

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

N572069844

FACILITY: CHENEY LIMESTONE CO		SRN / ID: N5720
LOCATION: 9400 SAND RD, BELLEVUE		DISTRICT: Lansing
CITY: BELLEVUE		COUNTY: EATON
CONTACT: Larry Mathewson , Plant Superintendent		ACTIVITY DATE: 11/14/2023
STAFF: Michelle Luplow	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Onsite inspection to determine compliance with General PTI # 43-18.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow

Personnel Present: Larry Mathewson, Plant Superintendent (larry@cheneylimestone.com)

Other Personnel: Sky Cheney, President (sky@cheneylimestone.com)

Purpose

Conduct an unannounced, onsite compliance inspection to determine compliance with Cheney Limestone's General Permit to Install (PTI) No. 43-18 for a non-metallic mineral crushing facility, which was issued March 13, 2018. This permit was issued to replace PTI 533-95 to allow for Cheney Limestone to operate under updated crushing permit requirements.

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 at 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, and driveways (for the Eaton County Road Commission); and landfills. L. Mathewson said they have been located at this site since 1999.

Cheney Limestone generally operates based on daylight 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.

Cheney Limestone is subject NSPS Subpart OOO for non-metallic mineral crushers. NSPS Subpart OOO conditions are incorporated in the PTI. Cheney Limestone is required to report to MAERS. Although the General PTI allows for Cheney Limestone to relocate, L. Mathewson said that this is a stationary plant.

Limestone is a hygroscopic mineral that, when too wet, can cause undesirable characteristics. The crushed limestone Cheney produces is akin to a very fine sand, that when wet, will inhibit the crushing equipment from working properly, because of its thick, mud-like consistency. Cheney Limestone uses water at the primary crusher and conveyor in moderation, but the majority of the dust control is done by enclosing the equipment to prevent fugitive emissions.

Inspection

At approximately 12:38 p.m. on November 14, 2023, I arrived onsite. I noted that the unpaved yard and haul roads appeared to be dry, with some trackout onto Sand Road. Upon my arrival, L. Mathewson met me outside and informed me that they had a water line break that morning due to freezing overnight temperatures, but the equipment was fixed. He then proceeded to use Cheney's onsite water truck to water down the unpaved plant yard and roads. He said they aim to use the water truck once per hour to maintain these areas. The water truck is filled by pumping water out of the pit's pond.

While onsite, after water had been applied to the roads, I observed various pieces of heavy loader equipment driving throughout the site on these areas and the fugitive dust from this traffic was minimal (<5%).

I verified with L. Mathewson that the permitted equipment presented in Table 1 is present at the site. All equipment was being operated during the inspection. All ID numbers were also verified.

Table 1. Permitted Equipment

Equipment	Description	Opacity Limit (%)	Status
Feeder Hopper	Receives uncrushed lime	10	Compliance
Hazemag Primary Impactor; Model APPH 1315Q, 350 HP	Device ID: 1315, Serial # HU1567	15	Compliance
Cage Mill Secondary Crusher Stedman Model G54H4-47, 250 HP	Device ID: 54, Serial # D3187 Secondary Crusher; used to crush lime down to "Ag Lime" size (powder/fine particulate)	15	Compliance
5 x 12 Double deck Screen (First Screen Tower) Diester BHM 2512	Device ID: S1 Serial # 699612 Used to sort crushed lime into 2 different sizes	10	Non-compliance
8 x 12 Double deck screen (Final Screen Tower)	Device ID: S2	10	Compliance

Diester BHM 2820	Serial # 699611 Used to sort crushed lime into 2 different sizes		
Vibratory Feeder Diester VFB5016	Device ID: F1 Serial # 64367	10	Compliance
Conveyor Nordberg Model 250	Device ID: C1 Serial # 366009	10	Compliance
Conveyor Nordberg Model 240	Device ID: C2 Serial # 366010	10	Compliance
Conveyor Nordberg Model 240	Device ID: C3 Serial # 366011	10	Compliance
Conveyor Nordberg Model 153	Device ID: C4 Serial # 366012	10	Compliance
Conveyor DL Dinning Model 5427027	Device ID: C5 Serial # 102417-07-CL	10	Compliance
Conveyor Nordberg Model 240	Device ID: C6 Serial # 366013	10	Compliance

