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MAUI

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

P070140777

FACILITY: BAUD Industries Inc.		**SRN / ID:** P0701
LOCATION: 47576 Halyard Drive, PLYMOUTH		**DISTRICT:** Detroit
CITY: PLYMOUTH		**COUNTY:** WAYNE
CONTACT: Sebastien Dequenne , Quality Manager		**ACTIVITY DATE:** 07/20/2017
STAFF: Stephen Weis	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** Minor
SUBJECT: Compliance inspection of the Baud Industries facility in Plymouth Township. The Baud facility is scheduled for inspection in FY 2017.		
RESOLVED COMPLAINTS:		

Location:
BAUD Industries, Inc. (SRN P0701)
47576 Halyard Drive
Plymouth 48170

Date of Activity:
Thursday, July 20, 2017

Personnel Present:

Steve Weis, DEQ-AQD Detroit Office
Sebastien Dequenne, Quality Manager, BAUD Industries

Purpose of Activity

A self-initiated inspection of the BAUD Industries facility (hereinafter "BAUD") was conducted on Thursday, July 20, 2017. The BAUD facility is on my list of sources targeted for an inspection during FY 2017. The purpose of this inspection is to determine compliance of operations at the BAUD facility with applicable rules, regulations and standards as promulgated by Public Act 451 of 1994 (NREPA, Part 55 Air Pollution Control), applicable Federal standards, and any applicable permits and orders.

Facility Description

The BAUD facility in Plymouth is an automotive parts supplier that operates in a building located on the north side of Halyard Drive, just under ¼ mile west of Beck Road, in Plymouth Township. The building consists of an office area at the east end of the building, and a connected warehouse/manufacturing building that is approximately 17,400 square feet in area. The building was formerly occupied by Prosys Industries, who was in the business of designing, manufacturing and servicing electric coil winding and finishing equipment. I was told that BAUD purchased the building in 2015.

The BAUD facility is located in the Metro West Technology Park, which consists of various commercial and light industrial properties stretching along Halyard Drive as it runs between Beck and Ridge Roads to the north of the M-14 freeway. The area bounded by M-14 to the south, 5 Mile Road to the north, Sheldon Road to the east and Ridge Road to the west is occupied by similar commercial/industrial parks, such as the Metro West Beck Road Industrial Park, located to the north of the Metro West Technology Park; the North Plymouth Commerce Center/Plymouth Tech Park, located on the east side of Beck; the Plymouth Corporate Park and the Metro West Industrial Park, which extend between Beck and Sheldon Roads. Some of the neighboring businesses to BAUD include AVL Powertrain Engineering and Shiloh Industries.

The closest residential areas to the BAUD facility are located on the south side of M-14. The closest residences are located approximately ¼ mile from the facility on the south side of M-14.

Facility Operations

BAUD is a French-based company that has 10 production facilities around the world. Four of these facilities are located in France, two in Switzerland, and one each in Poland, Tunisia, Singapore and the United States. The BAUD facility in Plymouth Township represents BAUD USA. According to information from the company's website (www.baud-industries.com), BAUD was founded in 1978. The company specializes in bar turning, high-precision machining and complex mechanical bearing assemblies.

The company currently has five divisions – Automotive, Connectors, Home Automation/Electric, Watch-Making and Devices. The Plymouth facility is part of the Automotive Division. During this site visit and another visit to the facility with DEQ-AQD Permit Unit staff on June 8, 2016, I was told that the BAUD facility in Plymouth produces parts used in automotive braking systems, gear boxes, and fuel injectors, and that the facility's current customers include Bosch, Ford, Borg Warner, Continental, Toyota and Renault-Nissan.

BAUD currently operates one shift from 7am to 5pm, Monday through Friday at their Plymouth location. BAUD produces automotive parts at the facility utilizing six multiple-spindle CNC lathe machines. Metal for the parts (brass, steel and stainless steel) is received at the facility in bars, and these bars are machined/turned to produce the desired part, which is washed on site. The CNC lathes operate on spill-containing skids, and they operate as a closed system – the machine is closed to the in-plant air while it is operating, and the water and oil that is used to cool the parts that are being machined are filtered and recirculated. The parts that are produced in the CNC lathes are cleaned on site to remove residual cutting and machining oils from the parts prior to their being shipped offsite, either for further processing at another facility, or for use by the customer.

