

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

B627326046

FACILITY: Theut Products		SRN / ID: B6273
LOCATION: 73408 VAN DYKE, ROMEO		DISTRICT: Southeast Michigan
CITY: ROMEO		COUNTY: MACOMB
CONTACT: John Rightenburg, Quality Control Manager		ACTIVITY DATE: 06/25/2014
STAFF: Samuel Liveson	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

On June 25, 2014 I conducted an unannounced, scheduled level 2 inspection of Theut Products, Inc., located at 25737 Sherwood Avenue in Warren, Michigan. Air Quality Division (AQD) Senior Environmental Engineer Mr. Sam Amer accompanied me on the inspection. The purpose of the inspection was to determine the facility's compliance with the federal Clean Air Act, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and Permits to Install (PTI) No. 335-07 and No. 997-80.

We arrived at Theut Products at approximately 1:00 pm. We met with Mr. Luke McDoogal, Quality Concrete Control Technician and facility contact, and Mr. John Rightenburg, Sales Associate, who provided a walkthrough of the facility and explained equipment and operations. Mr. Amer and I presented our credentials and provided Mr. McDoogal and Mr. Rightenburg with a copy of "DEQ Environmental Inspections: Rights and Responsibilities."

Site Overview

Theut Products manufactures block and ready-mix transit concrete. Permit 335-07 covers a concrete crusher at the facility, and permit 997-80 covers the concrete block plant. Theut Products has approximately 40 employees and operates Monday to Friday, 7:30-4:30 pm, as well as Saturdays from 7:30-1 pm.

Transit Mix Plant

The transit mix plant appears to be exempt from R201 per R289(d)(i). According to records provided by Mr. McDoogal, 45,553 cubic yards of concrete have been sold from January 1 of 2013 to June 24, 2014, which is well below 200,000 cubic yards annually.

Theut Products generally supplies wet batch concrete mixes to contractors. A wet batch is mixed inside the plant before being poured into a truck, whereas a dry batch is mixed inside the truck. Water passes through a natural gas-fired hot water heater at 50°F. The heat input of the heater is 4.5 MMBtu, and its voltage is 460 V. It was constructed in 2005. The hot water heater appears to be exempt via R282(b). Gas-fired boilers are not applicable to 40 CFR 63 Subpart JJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.

Aggregate is contained in a bin and five hoppers, and cement is contained in one hopper and four silos. All ingredients are placed onto either an aggregate or cement scale, and mixed in a drum. Ingredients in the drum are adjusted for slump before being poured into trucks. The cement hopper and each of the four cement silos are controlled by five baghouses, and the drum containing all ingredients is controlled by a dust collection system. From observation on ground level, the baghouses seem to be in good working order – no opacity or fallout issues were observed. Baghouses are shaken clean once per loading cycle (several times per day), and the dust collector is shaken clean once a night. Bags are generally replaced about annually, the last being replaced 18 months prior. Bags are replaced if they are operating poorly based on differential pressure across the filter. Mr. Amer requested that Theut Products keep a spare replacement bag available in the case of an emergency.

Vehicle Maintenance Building

The Vehicle Maintenance Building is used for storage and maintenance of trucks from all seven Theut Product locations throughout SE Michigan. It has an overhead natural gas heater that appears exempt from R201 per R282(b)(i).

Repair Shop

The repair shop has various tools and hardware. A used oil furnace, which hasn't run in several years, appears exempt from R201 per R282(b)(i). A parts washer from Zep uses mineral spirits and has a surface area less than 10 square feet so that it appears exempt from R201 per R281(h). Operational instructions from the AQD were posted nearby the parts washer, but its lid was left open. Mr. Amer and I asked that it be closed, and that Mr. McDoogal and Mr. Rightenburg remind staff to keep the lid closed when the parts washer is not in operation. We also provided updated instructions to post near the parts washer.

An above-ground 1000-gallon diesel storage tank is located just outside the repair shop. According to Mr. Rightenburg, it is used to fuel off-road vehicles such as forklifts and loaders. On July 10, 2014, I referred the storage tank to the Department of Licensing and Regulatory Affairs to check its permit status.

