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

N622438793

FACILITY: MEYERS BOAT CO		**SRN / ID:** N6224
LOCATION: 534 S CENTER ST, ADRIAN		**DISTRICT:** Jackson
CITY: ADRIAN		**COUNTY:** LENAWEE
CONTACT: Bill Brown , President		**ACTIVITY DATE:** 03/02/2017
STAFF: Mike Kovalchick	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Compliance inspection. No findings.		
RESOLVED COMPLAINTS:		

Minor Source

Facility Contacts

Bill Brown: President.

ph 800-247-6275 billbrown12@comcast.net

Website: http://www.meyersboat.com/ http://www.weaverjack.com/ http://www.mascocabinetry.com/

Purpose

On March 2, 2017, I conducted an unannounced compliance inspection of the Meyers Boat Company (Company) located in Adrian, Michigan in Lenawee County. The purpose of the inspection was to determine the facility's compliance status with the applicable federal and state air pollution regulations, particularly Michigan Act 451 Part 55, Air Pollution Control Act and administrative rules and their Permit to Install (PTI) # 588-96.

Facility Location

The facility is located in a very large complex of old commercial/industrial buildings surrounded by a residentia area in Adrian. See aerial photo dated April, 2016. The complex of buildings is owned by a Mr. Jim Brown. The Meyers Boat Company, Weaver Jack Corporation and Masco Builder Cabinet Group all have operations in this complex of buildings. They lease space from the owner. Other companies lease storage space there such as Anderson Development Company and Ervin Industries.

Facility Background

This Company received a Permit for a sailboat manufacturing process on February 21, 1997.

It was for two 100 HP gas fired boilers that produced steam for expandable polystyrene boat hull molding.

From the permit application:

"Boats are constructed from an inner and outer plastic shell with a polystryrene inner lining. There is no surface coating involved in this process. The inner and outer shells are formed by heating plastic sheets and vacuum forming the desired shape over a mold. The polystyrene inner lining is created by steam heating expanded polystyrene beads. Emissions from this process are primarily pentanes contained in the beads"

Expected usage of polystyrene beads = 24,600 lbs/year

Polystyrene bead usage (average) =38 lbs/hour

*Beads contain 3% by weight Cyclopentane =38 lbs/hr * .03=1.14 lbs/hr"*

"A rule 230 review was not performed because there is no specific in plant exhaust system and relatively high screening level 17500 ug/m^3 for cyclopentane. Boilers exempt based on size."

"VOC emissions are negligible and result only from the polystyrene expansion process in which pentanes are released into the general plant environment. Facility can be characterized as a "seasonal" operation, only operating 4 months per year."

The Company was last inspected on March 30, 2011.

Regulatory Applicability

PTI 588-96 is applicable to the polystyrene sail boat manufacturing process.

The aluminum boat building area is where the Company builds aluminum hulled boats, canoes and Jon boats. They receive coils of aluminum which they cut, grind and weld over frames to construct the boats. These operations are exempt from permitting by Rule 285(l)(vi)(B).

Paint booth (exempt per Rule 287(c)) for painting certain parts of the aluminum boats.

The one remaining 100 HP gas fired boiler is exempt per Rule (Rule 282(b)(i)) and not subject any federal regulations due to its relatively small size.

Arrival & Facility Contact

Visible emissions or odors were not observed upon my approach to the Company's facility. I arrived at 9:30 AM, proceeded to the facility office to request access for an inspection, provided my identification and spoke with Bill Brown (BB) who is manager for the facility and the son of the owner. I informed him of my intent to conduct a facility inspection and to review the various records as necessary. BB extended his full cooperation to me during the inspection and fully addressed all my questions.

Pre-Inspection Meeting

BB outlined that the Company has 11 full time employees and plant is operating 8 hours a day, 5 days a week this time of year. He indicated that the polystyrene bead sail boat process had not been active since the summer of 2015. They have a lot of excess inventory storage at the facility and it is quite possible that they will not operate the line in 2017 unless orders are received for the large hull variety of sailboat they make.

