conditions associated with this permit.

### **PERMIT NO. 219-72**

The application associated with this permit number indicates the installation of a dry mix bag filter control collector – Wheelbrator Frye Dust Collector, with 1008 ft<sup>2</sup> of cloth area. Based on the information Mr. Burt supplied, there is a bin vent on Mortar #1 that was installed in 1972 that may be the control indicated in the application. Based on a review of the equipment indicated, it appears as though this permit was for a collector larger than the bin vent indicated by Mr. Burt. There are no conditions associated with this permit.

### **PERMIT NO. 417-75**

The application associated with this permit indicates the installation of a "Type "A" Dynaclone Capacities with 3 tiers of bags and 60° of hoppers". The unit was said to contain 219 bags and was to be used to control dust from the plant bagging activities.

**PERMIT SPECIAL CONDITIONS:**

SC 12 The particulate emission rate from the cement bagging operations shall not exceed 0.1 pounds of exhaust gases, calculated on a dry gas basis.

SC 13 Visible emissions are limited to an opacity of less than or equal to 20% except as specified in Rule 336.41.

Conditions were not individually evaluated because, based on information received from Mr. Burt after the inspection, a new baghouse was installed on the bagging line in 1998 so these conditions would not apply to the unit currently installed. It is a Dustar unit that holds 316 bags with a cfm of 24,000. Based on the size of the unit, a Rule 201 permitting exemption, Rule 290, may be able to be used. This exemption requires that the cfm does not exceed 30,000 and the opacity does not exceed 5%. Rule 285(d) for a meaningful change should also be considered. Is this equipment equivalent or more efficient than what was there previously?

During the inspection, excess emissions were observed from the process. These emissions were approximately 25%-30% on a continuous basis. Mr. Burt acknowledged a problem with the unit and indicated that the bags were all going to be changed once enough were received. On July 28, 2014, JD requested a copy of the purchase order for the new bags. Mr. Burt sent it over with information stating that 200 of the bags had already been replaced on July 26, 2014. The remaining bags are to be delivered on July 29, 2014 and installed on August 2, 2014.

JD and AL went into the control room to observe the pressure drop via the magnehelic gauge for the unit. While observing the magnehelic gauge, JD noted that the range indicated on the gauge extended to the entire meter. JD asked Mr. Burt about the range for proper operation and why it was not set. Then JD turned the dial to a slightly smaller range of values which then immediately engaged the alarm on the unit. It appears as though the pressure alarm was disengaged during operations in order to continue operating with pressure drop problems ongoing with the baghouse.

At this time Mr. Burt also acknowledged that the pressure drop gauges for the dryer and associated baghouse had not been in operation for some time. Mr. Burt was unclear about the exact time when the units were no longer in operation.

## **PERMIT NO. 74-80**

The Permit No. 74-80 application states that this permit was to replace an old dryer with a wheelbrator and to install a different dryer and baghouse rated up to 21,000 CFM. According to the information from Mr. Burt the current dryer dust collector has a cfm of 24,000. It is unclear as to whether or not this is the same unit as was permitted. The dryer is permitted to burn natural gas or #2 Fuel oil with a 69mm btu/hr capacity. According to Mr. Burt, the dryer is only capable of burning natural gas. The dryer has no piping or other equipment to burn an alternate fuel.

The dryer was not in operation at the time of the inspection. Emissions from the fuel burned during the drying of the material does not appear to have been taken into account during the original permitted process.

### **PERMIT SPECIAL CONDITIONS:**

SC 12 Rule 44 - The particulate emission rate from the sand and gravel drying and handling operation shall not exceed 0.1 pounds of exhaust gases, calculated on a dry gas basis.

*Compliance with this condition is assumed as long as the unit is operating properly. Proper operation includes acceptable pressure across the baghouse and typically no visible emissions. However, AQD staff, including AL, has observed visible emissions from this stack on several occasions since May 1, 2014. These observations indicate that the unit may not have been operating properly.*

SC 13 Visible emissions are limited to an opacity of less than or equal to 20% except as specified in Rule 336.41.

*At the time of the inspection, no visible emissions were observed from the dryer baghouse. However, AQD staff, including AL, has observed visible emissions from this stack on several occasions since May 1, 2014.*

SC 14 This conditions details the possibility of a stack test if requested.

*No stack test is requested at this time.*

Based on the size of the unit, a Rule 201 permitting exemption, Rule 290, may be able to be used for the baghouse unit. This exemption requires that the cfm does not exceed 30,000 and the opacity does not exceed 5%.

## **MALFUNCTION ABATEMENT PLAN (MAP)**

Based on historical complaints, Quikrete was required to create a MAP for the facility. After a thorough file review, JD did not observe the actual written plan. Once on-site, JD asked Mr. Burt if he was aware of the plan. Mr. Burt stated that Quikrete did have a plan and that it was implemented. JD requested the MAP records.

Mr. Burt provided the twice-monthly maintenance logs for the bin vents and the two baghouses. Both yearly check sheets were provided during the inspection. The sheets both list the equipment to be inspected, as well as what is to be completed during the inspection. The sheets also list the month and which week. The Bin Vents sheet has the date written for each inspection and the Dust collector sheet has the initials of the person doing the inspection.

After the inspection, Mr. Burt e-mailed JD another copy of the yearly check sheets as well as the individual twice-monthly baghouse and bin vent inspection sheets. These sheets have a drawing that indicates the bags in the baghouse, which bags were bad, which were replaced and the date the work was done as well as any other pertinent information.

Since AQD staff began to observe excess opacity from the two baghouses (May 1, 2014), the MAP records indicate some issues with the baghouses. Notes are as written in the maintenance logs.

### Bagging Line Baghouse

**April 2014** - It was noted at that time that "bags getting thin. Need to be Replaced".

**May 2014** - At least 14 of the 316 bags were replaced and it was noted that "beginning to see dust build up on wall Near Entry Door. May have water leak." There is no indication of action taken.

**June 2014** – Seven bags were replaced in June 2014. Only one June 2014 inspection date was noted on the diagram. "New bags on order for Full Replacement \* Replace in July"

### Dryer Baghouse

**February 2014** – Fugitive dust was noted. At the time no bags were leaking but a hole in the wall of the baghouse was identified. The notes state "Wall repaired. Will Need Further repair."

**March 2014** – Bags replaced but no indication of further repairs to the wall.

**April 2014** - Quikrete began to replace all of the bags by section. These sections are noted in the diagram.

**May 2014** – More sections replaced and noted. It was noted however, "No Leakin Issues."

NOTE: This was the time frame when AQD staff began to note excess opacity from the baghouse.

**June 2014** – More sections replaced and noted.

### Bin-Vents

Mr. Burt stated that excess opacity is more likely to occur on the bin-vents if the trucks overfill the silos. These silos do not appear to be equipped with alarms to alert Quikrete staff or truckers as to when the silo is getting too full.

Based on observations made during the inspection and the review of the MAP documentation, an updated

MAP will be requested from the facility that will better address issues with the equipment.

Quikrete would need to provide better documentation for the potential use of any of the Rule 201 permitting exemptions.

Based on observations made at the time of the inspection and the subsequent review of the records supplied to JD by Mr. Burt, Quikrete is in non-compliance as noted above and will be issued a Violation Notice.

NAME

DATE 8/11/14

SUPERVISOR

PAB