

M4639  
MANILA

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

M463929540

FACILITY: POOF-SLINKY INC		SRN / ID: M4639
LOCATION: 45605 HELM ST, PLYMOUTH		DISTRICT: Detroit
CITY: PLYMOUTH		COUNTY: WAYNE
CONTACT: Mike Schmitt, Plant Manager		ACTIVITY DATE: 05/27/2015
STAFF: Todd Zynda	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: FY 2015 Targeted Inspection		
RESOLVED COMPLAINTS:		

REASON FOR INSPECTION: Targeted Inspection

INSPECTED BY: Todd Zynda, AQD

PERSONNEL PRESENT: Mike Schmitt, Plant Manager

FACILITY PHONE NUMBER: 734-454-9186

FACILITY FAX NUMBER: 734-454-0687

FACILITY WEBSITE: poof-slinky.com

### FACILITY BACKGROUND

Poof-Slinky, LLC. (Poof) produces foam balls for toys and recreational use. The building that houses manufacturing and production is located at 45605 Helm Street, Plymouth, Michigan. Property surrounding the manufacturing building consists of commercial and light industrial establishments. The nearest residential neighborhood is located on Five Mile Road, approximately 0.35 miles to northwest of the facility. Additional office and warehouse space is located at 4250 Haggerty Road, Canton, Michigan.

The facility operates one production shift Monday through Thursday. Hours of operation are 6:00 AM to 4:30 PM daily. Poof currently has 25 employees, but adds temporary employees as needed when production demand increases.

### PROCESS OVERVIEW

The facility has two foam ball production lines (big ball line and mini ball line) and a manual touch-up ("dotting") paint booth. The big ball production line operates as follows. Molds for balls are installed on a conveyor and then sprayed with a water-based mold release compound around the relief hole of the mold. The inside of the open molds are painted various colors in a 4-stage automatic paint booth and then run through an infra-red curing oven, which heats the mold to 230 degrees Fahrenheit (°F). The heated molds then pass through an automated foam pouring station. After the foam mixture (polyol and Methylene diphenyl diisocyanate [MDI]) is added, the molds are closed and passed through curing oven at 150 to 175 °F. During curing the foam forms into the mold and the paint that was added to the molds adheres to the balls. Following curing, the balls are unloaded. Select foam balls may be "dotted" or stenciled in a paint booth located off the production line. Particulate emissions from the paint booths are controlled with dry filters and exhausted through stacks.

The mini ball line is operated in a similar fashion, except the line is set up as a rotary or carousel production line, rather than a continuous loop conveyor.

Following production, the balls are inspected, packaged in plastic wrap, and prepared for shipping.

### COMPLAINT/COMPLIANCE HISTORY

There have been no complaints for this facility.

The facility was inspected on June 28, 2004 and found to be in compliance with permit conditions and applicable rules and regulations.

The inspection conducted in December 2008 determined the facility was in noncompliance. The following items were identified to be in noncompliance at the time of the inspection: the operation of the rotary mini-ball line

without a permit; the paint usage greater than permit limits; the hours of operation greater than permit limits; and the exhaust stack requirements. The facility provided a letter with clarification or responses to the items identified in the violation. The letter clarified that the gallons of paint used per color were within limits, clarified that the exhaust stacks have louvered caps and are operated with the louvers open, and clarified the hours of operation. The facility response also indicated that the mini-ball line was exempt from Rule 201 due to exemptions in Rule 290. The MDEQ did not provide a response to the letter.

On August 14, 2012 an inspection was conducted to address outstanding violations and to conduct a compliance inspection. As a result of the inspection, the facility submitted a General Permit to install (PTI) application for a coating line. Wayne County Installation Permits C-9214 through C-9216 were voided and a general permit for a coating line (PTI 184-12) was issued on November 29, 2012.

