

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

B201433297

|   |                               |                           |
|---|-------------------------------|---------------------------|
| FACILITY: Day International, Inc. a Flint Group Company |                               | SRN / ID: B2014           |
| LOCATION: 111 Day Dr, THREE RIVERS                      |                               | DISTRICT: Kalamazoo       |
| CITY: THREE RIVERS                                      |                               | COUNTY: SAINT JOSEPH      |
| CONTACT: Joseph Doornbos, Director of Mfg               |                               | ACTIVITY DATE: 02/09/2016 |
| STAFF: Dennis Dunlap                                    | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MAJOR       |
| SUBJECT: Scheduled inspection.                          |                               |                           |
| RESOLVED COMPLAINTS:                                    |                               |                           |

This was not a scheduled inspection. Joe Doornbos and Jim Cotton are the contacts. The inspection brochure was handed out. The facility operates 24 hours/day, seven days per week. There are about 70 employees. The facility is covered by 40 CFR Part 63 Subpart OOOO. The facility manufactures lithographic printing blankets.

### Walkthrough

The boiler is rated at 20.9 MMBtu/hr. The date on the label is 8/2/79. The boiler has been added to the draft ROP because it is subject to the boiler MACT. The boiler is used to heat the building and for process operations. One of the functions is to add humidity to the spreading room. A new system is planned for humidity control that will not use the boiler.

The compounding area has hoods where dry ingredients are mixed. These hoods are connected to the FGFABFILTER dust collector. There are three mills (EUMILLING) in this area where the rubber compound is formed. The mills are connected to FGFABFILTER. This dust collector has a differential pressure gauge in the room which is read once per day. The dust collector was off when viewed because employees were on break. When employees returned the reading was 0.75. The dust collector is outside near the carbon adsorbers. The outlet is inspected daily for visible emissions although the ROP requires a weekly check.

After the rubber is formed it goes to the granulation area where it is ground into pieces and put in drums. Talc is added to the rubber before grinding. The grinder is connected to a dust collector that emits inside the room.

The cement area (EUCEMENTPREP) consists of two adjoining rooms. This area is connected to the Solvent Recovery System (SRS) and is part of the permanent total enclosure (PTE). There are 19 Ross mixers and one Winkworth 200 gallon mixer. The Ross mixers are 100 gallons with two of them 200 gallons. The ground rubber is added to the mixers. Each drum of ground rubber is about 50 gallons. Toluene is added and mixed with the rubber. Each mixer has a gauge to determine the amount of toluene to be added. There is also a gauge at the main toluene tank used to measure facility toluene usage. This gauge is read daily. The rubber material is mixed for 5-14 hours. When finished mixing the product is conveyed to drums. This material is 30-40% solids. In this room there are also heptane and ethanol cold cleaners.

The spreading room is in the PTE. There are four spreaders. Two of these are used to make the carcass (layers of fabric and bottom rubber layer) and two are used to apply the face rubber layer. There are three to four layers of fabric, but this can range to 2-5 layers. The carcass may be put in a hot room at 165 degrees F before the face layer is put on. Humidity is controlled in the spreader room. The ovens are monitored for the lower explosive limit. When making the face layer rubber is added to the spreaders and layer after layer is added to build up to the desired thickness. Talc may be added during this process. Ethanol is used to clean the spreaders. The rubber blankets spend about 20 minutes in the oven. The rubber may contain microspheres that break down when heat is added to make the rubber spongy. The spreaders are connected to the Dept. 65 dust collector. This dust collector is outside near FGFABFILTER and emits back inside the building.

The extruder room is part of the PTE. There is an extruder here which reclaims toluene from unused rubber. The toluene goes to the SRS and the rubber is taken to a landfill near Marshall. Steam from the

SRS steam recovery cycle also goes to this room where it goes through a condenser and to a water tank where toluene and alcohol are separated. The water portion containing alcohol goes through a small air stripper before going to the sanitary sewer. The air emissions from the air stripper goes to the SRS. Reclaimed toluene goes to a holding tank before going to the 4,500 gallon toluene tank. This tank has a gauge to record the amount reclaimed. Wastewater going to the city treatment plant is sampled at the main outlet for toluene. There is a limit of 17.5 ppm for toluene. The usual sampling result is 0.5-0.9 ppm.

