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

N713239404

FACILITY: Sun Gro Horticulture		**SRN / ID:** N7132
LOCATION: 1160 East Chicago Road, QUINCY		**DISTRICT:** Kalamazoo
CITY: QUINCY		**COUNTY:** BRANCH
CONTACT: Dan Johnson , General Manager		**ACTIVITY DATE:** 04/11/2017
STAFF: Dale Turton	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

Staff conducted an air quality inspection at Sun Gro Horticulture facility to determine compliance with 40 CFR Part 60 UUU, APC Rules and Permit to Install No. 38-00B. The facility produces potting soil from blending expanded perlite and vermiculite ore with lime, composted bark, fertilizer, and peat.

Staff met with Dan Johnson (general manager) and Kyle Leosh (production manager).

This is currently a busy time of the year, so they are at times running 24 hours per day.

The following emission units were observed during the plant inspection.

EU-Perlite

Perlite ore is received by rail and stored outside in a covered bin. The ore is then processed in a natural gas fueled expansion furnace at a temperature around 1700 degree F. The perlite expansion process is routed to a collection cyclone where most of the material drops out. The exhaust from the cyclone is routed to the baghouse to control the particulate emissions and associated opacity. The exhaust from the baghouse stack was observed during operation and there was only a very slight visible emission (less than 5%). The permit allows up to 10% opacity. The temperature at the baghouse is kept below 375 deg F, since the bags are only rated up to 400 degrees. There is not a differential pressure gauge on this baghouse.

After the expansion process the material collected from the cyclone is sent to the storage silos and is ready to be sent inside the building for mixing into the product.

The permit lists another stack but there is only one stack. According to Dan, all of the combustion emissions and the associated dust from the process are vented through one stack for the baghouse. This discrepancy could be corrected by the company by submitting a permit revision application.

Maintenance is performed every Monday on the system, including the control equipment. Weekly maintenance records are being kept as required and records are being kept of the visible emissions observations. Records show that bags (socks) are being routinely replaced every week as they are discovered due to the abrasive nature of perlite. The company is subject to 40 CFR, Subpart UUU, Standards of Performance for Calciners and Dryers in Mineral Industries. The main requirement is that 10% opacity is not exceeded. They comply with that requirement.

EU-Vermiculite

Vermiculite ore is received by rail and stored outside in a covered bin. The ore is then processed in a natural gas fueled expansion furnace at a temperature around 1300 degree F. The vermiculite expansion process is routed to a collection cyclone where most of the material drops out. The exhaust from the cyclone is routed to the baghouse to control the particulate emissions and associated opacity. The exhaust from the baghouse stack was not able to be observed during operation since the process was temporarily down for a part replacement. The permit allows up to 10% opacity. The temperature at the baghouse is usually below 200 deg F. The bags are rated up to 400 degrees. There is not a differential pressure gauge on the baghouses.

After the expansion process the material from the cyclone is sent to the storage silos and is ready to be sent inside the building for mixing into the product.

The permit lists another stack but there is only one stack. According to Dan, all of the combustion emissions and the associated dust from the process are vented through one stack for the baghouse. This discrepancy could be corrected by the company by submitting a permit revision application.

The destoner is an outside screening operation used to remove stones from the vermiculite ore prior being sent to the expansion furnace. This is also being controlled by a baghouse.

Maintenance is performed every Monday on the system, including the control equipment. Weekly maintenance records are being kept as required and records are being kept of the visible emissions observations for both stacks. Records show that bags (socks) are being replaced as needed in response to minor leaks being discovered. The company is subject to 40 CFR, Subpart UUU, Standards of Performance for Calciners and Dryers in Mineral Industries. The main requirement is that 10% opacity is not exceeded. They comply with that requirement.

EU-Peatprocess

This process is contained within the building. This EU appears to not only include the peat process but also the mixing of all ingredients and bagging of the final product.

The peat is received in large bags in a compressed form. These bags are opened and placed on a conveyor to be sent to the machine to fluff it out. The fluffed material is then sprayed with water to bring it up to the proper moisture content of near 50%. The conditioned peat is then sent through the wall into the mixing and bagging area. This area is also enclosed within the building as required by the permit.

This entire operation is controlled by a baghouse. The vacuum system has multiple pickup points to control the indoor dust. The baghouse exhaust is routed back through the wall into the peat moss processing area. The permit requires records of visible inspections of the particulate control system. The company does perform this maintenance but since it exhaust indoors, they did not have a formal log sheet on it. They stay ahead of any problems since they do not want dust inside the building.

This process is currently included in the permit. The company may want to explore the possibility of operating this process under an exemption. The permit lists the stack as being exhausted unobstructed vertically upwards to the ambient air. The baghouse stack currently exhausts sideways inside of the building. Although there does not appear to be a specific exemption for this type of operation, they may want to explore using R290.

FG-Fugitive

Fugitive dust resulting from EU-Truck Traffic and EU-Storage activities are referenced in Appendix A fugitive dust plan. Plant roadways and the yard areas are maintained by applying water as needed from a tank equipped with a spray bar and with sweeping. This is limited during the winter due to freezing temperatures but is done more during warm weather. Records are being kept of the sweeping and cleaning of all the plant areas.

Staff noticed that most of the area east of the plant around the storage piles looked damp. The piles are almost continuously kept watered throughout the season unless it is raining.

EU-Storage

Piles of material are stored on the east side of the plant. Also red pine bark is processed outdoor to produce organic compose. This process is considered exempted from air permitting under APC Rule 285(bb) for commercial composting operations. The materials are screened and sized and mixed in a tub-type grinder. This operation does not cause a dust problem since the bark has to be about 65% moist to produce compost. The grinder does not operate all the time and considered exempted from air quality permitting under APC Rule 285 (gg) for equipment used for hogging wood or wood residues.

The facility seemed to meet the requirements of 40 CFR Part 60 Subparts A and UUU, APC Rules and Permit to Install No. 38-00B and considered to be in compliance.

NAME Dale Trinter DATE 4/17/2017 SUPERVISOR MD 4/18/17