

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

U11210316358679

FACILITY: Bluewater Thermal Solutions		SRN / ID: U112103163
LOCATION: 800 S. Fair Street, Benton Harbor		DISTRICT: Kalamazoo
CITY: Benton Harbor		COUNTY: BERRIEN
CONTACT: Carolyn Moscardelli, General Manager		ACTIVITY DATE: 06/23/2021
STAFF: Matthew Deskins	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS:
SUBJECT: On-Site Inspection as a result of a complaint that was received related to smoke and odors.		
RESOLVED COMPLAINTS:		

On June 23, 2021 AQD Staff (Matt Deskins) went to conduct an on-site inspection / complaint investigation of the Bluewater Thermal Solutions ("Facility") located at 800 S. Fair Street in Benton Harbor, Berrien County as a result of a complaint that was received. The facility has been assigned an Unregistered Facility I.D. / State Registration Number (SRN) of U112103163 in the AQD MACES Database. The complaint had been called into the main phone line of the Kalamazoo District Office, where the complainant left a message, and it was then forwarded to staff on June 21, 2021. According to the complainant, they work at the Health Clinic that is located right across the street of the Facility to the E/SE. The complainant stated that at times they observe quite a bit of smoke coming from the facility and the odors are unpleasant. The complainant was worried about what these emissions might have on the health of the women and children coming into the clinic. Since staff had a scheduled inspection down in Bridgman for the morning of the 23<sup>rd</sup>, they decided they would investigate things at the Facility on their way back to the office that day if time allowed.

Staff arrived at the Facility at approximately 12:25 p.m. Winds appeared to be out of the S/SW and staff drove slowly by the facility with their windows down. Once downwind of the facility, staff could definitely smell what they would describe as "foundry" type smells coming from the facility and would have rated it a "2" (Distinct and Definite Odor) on the AQD Odor Scale. Staff then proceeded to the parking lot of the Health Clinic to observe the operations prior to going over to the Facility. While at this location, staff did observe smoke coming from the various stacks on top of the roof as well the exhaust vents on the south side of the building. Staff also observed smoke coming out of the open bay doors on the east side of the Facility as well. The smoke was mainly white but at times there was some black which appeared to be coming from a stack on the SW corner of the building. After observing things for about 15 minutes, staff decided to go over to the Facility to check things out.

After driving across the street to the Facility, staff proceeded to the office entrance. The door was locked and staff noticed some instructions posted on the door to either ring the bell or to call a number if they needed to speak with someone. Staff first tried the bell and then tried calling the number (269-925-3286) with no success doing either. Staff then walked around to the bay doors on the east side of the building and noticed someone on a forklift. Staff tried to get their attention but they didn't appear to notice staff and drove off to another section of the building. Staff then went back around to the office entrance. Staff was debating on what to do next when a car pulled into the side parking lot. The person who pulled in was an employee of the Facility and staff mentioned that they were with the AQD and asked if they could get

someone to come meet with staff at the entrance door. The employee said they would. After waiting what seemed to be about 10 minutes with no one coming to the door, staff started to proceed again to the open bay doors on the east side in hopes of locating someone. On their way staff ran into another employee who appeared to be leaving the Facility. Staff was able to get their attention and mentioned to this employee that they were with the AQD and asked them if they could try to get someone to meet staff at the entrance door. The employee went back inside and a couple minutes later they opened the entrance door for staff and said someone would be with them shortly.

A few minutes later staff was greeted by Carolyn Moscardelli (General Manager) of the Facility. Staff introduced them self to Carolyn and mentioned why they were there. Carolyn said that they were just finishing up lunch but that they would meet with staff in a couple of minutes if that was okay. She mentioned that Jim Hedman (Corporate Director of Engineering) happened to be on site that day as well and could also meet with staff. Staff said that would be great. A few minutes later staff was greeted by Jim who then led staff back to a conference room. Once in the conference room, staff exchanged business cards with Carolyn and Jim. Shirley Ulloque (Operations Manager) also sat in on the meeting. Once introductions were over, staff mentioned that we had received a complaint regarding smoke and odors coming from the facility which prompted the visit. Staff mentioned that they had observed operations for about 15 minutes from across the street and observed quite bit of smoke coming from their operations, including some black smoke. Staff then mentioned that they had checked the district files and various AQD permit databases, but couldn't find any information related to this Facility. Staff then asked them various questions about operations and the following is a summary of staff's conversation with them.

According to Carolyn, the Facility is a Commercial Heat Treat Operation for Carbon Steel. The majority of their business (~40%) consists of heat treating roofing screws and the remainder is just general industrial business such as automotive. The facility currently employs about 30 people "Post-Covid" and they work a 24/7 work schedule. Staff then asked about the number of furnaces at the Facility and what type of operation takes place in them. According to Carolyn and Jim, the facility has (8) heat treat furnaces, (6) wash areas, and (9) tempering furnaces. They said that the basic operations consist of the following steps:

1. Parts go through Heat Treatment
2. Parts get Oil Quenched
3. Parts go through a wash bath (heated water only),
4. Parts go into to a tempering furnace

**Note:** They mentioned that the parts aren't fully dry nor totally oil free when they get put in the tempering furnaces which is probably what creates the black smoke for a little while.