In 2016, when BAUD first began cleaning parts at the Plymouth facility, they utilized an ILSA IP20V solvent cleaning machine that used perchloroethylene (PCE) to clean the parts. The ILSA machine washed the parts with liquid PCE, and also heated some PCE to 80°C to produce vapors to complete the machine's washing cycle. BAUD was issued DEQ-AQD Permit to Install (PTI) No. 62-16 to address the installation and use of the ILSA machine at the facility on June 14, 2016. The ILSA machine is no longer being used by BAUD, and it has been permanently removed from service at the facility. The status of the ILSA machine will be discussed in the next couple of sections of this report.

I was told during the site visit in 2016 that BAUD would be installing an environmentally friendly cleaning machine from Dürr in the Fall of 2016 to replace the ILSA machine. The machine that is currently being used to clean the parts produced at the facility is a Dürr Ecoclean EcoCcore Automated Cleaning System that is equipped with Koolant Koolers by Dimplex to chill the cleaning material. According to BAUD, they began operating the new cleaning machine at the facility on March 20, 2017. The Ecoclean machine was installed at the facility by Dürr; Dürr also performs maintenance on the cleaning machine, and will handle any changeout of the cleaning solvent. The Ecoclean machine utilizes Isopar H Fluid to clean parts; I was told that this is the same solvent that is used at BAUD's European facilities. This material is a hydrotreated heavy naptha that has a vapor pressure of 0.56mm Hg. I requested and was provided with a Safety Data Sheet for the Isopar material, a copy of which is attached to this report. All of the parts that are produced at the facility go through the cleaning machine. I was told that the Ecoclean machine is currently being used once per day, and that the cleaning cycle lasts less than an hour. The Ecoclean machine regenerates/distills the solvent that is used in the machine. Sebastien provided me with an electronic copy of the Operating Instructions for the Ecoclean EcoCWave Automated Cleaning System. The document provided information relating to the operation, maintenance and trouble-shooting of the machine, but did not provide an overview of the machine. I found a brochure for the Ecoclean EcoCcore machine, a print out of which is attached to this report for reference. According to the brochure, the cleaning machine has continuous solvent treatment, it operates as a closed system, and it employs "environmentally and energy-efficient system technology." During the site visit, I was told that the Ecoclean machine operates as a closed system, and that vapors from the cleaning solvent do not leave the machine.

The manufacturing/warehousing portion of the building is heated using ceiling-mounted Reznor natural gas fired heaters that are exempt from DEQ-AQD permitting requirements due to their small heat input capacity. At the time of the June 8, 2016 visit to the facility, Prosys was leasing space in the north half of the manufacturing/warehousing portion of the building where they operated a coil winding machine. This equipment was no longer at the facility, and it appears that Prosys has moved to a location in Canton Township (7666 Market Drive).

There are currently no emergency engines/generators at the BAUD facility, and no fuel storage tanks.

Inspection Narrative

I arrived at the facility at 11:10am. Sebastien met me at 11:25am, and we began the site visit.

We first sat down in the facility's conference room and discussed the facility and its operations. Sebastien provided me with the operating hours of the facility, and he described the types of parts that are produced at the facility. There was a display in the conference room that contained examples of some of the parts that are produced at the Plymouth facility, and Sebastien brought some of the parts out to show to me. We discussed the status of the ILSA cleaning machine, which was permitted for use by DEQ-AQD in 2016. Sebastien explained that the ILSA machine has been removed from service; the machine has been disconnected, the solvent material removed, and it has been moved from the location in the facility where it operated. The ILSA machine is to be moved to a facility in Europe, and it was awaiting shipment at the time of my visit.

Sebastien described the use of the CNC lathe machines to make parts at the facility, and we discussed the new cleaning machine. We then walked out to the manufacturing/warehousing portion of the facility to view the process equipment. We looked at the CNC lathe machines, and observed one of them in operation. We then looked at the new Ecoclean machine, which was not operating at the time of my visit. There was a plate/label on the machine that provided the manufacturer name and model number. Sebastien showed me how parts are loaded into the machine, and he described its operation. He told me that all of the parts that are produced at the facility go through the cleaning machine to remove cutting/machining oils from the parts. BAUD is not tracking the amount of solvent used in the machine. As mentioned previously, Dürr also performs maintenance on the cleaning machine, and also handles any changeout of the cleaning solvent. Sebastien told me that he thinks that Dürr will be tracking the amount of solvent that is added to the machine. Sebastien said that the Ecoclean machine uses a very low volume of solvent, and that it is currently used once per day, with a cleaning cycle taking less than an hour.