Conveyor Nordberg Model 240	Device ID: C8 Serial # 366014	10	Compliance
Conveyor Nordberg Model 240	Device ID: C9 Serial # 366015	10	Compliance
Conveyor Nordberg Model 240	Device ID: C10 Serial # 366017	10	Compliance
Conveyor Nordberg Model 240	Device ID: C11 Serial # 366016	10	Compliance
Conveyor Nordberg Model 240	Device ID: C12 Serial # 366018	10	Compliance
Conveyor Nordberg Model 153	Device ID: C13 Serial # 366019	10	Compliance
Conveyor Nordberg Model 153	Device ID: C14 Serial # 366020	10	Compliance
Conveyor Nordberg Model 153	Device ID: C15 Serial # 366021	10	Compliance

FGCRUSHING

EUPROCESS consists of a crushers and associated process equipment (including drills, screening operations, belt conveyors, loading operations, and any other material handling equipment operated at the site).

Visible Emission Limits & Equipment, Design/Equipment Parameters & Testing/Sampling

There are visible emission limits for each piece of equipment in FGCRUSHING, based on a 6-minute average, per the listing in Table 1. These visible emission limits are associated with affected facilities that commenced construction, modification or reconstruction after August 31, 1983 but before April 22, 2008, as applicable to Cheney Limestone affected facilities.

All affected facilities appeared to meet the visible emission limits except for the 5 x 12 Double-deck screen, Device ID S1, which was exceeding the 10% opacity limit the entire time I was onsite. A Method 9 check was conducted by ensuring that the sun was to my back while observing the emissions. Attached are photos of the process and fugitive dust. L. Mathews said onsite that he believed the reason why there was opacity is because the tarp covering the unit was torn. I requested that L. Mathewson provide me with a description of what was done to correct the issue by the end of the week (November 17) and take photos of the process while in operation to demonstrate to my satisfaction that the opacity issues have been addressed.

L. Mathewson informed me that the screen enclosure was fixed on November 15, 2023. S. Cheney provided further follow-up on November 17, describing the corrective actions and sending photos of the corrective actions. He stated that they added extra flashings to reduce air movement through the screen as well as replacing the worn tarps. This description, in conjunction with the photos, demonstrate that Cheney Limestone has sufficiently addressed the opacity issues emitting from the S1 screen. See attached photos.

The NSPS Subpart OOO requires that all affected facilities be tested to comply with the established opacity limits. All affected facilities were tested for the NSPS in 1997.

Material Usage Limits & Monitoring/Recordkeeping

FGCRUSHING has a limit of 2,000,000 tons of non-metallic mineral processed per calendar year at this site. Cheney Limestone is required to keep daily and monthly records of the amount of material processed in tons. I requested these records from January 2021 – October 2023. S. Cheney provided these records, see Table 1 & attached. Records indicate compliance with the 2,000,000-ton annual material limit.

Table 1. Materials Processed through crusher January 2021 – October 2023

Year Crushed	Tons Crushed
2021	148,318

2022	167,086
2023	145,649

Process/Operational Limits

FGCRUSHING shall not operate unless the Fugitive Dust Control Program specified in Appendix A is implemented.

The following is an evaluation of compliance with Appendix A:

Plant, Site Roadways and the Plant Yard

The dust on the site roadways and plant yard are required to be controlled by applications of water, calcium chloride, or other approved fugitive dust control compounds. This shall be done as needed to ensure the 5% opacity limit is met for truck traffic. During the inspection I noted the 5% opacity limit for truck traffic was being met and water appeared to be a sufficient fugitive dust suppressant for this site.