## **OUTSTANDING CONSENT ORDERS**

None

## **OUTSTANDING LOVs**

None

## **INSPECTION NARRATIVE**

On May 27, 2015 the Michigan Department of Environmental Quality (MDEQ) Air Quality Division (AQD) inspector, Mr. Todd Zynda, conducted an unannounced level 2 inspection of Poof located at 45605 Helm Street, Plymouth, Michigan. During the inspection, Mr. Mike Schmitt, Plant Manager, provided information and a tour of facility operations relating to air quality permits.

The inspection was conducted to determine the facility's compliance with the Natural Resources and Environmental Protection Act (NREPA), Act 451, Part 55, and PTI 184-12. Poof is permitted for the operation of two coating lines.

At 10:30 AM, AQD arrived onsite and performed outside observations. Visible emissions were not observed at the time of the inspection. At 10:38 AM AQD entered the facility, stated the purpose for the inspection, and was greeted by Mr. Schmitt. During the opening meeting the facility operations and PTI 184-12 conditions were discussed. According to Mr. Schmitt, Poof-Slinky was recently acquired by Alex Brands. Mr. Schmitt stated that operations at the Plymouth location have not changed with the acquisition and the name Poof Slinky is still used for all manufactured products.

Following a discussion of operation status and records required to demonstrate compliance, Mr. Schmitt provided a tour of the facility. The tour began at the main production line (big-ball line). The automated paint booth, paint curing oven, foam pouring station, and foam curing oven were observed and were operating in good condition. A detailed description of the line is discussed above in "Process Overview". According to Mr. Schmitt, filters for the automated paint booths are changed every three hours during each shift.

The tour continued inside, where the paint storage area was observed. Paint is stored in 55 gallon drums and 200 gallon totes. Additionally, the waste material storage area was observed. Waste paint and water were properly stored in closed containers. The mini-ball rotary line was also observed. The mini-ball line operates in a similar fashion as the big ball line. The process steps are the same, with the exception that the line operates in a carousel or rotary manner.

Following observation of inside operations, the tour went outside for observation of the exhaust stacks and surrounding property. The stacks appeared to be in good condition. The exhaust stacks for paint operations are discharged unobstructed vertically to ambient air.

The tour concluded at the manual touch-up ("dotting") paint booth. According to Mr. Schmitt, the dotting paint booth has not been in operation for several years. Currently the area surrounding the dotting paint booth is used for storage.

Following the inspection walk through, a discussion was held regarding the records requested. The VOC content varies depending on the paint used. Currently, the facility uses up to 12 different paints. It was agreed that since

VOC emissions are likely significantly less than permit limits, the facility would calculate VOC emissions using the "worst case" paint VOC content. Mr. Schmitt agreed to compile and submit the records within seven business days. At this time, Mr. Schmitt provided the Material Safety Data Sheet (MSDS) for the mold release agent. The MSDS for the mold release agent indicate a volatile organic compound (VOC) content of less than 0.01 percent by weight (negligible VOCs).

Later in the day, on May 27, 2015, Mr. Schmitt provided the requested records via email (see attachment).

## APPLICABLE RULES/PERMIT CONDITIONS

### Permit to Install 184-12

Permit conditions relating to a thermal oxidizer or catalytic oxidizer are not applicable as the facility does not operate either type of control equipment. For brevity, permit conditions have been paraphrased.

### FG-COATING

SC I. 1. and 2. **IN COMPLIANCE.** VOC emissions shall not exceed 2,000 pounds per calendar month or 10 tons per years on a 12-month rolling basis. The facility calculates VOC emissions using the paint use per shift along with the "worst case" VOC content (0.6 pound per gallon – Teal Barrier Coat). VOC emissions are significantly less than emission limits. The maximum monthly VOC from January 1, 2013 through April 30, 2015 was 120.96 pounds. The maximum 12-month rolling VOC emission was 1388 pounds (0.69 tons).

SC III. 1. **IN COMPLIANCE.** Shall capture all purge/clean-up solvents and waste coatings from all coating applicators used. Shall store these materials in closed containers and shall dispose of them in an acceptable manner. During the inspection it appeared that all waste materials area properly captured and stored in closed containers.

