

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

P081239425

FACILITY: Green Stream Company		SRN / ID: P0812
LOCATION: 69676 M-103, WHITE PIGEON		DISTRICT: Kalamazoo
CITY: WHITE PIGEON		COUNTY: SAINT JOSEPH
CONTACT: Mandi Bertog ,		ACTIVITY DATE: 04/18/2017
STAFF: Dennis Dunlap	COMPLIANCE STATUS: Compliance	SOURCE CLASS: Minor
SUBJECT: Scheduled inspection.		
RESOLVED COMPLAINTS:		

This was not an announced inspection. Dennis Dunlap was the inspector for AQD. Mandi Bertog was there for Green Stream. Kellie Albee, the General Manager, was there from Elkhart. Green Stream acquired the operations here from Michiana Decorative Mulch in July, 2016. The Green Stream operations at 701 Sol Morris Avenue in White Pigeon are no longer in operation. Permit 183-11A for that location has been voided.

Green Stream employs 23 people. It operates from about 5 AM to 6 PM 6 days per week. Currently the facility recycles cardboard and polystyrene (Styrofoam), and produces chipped wood for animal bedding, cover at landfills, and for landscape mulch.

The recycling of cardboard and polystyrene is done in one building. Cardboard is placed in a bailing machine. The cardboard comes out in tightly packed bales. No visible emissions were observed for this process. There is a spare bailing machine. Spare plastic bags are also baled.

The recycling of polystyrene (PS) consists of two operations. In the first one the PS is placed in a machine that grinds it into pieces. It is then compressed to remove the air. This creates blocks that are packaged and hauled away. This process is exempt by Rule 285(2)(l)(vi)(B). PS is classified as a plastic. No visible emissions were associated with this activity. In the other operation PS is placed in a machine that grinds it into pieces. The pieces then go into an extruder where they are heated to 170 degrees F (by electricity). The extruded plastic is then packaged and hauled away. This process is exempt by Rule 285 (2)(l)(vi)(B) and Rule 286(2)(a).

In another building there was a cold cleaner. The lid was closed and rules were posted.

It appears that the wood chipping operation is exempt by Rule 285(2)(gg). Used wood is brought in by several suppliers including the RV industries. "A" wood is clean wood and contains no processed wood such as pressed laminate. "B" wood may contain laminated wood. I did not see any demolition waste in the wood piles. "A" wood is only used for landscape mulch. "B" wood is used for animal bedding and landfill cover. It appears that this material is chipped to a smaller size than mulch.

During the inspection "A" wood was being chipped for landscape mulch. Very little visible emissions were seen from this process. After chipping the wood is screened and then conveyed to the coloring machine. Colorants are applied to the wood chips in this machine. After coloring the mulch is placed in concrete bunkers or bins for two days to complete the coloring process. The finished mulch is then loaded onto trucks.

Six colorants are listed as being used. These are red, chocolate, coffee, black, light brown, and gold. It appears that gold has not been used. Green Stream provided colorant usage amounts for 2016 and 2017. There is a concern with the coffee colorant because 1,4-dioxane and ethylene oxide were listed on the SDS up to 1.0% by weight. The screening level (IRSL) for ethylene oxide is 0.0002. Based on Rule 291(2)(c), this can only be emitted up to 0.006 tons (12 pounds) per year. This corresponds to 144 gallons per year of the coffee colorant. The screening level for dioxane is 0.2 (IRSL). Based on Rule 290 (2) (B), emissions are limited to 20 pounds per month. This is about 230 gallons per month of the colorant. For 2016 and 2017, usage of the coffee colorant has exceeded 144 gallons.

However, Green Stream contacted BASF, the manufacturer of the colorants. BASF indicated that the SDS was in error and revised the SDS to remove the two chemicals. The revised SDS does not show these two chemicals as present in the coffee colorant. The solvent in the colorant is water. AQD also talked with BASF (Brent Parker and Lee Guggenbiller) who confirmed that the SDS was in error. Based

on this, the colorants do not contain VOCs. AQD may look into the possibility of testing the coffee colorant for 1,4- dioxane. Ethylene oxide is a gas at room temperature and should not be in the colorant, so this will not be tested for.. Green Stream should continue to keep records of colorant usage. Unless 1,4- dioxane is found in the colorant, Green Stream is currently not in violation.

There are two Vermeer tub grinders used for chipping wood. These are different units than the ones used by Green Stream at the Sol Morris Avenue location under Permit 183-11A. One is model TG 7000. They are diesel-powered. They are mobile and are used onsite at various locations. They are exempt by Rule 285(2)(g). As stated above, no demolition waste was seen. Because they are mobile, they are classified as non-road engines and are not subject to 40 CFR Part 63 Subpart ZZZZ.

The former facility, Michiana Decorative Mulch, had a Fugitive Dust Control Plan. This was pointed out that Green Stream should look at this plan and implement it.

During the inspection a berm was being constructed. There were quite a few large trucks hauling dirt. Road dust was being generated.

NAME Dennis Dunlap

DATE 5/1/17

SUPERVISOR MB 5/1/17