Crusher (PTI No. 335-07)

A small mobile Komatsu crusher by AIS Equipment, model number BR300J, has a capacity below 150 tons per hour. Because the crusher and related operations were not in use during our inspection, visible emission limits specified in PTI No. 335-07 Special Conditions (SCs) 1.2 and 1.3 were not verified. For particulate control, water is dumped onto concrete material before being put into the crusher according to Mr. Rightenburg. According to SC 1.6, spray bars must be installed on the crusher and screen. However, spray bars did not appear to be installed on either the crusher or screen. On July 23, I sent a request that Theut Products either request a permit change to reflect their method of control, or install spray bars in accordance with their current permit. If neither action is taken, a violation notice may be issued.

All equipment was labeled with company ID numbers, as per SC 1.7. The crusher was not in use during our visit. On July 12, 2014, Mr. McDoogal provided records of watering amounts and concrete crushing as per SC 1.9. According to records, crushing occurs 3 to 5 times a month for 1.5 to 6 hours. Approximately 100 gallons of water are used for every 20 tons of concrete crushed. From June of 2013 to June of 2014, 1080 tons of concrete was crushed, well under the 100,000 tons per 12-month rolling time period as specified in SC 1.4. Material is ground into either 1x3" pieces, or finer 21a size pieces which are driveway size. Opacity from storage piles was below 5%, as per SC 3.1.

In areas of truck traffic, we observed periodic opacities greater than 20% whenever trucks drove through. This exceeds the 5% opacity limit specified in SC 2.1. According to Mr. Rightenburg, roads are swept on rainy days. Watering records provided by Mr. McDoogal showed that watering of the drive and yard occurred 6 times in June and a combined 5 times in April and May, using 150-300 gallons each time. Mr. Amer stressed the importance of watering areas of truck traffic more frequently with Mr. McDoogal and Mr. Rightenburg. If opacity is observed on subsequent visits to the site, a violation notice may be issued.

Block Plant (PTI No. 997-80)

To form concrete cinder blocks, aggregate, cement, and water are combined into a mixer before traveling on a belt to a hopper and then into a mold box. Here, three blocks at a time are vibrated and extra concrete material is skimmed off the top of the blocks. The blocks are compressed, and put on a pallet and placed outside. They are considered "green", or mushy, so they would deform if pressed and need time to harden. Because operation hasn't occurred in the wintertime for several years, the outdoor air and hardening inside the concrete keep the concrete between 100-120°F so that it heats and hardens naturally. The concrete block plant includes a kiln that may be used to warm concrete blocks if the block plant is running during wintertime, but this kiln hasn't been used for several years according to Mr. Rightenburg.

Sand and gravel are stored in separate hoppers, and cement is stored in two silos. Both cement silos are controlled by baghouses. From observation on ground level, the baghouses seem to be in good working order, as required in SC 11 and 12 – no opacity or fallout issues were observed. Baghouses are shaken clean once per loading cycle, and the dust collector is shaken clean once each night. Bags are generally replaced about annually. Bags are replaced if they are operating poorly based on differential pressure across the filter. Mr. Amer requested that Theut Products keep a spare replacement bag available in the case of an emergency.

In areas of truck traffic, we observed periodic opacities exceeding the 20% limit specified in SC 10. According to Mr. Rightenburg, roads are swept on rainy days. Watering records provided by Mr. McDoogal showed that watering of the drive and yard occurred 6 times in June and a combined 5 times in April and May, using 150-300 gallons each time. SC 13 requires that the applicant sprinkle the plant roads and yard with calcium chloride and water twice a week or as needed. Mr. Amer stressed the importance of watering areas of truck traffic more frequently with Mr. McDoogal and Mr. Rightenburg. If opacity is observed on subsequent visits to the site, a violation notice may be issued.

Compliance Evaluation

As a result of this inspection, it appears that Theut Products is in compliance with the federal Clean Air Act, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and Permits to Install (PTI) No. 335-07 and No. 997-80. Further action is required for crusher opacity control; a violation notice may be issued if Theut Products neither requests a permit change to reflect their method of opacity control on the crusher, or installs spray bars in accordance with PTI No. 335-07.

NAME



DATE

7/24/14

SUPERVISOR

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