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

N572036162

FACILITY: CHENEY LIMESTONE CO		**SRN / ID:** N5720
LOCATION: 9400 SAND RD, BELLEVUE		**DISTRICT:** Lansing
CITY: BELLEVUE		**COUNTY:** EATON
CONTACT: Larry Mathewson , Plant Manager		**ACTIVITY DATE:** 08/25/2016
STAFF: Michelle Luplow	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Scheduled, unannounced compliance inspection to determine compliance with PTI No. 533-95.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow
Personnel Present: Larry Mathewson, Plant Manager (cheneylime@att.net)

Purpose: Conduct an unannounced, scheduled compliance inspection by determining compliance with Cheney Limestone's Permit to Install (PTI) No. 533-95 for a limestone processing/crushing facility. Cheney Limestone was last inspected in 2009.

Facility Background/Regulatory Overview: Cheney Limestone (Cheney) mines and processes (crushes and screens) limestone from its own quarries, located across the street from their office location of 9400 Sand Road. L. Mathewson explained that the crushed limestone is used for various applications including agricultural applications (soil acid neutralization); and roads, parking lots, driveways, and landfills (for the Eaton County Road Commission). L. Mathewson said they have been located at this site since 1999.
Cheney Limestone generally operates based on light-hours. Their operating season starts approximately April 1 and ends near the end of November. Operating hours are generally from 7:00/7:30 a.m. – 3:30 p.m., but sometimes as late as 5:30 p.m., 5 days a week, with 5-hour Saturday shifts in the spring and late fall if the demand for lime increases.
It appears that Cheney Limestone may have NSPS OOO-subject affected facilities. A thorough review of the regulation in relation to Cheney Limestone's processes was not conducted at this time, but something worthwhile to revisit upon the next inspection. Cheney Limestone reports to MAERS.

There is a crushing operation site southeast of Cheney Limestone that may need to be inspected in the future.

Inspection: This was an unannounced scheduled compliance inspection. At approximately 8:30 a.m. on August 25, 2016 I met with Larry Mathewson, Plant Manager at Cheney Limestone's main office located at 9400 Sand Rd. Bellevue. I explained to him what occurs during an inspection, and provided him with a DEQ "Environmental Inspections: Rights and Responsibilities" brochure to illustrate a typical inspection procedure.

PTI No. 533-95
I verified with L. Mathewson that the following permitted equipment is present at the site. All equipment was being operated during the inspection.

Table 1. Permitted Equipment

Equipment	Description	Status
Feeder Hopper	Receives uncrushed lime	Present
Primary Impactor	NA	Present
Cage Mill	Spinning drums that pulverize lime into Ag Lime size particles	Present
Scalping Screen	Also called "First Screen Tower"	Present
Final screen tower	Is equipped with 2 double decks	Present

Hazemag Model APPH 1315, 350 HP	Primary Crusher	Present
Stedman Model G54, 250 HP	Secondary Crusher; used to crush lime down to "Ag Lime" size (powder/fine particulate)	Present
Double deck	Equipped to Final Screen Tower; used to sort crushed lime into 2 different sizes	Present
Double deck	Equipped to Final Screen Tower; used to sort crushed lime into 2 different sizes	Present

Material Limits
Cheney Limestone has a limit of 250,000 tons of limestone quarried per calendar year and a total of 250,000 tons processed through the crushing plant per calendar year. In MAERS, Cheney Limestone reported that they processed 179,967 tons of limestone in calendar year 2015. L. Mathewson verified that this throughput is total limestone mined as well as the total processed/crushed. He said that they keep records for the total plant throughput on a daily basis. The plant throughput he said is equivalent to the tons of lime mined. Cheney Limestone is in compliance with these material limits.

Operating Hour Limits
The permit only allows Cheney to operate from the hours of 7 a.m. to 6 pm Monday through Friday, and from 7 am to 12 noon on Saturdays. As discussed in the "Facility Background" section of this report, Cheney operates within these hours for the week days as well as Saturdays. These operating hour requirements limit Cheney's hours of operation per calendar year to 3120 hours. Cheney records the hours of operation for the feeder, impactor, screens and cage mill on a daily basis, as required by the permit. Cheney is in compliance with the operating hour limits.

Blast Requirements
Cheney conducts "blasts," which are explosions used to break the ground in order to easily dig and get to the limestone. L. Mathewson said they subcontracted this practice out after 9/11/01, to a company who deals solely with explosives. Before that time, Cheney would do their own blasting: The PTI mentions a rock drill in some of its conditions but L. Mathewson verified that they no longer have this piece of equipment. He said it was used to drill and blast their own material. Blasts are conducted by drilling holes into the ground and filling them with a gel explosive: a nitrogen/fuel oil mixture. Cheney is allowed to perform up to 180 blasts per calendar year, never exceeding more than one blast per calendar day. The blasts are also only permitted to be conducted between the hours of 7 am and 6 pm Monday-Friday and 7 am to 12 noon on Saturday. The maximum surface area they are allowed to blast is 1100 ft2 and they are allowed a maximum of 250,000 tons of material blasted per calendar year. Cheney is required to keep monthly records of the date and time blasts occur, the amount of material blasted per blast and total material blasted per month.