BB explained that his father owns the large complex of building/interconnected warehouses. Meyers Boat Company (owned by his father), the Weaver Jack Corporation (owned by his father), and the Masco Builders Cabinet Group all have operations there along with other tenants that simply use the buildings for storage. He indicated that Masco is small operation that does R&D work. They saw/cut wood, use glue and varnish to make cabinet displays for trade shows.

BB indicated that aluminum boat manufacturing process and the associated paint booth are currently active.

Onsite Inspection

BB then conducted a tour of the facility.

We first walked to where the boilers were located. To get there, we went through a series of dark warehouses that had no heat using a flash light. See picture of the 100 HP natural gas fired boiler. It was the only boiler present. Evidently, one of the boilers had been removed since the last inspection was conducted in 2011. The remaining boiler was in poor shape (built in 1972) and it appeared to have not been used recently. It sits directly adjacent to the polystyrene bead process.

Next, we looked at the four sail boat forming machines. See attached picture of one of them. As previously mentioned, they had not been used in a couple of years. They sold approximately 120 sailboats in 2016. A large inventory of sail boat hauls remain. They can produce 5 to 10 boats in a single day so only brief periods of manufacturing are needed to meet current demand.

The process was described as follows in a previous inspection report which appears to be still current:

"According to Mr. Brown the company preexpands the polystyrene beads on Monday and allows them to "age for 1 to 2 days, depending on the boat style they will be making. On Wednesday they mold the sail boats. Typically they can create 10 to 20 boats a day. Again depending on the size of the sail boat, approximately 50(pounds of beads are used per boat. Therefore their VOC limits are well below their 25 ton per year limit identifiec in Special Condition (SC) No. 13. Prior to adding the beads the molds are oiled using Dextron oil (a mineral oil, and then fitted with metal parts to strengthen the hull and for the mast and keel. The beads are then added tc the lower mold and the upper mold is then attached to the lower. High pressure steam is then injected into the molds expanding the beads to fill the void. The forms are then trimmed and moved to the warehouse to finish

curing. After curing the forms are covered with a colored plastic sheet (its outer shell) and placed into a therma vacuum form."

Next, we visited the aluminum boat manufacturing area. See attached picture. In this area the Company builds aluminum hulled boats. They receive coils of aluminum which they cut, grind and weld over frames to construc the boats. Any minor particulate emissions generated remain in the in-plant environment.

A paint booth is located in the same building. See attached picture. They do some painting of the aluminum boats and some parts from the adjacent Weaver Jack Company. The operation is small. (I estimated about 2C gallons per month.) BB indicated that they change the filters once a week although the filter in place looked to be in rather poor shape. The exhaust goes out laterally through the paint booth wall and then outside to a stack See attached picture. Some overspray was noted on the wall of the plant since the exhaust stack vents sideways at the top back towards the building. This location is a long way from any possible receptor so low possibility that the paint overspray could land on a vehicle etc.

Next, we visited the Weaver Jack production area since it is contiguous to the Meyers production areas and under common ownership. They make very large jacks for armored vehicles. This area contained one old paint booth that is now used as a storage room. There is also one cold cleaner. See attached picture. The cold cleaner was empty with the lid closed. They use only mineral spirits in it. There appears to be no other processes that general emissions and nothing is exhausted directly outside.

Recordkeeping/Permit Requirements Review

During the pre-inspection meeting with BB, I reviewed paint records for 2016 by looking at a file that contained purchase invoices. I estimated that about 20 gallons per month of coating were being bought/used. (Mostly described as Olive Drab.) They used about 275 gallons of solvent (toluene) in 2016. MSDS's were also available but not examined as the paint booth is considered exempt per Rule 287 (2) (c) as it was clear that much less than 200 gallons per month were being used even considering that some of the paint is actually as result of usage by the Weaver Jack Company as any painting in that operation is done in the Meyers paint booth.

Polystyrene bead records were not examined since it had been almost 2 years since that operation has been active. I did take a look at the MSDS for the beads. It showed that the polystyrene beads contained between 2.5% to 7.5% pentane compounds. Note that the original permit application listed the pentane compound content as 3%.

The permit contains the following substantive conditions:

Polystyrene bead process shall not exceed 5.7 pounds per hour nor 25 tons per year.