I was then shown the ILSA cleaning machine. At the time of my visit, it was being stored in an area adjacent to the CNC lathes and the Ecoclean machine. One of the facility staff pointed out the solvent level sight glass on the ILSA unit, through which I could see that there was no solvent in the machine. I took a couple of pictures of the ILSA cleaning machine, which are attached to this report; one of the pictures show the solvent level sight glass, and the other shows the machine, disconnected. I was told that BAUD is hoping to ship the ILSA machine from the facility soon.

We returned to the office area of the facility. I had some questions about the Ecoclean machine; I wanted to know if BAUD had any information from the manufacturer about the operation of the machine, and emissions from the machine. We went to Sebastien's office, and he checked for information about the machine. He showed me an electronic version of the Safety Data Sheet (SDS) for the material that is used in the machine (Isopar H). Sebastien forwarded a copy of the SDS to me, a copy of which is attached to this report. He found an e-mail stating that the Ecoclean machine began operating at the facility on March 20, 2017. He told me that he would try and locate some information about the cleaning machine and send it to me. After a brief conversation summarizing the site visit, I left the facility at 12:25pm.

Permits/Regulations/Orders/

Permit to Install (PTI) No. 62-16 was issued to BAUD to address the installation and operation of the ILSA cleaning machine. Recall that In 2016, when BAUD first began cleaning parts at the Plymouth facility, they utilized an ILSA IP20V solvent cleaning machine that used perchloroethylene (PCE) to clean the parts. The ILSA machine washed the parts with liquid PCE, and also heated some PCE to 80°C to produce vapors to complete the machine's washing cycle.

PTI No. 62-16, which was issued by DEQ-AQD on June 14, 2016, put forth permit conditions that limited emissions from and the operating hours of the ILSA machine, and put forth operating conditions and maintenance requirements. The permit conditions were in accordance with the requirements of 40 CFR Part 63, Subpart T (National Emission Standards for Halogenated Solvent Cleaning) that were applicable to the ILSA machine. BAUD operated the machine in compliance with the PTI, and provided DEQ-AQD with the notifications that are required by Subpart T. In an e-mail that I received from BAUD on March 13, 2017 (a copy is attached to this report), it was stated that the ILSA machine operated until the end of January, and that it was going to be transferred to BAUD's facility in Poland. During the site visit, I advised Sebastien that PTI No. 62-16 can be voided since the ILSA cleaning machine is no longer in operation. The PTI had not yet been voided. I will request

that BAUD send correspondence confirming that the ILSA machine is no longer operating at the facility, and requesting that the PTI be voided.

The new Ecoclean cleaning machine that has been installed and is in use at the facility appears to be exempt from DEQ-AQD permitting requirements. Michigan Administrative Rule 285(r)(iv) exempts equipment that is used for cleaning metal surfaces if the process emissions are only released into the general in-plant environment. The Ecoclean machine does not vent to the ambient air; it vents inside of the BAUD facility, and I was told during the site visit that the Ecoclean machine operates as a closed system, with vapors from the cleaning solvent not leaving the machine. The Ecoclean machine does not meet the definition of a cold cleaner as put forth in Michigan Administrative Rule 103(aa), as it is not a tank but rather an upright machine in which solvent material is sprayed onto metal parts, and the solvent material is recirculated by the machine. As such, the Ecoclean machine does not appear to be subject to the requirements of Michigan's Part 7 rules, specifically Administrative Rule 707. If the Ecoclean machine were subject to Rule 707, it would appear to meet the requirements of the Rule - the machine utilizes a condensation system to reclaim solvent (707(2)(c)); it operates as a closed system (707(3)(a)); the metal parts that are cleaned in the machine have solvent removed via a vacuum, which is more effective than the draining required by 707(3)(b); and the amount of waste solvent generated by the machine is minimal due to the solvent recirculation/reclaim/treatment performed as part of the machine's operation, and what waste solvent is generated is contained in the machine (707(3)(c)).

Compliance Determination

Based upon the results of the July 20, 2017 site visit and subsequent information review, the BAUD facility appears to be in compliance with all applicable rules and regulations.

Attachments to this report: manufacturer's information about the Ecoclean cleaning machine; a copy of the Safety Data Sheet for the Isopar material that is used in the Ecoclean machine; a copy of the March 13, 2017 e-mail from BAUD regarding the last time that the ILSA cleaning machine operated; two pictures of the ILSA machine.

