

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

P006327576

<b>FACILITY:</b> McPhee Electric & Telecommunications Inc		<b>SRN / ID:</b> P0063
<b>LOCATION:</b> 6788 Billwood Hwy, POTTERVILLE		<b>DISTRICT:</b> Lansing
<b>CITY:</b> POTTERVILLE		<b>COUNTY:</b> EATON
<b>CONTACT:</b> Mike McPhee, President		<b>ACTIVITY DATE:</b> 10/22/2014
<b>STAFF:</b> Michelle Luplow	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> Minor
<b>SUBJECT:</b> Unannounced scheduled compliance inspection of drum-top bulb crusher.		
<b>RESOLVED COMPLAINTS:</b>		

Inspected by: Michelle Luplow

Other DEQ staff: Keisha Williams, AQD Toxics Unit

Personnel Present: Mike McPhee, President ([mdm@mcphееelectric.com](mailto:mdm@mcphееelectric.com))  
Marie McPhee

**Purpose:** Conduct an unannounced, scheduled compliance inspection by determining compliance with McPhee Electric's Permits to Install (PTI) No. 40-10 for a 55-gallon drum top bulb crusher. This is the first time since permit issuance that the AQD has inspected this facility.

**Facility Background/Regulatory Overview:** McPhee Electric and Telecommunications services electrical and industrial sources by collecting and transporting fluorescent bulbs from these facilities either directly or indirectly to Clean Lights in Mason.

**Inspection:** This was an unannounced compliance inspection. At approximately 8:40 a.m. on October 22, 2014, K. Williams and I traveled to 6788 Billwood Highway, where the bulb crusher was supposed to be located. This location is a residence (see attached map), where the bulb crusher is stored in the red barn, adjacent to the house. There was no one present on site, so we met Mike McPhee, president of McPhee electric, at McPhee's business office at 3495 Lansing Rd, Charlotte, at approximately 9:50 a.m. I explained to Mr. McPhee why we were there and provided him with a DEQ "Environmental Inspections: Rights and Responsibilities" brochure to illustrate a typical inspection procedure. Mr. McPhee explained that they no longer use the bulb crusher, and according to their records, haven't operated the unit since 2012 and don't plan on using it ever again. Although we did not return to the site to verify the crusher's operating condition, M. McPhee said that the unit is being stored in the building where they operated it. Marie McPhee said that they plan on having Aircycle remove the equipment and will notify us when they do so that the permit can be voided.

Mr. McPhee said that he provided all employees working with the bulb crusher their own respirators to be worn during operation.

Currently McPhee will remove light bulbs from companies and either store them at their site until they can be shipped to Clean Lights, or the light bulbs are sent directly to Clean Lights from the job site. I viewed the barrels of lights kept onsite at McPhee's main office. They are kept upright in blue barrels. Mr. McPhee said that the barrels have holes in the bottoms to drain the barrels during rainfall. I saw no broken bulbs onsite.

**PTI No. 40-10 – Drum-top bulb crusher: Hg hazard**

Mr. McPhee said the largest project McPhee undertook was removing and crushing the lamps from Dart's investment buildings back in 2010. McPhee Electric is required to keep records of the number and size of fluorescent light bulbs crushed per calendar day, per calendar month, and per 12-month rolling time period (SC VI.1), using the format specified in Appendix 3 of the permit, as well as recording the room temperature while EU-BULBCRUSHER is being operated (SC VI.4). Marie McPhee provided me with all of these records spanning the entire use of the unit (years 2010 – 2012, see attached). All required records have been kept; however, the 12-month rolling totals have been incorrectly calculated (they were calculated per calendar year instead of 12-month rolling). McPhee Electric has a limit of 50 8-foot equivalent bulbs per day and 5000 8-foot equivalent bulbs per 12-month rolling time period. According to McPhee's records, they have never exceeded the daily limit. Because the 12-monthly rolling totals were miscalculated, I created a 12-month rolling spreadsheet from their data and found that in April 2011, they reached a total of 5050 bulbs per 12-month rolling at that time. This was the only exceedance of their permit Material Limits throughout the life of the permit. Because this was the only exceedance and they have not operated since 2012 and they plan on removing the equipment, a violation notice for the exceedance will not be

issued. McPhee has been notified of this exceedance.

The permit also requires (SC VI.2) that records be kept indicating when the bag filter, HEPA filter, and activated carbon/activated carbon filter were replaced. The carbon/carbon filter is required by permit to be replaced every 2 calendar years at a minimum (SC III.5). McPhee has kept records of both 1<sup>st</sup> Stage (Bag Filter) and 2<sup>nd</sup> Stage (HEPA Filter) replacements (see attached). The log, however, does not record activated carbon replacement. Marie McPhee said that McPhee Electric followed the filter replacement schedule in the manufacturer's specifications sheet, which she provided (see attached). According to the spec sheet, the carbon filter is to be replaced every 10 million lamps. McPhee has not replaced the carbon filter because their throughput quantity has not reached the 10 million lamp threshold. According to the permit and considering when McPhee first started operating the crusher, the carbon filter would have had to be replaced in April 2012. While not keeping records and not replacing the carbon filter is a violation of the permit, it is not necessary to send a violation notice because McPhee plans on removing the equipment and voiding the permit in the future. Had McPhee still been operating this equipment at the time of inspection, a violation notice would have been issued. SC III.2 requires that the unit be maintained and operated according to manufacturer's specifications – based on the log entries, they have met the requirements of this condition, as well as SC IV.1 for operating the unit with the bag, HEPA and carbon filters.

SC III.3 requires that EU-BULBCRUSHER be located a minimum of 50' from the property line, 100' from places of residence or private/public assembly, 500' from schools, apartment buildings, institutions, and not less than 1000' from a hospital or nursing home. The attached map shows the property with a scale. The house on the property is more than the 100' required setback distance. Assuming the crusher was closer to the middle of the barn, it would also be 50' from the property line adjacent to the neighbor's residence. There were no schools, apartment buildings, institutions, hospitals or nursing homes within the aforementioned setback distances. McPhee is in compliance with this condition.

SC III.6 requires that the glass and metal pieces collected in the bulb crusher drum be properly handled, transported and disposed of in accordance with all state and federal regulations, and SC VI.3 requires that the records for these activities be kept. Marie McPhee provided me with all waste manifests from all of the waste McPhee has generated since the start of the unit's operation. Mr. McPhee explained that AirCycle, the company McPhee Electric bought the unit from, was responsible for picking up the full drums. The last pickup from AirCycle was in October 2012 and the last crushing job was conducted in September 2012, which suggests that all crushed material was properly disposed of. I showed Bryan Grochowski from Hazardous Waste in the Office of Waste Management and Radiological Protection the 6 manifests sheets provided, and he found some issues: failure to report the total quantity in box 11 on some of the manifests, failure to sign at the bottom of one of the manifests signifying that the facility in charge of receiving the waste had actually received it, failure to register as a small or large quantity generator versus the CESGO (Conditionally Exempt) generator that McPhee reported on the manifests, and failure to provide a generator ID number. I provided B. Grochowski with copies of the manifests and said he would follow-up on this issue. Other than the aforementioned issues, McPhee has kept appropriate records and has disposed of the items properly and is therefore in compliance with SC III.6 and SC VI.3.

McPhee Electric and Telecommunications is in compliance with all state and federal regulations at this time.

NAME Michelle M. Lupton

DATE 10-29-14

SUPERVISOR M. MCB