Material usage rates, in pounds for the polystyrene bead expansion process: 35 pounds per hour, 306,000 pounds per year. 2 years of usage records must be kept.

It is evident that the Company is currently in compliance with all these requirements since they are not operating this process. However, since the polystyrene beads potentially contains more pentane compounds that what was described in the original process, it possible that the Company could exceed permitted values if production is restarted and proceeds at a high level. BB indicated that the facility does not have any polystyrene beads on hand as they can't be stored for any length of time as the pentane evaporates from the beads.

Post-Inspection Meeting

I held a brief post-inspection meeting with BB. I indicated that the facility appeared to be in compliance. I did note that the Company needs to do a better job at changing the filter on the paint booth. I thanked BB for his time and cooperation, and I departed the facility at approximately 10:25 AM.

Compliance Summary

Based upon the facility inspection, review of the records, and review of applicable requirements, the Company is in full compliance with their PTI. It should be noted that if the Company ever returns to full production, there potentially could be issues meeting their VOC emissions limits since the amount of pentane contained in the polystyrene beads is higher than was described in their original permit application.

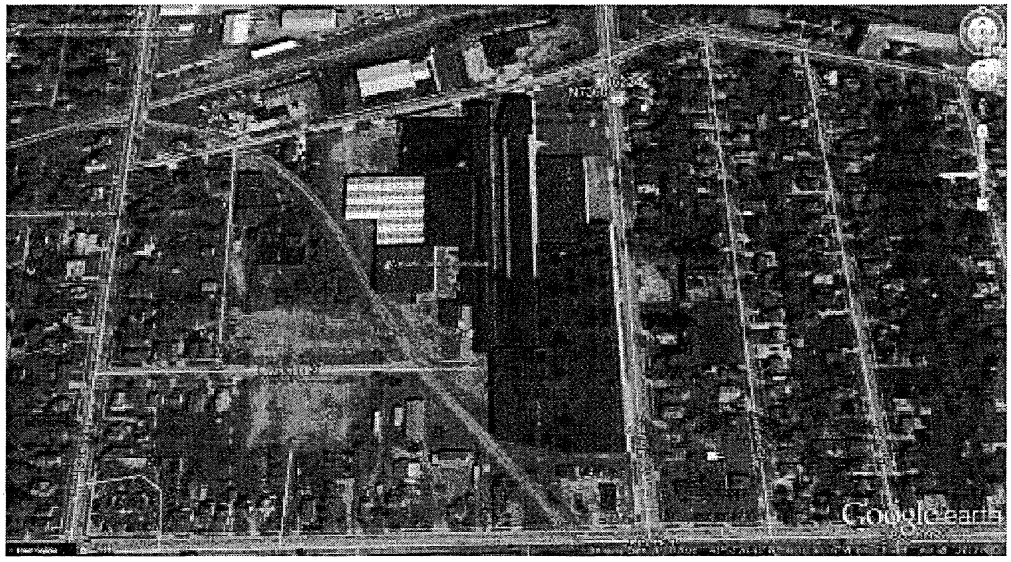

Image 1(aerial photo) : Aerial photos of the Meyers Boat Company and associated warehouses take on April, 2016