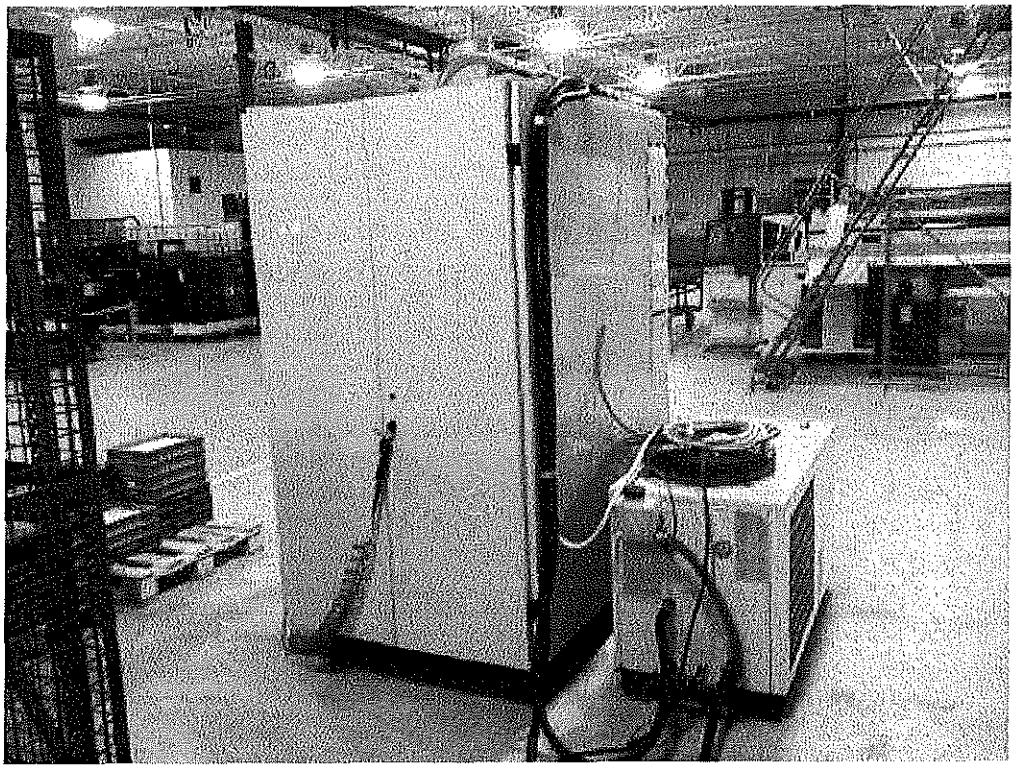

Image 1(ILSA machine) : The ILSA cleaning machine, which is no longer in operation and has been disconnected. It was awaiting shipment to a BAUD facility is Europe at the time of my site visit.

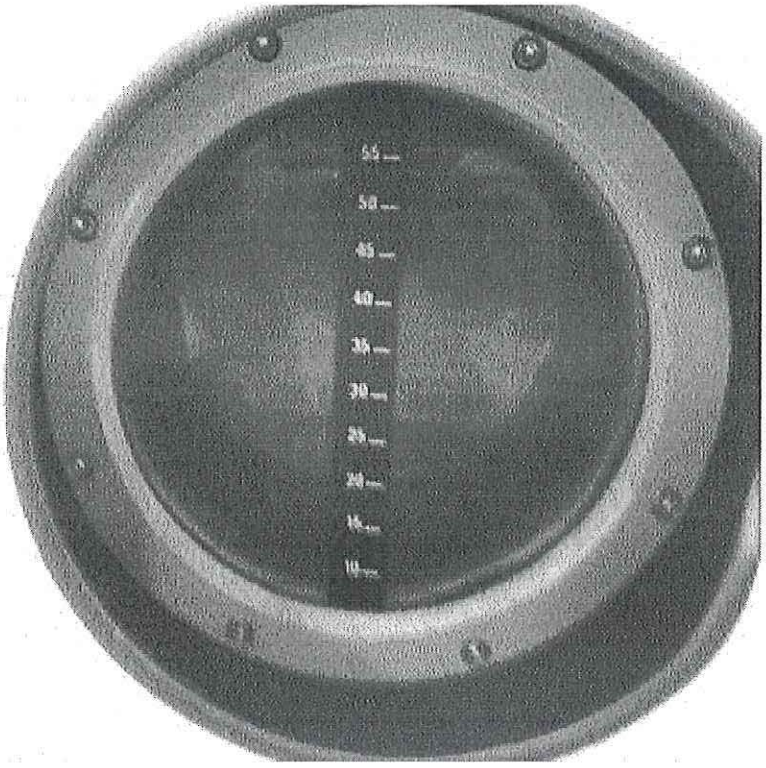

Image 2(ILSA sight glass) : The sight glass on the ILSA machine, which shows that there is no solvent in the machine.

NAME Steve Wes DATE 1/17/18 SUPERVISOR JK