L. Mathews says that they usually conduct ~ 12 blasts per year. I reviewed the blast records for 2016 (see attached for an example of a blast report). Cheney conducted 10 blasts in 2016 through August. Blasts were conducted in February (1), April (2), May (1), June (3), July (2) and August (1). They have only conducted one blast per day in the months where 2+ blasts were conducted. The "Blast Report" contains the date, time, the dimensions of the blast area (burden front row x burden other rows), and the total tons blasted. For the July 2016 blast report, 45 tons of material was blasted within a surface area of 1144 ft2. Although L. Mathewson has these blast reports for each month they blasted, he did not total the monthly amount of material blasted. Based on July records, Cheney would likely not have exceeded the 250,000 ton/calendar year limit on the amount of material blasted, but I will inform L. Mathewson that the total monthly amount of material blasted should be recorded, as well as calculating the surface area and putting it in a record as opposed to only relying on the dimensions of the blast area.

Blasting is also not allowed to occur within 25' of any property line nor within 100' of any property right-of-way line. A map for these two delineations is required to be kept. L. Mathewson showed me the map that they keep posted in his office which marks the 100' setback from all property lines and property right-of-way lines.

Cheney is in compliance with their blast requirements at this time.

Plant Yard Requirements & Fugitive Dust Plan
A fence is required to completely encompass the facility (except for the plant access road) with at least 2 strands of barbed wire and no trespassing signs posted every 100'. I verified that a barbed-wire fence enclosed the facility perimeter as well as no trespassing signs posted.

The plant access road is required to be paved. I verified that this was done.

Sprinklers were required to be installed by November 30, 1996 along the paved plant access road and the unpaved haul road from the quarry pit at a minimum of 50ft apart and should be activated for at least 15 minutes every hour on days when haul trucks are operating. Prior to installing the system, the Fugitive Dust Plan (Appendix A of PTI 533-95) is required to be implemented for applying water to the plant access road and haul road from the quarry pit. L. Mathewson said that they used to have a line of sprinklers along the paved road and roadway that went up to the feeder ("feeder trail"). I believe the intention of this condition was to ensure that the road dust was kept to a minimum. It is my professional judgment that as long as Cheney complies with the Fugitive Dust Plan they will be in compliance with the intent of requiring a sprinkler system.

Appendix A: Fugitive Dust Plan

Storage Piles
Cheney is required to keep a free drop height from each conveyor to the storage pile no more than 3 ft. The conveyor free drop height for the rip rap pile was greater than 3' (~10'). I informed L. Mathews of this requirement and that the conveyor must be lowered to meet the 3' drop height requirement. He said that they will adjust the conveyor to maintain the 3' drop distance.

The Ag Lime stacker is required to have a 5' rubber boot slit to conform to the Ag Lime pile. L. Mathewson showed me the boot with the slits to conform to the pile, in addition to a sprinkler head that surrounds the boot to control dust prior to the lime hitting the pile.

L. Mathewson said that each pile has its own sprinkler heads. He said sometimes the water spray is left on all day, it just depends on how dry and how windy it is that day. They keep daily records for each storage pile on how long the water spray was turned on for, specifying on their record sheet that they should spray at least 15 minutes/day, as required in the Fugitive Dust Plan. Attached is an 8/5/16 record, which indicates that they watered the piles from 8 a.m. – 2 p.m.

Front-end loader free fall heights are required to be 2' or less. I did not observe any front-end loader activity during the inspection to determine compliance with this requirement.

Paved Customer Roads
The paved customer road into the plant is required to be paved, and in the absence of a sprinkler system, is required to be watered with a water truck. L. Mathewson verified that the water truck is used to control dust on all plant roadways. Throughout the plant yard I noted that the ground was considerably moist, although this was likely the result of rain previous to the inspection. Wet sweeping is required to be done weekly at the front gate where the plant access road meets the public road. L. Mathewson pointed out this intersection and I saw the wetted dirt that had been tracked out onto the public road. He said they would be wet sweeping this area soon.

Cheney is in compliance with their Fugitive Dust Plan at this time.

The permit requires that no more than a maximum of 5 storage piles be present at any given time. The size of each storage pile shall not exceed the values listed in Table 2. Table 2 also includes the area of the piles as they appeared on Google Earth, using the Google Earth ruler tool.