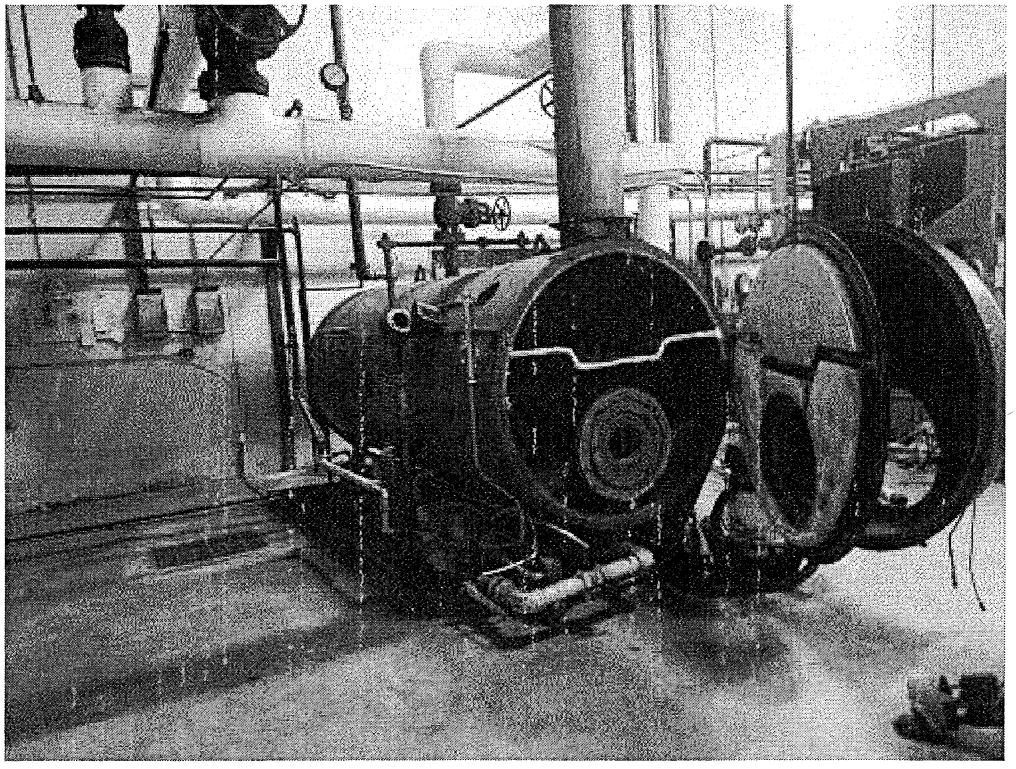

Image 2(Boiler) : 100 HP natural gas fired boiler built in 1972.

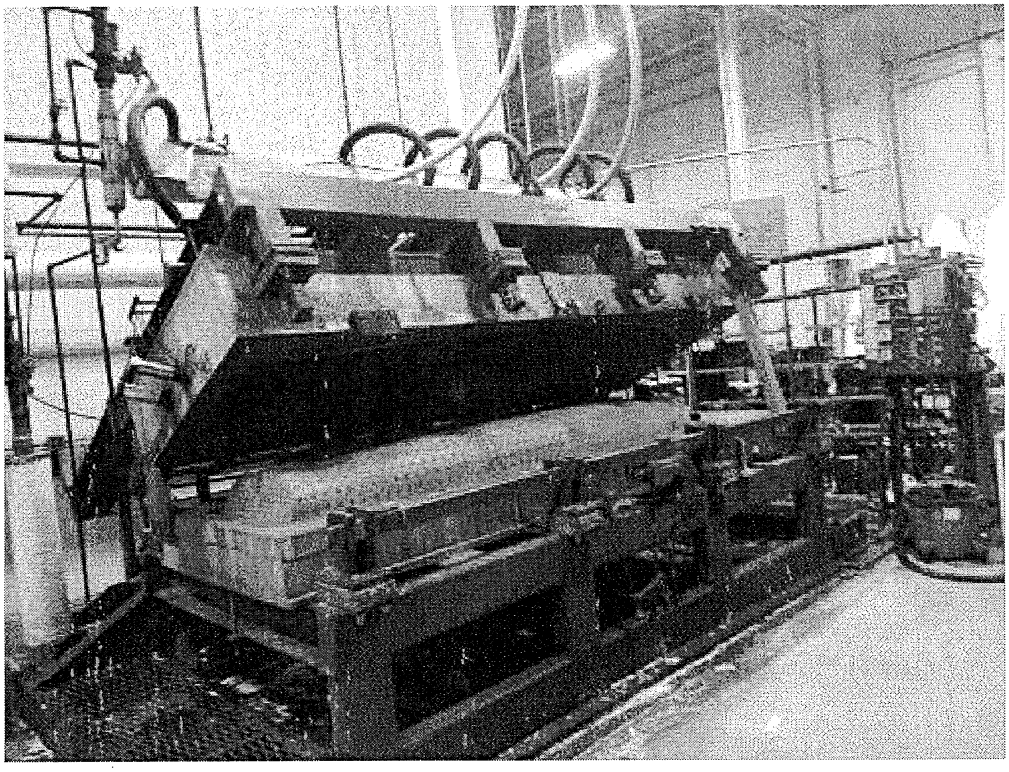

Image 3(Press) : Polystyrene bead boat haul process.