The drop distance at each transfer point throughout the plant should be reduced to the minimum the equipment can achieve. During the inspection I observed that all transfer points appeared to be maintained at a minimum free-fall height to minimize emissions. Additionally, dropchutes are installed on several stockpiling conveyors, which also minimizes emissions.

Storage Piles

Stockpiles shall be watered on an as needed basis to meet the opacity limit of 5%. I observed no opacity from the stock piles.

Truck Traffic

Onsite vehicles being loaded should have the loads be no higher than 6" below the top of any sideboard, side panel, or tailgate, otherwise the truck shall be tarped. I did not observe any loading of materials during the inspection.

I reminded L. Mathews that Cheney Limestone is required to track all dust suppressant applications for the site roadways and plant yard and the storage piles. I did not request fugitive dust records at this time, as fugitive dust from these areas appeared to be kept to a minimum.

Compliance Statement

Cheney Limestone appears to be in compliance with PTI 43-18 at this time.



Image 1(Fugitive Dust 1) : 5 x 12 Screen (S1) and fugitive dust in excess of 10% standard.



Image 2(Fugitive Dust 2) : 5 x 12 Screen (S1) and fugitive dust in excess of 10% standard.



Image 3(Fugitive Dust 3) : 5 x 12 Screen (S1) and fugitive dust in excess of 10% standard.

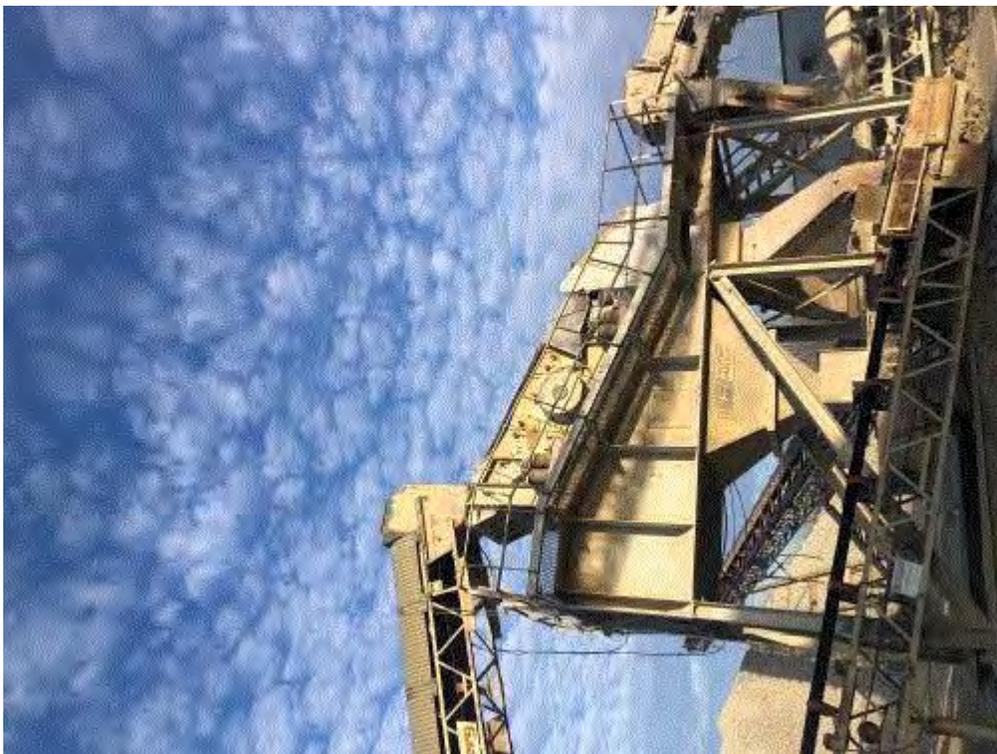


Image 4(S1 Screen) : Photo credit: Cheney Limestone. Screen fixed to address opacity issues.



Image 5(S1 Flashing) : Flashing added to further enclose screen and minimize air intrusion



Image 6(Drop Chute) : Drop Chute on stacking conveyor to minimize fugitive dust emissions.