Table 2. Storage piles and surface area

Pile	Permitted Size (ft x ft)	Permitted Size (ft^2)	Actual size (ft^2)	Compliance?
Surge	85 x 55	4,675	15,515	No
Rip Rap	100 ft (diameter)	100 ft	63 ft	Yes
Ag Lime	400 x 100	40,000	43,681	No
Fine Chip	400 x 100	40,000	12,800	Yes

Course Chip	400 x 100	40,000	9.792	Yes

As shown in Table 2, per the most recent Google Earth map, Cheney is out of compliance for the area covered by their Surge Pile and Ag Lime Pile; however, the pile size constantly changes depending on production and the amount of load-outs that Cheney conducts on a daily basis. Additionally, the internet satellite images are not up-to-date with what is currently onsite. Therefore, compliance with the surface areas of these piles requires only a cursory evaluation of compliance, as absolute compliance is difficult to ascertain. I will remind L. Mathewson of the requirement to maintain piles within a certain surface area and inform him that Google Earth images show the 2 aforementioned piles are out of compliance, encouraging him to maintain these piles' sizes according to the permit requirements.

Table 3 contains the equipment that have associated yearly production throughput rate limits. Cheney is required to keep production throughput records on a monthly basis for each of these pieces of equipment. The Feeder/Hopper, Primary Impactor, Scalping Screen, and Final Screen are in compliance with their limits because the total throughput through the plant for 2015 was 179,967 tons, which is much less than the limits. Cheney keeps daily records of the tons processed through various pieces of equipment and provided me with daily records for the month of June. The daily Cage Mill throughput is represented as "Agg Lime" in the Data Printout Pages: Daily Totals records. The Conveyor C4 which would be calculated by taking the total daily throughput and subtracting the "Recrush Material" throughputs and "Agg Lime" throughputs. For the month of June, the Cage Mill (Ag Lime) throughput was 15,957.71 tons. Assuming that Ag Lime production was consistent from April – November (operating season), the throughputs for Ag Lime would exceed 50,000 tons; I will ask for more records from L. Mathewson to determine Cage Mill and Conveyor C4 throughput rates for 2015 and 2016 and provide a follow-up activity report to determine compliance with these throughput limits. I will also request that he create records from the daily records that total throughputs for the month for each piece of equipment, and then create calendar year totals from that.

Table 3. Compliance with Max Yearly Production Throughput Limits

Equipment	Max Yearly Production Throughput Rate Limits (tons)	Compliance
Feeder/Hopper	275,000	Yes
Primary Impactor	275,000	Yes
Scalping Screen	275,000	Yes
Final Screen	250,000	Yes
Cage Mill	50,000	**TBD**
Conveyor C-4	25,000	**TBD**

Visible emissions shall not exceed 10% opacity for the following equipment: feeder/hopper, primary impactor, scalping screen, final screen, and cage mill.

Visible emissions shall not exceed 5% opacity for the following equipment: conveyors, transfer points, drop points, storage piles, truck traffic, track shovels, and front-end loader traffic.

During the inspection I observed no more than 5% opacity from any of the aforementioned equipment, nor the plant yard or plant roadways or mining quarry. Cheney is in compliance with all visible emission limits at this time.

The following conveyors are required to be equipped with covers: C1, C2, C6, C8, C9, C12, C15. L. Mathews and I looked at all 6 conveyors and verified that each once is enclosed/not open to the ambient air.

The following conveyors are required to be equipped with water sprays: C11, C10, C15. L. Mathews showed me that all of the conveyors, including the 3 listed here, are equipped with water sprays, even the conveyors that are enclosed. He said that all the watersprays are also fully automated: the control room has a program that will turn on all water sprays. He said this automated system has been in place for 4 years.

Drop chutes are required to be equipped at various transfer points across the equipment as specified in the permit. L. Mathewson and I identified each transfer point and verified that these transfer points are enclosed with tarps, preventing fugitive emissions.

The air pollution control equipment (water spray and structural dust controls) is required to be maintained according to the MAP/PMP in Appendix B.

Appendix B – MAP/PMP
Water sprays are required to be inspected at least monthly and repairs/maintenance are required to be conducted as needed. Cheney keeps record of any inspections and repairs that were done on the watersprays. He said that the control room staff walk they plant every day to ensure the water sprays are operating properly. If they are not, the inspection notes and repairs are made on the daily "Plant Control Form." The 8/5/16 record indicates that no inspections or repairs on the waterspray were conducted that day.

The structural dust controls are required to be inspected on a monthly basis. These inspections are also conducted daily during the morning walk-through of the facility. As with the waterspray systems, there were no repairs made to the structural equipment on 8/5/16.

Cheney is in compliance with their MAP/PMP at this time.

Cheney Limestone appears to be in compliance with PTI 533-95 at this time. I will inform L. Mathewson of the few changes I would like to see with their recordkeeping in order to more efficiently determine compliance with material limits.

NAME Melissa Lyons DATE 9/30/16 SUPERVISOR