SC IV. 1. **IN COMPLIANCE.** Shall equip and maintain high volume-low pressure (HVLP) spray applicators or comparable technology with equivalent transfer efficiency. During the inspection the paint applicators appeared to meet this permit condition.

SC IV. 2. **IN COMPLIANCE.** Shall not operate any spray application unless particulate control (dry filters or water curtain) is installed, maintained and operated in a satisfactory manner. During the inspection, dry filters were in place. According to Mr. Schmitt, the filters are changed out every three hours during a working shift.

SC V. 1. **NOT APPLICABLE.** Upon AQD request, verification of VOC emissions and VOC content of any coating. At this time, AQD has not requested any testing.

SC VI. 3. **IN COMPLIANCE.** Shall keep the following information on a monthly basis.

- a. Purchase orders and invoices for all coatings, reducers, and purge clean-up solvents.
- b. VOC content, in pounds per gallon of each coating, reducer and purge/clean-up solvent used.
- c. Gallons of each coating, reducer and purge clean-up solvent used and reclaimed.
- d. VOC mass emission calculations determining the monthly emission rate for each coating line in tons per calendar month.
- e. VOC mass emission calculations determining the annual emission rate for each coating line, in tons per 12-month rolling time period.

The company sufficiently maintains records to meet these requirements. The VOC emission calculations and the MSDS for each coating were provided via email on May 27, 2015.

SC VI. 4. **IN COMPLIANCE.** Shall maintain a current listing from the manufacturer of the chemical composition of each coating, including the weight percent of each component. The MSDS for each coating was provided.

SC VIII. 1. **IN COMPLIANCE.** Exhaust gases from FG-COATING shall be discharged unobstructed vertically upwards to the ambient air. The stacks associated with the coating lines appear to meet this requirement.

SC IX. **IN COMPLIANCE.** Shall not replace or modify any portion of FG-COATING, including control equipment or coatings, nor install additional coating line unless the general permit is updated, the permit conditions are

continued to be met, and records are maintained. At this time, the facility has not made any modification since PTI 184-12 was issued.

### FG-SOURCE

SC I. 1. **IN COMPLIANCE.** VOC emissions shall not exceed 30 tons per year on a 12-month rolling basis. As described above under FG-COATING, SC I, the facility is significantly less than 30 tons per year. There are no other VOC emission units identified at the facility besides FG-COATING.

SC VI. 1. **IN COMPLIANCE.** Shall keep VOC mass emission calculations, on a monthly basis and the annual emission rate in tons per 12-month rolling time period. The facility maintains the required calculations as described above.

### **Permit to Install Exempt Equipment**

#### Foam Injection Equipment

The foam injection equipment on the big ball line and mini ball line are exempt from permit to install (PTI) requirements under the following Rule.

R336.1286(e): "Permit to install does not apply to...reaction injection molding (open or closed mold) and slabstock/casting equipment."

### **National Emission Standards for Hazardous Air Pollutants (NESHAPs)**

The facility is subject to 40 Code of Federal Regulations (CFR) Part 63, Subpart OOOOOO for the Flexible Polyurethane Foam Production and Fabrication Industry. However, AQD currently is not the delegated authority for this regulation. Therefore, Subpart OOOOOO was not evaluated.

### **APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS:**

Not applicable. All lots are paved.

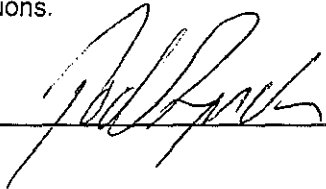
### **MAERS REPORT REVIEW:**

The facility is not required to submit Michigan Air Emissions Reporting System (MAERS).

### **FINAL COMPLIANCE DETERMINATION:**

At this time, this facility appears to be in compliance with PTI 184-12 and federal and state air quality regulations.

NAME



DATE

5/28/15

SUPERVISOR

JK