Image 4(aluminum) : Aluminum boat manufacturing area

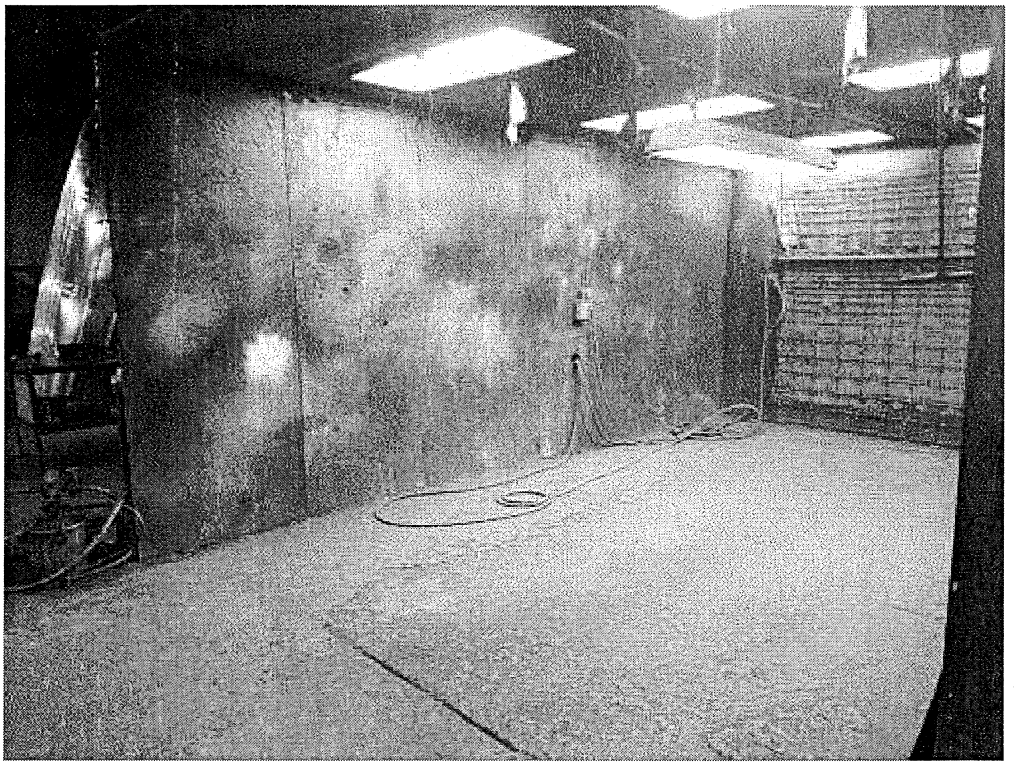

Image 5(Paint booth) : Paint booth in the aluminum manufacturing building.