NAME Michelle Luplow

DATE 11/29/23

SUPERVISOR RB

Month	2021 production	2022	2023
Jan	0	0	0
Feb	0	0	0
Mar	3980	0	1752
Apr	25983	17783	21627
May	22859	23541	20890
June	19886	23830	23848
July	16933	14827	13253
August	20787	20219	24762
September	12646	26827	20551
October	15379	23674	18966
November	9865	16385	
December	0	0	
	148318	167086	145649

TONS PRODUCED	JULY 2021	TONS PRODUCED	AUGUST 2021	TONS PRODUCED	SEPTEMBER 2021	TONS PRODUCED	OCTOBER 2021
1476	1		1	1132	1	1201	1
	2	910.5	2		2		2
	3	821.4	3		3		3
	4	967.5	4		4	795	4
	5	896.0	5		5	709	5
1336	6	957.6	6		6	1159	6
993	7		7	1095	7	870	7
1279	8		8	1316	8		8
1360	9	879.2	9	1163	9		9
	10	789.4	10	634	10		10
	11	929.0	11		11	1029	11
1231	12	1018.1	12		12	909	12
722	13	1034.1	13	959	13	1135	13
1005	14		14	992	14	1141	14
1272	15		15		15	1077	15
901	16	949.4	16	1100	16		16
	17	1032.6	17	975	17		17
	18	1041.7	18		18	606	18
877	19	1204.3	19		19		19
825	20	962.8	20	683	20	363	20
	21		21	Rain	21	934	21
271	22		22	Rain	22	1054	22
	23	1063.3	23	Rain	23		23
	24		24	Rain	24		24
	25	986.9	25		25	109	25
791	26	1162.5	26		26	198	26
861	27	1203.3	27	238	27	1016	27
	28		28	169	28	1073	28
924	29		29	1048	29		29
810	30	1447.8	30	1141	30		30
	31	1552.0	31		31		31
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16933		21810		12646		15379	
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TONS PRODUCED	NOVEMBER 2021	TONS PRODUCED	APRIL 2022	TONS PRODUCED	MAY 2022	TONS PRODUCED	JUNE 2022
	1		1		1	1153	1
1079	2		2	1226	2	1580	2
950	3		3	563	3	1426	3
1318	4		4	800	4		4
1335	5		5	594	5		5
	6		6	793	6	982	6
	7	517	7		7	1321	7
	8	369	8		8	1384	8
1346	9		9	1663	9	1295	9
371	10		10	1445	10	1346	10
1072	11	1066	11	1136	11		11
918	12	1324	12	1506	12		12
	13	1345	13	1382	13	1370	13
	14	1260	14		14	1316	14
	15	1162	15		15	1320	15
534	16		16	634	16		16
944	17		17	1150	17	963	17
	18		18	695	18		18
	19	1114	19	1543	19		19
	20	974	20	1282	20	1244	20
	21	1193	21		21	1032	21
	22	1317	22		22		22
	23		23	1178	23		23
	24		24	1401	24	920	24
	25	1192	25	1789	25		25
	26	1153	26	1370	26		26
	27	908	27		27	1001	27
	28	1227	28		28	1313	28
	29	1170	29		29	1605	29
	30	492	30		30	1258	30
	31		31	1391	31		31
		17783		23541		23830	
9865							

