

**IOWA DEPARTMENT OF NATURAL RESOURCES
FIELD SERVICES AND COMPLIANCE BUREAU
FIELD OFFICE #2 - MASON CITY IOWA**

DATE: June 15, 2015

TO: The Record

FROM: Glenn Carper 

SUBJECT: Lehigh Cement – Mason City
Air Quality Facility #17-01-005
Anonymous Complaint of Excess Emissions

On June 8, 2015 this office received an anonymous complaint alleging that there were ongoing excess emissions from the "dust arrestors" at the shipping silos and raw mill at Lehigh Cement. The complainant said this had been reported to the facility but nothing had been done about the emissions. I was assigned this complaint on June 9th and conducted an investigation on June 10th. I met with Brodie Pederson, Assistant Plant Manager.

Mr. Pederson stated that they did have a bad bag in the raw mill elevator vent bagfilter, EP18. He said that it had since been repaired. He said that there were also problems with the tipping valves on the hopper for this bagfilter. These valves work as a pair. One will dump dust from the hopper while the other one fills. This provides a continuous air seal. Mr. Pederson said that there were problems with the bearings on these valves; they were not seating properly and there was some leakage. The bearings for the tipping valves were recently replaced. Mr. Pederson stated that new bags have also been ordered for the bagfilter so that it can be completely rebagged.

According to Mr. Pederson, the bagfilter (EP47) for the storage silos at the loadout area controls dust from two set of silos. There is an east set of silos and a west set of silos. There are separate ducts from each set of silos to the bagfilter. There are dampers in these ducts. The dampers must be continually reset to balance the air flow depending upon which set of silos is receiving finished cement. This air balance can affect the performance of the bagfilter. Mr. Pederson stated that there have also been problems with the material in the hopper at the bottom of the bagfilter "bridging over" and not flowing out of the dust collector through the air lock at the bottom of the hopper. This can cause dust to start filling up the hopper which can cause visible emissions from the bagfilter. Problems with the screw coming off of the air lock can also cause filling of the hopper. A pneumatic rapper has been added to the hopper to help prevent bridging of material.

Pete Peterson, Kiln Manager, accompanied me while we checked the bagfilters in the raw mill and finished cement loadout areas. The raw mill was down for routine maintenance at the time of my visit. None of the bagfilters in this area were operating (EPs 11, 18, 19, 20, 21, 22, 23 & 24) (see attached list). There was some dust on the concrete under EP 18 the raw mill elevator vent bagfilter. Mr. Peterson stated that this dust was due to the bad bag which had recently been discovered and repaired. There were no dust accumulations under the discharge points for any of the other bagfilters.

All the bagfilters at the finished cement silos were in operation (see attached list). The observed opacity from EPs 48, 50, 51, 52 & 53 was 0%. The observed opacity from EP47, the main storage bin bagfilter, was < 5%. There were no excess accumulations of dust under any of the bagfilter discharge points.

Maintenance work orders for recent work performed on the raw mill elevator vent bagfilter (EP18) and the cement storage bagfilter (EP47) were provided. One work order showed that emissions were noticed from EP18 on 5/22/15 and that one bag was replaced on 5/26/15, after the Memorial Day weekend. The bearings on the tipping valves for EP18 were replaced on 6/9/15. Another work order showed that enough bags (120) to completely rebag this bagfilter were ordered on 6/9/15. Mr. Pederson said that this bagfilter would be totally rebagged once these filter bags arrived. The last work order indicated that the screw conveyor below the airlock on the finished cement storage silo bagfilter (EP47) was repaired on 5/1/15.

40 CFR Part 63 Subpart LLL requires periodic opacity observations of these bagfilters. Mr. Perry Dargitz, Lehigh's Environmental Manager, provided copies of the most recent opacity observations of these emission points. The records indicate that at the time of the observations there were no visible emissions from any of the stacks.

My observations on 6/10/15 and the records maintained by Lehigh indicate that the bagfilters are monitored on a routine basis and that problems are repaired as they are discovered. No recommendations and no further action required.

c: DNR Air Quality Bureau