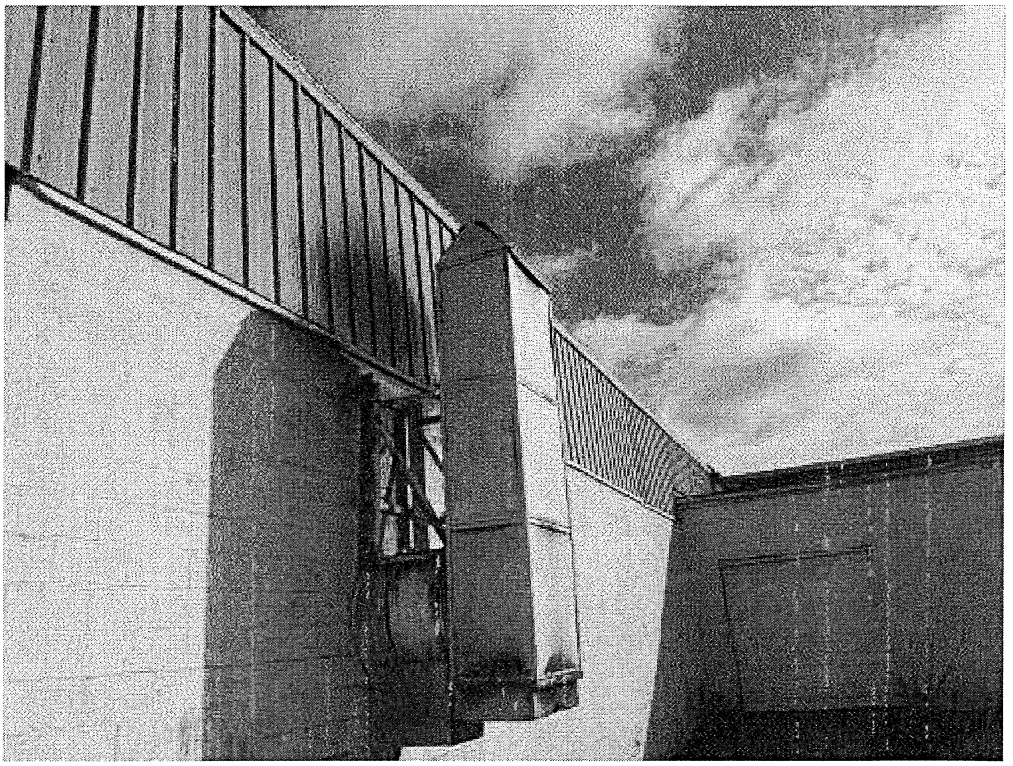

Image 6(paint booth exhaust) : Paint booth exhaust stack. Note overspray on the building wall.

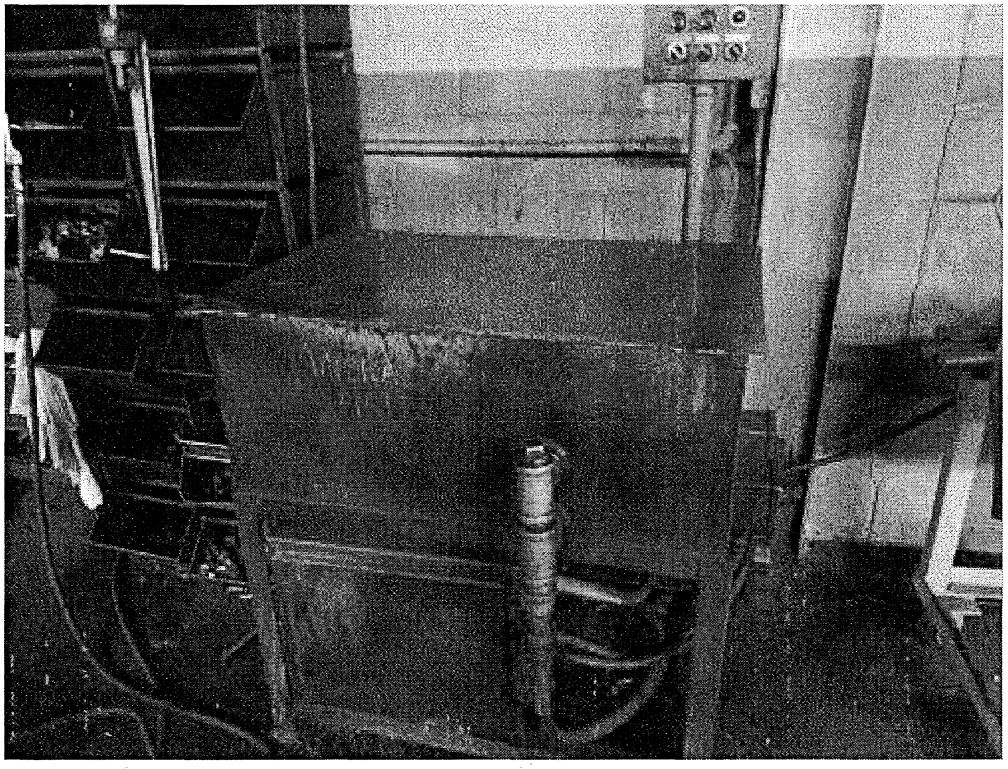

Image 7(cold cleaner) : Cold cleaner in the Weaver Jack building.

NAME M Kowalchuk DATE 3/3/2017 SUPERVISOR