Staff then asked about the oil quenching operations and Jim mentioned that oil quenching is done at each heat treat furnace. He said that (2) heat treat furnaces have "open" oil tanks and the other (6) have sealed oil tanks built right into the bottom of the furnaces. Staff then asked the size of the furnaces and Jim said that they ranged in size from 500,000 btu/hr up to 6 MMbtu/hr. Staff then asked if they do

any ammonia injecting which Jim said that they do. Staff then asked what size the anhydrous ammonia tank is and Jim said he thought it was 1,000 gallons.

Note: They also have a generator for natural gas which also gets injected into the furnaces, along with the ammonia, to create the desired atmosphere required to reach a certain hardness depending on the parts specifications.

After getting a summary of Facility operations, staff mentioned that there appears to be a couple of issues pertaining to AQD permitting requirements. Staff mentioned that the AQD has a Permit to Install (PTI) exemption (Rule 336.1282(2)(a)(i)) for certain heat treat furnaces that are under 10 MMbtu/hr, but it excludes those that utilize oil quenching, oil coated parts, etc. in the process. Staff went on to mention that anhydrous ammonia tanks can also be exempt from needing a PTI under another permit exemption (Rule 336.1284(2)(j)), but they have to be under 500 gallons. Staff then showed them the exemption wording from their PTI Exemption Handbook and Shirley made a copy for herself, Carolyn, and Jim. Staff then went on a tour of the facility and viewed the various furnaces, wash areas, tempering furnaces, etc. and did not observe any other equipment that might need a PTI.

Once back in the conference room, staff mentioned that a Letter of Violation will be forthcoming with regards to the non-permitted furnaces and the anhydrous ammonia tank. Staff then asked who they should address the letter to and both Carolyn and Jim mentioned to address it to Mike Anderson (630-210-4577), who is their Corporate EH&S(?) Manager, at their Facility address. Jim and Carolyn then asked staff if any permits could be under another name because Bluewater Thermal Solutions bought out Harbor Metal back in 2006 who previously owned this Facility along with others here in Michigan. Staff said that they would double-check on things when back at the office, but the AQD creates SRNs for any facility that gets an air permit, and the SRN is address specific and nothing came up in any of staff's queries whether by facility name, address, city, etc. Staff then asked Jim if he could send them information on the furnaces and anhydrous ammonia tank including their size and installation date if known. Jim said that he would and later did (See Attached). Staff then thanked Jim, Carolyn, and Shirley for their time and departed the Facility at approximately 2:00 p.m.

When staff arrived back at the district office, they noticed that they had a phone message and it was from Mike Anderson. Staff returned his call and we discussed staff's findings during the visit. Mike mentioned that he looked at the exemptions and thought it was pretty clear that they needed permit(s) for the various equipment at the site. He said that it was unfortunate because they have an environmental consultant who supposedly assured them that everything was in order. He then went on to say that they will do everything that is necessary and that they will get working on things ASAP. Staff mentioned that they appreciated that but that they should probably wait until they get the Violation Notice and ultimately the permit(s) before doing anything to the equipment. The reason being is that our permit engineers may require certain things and you don't want to waste money doing something that may not be necessary or may not be enough. He said he understood.

Staff also called the complainant back that day as well. Staff mentioned that the smoke, although maybe unpleasant to look at, does not necessarily mean they are in violation or doing anything shady. Staff mentioned that we would have to do official "Opacity" readings when it comes to smoke to determine whether it would be over

any limits. Staff mentioned that the smoke they observed probably wouldn't have exceeded any limits. As for the odors, staff explained the AQD Odor Investigation Procedures and that we have to take the following three criteria into account: 1) Frequency of the Odor(s), 2) Intensity of the Odors, and 3) Duration of the Odors. Staff explained that if they are only smelling the odor when going from their car into the clinic and vice versa, then the duration component would be hard to prove in this instance. The same could be said if they are sitting in their vehicle eating their lunch. Staff went on to mention that although they are not doctors, it was their professional opinion that the odors wouldn't be harmful to anyone that's only being subject to them for a minimal amount of time (again in this instance only going from the parking lot into the clinic or while having lunch in their car). Staff said that just because they can smell something doesn't automatically mean it is harming them necessarily. Staff then asked them if the odors or smoke ever get inside the Health Clinic which they replied it hasn't yet. Staff mentioned to contact them if it ever does because then that could be a different situation. They said that they would and thanked staff for looking into the matter and getting back to them.

**COMPLAINT INVESTIGATION CONCLUSION:** Staff will consider the current complaint resolved but they will be sending a Violation Notice to the Facility for operating the various furnaces and anhydrous ammonia tank without a Permit to Install from the AQD.

NAME Matt Decker

DATE 6-30-21

SUPERVISOR RIL 7/8/21