



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

DATE: APR 19 2019

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Innocor Foam Technologies, LLC, West Chicago, Illinois

FROM: Linda H. Rosen, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Chief
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Innocor Foam Technologies, LLC

Facility Location: 1750 West Downs Drive, West Chicago, Illinois

Date of Inspection: February 21, 2019

EPA Inspector(s):

1. Linda H. Rosen, Environmental Engineer
2. Jason Schenandoah, Environmental Engineer

Other Attendees

1. Lissette Diaz, Environmental, Health and Safety Manager, Innocor
2. Mark Fernandez, Plant Manager, Innocor
3. Mark DeCoteau, Regional Operations Director, Innocor
4. Jeremy Kessler, Pour Line Manager, Innocor (during tour)

Contact Email Address: ldiaz@innocorinc.com

Purpose of Inspection: to inspect Innocor in relation to Clean Air Act requirements.

Facility Type: Polyurethane foam production

Arrival Time: 10:00 am

Departure Time: 1:15 pm

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Credentials Presented
- ☒ CBI warning to facility provided

The following information was obtained verbally from representatives of Innocor unless otherwise noted.

Company Ownership: In 2014, Innocor was formed by a merger of Sleep Innovations and Flex Foam. In 2016, Innocor was sold to Bane Capital. Nationwide there are 22 facilities with a corporate headquarters in New Jersey, 1600 employees and three business units.

Process Description:

The facility makes two types of foam, conventional and memory (visco elastic) foam. Products made from the foam include: (1) short bun material (blocks of foam) which are sold to other manufacturers; (2) toppers for mattresses for retail sale and assembled toppers for retail, original equipment manufacturing (OEM) or internal use; (3) mattresses (retail); (4) specialty items for OEM; and (5) cluster pillows which are filled with ground up foam.

Raw material chemicals come in mostly by rail and truck (90 percent) and are transferred to the two tank farms (1 and 2) but some materials are received in totes (10 percent). Ancillary raw materials come in by super sacs (e.g., gel beads). Raw materials consist of polyols, specific types of polyols for various properties, methylene diphenyl diisocyanate (MDI), toluene diisocyanate (TDI) and other additives. MDI is used on in memory foam and TDI is used for conventional foam. About 45 different chemicals come in with 5 being the prominent ones used and the rest additives. The chemicals are mixed in the trough or pour head and the foam starts expanding as it moves down the line. There is no air pollution control on the pour line. Sections of the foam are cut off by specifications determined by final product or customer demand.

Memory foam needs two days to cool on racks. Conventional foam is cooled on tables in rooms. Cooling can be sped up on vacuum tables that pull air through the bun. The air is routed to a baghouse.

The foam can be further processed depending on the final product to be achieved. Two water-based adhesives are used to put layers together: one is rolled on (95 percent) and a second is sprayed on for OEM (5 percent).

Building 1 (1850) contains the pour line, tank farm 1, and tank farm 2. Building 2 (1750) contains storage, cooling, curing, cutting and gluing to create subassembly products shipped out of Building 2. Building 3 (1700) is mattress assembly and OEM.

Staff Interview: The facility operates five days per week and operates the pour line only during the first shift. Adhesive is applied mostly during the first two shifts and a small amount during the third shift. Prepping occurs during the third shift.

The facility calculates TDI HAP emissions using emission factors based on production. They use an outside consultant, GHD, for this purpose. Production is measured in lbs of chemicals poured or board feet produced.

The TDI monitor has a yellow visual alarm set to 1/2 of the PEL and a red visual alarm set at 4/5 of the PEL.

For cleaning the facility uses simple green. They did not know if any of the adhesives have been tested by Method 24.

The facility has recently undergone a \$ 2.5 million expansion to enable foam and mattresses to be mechanically moved around the facility. The facility stated this could increase production by making everything move faster.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations:

We walked through Building 1 and observed the two tank farms inside the building. We met Jeremy Kesler the pour line manager. There were two TDI tanks, one 30,000 gallons and one 6,000 gallons; three MDI tanks, two 10,000 gallons and one 6,000 gallons; base polyol tanks; and various additive tanks. On the TDI tank, they load out through the bottom and load in through the top near the middle of the tank. We observed the pour line even though it was not in operation at the time we observed it.

We observed Building 2 where drying and curing occurs. There are four glue stations at the facility, two in this building and two in Building 3.

We observed Building 3 where OEM occurs and also medical mattress assembly. A firesock is spray glued onto the medical mattress. We also observed roll coating in Building 3.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

1. West Manufacturing Process Flow (in EPA files)
2. List of Pourline Chemicals (in CBI files)
3. 2017 Annual Emissions Report

CLOSING CONFERENCE

Requested documents:

We indicated to the facility that we would request records either formally through a Section 114 Request or through an email.

Concerns: I indicated that I was not clear as to whether submerged loading was occurring at the TDI tank.

SIGNATURES

Report Author: _____

Date: _____

Section Chief: _____

Date: _____

Facility Name: Innocor Foam Technologies, LLC
Facility Location: 1750 West Downs Drive, West Chicago, Illinois
Date of Inspection: February 21, 2019

APPENDICES AND ATTACHMENTS

- I. Media Appendix

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Jason Schenandoah	2. Date(s) of Inspection: February 21, 2019
3. Company/Facility Name: Innocor Foam Technologies, LLC	4. Street Address, City, State: 1750 West Downs Drive, West Chicago, Illinois
5. Number of Images: 7	6. Archival Record Location: CD-R labelled "Innocor Inspection Photos, February 21, 2019, West Chicago, Illinois"

Image Number	File Name	Date and Time (incl. time zone and DST)	Description of Image
1	DC_2043.JPG	2/21/2019 11:27 am	Large TDI Tank TNK-0012 specifications (20K is a typo, should be 30K)
2	DC_2044.JPG	2/21/2019 (no time)	This photo was accidentally not saved and is not available to view
3	DC_2045.JPG	2/21/2019 12:00 pm	Large TDI Tank TNK-0012
4	DC_2046.JPG	2/21/2019 12:04 pm	TDI monitor in large TDI tank room, farm 2
5	DC_2047.JPG	2/21/2019 12:05 pm	TDI monitor in large TDI tank room, farm 2
6	DC_2048.JPG	2/21/2019 12:06 pm	TDI monitor in small TDI tank room, farm 1
7	DC_2049.JPG	2/21/2019 12:10 pm	TDI monitor at cut off saw
8	DC_2050.JPG	2/21/2019 12:29 pm	Employee spraying adhesive in OEM