



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

DATE: APR 16 2019

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
FXI Inc., Fort Wayne, Indiana

FROM: Jason Schenandoah, Environmental Engineer
AECAB (IL/IN)

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

TO: File

BASIC INFORMATION

Facility Name: FXI Inc.

Facility Location: 3005 Commercial Rd., Fort Wayne, Indiana

Date of Inspection: March 19, 2019

EPA Inspector(s):

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

Other Attendees

1. Justin Bruce, Engineering and Maintenance Manager, FXI Inc.
2. Lee McHaney, Maintenance Supervisor, FXI Inc.
3. Joseph A. Cichy, Plant Manager, FXI Inc.
4. Chris Webb, Regional Manager, FXI Inc.

Contact Email Address: cwebb@fxi.com; jbruce@fxi.com; scarlson@fxi.com

Purpose of Inspection: To determine compliance with the Clean Air Act

Facility Type: Polyurethane foam production

Arrival Time: 9:00 am

Departure Time: 12:15 pm

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Credentials Presented
- ☒ CBI warning to facility provided

The following information was obtained verbally from FXI Inc. (FXI) personnel unless otherwise noted.

Process Description:

Raw materials at the facility are brought in by rail and tanker truck and pumped to storage tanks throughout the facility. Raw materials consist of polyols, diisocyanates, amines, water, dyes, and other additives. Raw materials are pumped to an emulsifier and blended right before depositing into a trough. The foam moves down the trough as the foam forms. Sections of the foam are cut off by specifications determined by final product or customer demand. The foam can be then further processed depending on the final product to be achieved. Foam may be sent to a flame laminator in which substrates such as vinyl, aluminum, and woven nets can be melted to the foam. Foam can also be sent to a skinner in which nip rollers heated with hot oil will heat the foam and a laminate is then adhered to the foam. Foam may also be sent to felt presses. At the felt presses, heat and pressure are applied to the foam to make the foam more adsorbent. The foam may go to zappers as well. In the zipper process, mini explosions blow out the cell walls of the foam, called reticulation, to make filters. The foam can also go to quench reticulation which uses a caustic bath to reticulate the foam and make the foam softer. Lastly, the final process that the foam can undergo is at a looper. The looper will connect the two ends of 200 ft rolls and slice it to create thin foam sheet rolls. Finished product is then packaged and shipped out via truck.

Staff Interview: Process heat is used at the railcar and trucker unloading stations to prevent freezing of certain raw materials. A nitrogen blanket is pumped on top of tanker car to push product out. Most storage tanks vent to atmosphere with the exception of tanks containing Toluene Diisocyanate (TDI) which are controlled by carbon beds. Pumps for the TDI tanks are sealed and magnetically driven.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations:

Gas vapor was seen to rise from the hoses and the ground when a tanker truck and railcar were being unloaded. FXI personnel said the vapor seen was process steam.

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

Appendix A contains the log of photos taken at the facility.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

1. Checklist form for FXI's internal inspection checks on pumps used for TDI.

SIGNATURES

Report Author:  Date: 4/16/2019

Section Chief:  Date: 4/16/19

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APPENDICES AND ATTACHMENTS

- I. Appendix A: Digital Image Log

Facility Name: FXI Inc.

Facility Location: 3005 Commercial Rd., Fort Wayne, Indiana

Date of Inspection: March 19, 2019

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Linda Rosen	2. Date(s) of Inspection: March 19, 2019
3. Company/Facility Name: FXI Inc.	4. Street Address, City, State: 3005 Commercial Rd., Fort Wayne, Indiana
5. Number of Images: 17	6. Archival Record Location: CD-R labeled as "FXI, Inc. Inspection photos; 3/19/2019; 3005 Commercial Rd; Fort Wayne, IN"

Image Number	File Name	Date and Time (incl. time zone and DST)	Latitude and Longitude	Description of Image
1	P3190001.JPG	3/19/2019 8:57		Vapors from railcar unloading station
2	P3190002.JPG	3/19/2019 8:58		Vapors from tanker truck unloading station
3	P3190003.JPG	3/19/2019 9:04		Tanker truck unloading
4	P3190004.JPG	3/19/2019 9:06		Vapors from tanker truck and railcar unloading station
5	P3190005.JPG	3/19/2019 10:27		Foam testing stations
6	P3190006.JPG	3/19/2019 10:29		Foam cutter
7	P3190007.JPG	3/19/2019 10:35		Methylene diphenyl storage tank
8	P3190008.JPG	3/19/2019 10:38		TDI Tank
9	P3190009.JPG	3/19/2019 10:41		Run tanks
10	P3190010.JPG	3/19/2019 10:47		Emulsifier and dispenser
11	P3190011.JPG	3/19/2019 10:47		TDI monitor
12	P3190012.JPG	3/19/2019 11:09		Flame laminator
13	P3190013.JPG	3/19/2019 11:13		Mentor cleaning solvent label
14	P3190014.JPG	3/19/2019 11:24		Carbon bed canister
15	P3190015.JPG	3/19/2019 11:24		Date of change on carbon bed canister
16	P3190016.JPG	3/19/2019 11:33		Foam coming out of trough to cutter
17	P3190017.JPG	3/19/2019 11:36		Foam mixture pouring from emulsifier into the trough before curing