

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

N723236003

FACILITY: Carl Schlegel, Inc.		SRN / ID: N7232
LOCATION: 3715 N. Chandler Rd, SAINT JOHNS		DISTRICT: Lansing
CITY: SAINT JOHNS		COUNTY: CLINTON
CONTACT: Mark Schlegel, Manager		ACTIVITY DATE: 08/09/2016
STAFF: Julie Brunner	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Inspection of portable crushing plant on General PTI 62-03		
RESOLVED COMPLAINTS:		

Facility Contacts:

Mr. Mark Schlegel, Manager, 517-487-5961, markc@schlegelsand.com
On-site staff: Brian Tomasek and Jennifer Enos

On August 9, 2016, I conducted a scheduled inspection of Carl Schlegel, Inc. AC Plant which is a portable crushing plant on General Permit No. 62-03 (N7232). The last inspection of this portable crusher was on September 11, 2012 when it was located in St. Johns. A relocation notice was received March 14, 2016 to relocate the portable crushing plant to the Ovid Pit located at 9690 W. M-21 in Ovid.

Carl Schlegel, Inc. produces construction aggregates including sand, gravel crushed stone, boulders, topsoil, etc. They have gravel pits located in St. Johns, Maple Rapids, Ovid, Dansville, and Lansing. Carl Schlegel, Inc. has four (4) portable crushing plants with the following Source Registration Numbers (SRN): N7035, N7232, N8066, and P0290.

For the portable crushing plant on General Permit to Install (PTI) No. 62-03 (N7232), it has been located in a former farm field that is being mined for gravel (e.g. Ovid Pit). The Ovid Pit has been active for approximately 9 years. The surrounding area is rural with some residential mixed in.

Portable crushing plants are minor sources of any regulated air contaminants including hazardous air pollutants (HAPs) and not subject to the Title V Renewable Operating Permit (ROP) program. Equipment that is part of a portable crushing plant could be subject to the New Source Performance Standard (NSPS) in 40 CFR 60, Subpart 000 — Standards of Performance for Nonmetallic Mineral Processing Plants.

§60.670 Applicability and designation of affected facility.

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in §60.671).

(b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as

provided for in paragraph (d)(3) of this section.

(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in §60.676(a).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part 60 that do not apply to owners and operators of affected facilities subject to this subpart or that apply with certain exceptions.

Table 1 to Subpart 000 of Part 60—Exceptions to Applicability of Subpart A to Subpart 000

Subpart A reference	Applies to subpart 000	Explanation
60.4, Address	Yes	Except in §60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a) (1) notification of the date construction or reconstruction commenced (§60.676(h)).
	Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, appendix A-4) require a 7-day advance notification instead of 30 days (§60.675(g)).	
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, appendix A-4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§60.675(c)), Method 9 (40

		CFR part 60, appendix A-4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

Some of the equipment listed on PTI 62-03 is subject to requirements of 40 CFR 60, Subpart OOO as indicated on the General Permit to Install Application form. The affected facility is capable of processing greater than 150 tons per hour, and each piece of equipment is subject if it was constructed after August 31, 1983.

Michigan Air Emissions Reporting System (MAERS):

The facility reports to MAERS as a Category III fee subject. There were 41.12 lbs of carbon monoxide (CO), 191.05 lbs of nitrogen oxides (NOx), 64.92 lbs of PM10, 13.44 lbs of PM2.5, 12.56 lbs of sulfur dioxide (SO₂), and 15.59 lbs of volatile organic compounds (VOC) emissions reported for 2015 due to crushing operations and the diesel fuel-fired engine used to power the plant. The AC Plant processed 5147.55 tons of sand and gravel in 2015. Corrections were made to the fuel inputs submitted to MAERS.

Inspection:

I arrived at the on-site office at 9:30 AM. I detected no odors around the facility. The gravel roads showed evidence of water application for dust control, and there were no visible emissions (VEs) due to fugitive dust. Weather upon arrival was 72°F, wind was calm, and the UV Index low.

Prior to the inspection, I talked to Mark Schlegel about the AC Plant. A relocation notice was submitted in March, but the plant was not assembled and operational until August 1st. The AC Plant is not currently processing gravel for a specific job. The gravel it is processing cannot go through the wash plant. According to the relocation notice, it is expected to process approximately 20,000 tons of material while at this location. A copy of the March 14, 2016 "Relocation Notice" with my notes on the equipment list is attached.