The room for the toluene holding tank and the 4,500 gallon toluene tank is not connected to the PTE. They have conservation vents connected to the atmosphere.

There is an SVE system (EU-SVE and FGMACT\_G5) that is used to clean-up toluene from the ground. This work is contracted out. The amount taken from the ground is calculated. This amount is multiplied by the control efficiency for Rule 290 recordkeeping. Toluene vapors are routed to the SRS. Underground solvent tanks have been removed. The system consists of piping in the ground and tubes that run through a small trailer for analysis. The tubes are connected to the SRS. The system does not operate during winter months.

After the face layer is put on the rubber blankets they are hung up in the Festoon room. This room is part of the PTE. The blankets are hung to release more toluene and to release pressure. They are hung here 5-12 hours. From the festoon room the blankets are cleaned. The cleaner is connected to the Dept. 65 dust collector. The blankets are then put on a packer machine where release paper is put on the face side. The blankets go to a cure oven for 12 hours at 290 degrees F. There are three cure ovens that are used. The ovens are connected to the SRS. The Dept. 65 dust collector vents inside the building near cure ovens 1 and 2.

After curing the blankets are inspected and may be ground to the desired thickness. The grinding machine is connected to three outside dust collectors that vent inside the building. The blankets are then prepared for shipping. A label may be printed on each blanket by an ink jet printer. This uses gold, red, and black ink. There is a solvent for thinning and cleaning. The solvents are MEK and isopropanol. Usage is determined by inventory. This is a rule 290 group and VOC emissions are calculated monthly.

There is a red room where drums of rubber are stored to be processed. They are covered. This room is not part of the PTE.

The cold cleaner in the shop has been removed.

The SRS consists of three carbon adsorbers. The adsorption cycle is 180 minutes for each unit. The desorption cycle is 90 minutes. There is not a bypass for this system. If a problem occurs the manufacturing system shuts down. The carbon is analyzed periodically for efficiency. The carbon in this system has not been replaced since the system was installed. The inlet and outlet has a CEMs. The outlet CEMs has a yearly RATA and cylinder gas audits. Both CEMs are calibrated daily. There is a control panel for the SRS. This covers the diff. pressure readings for the north and south PTE, the inlet and outlet readings in ppm, and stage that each carbon adsorber is in. There are alarms for the PTE. These are set at 0.0075. When an alarm occurs the system is checked. There are alarms for the CEM outlet. These are set at 45, 100, and 7,000 ppm. Data stored includes hourly average PPM and pounds per hour. 40 CFR Part 63 Subpart OOOO may require three-hour rolling averages. This was going to be looked into by the facility. The 1-hour average for the outlet was reading 8 ppm. The inlet was reading 2,461 ppm.

During the inspection the north PTE monitor was reading 0.6.

### Recordkeeping

The recordkeeping for the MACT OOOO from Nov. 2014 to November 2015 appeared to be in compliance. Methanol (from the ethanol) and heptane from fastbond are added in with toluene. They are using the control efficiency from the 2015 stack test (99.6%). Toluene hauled away as hazardous waste may be subtracted. The MACT recordkeeping is based on a 12-month rolling average. In general,

each month the HAP used in the coating is determined minus the control efficiency (99.6%). This is added to the previous 11-months and divided by the solids used in the same time period.

The overall VOC for the facility is calculated as a 12-month rolling average. This was 59.6 tons from Nov. 2014 to Nov. 2015 (permit limit 175 tpy). For the SRS VOC emissions, they are using the difference between toluene recovered and toluene used. They are keeping track of the Rule 290 groups.

They have a MAP/SSM plan for the SRS.

The toluene is 99% pure according to the MSDS. The specific gravity is 0.87 (7.2 lbs/gal).

NAME Dennis Dunlap DATE 2/13/16 SUPERVISOR MD 2/14/16