

REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

SEABEE FOUNDRY

1483 Highway 3
Hampton, Iowa 50441
641-456-4871

EPA ID Number: None

On

February 26, 2021

By

TOEROEK ASSOCIATES, INC.

For

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region 7

Enforcement and Compliance Assurance Division

INTRODUCTION

At the request of the Enforcement and Compliance Assurance Division/Chemical Branch/RCRA Section (ECAD/CB/RCRA) of the U.S. Environmental Protection Agency (EPA) Region 7, Toeroek Associates, Inc. and its subcontractor Tetra Tech (Toeroek team) conducted a hazardous waste compliance evaluation inspection (CEI) at the Seabee Foundry (Seabee), at 1483 Highway 3, Hampton, Iowa. The CEI was conducted under the authority of Section 3007 of the Resource Conservation and Recovery Act (RCRA), as amended. The CEI covered hazardous waste generator requirements, used oil management, and universal waste requirements, as applicable. This report and its attachments present the findings of the CEI.

PARTICIPANTS

Seabee:

Tim Robinson, Plant Manager

Toeroek Team:

Heather K. Wood, Inspector, 816-412-1768

INSPECTION PROCEDURES

Due to the spread of coronavirus disease 2019 (COVID-19) at the time of the CEI, I contacted Seabee via telephone 1 week prior to the scheduled inspection and spoke with Mr. Taylor Kolb at Seabee's main manufacturing facility. The purpose of the initial contact was to identify the appropriate facility representative, ensure the representative would be available at the foundry during the CEI, and to discuss protocols, procedures, and any other requirements adopted by the facility to mitigate the spread of COVID-19. I scheduled the inspection, and Mr. Kolb informed me that Mr. Robinson would be at the inspection.

Prior to the CEI at Seabee on February 26, 2021, I conducted a drive-by visual inspection of the facility. I did not observe any areas of concern during the drive-by. Upon my arrival, I was buzzed through the front door and met in the office by Mr. Robinson. He escorted me to his office, where I conducted an entry briefing.

During the entry briefing, I presented my business card and EPA credential letter to Mr. Robinson. I explained the scope of the CEI and the data gathering procedures that would be employed (for example, interviews, visual inspection, records review, and digital photography). I then informed Mr. Robinson of the facility's right to make confidentiality claims for any or all of the information obtained. I stated that at the conclusion of the CEI, Mr. Robinson would be presented with a Confidentiality Notice (Notice) with which he could make or not make a claim of confidentiality for the facility. I also provided Mr. Robinson a copy of U.S. Federal Codes 1001 and 1002, concerning communication of false statements and documents to federal inspectors, and RCRA Section 3007, explaining EPA's inspection authority, both of which he read.

A copy of each of the following documents was left with the facility during the inspection:

- RCRA Facility Access Information Sheet
- Mr. Trevor Urban's business card
- RCRA Section 3007
- U.S. Federal Codes 1001 and 1002
- Instructions for Responding to a Notice of Preliminary Findings
- Notice Regarding Proprietary/Confidential Business Information
- Managing your Hazardous Waste: A Guide for Small Businesses
- U.S. EPA Small Business Resources Information Sheet
- Industry Sector Notebooks
- Environmental Compliance Assistance Centers
- Management of Fluorescent Lamps for Businesses

Prior to the CEI, EPA provided a Hazardous Waste Site Info Verification Report (Verification Report) (Attachment 1). I reviewed the Verification Report with Mr. Robinson and updated the report. Specifically, I updated the site contact information to replace Mr. Howard Pohlman with Mr. Robinson. I also removed waste codes for lead and mercury waste previously used for universal waste.

I conducted the visual inspection of the facility, accompanied by Mr. Robinson. Mr. Robinson did not have any documentation related to waste determination or shipping. Facility information gathered during the CEI is documented on the Data Gathering Worksheets and Checklists (Attachment 2).

At the conclusion of the CEI, I conducted an exit briefing with Mr. Robinson. I did not collect any documents during the inspection, so I did not prepare a Receipt for Documents and Samples. I provided Mr. Robinson the Notice, which he signed indicating no confidential business information had been provided (Attachment 3). I also provided Mr. Robinson a Notice of Preliminary Findings (NOPF), which he signed to acknowledge receipt (Attachment 4).

A scaled facility map and a schematic map was posted at the facility, and a photograph I took of the map is included as Attachment 5. An aerial photograph of the facility was downloaded after the CEI and is included in Attachment 6. The 21 photographs taken during the CEI are in Attachment 7.

FINDINGS AND OBSERVATIONS

1. Facility Description and General Information

Seabee foundry manufactures metal parts for the Seabee manufacturing facility, where they are shaped into hydraulic cylinders, and repairs parts for the Seabee manufacturing facility. Operations include manufacturing forms, melting and pouring metals, shaping parts, and conducting general facility maintenance. Raw materials include scrap iron, flux and other alloy components, casting sand, mold coating, and perlite slag coagulant. Seabee began operating the foundry facility in 1980 and currently employs 13 full-time staff. The Seabee foundry facility is housed within a 65,000-square-foot building. Mr. Robinson stated that the normal business hours for Seabee are Monday through Thursday from 5:00 a.m. to 3:30 p.m.