A sand and gravel wash plant was operating close to the office. Materials are dug out of the pit which has filled with water, and is washed/separated in the plant. The wash plant is exempt from permitting under Rule 285(t).

I was met shortly upon arrival by Mr. Brian Tomasek. I provided him with an "Environmental Inspections" brochure. The facility operations were discussed. The AC Plant has been in for 6 days and has operated a total of 4.5 days so far. It was currently down for repairs. We went out and toured the equipment. The following equipment is located on-site and was compared to the equipment listing on the relocation notice and General PTI:

Device ID	Device Type	Description	Manufacture Date
F004(1),(2)	Feeder Hopper	Hewitt-Robbins	?
C137	Conveyor	Norest, 30" x 83'	1985
C143(2)	Conveyor	Superior, 36" x 100'	?
C133	Conveyor	Norest, 30" x 80'	1985
SCR003	Screen	Diester screen deck	1975
CR002	Cone Crusher	Allis-Chalmers 945-Hydrocone (Serial No. 10328)	1974
C113	Conveyor	Allis-Chalmers	1974

		attached (to crusher) discharge	
C112	Conveyor	Pierce return conveyor	old
C209(2)	Conveyor	Crush return, Shop built 24" x 85'	1973
C145	Conveyor	Screen discharge, Allis-Chalmers	1974
C207 (on PTI 187-08)(2)	Conveyor	Shop built, 30" x 90	1973
C176(2)	Conveyor	Norest 30" x 80'	?
C107	Conveyor	Harmon Fabco 30" x 125' stacker	1975

- (1) Initially used feeder F002 and switched to F004 due to a breakdown.
(2) Equipment not listed on PTI 62-03 and a modification application is being submitted.

The crushing plant is powered by a diesel fuel-fired generator set (genset). The engine is a Cummins 500 kW (670.5 hp), Model No. KTA19-64, Serial No. 7161212, manufacture date: 1/1996, and it is pre-Tier I. The generator is an Onan. The genset sits on a flatbed trailer that can be moved. Low sulfur diesel fuel (less than 0.0015 % wt S) is combusted in the genset. The engine is considered non-stationary and non-road. The designation of the diesel engine as a non-stationary engine establishes that it is not subject to 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The designation of the diesel engine as a non-road engine establishes that it is not subject to 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Water spray is installed on the crusher. The materials are on-site to install hard tubing for water spray on the conveyors. Water is pumped out of a reservoir on-site when dust suppression is needed. Currently, the materials to be crushed have about 8% water and the norm is 4%. The facility also has a water tanker truck for application of water to roads for fugitive dust control.

The AC Plant is located greater than 500 feet from any residential or commercial property as required by Special Condition (SC) V.5.c. A copy of the general permit and conditions does need to be posted at the on-site office. This was discussed and a copy was going to be sent to the facility that afternoon.

Since the plant was expected to be up and running that afternoon, I left the facility 10:45 AM and returned at 3:45 PM. The weather conditions upon re-arrival were 88°F, wind was S @ 7 MPH, and the UV Index 5 Moderate. The facility roads showed a recent application of water.

The plant was operating. It was producing 22A road gravel (less than or equal to 1" crushed stone). A front end loader dumps materials into a feed hopper. The materials are transferred to the crusher on a series of conveyors. The drop points between the conveyors are at a minimum distance. At the crusher, water is injected into the cone while crushing. The water injection rate was 5 gallons per minute. The conveyors do not currently have water application installed, but it is planned.

No VEs were observed from the conveyors, drop points, storage piles, crusher or engine stack. (Pictures were taken of the plant.) The plant appeared to be in compliance with the permitted opacity limits, and the fugitive dust plan.

A portable meter can be plugged into the product side conveyor to estimate material output. It was used to measure 156 ton per hours at the time of the inspection. Since the meter is uncalibrated plus 8% is added for a total estimated output of 168 tons per hour.

Records:

The daily log sheets were obtained since plant startup (Preshift Checklist - AC Plant) and are attached. The AC plant was operated on 8/1, 8/2, and 8/8. It averages about 150 ton/hr and has operated about 45 hours according to the generator clock.

