DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

A049762140

FACILITY: NILES STEEL TANK COMPANY		SRN / ID: A0497
LOCATION: 1701 TERMINAL RD, NILES		DISTRICT: Kalamazoo
CITY: NILES		COUNTY: BERRIEN
CONTACT: Keith Zebell , Manufacturing Manager		ACTIVITY DATE: 03/02/2022
STAFF: Matthew Deskins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced Scheduled Inspection		
RESOLVED COMPLAINTS:		

On March 2, 2022 AQD Staff (Matt Deskins) went to conduct an unannounced scheduled inspection of the Niles Steel Tank Company (NST) (SRN: A0497) located in Niles, Berrien County. According to AQD district file information, NST doesn't have any air permits issued to them by the AQD and the last time AQD staff had been there was back in 2005 as the result of a complaint that was received regarding their sand blasting operations. During that complaint investigation, AQD staff had found them to be operating a coating booth and a sand blast operation as part of their tank fabricating process. It was later determined that the coating booth could be operated under the AQD Rule 287(c) permit exemption but the sand blast operations, as had been set-up and operated back then, wouldn't meet the AQD Rule 285(l)(vi) permit exemption. A violation notice had been sent pertaining to that issue and NST resolved the violation by making some retrofits to the sand blast operation so it would meet the permit exemption. Staff also noted in the files that they are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart XXXXXX (Nine Metal Fabrication and Finishing – Area Source Categories). It was noted that they submitted an Initial Notification and have been submitting On-Going Compliance Status Reports. The AQD is not delegated by the EPA to enforce this regulation so these reports weren't reviewed for compliance nor will any attempts be made to do that during the inspection either. Not knowing what their current operations might entail, staff researched their website and below is an excerpt that was copied and pasted from it that describes/summarizes their operations. (Also, see copy of attached brochure)

Niles Steel Tank is a fabricator of quality pressure vessels and glass lined water storage tanks.

Niles Steel Tank began in 1898 servicing the local agricultural industry and shortly thereafter built water tower tanks for the railroad industry. During the expansion of the Industrial Revolution, Niles Steel Tank played a major role in supporting both local and national manufacturers with ASME, Sec. VIII, Division 1 process tanks, pressure vessels, custom reactors and custom pressure vessels for almost every industry. Since Niles Steel Tank is a custom tank fabricator, there is very little that the facility cannot produce and is limited only by D.O.T. size restrictions and in-house lifting capabilities.

Purchased in 2002 by the Bradford White Corporation, Niles continues to operate as a manufacturer of custom pressure vessels, process tanks and glass lined water storage tanks. Soon after the acquisition, Niles expanded its operation into an 110,000 sq. ft. facility and began construction on their large glass lining operation. In 2004, Niles Steel Tank produced its first glass lined water storage tank. Although glass lined water storage tanks have become a large part of the NST business, the operation continues to service the custom pressure vessel markets.

As a U.S. manufacturer of custom pressure vessels and process tanks, Niles Steel Tank builds under the ASME Boiler and Pressure Vessel Code, Section VIII Division 1, with HLW, R, and U stamps in both carbon steel and stainless-steel materials. Niles Steel Tank also

services many other countries including, Mexico, Canada, Germany, Saudi Arabia and other Asian and European countries.

Today, you'll find that Niles Steel Tank is not only a quality supplier for the major manufacturing corporations across the country but is also an OEM vessel supplier for equipment manufacturers who use tanks as an integral part of their products. Our diverse list of customers includes the automotive, compressor and press industries, air conditioning, water filtration, chemical and pharmaceutical companies and a host of other industries. NST also fabricates glass-lined pipe and fittings for the chemical, paint and wastewater treatment sectors.

Staff departed for NST after having inspected another source in Benton Harbor.

Staff arrived at the NST facility at approximately 1:10 p.m. after travel time and having lunch. Prior to entering the facility, staff took a few minutes to see if they could observe and visible emissions from any stacks, vents, etc. and none were noted. Staff then proceeded into the office area. While signing in staff observed a couple of employees coming through the lobby and one of them asked if they could assist staff. Staff said that would be great and introduced them self and stated the purpose of the visit. The employee mentioned that staff would probably need to meet with Keith Zebell (Manufacturing Engineer) and said she would go get him. A few minutes later Keith came out to greet staff. After introductions and the exchanging of business cards, staff asked if they had a conference room or somewhere they could sit down to discuss facility operations along with what staff would like to see. Keith then led staff to a conference room and the following is a summary of staff's discussion with him.