TONS PRODUCED	JULY	2022
		1
		2
		3
		4
720		5
672		6
1056		7
561		8
		9
		10
976		11
1139		12
759		13
887		14
926		15
		16
		17
609		18
783		19
987		20
907		21
639		22
		23
		24
515		25
847		26
361		27
702		28
779		29
		30
		31
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14827		
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TONS PRODUCED	AUGUST	2022
512		1
919		2
780		3
952		4
899		5
		6
		7
772		8
887		9
881		10
791		11
688		12
		13
		14
702		15
982		16
930		17
1407		18
983		19
783		20
		21
		22
643		23
1022		24
991		25
825		26
869		27
		28
		29
848		30
1155		31
<hr/>		
20219		
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TONS PRODUCED	SEPTEMBER	2022
1452		1
1302		2
		3
		4
		5
1315		6
1482		7
1549		8
1181		9
		10
		11
1646		12
1580		13
1411		14
1559		15
1035		16
		17
		18
		19
1258		20
1539		21
1511		22
		23
		24
		25
1698		26
1641		27
1575		28
1714		29
380		30
		31
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236827		
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TONS PRODUCED	OCTOBER	2022
		1
		2
1032		3
1283		4
1015		5
862		6
593		7
		8
		9
1548		10
1236		11
1277		12
1473		13
1206		14
		15
		16
1261		17
1366		18
		19
1069		20
1063		21
		22
		23
1470		24
1466		25
1224		26
1306		27
1100		28
		29
		30
823		31
<hr/>		
23674		
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TONS PRODUCED	NOVEMBER 2022	TONS PRODUCED	MARCH 2023	TONS PRODUCED	APRIL 2023	TONS PRODUCED	MAY 2023
			1				1
394	1		2				2
1581	2		3				3
1385	3		4	1142	3		4
1243	4		5	507	4		5
	5		6	265	5		6
	6		7	1346	6	466	7
1128	7		8	1365	7		8
1104	8		9		8	798	9
1335	9		10		9	962	10
962	10		11	1652	10	785	11
1226	11		12	1604	11	839	12
	12		13	976	12	1069	13
	13		14	1272	13		14
1324	14		15	1452	14		15
1198	15		16		15	1392	16
644	16		17		16	1519	17
15	17		18	1126	17	1474	18
61	18		19	153	18	1452	19
	19		20	1314	19	1456	20
	20		21	1321	20		21
692	21		22	1345	21		22
964	22		23		22	1619	23
1129	23		24		23	1359	24
	24		25	1144	24	1649	25
	25		26	918	25	1681	26
	26		27	906	26		27
	27	451	28	922	27		28
	28	848	29	898	28		29
	29	453	30		29		30
	30		31		30	1426	31
	31				31	944	
		1752					
16385		=====		21627		20890	
				=====		=====	

TONS PRODUCED JUNE

2023

1239	1
	2
	3
	4
756	5
689	6
1349	7
1491	8
842	9
	10
	11
1353	12
1383	13
1045	14
688	15
128	16
	17
	18
1473	19
1366	20
1171	21
1152	22
1323	23
	24
	25
1296	26
1306	27
1359	28
1356	29
1083	30
	31

23848

TONS PRODUCED	JULY 2023
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	1
	2
	3
	4
	5
	6
	7
	8
	9
272	10
1251	11
987	12
1193	13
1291	14
	15
	16
1174	17
914	18
974	19
1172	20
1409	21
	22
	23
1413	24
	25
23	26
150	27
	28
1029	29
	30
	31

~~Total 13253~~

TONS PRODUCED	AUGUST 2023
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1143.148	1
847.501	2
1214	3
875	4
	5
	6
1045	7
1251	8
1339	9
1215	10
1177	11
	12
	13
1217	14
996	15
1285	16
541	17
1140	18
	19
	20
1319	21
592	22
1150	23
1166	24
	25
	26
	27
1082	28
1352	29
1266	30
1552.831	31

~~24762~~

24762 total

TONS PRODUCED	SEPTEMBER 2023
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	1
	2
	3
	4
1456	5
	6
979	7
738	8
	9
	10
1550	11
1253	12
324	13
1394	14
1286	15
	16
	17
1252	18
1212	19
1367	20
871	21
1222	22
	23
	24
1382	25
1472	26
	27
1345	28
1448	29
	30
	31

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20561

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TONS PRODUCED	OCT 2023
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	1
1123	2
1311	3
1291	4
274	5
712	6
	7
	8
788	9
689	10
982	11
735	12
912	13
	14
	15
1167	16
968	17
713	18
	19
982	20
	21
	22
	23
1040	24
1166	25
987	26
1304	27
	28
	29
1141	30
678	31

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18966

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