Summary:

The facility appeared to be in compliance with all applicable rules and regulations, and PTI 62-03. PTI crusher modification forms were submitted to add feeder no. F004, and conveyor nos. C143, C176, C207, and C209 to General Permit No. 62-03. The relocation notice was updated on 8/9/16 to add feeder no. F004 and remove feeder no. F002 from the list of equipment that was relocated to the Ovid Pit. An updated site map showing that the crusher plant is located greater than 1000 feet from the nearest neighbors was submitted too.



Image 1(Feed Hopper) : Dumping of materials into the feed hopper



Image 2(Conveyors to Crusher) : Conveying of materials to the crusher.

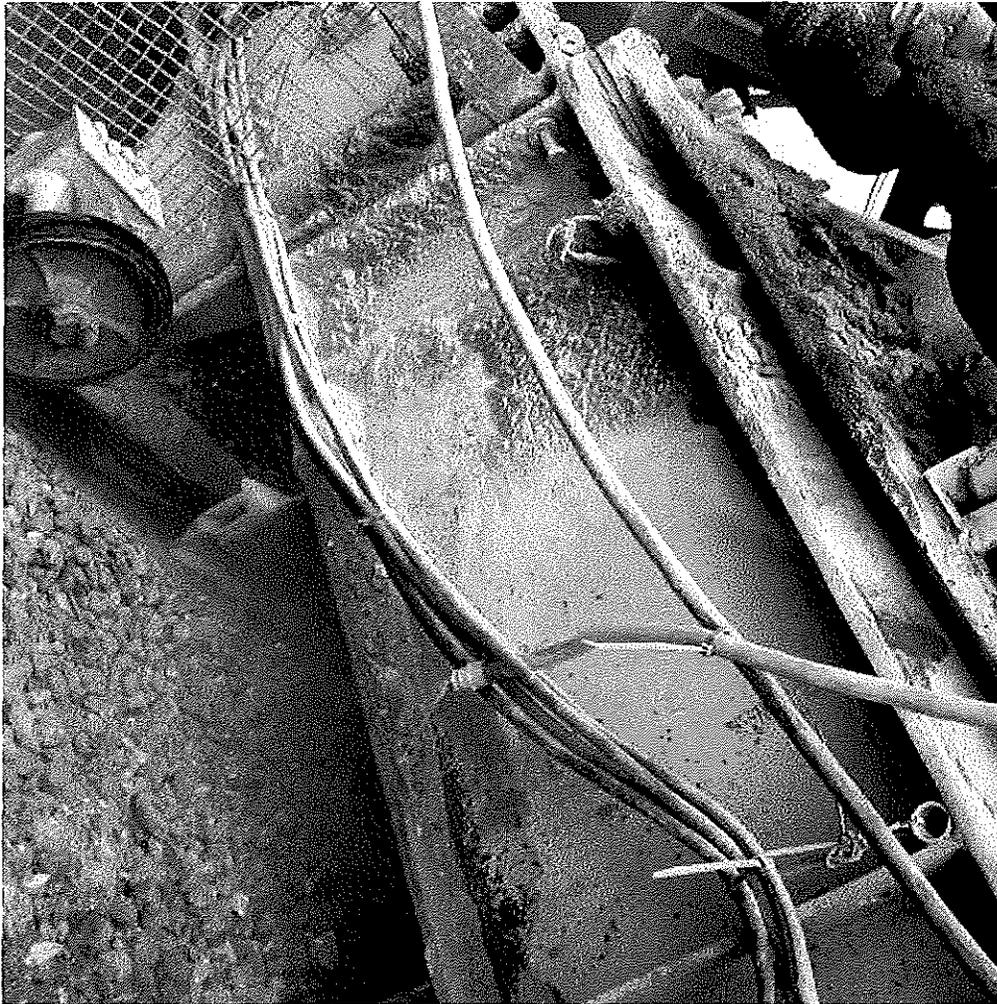


Image 3(Water injection) : Water injection into the crusher



Image 4(Discharge) : Discharge side of the crusher



Image 5(Stacker) : Conveyor to storage pile



Image 6(Water Spray) : Another water injection spot into the crusher



Image 7(Drop point) : Drop point between conveyors

NAME Julie L. Bunker

DATE 8/16/16

SUPERVISOR B. M.