According to Keith, NST's operations are pretty much as were described in what staff had copied and pasted previously from their website. Their operations entail two separate buildings with one being the Main Building, which houses office personnel and their Carbon Steel Operations, and the Alloy Building where they use Stainless Steel and other metal alloys. He said that they currently operate one shift (6:30 a.m. until 5:00 p.m.) Monday through Friday. He further stated that they also work most Saturdays but those hours vary. Staff then asked about the number of employees they had and he said that currently they have 41 union employees and 18 office employees and supervisors. Staff then asked how business has been and Keith said that it had been booming for them and that they are looking to hire more people. Staff then asked him what their main process operations consisted of and he responded, in descending order of amount that is done, the following operations:

Welding Equipment

Cutting and Forming – including Plasma Cutter Table

Coating Operations (Enamel Paint and/or Foam Applications)

Sheet Metal Work

Jacketing and Wiring

Staff then asked how many coating booths and sand blast operations that they currently had. Keith responded that they have (5) coating booths and (2) steel shot blast booths (enclosed). Staff then asked about the Quonset Hut that historically had housed their sand blast operation. Keith said he wasn't aware of that operation and it must have been removed years ago. As for the (5) coating booths, Keith mentioned that they included one for paint (mainly red), a topcoat foam booth, epoxy booth, and (2) glass lining (porcelain enamel) booths and associated drying furnace/oven. Staff then brought up the AQD Rule 287(c) Permit Exemption, along with its monthly recordkeeping requirements, and asked him if he

knew how much of each product that they used in each coating booth monthly. Keith stated that he wasn't sure but would look to find out. Prior to taking a tour of both Buildings, staff asked Keith if he could describe/summarize the basic process steps of their operations from start to finish. Keith said approximately 90%-95% of what they do will consist of the following process steps.

1. Order Component Parts or Raw Steel
2. Cut and Form the Steel to Size as Needed
3. Shot Blasting
4. Apply Enamel Coating
5. Run through Furnace
6. Post Furnace Processing (Welding and Forming)
7. Hydrostatic Testing (for water leaks)
8. Finishing Operations (Vary Depending on Customers Specifications)
9. Ship It (They do Minimal Woodwork (Crating) Strictly for Shipping Purposes)

Staff then went on a tour of both buildings and we started at the main one. During the tour of its operations staff viewed the process steps that were just described. Staff noted that all welding, forming, and finishing equipment, etc. vent inside the building. Staff observed the (2) steel shot blast operations and they both have dust collectors which vent inside. Staff observed all (5) coating booth operations and all had filters in place. When staff viewed the (2) glass lining (porcelain enamel) booths and associated drying furnace/oven, staff asked about the steps of the drying furnace/oven process. Keith said that it consists of (3) steps with the 1st being the Drying Cabinet that operates between 400-500 degrees F. The 2nd Sept consists of the Enamel Furnace which operates between 1450-1500 degrees F. The final step is just a Cooling Cabinet. Staff followed up later on the size of the furnace and oven and the furnace portion is rated at 8 million btus/hr and the oven is 4.5 million btus/hr. They both appear to meet the AQD Rule 282(2)(a)(ii) permit exemption. After checking things out in the Main Building we proceeded to walk over to the Alloy Building.

After walking over to the Alloy Building, staff noted that it wasn't in operation that day and Keith said that is currently only being used for operational purposes about 10%-25% of the time, with 10% probably being more accurate. Staff did not observe any coating or blasting operations in this building and Keith confirmed that they don't do any of that there. The equipment staff did observe was for welding, plasma cutting, metal forming, etc. which are exempt under various AQD Rule 285 exemptions. Staff then proceeded with Keith to walk back to the Main Building.

Once back in the conference room of the Main Building, staff mentioned that the first thing that staff would like to see would be the monthly coating use records for each booth. Keith said that he could probably get that information from purchasing records, since each booth uses a certain product. Keith said he would get with others and/or their consultant (Fishbeck) to see what he can come up with in terms of usage. Staff said that would be appreciated and that once those records were submitted and reviewed, that we would go from there with any potential follow-up questions. Keith said that he understood and staff thanked him for his time and departed at approximately 2:30 p.m.

Staff received the monthly coating use records from their consultant (Fishbeck) on March 14, 2022. The records provided to demonstrate compliance with the AQD Rule 287(c) permit exemption were for (4) out of the (5) coating booths for the Calendar Years 2020 and 2021. The records would appear to indicate that all booths were well under 200 gallons a month (See Attached Spreadsheet). Staff noted that the most coating that was used during those (2) years was in May of 2021 when approximately 204 gallons of coating was used for all (4) booths combined. For the fifth coating

booth (Topcoat/Polyurethane Foam) they are using the AQD Rule 290 permit exemption and calculations that were provided on March 15, 2022 appear to demonstrate compliance with the exemption. For the calculation they are using the ACC publication "MDI Emission Reporting Guidelines for the Polyurethanes Industry" method and nearly all of the chemical shot in the booth is 2-part methyl di-isocyanate foam, which produces very low emissions (See Attached Calculation).

After review of the records it would appear that the NST is meeting the requirements of all the aforementioned AQD permit exemptions. However, staff did make them aware via e-mail correspondence (See Attached) that although they appear to be meeting the 200-gallon limit for coating use in each booth, that they should probably calculate their facility wide Potential to Emit (PTE) for Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs) taking into account all coating and solvent usage, including clean-up/flushing solvents, just to make sure they don't trip any emission limit threshold(s). Staff also made them aware that moving forward that they should track individual coating and/or solvent usage on all booths, and not do any averaging as was done on the two enamel booths.

INSPECTION CONCLUSION: The facility appears to be in COMPLIANCE with the various AQD Permit Exemptions cited above. As mentioned in the opening paragraph, staff did not make a compliance determination as it applies to the 40 CFR Part 63 Subpart XXXXXX Regulation since the AQD is not delegated by the EPA to enforce the regulation.

NAME Matt Dark DATE 3-16-22 SUPERVISOR RJL 3/21/22