

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

A077544267

FACILITY: ALP LIGHTING COMPONENTS, INC		SRN / ID: A0775
LOCATION: 10163 US 31 N, CHARLEVOIX		DISTRICT: Cadillac
CITY: CHARLEVOIX		COUNTY: CHARLEVOIX
CONTACT:		ACTIVITY DATE: 04/25/2018
STAFF: Kurt Childs	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Compliance inspection, PTI 24-08.		
RESOLVED COMPLAINTS:		

Compliance inspection of ALP Lighting Components, Inc.

I conducted an inspection of this minor source to determine compliance with the Air Pollution Control Rules and Permit to Install number 24-08.

This facility has been operating at this location since 1965. The primary production processes at the plant are plastic injection and extrusion molding to produce lighting fixture lenses and reflectors. The reflectors are coated with basecoat, a metallic finish, and topcoat, this coating process is the primary source of air emissions. The facility previously held PTI 702-86 which was voided when coating usage was reduced.

At the time of the inspection, I met with Mr. Jim Ennis of A.L.P. Lighting Components, Inc. (A.L.P.) We conducted a complete site inspection and reviewed the operation of each process. There are three coating operations that are covered by PTI 24-08 as well as several other operations that fall under various Rule 201 exemptions.

The UV01 emission unit is an ultra-violet light curable spray coating operation that is automated. The UV coatings are topcoats that are applied over the metallic finish on lenses and reflectors. Parts are loaded onto a conveyor and enter the enclosed spray booth where an automated HVLP applicator applies the coating. The conveyor then passes through a section of the machine that exposes the coated parts to UV light which instantly cures the coating. The entire process is ventilated through fabric filters and HEPA filters prior to discharge through a vertical stack. The booth is equipped with a differential pressure gauge that is marked with the pressure at which the filters must be replaced. This process was not operating at the time of the inspection. Coating usage is logged by the booth operator using a measuring stick and entering the data on a log sheet.

The PNT01 emission unit consists of a Binks spray booth equipped with a manually operated HVLP spray applicator and Despatch curing oven. The booth contained two-part fabric filters that were in good condition. The booth is equipped with a differential pressure gauge that is marked with the pressure at which the filters must be replaced. This booth is also used to apply coatings to lenses and reflectors. Dedicated paint pots are kept at the booth and are filled from five-gallon buckets which are prepared and stored for use in a nearby flammable materials locker. Coating usage is logged by the booth operators as the paint pots are filled. This booth was not operating at the time of the inspection.

The PNT02 emission unit consists of a spray booth that was manufactured on-site and is equipped with a manually operated HVLP spray applicator and Harco curing oven. The booth contained two-part fabric filters that were in good condition. The booth is equipped with a differential pressure gauge that is marked with the pressure at which the filters must be replaced. This booth is also used to apply coatings to lenses and reflectors. Dedicated paint pots are kept at the booth and are filled from five-gallon buckets which are prepared and stored for use in a nearby flammable materials locker. Coating usage is logged by the booth operators as the paint pots are filled. This booth was not operating at the time of the inspection.

Paint booth log records are entered into a monthly spreadsheet by inventory control staff. That information is summarized on another table (copies of both tables attached), that is used to enter information into the monthly VOC emission calculation sheets that Mr. Ennis prepares. The VOC contents used in the calculations are from SDS sheets for each coating, solvent or reducer (example attached). VOC content for each paint mixture (coating, reducer, solvent) is tracked by mix number (see attached Paint Mixtures VOC Calculations sheet).

PTI 24-08 is a general permit for coating lines emitting up to ten tons per year of VOCs. VOC Emission limits in the PTI are:

- 2000 pounds per month, and 10 tons per year for each coating line based on a 12-month rolling time-period.
- 30 tons per year from all coating lines based on a 12-month rolling time-period.

Company records demonstrate actual emissions are well below these limits. The February 2018 rolling 12-month emissions were 3.214 tons for all three coating lines combined.

The plant also has several ancillary operations that either do not generate air emissions or fall under various Rule 201 exemptions. The vacuum metallizing processes at the facility apply a very thin coating of aluminum to the surface of parts mounted inside a chamber that has been evacuated. Very small amounts of metal are used, and all the metal is consumed in the process. No air emissions are generated.

There are numerous injection molding machines and extrusion machines that A.L.P. operates under Rule 286 for plastic processing equipment. An electrically heated annealing oven is used to flatten out warped plastic stock. Heat from the oven is vented to general in plant atmosphere but no emissions are expected.

A.L.P. has two laser cutting processes. A laser cutter used for cutting plastic/aluminum laminated film that operates open to the general in plant atmosphere (no exhaust system) and a laser cutter used to cut metal parts that is exhausted through a cannister type filter through a stack outside the plant. A.L.P. operates both units under the Rule 285(l) exemption.

A "mask" washer is used to remove accumulated coatings from masks used during the coating process. The mask washer is an enclosed unit that utilizes a high pressure, heated aqueous soap solution. It is equipped with a stack that exits the plant. A.L.P. operates the washer under the Rule 281(e) exemption for cleaning, washing, and drying equipment.

There is also a "Maxi Blaster" abrasive blasting booth/table that uses polycarbonate blasting media to remove the metallic coating from the racks that hold the parts in the vacuum metallizing process. The Maxi Blaster is vented through a cyclone and large cartridge filter dust collector. A.L.P. operates this unit under the R 285(l) exemption. Other processes at ALP operating under the R 285(l) exemption are cutting, sawing, grinding operations in the maintenance shop. These operations are all connected to an external dust collector.

The maintenance shop is equipped with a small (<10sq.ft.) cold cleaner utilizing mineral spirits. The cleaner is maintained by Vesco Oil. At the time of the inspection the lid of the cleaner was closed and there was no standing cleaning solvent in the basin. I provided Mr. Ennis with two "Cold Cleaner Operating Procedures" stickers.

Overall, the plant is neat and well-kept paint and waste storage was orderly and all containers were closed. Mr. Ennis stated that waste paint mixes are disposed of by Univar USA and disposal manifests are maintained. A.L.P. is a conditionally exempt small quantity generator according to Mr. Ennis. Due to their location on the shore of lake Michigan, the plant does not have sewer or septic for plant waste water, so it is collected and disposed of in totes.

As a result of the inspection it appears that ALP Lighting Components Inc. is in compliance with the Air Pollution Control Rules and PTI 24-08 at this time.

NAME  DATE 5-1-18 SUPERVISOR 