According to Mr. Robinson, Seabee does not currently generate hazardous waste from foundry processes. Molds are made using casting sand. They are coated with a resin mold coating compound (Attachment 7, Photograph 6). According to Mr. Robinson, isopropyl alcohol is used to thin the resin mold release compound. Isopropyl is also used to clean the spray guns, and the used isopropyl is flushed back into the product containers. He said that no waste is generated from this process, and that all chemicals used in the release process are completely used. Finishing (shake-out) of the molds generates shake-out dust, which is collected in a baghouse (Attachment 7, Photographs 14 and 15). The baghouse dust is considered nonhazardous waste, but the facility has no recent analytical data for the material.

Metal parts are manufactured by melting scrap steel and copper and pouring into sand molds, which generates slag (Attachment 7, Photograph 10). The facility applies perlite to the slag as a coagulant. When added to the surface of molten iron, the perlite expands and attracts fluid slag on the surface of the metal, aiding in slag removal. Small test pieces are tested by cutting in an onsite materials laboratory. Based on this testing, additional amendments may be added to the melt to achieve the desired properties. Parts are then quenched in an onsite tank of tap water. According to Mr. Robinson, water evaporates and is replenished as needed. He said that any tank bottoms from the quenching tank are consolidated with the slag and other debris as one waste

stream. Particulates from the melt are also captured in a baghouse (Attachment 7, Photographs 14 and 15). The slag and the baghouse dust are considered nonhazardous waste, but the facility has no recent analytical data for these materials.

Waste casting sand is shaken out (Attachment 7, Photographs 7 through 9). Sand that is sufficiently fine grained after shaking is reused, and the remainder is consolidated with the slag for disposal. Of the portion that can be reused, Mr. Robinson said that 70 percent is sold to a local concrete company to be used as aggregate, and 30 percent is reused for casting at the facility. Mr. Robinson said that the facility did not consider the waste recycled casting sand that was sent to the concrete company to be waste because it was reused. However, he was also not sure if the resulting concrete was used in building foundations or other applications where it would be directly applied to the land, thus constituting disposal. The facility has no recent analytical data for the waste casting sand.

Metal parts are shaped (cut, ground, blasted, polished), and dust from shaping is collected in a second baghouse. Gating pieces knocked off the cast parts are consolidated with slag (Attachment 7, Photograph 2). Scrap generated during the shaping process is generally returned to the melt. Scrap that cannot be reused is sent to an offsite scrap metal recycler. The facility considers scrap metal sent for recycling to be exempt from the definition of solid waste.

Building maintenance activities at the facility generate universal waste fluorescent tube and high-intensity discharge (HID) lamps, which are managed as universal waste. Facility maintenance also generates general trash.

In May 2017, Tetra Tech conducted a CEI for EPA at the Seabee foundry. No preliminary findings were made.

2. RCRA Status

The Seabee foundry was identified only as a small quantity handler of universal waste, accumulating less than 5,000 kilograms of universal waste at any time. No other regulated activity was identified on the Verification Report provided by EPA (Attachment 1). Based on my visual inspection and information provided by Mr. Robinson, I concluded that the Seabee foundry is likely a nongenerator of hazardous waste.

However, the facility did not have documentation for the waste characterization for a significant volume of waste, including slag, waste casting sand, and baghouse dust. Currently, the facility generates approximately 60,000 pounds per week of waste casting sand, 10 cubic yards per month of slag, and as much as 60 cubic yards of baghouse dust per year. During the inspection in 2009, the inspector reviewed analytical reports for waste streams identified as “blast media” and “foundry waste,” which, according to the Seabee representative, constituted a mixed slag, waste casting sand, and baghouse dust waste stream. The analytical report obtained in 2009 indicated that the mixed material was nonhazardous, but copies of the analytical reports were not included with the 2009 inspection report. In addition, the facility is not now mixing baghouse dust or most of the casting sand with the slag.

3. Waste Streams

This section of the CEI report describes waste streams generated by the facility, including the facility's waste determination and waste codes, generation process and rate, management at the facility, and ultimate disposition. The following discussion of waste streams is based on my interviews with Mr. Robinson, the visual inspection, and my review of available documentation.

Waste casting sand is generated from used casting sand that meets the grain-size requirements for concrete manufacturing. It is purchased by Lehigh Concrete in Mason City, Iowa, to be used as aggregate, and Mr. Robinson estimated that the facility generates approximately 60,000 pounds of waste casting sand per week. Although I observed shaken sand that would be reused at the facility, I did not observe any waste casting sand destined for recycling during the inspection. Waste casting sand that was unsuitable for reuse was consolidated with slag (as described below).

The facility did not consider the material that was sent to the concrete company to be waste because it was reused. However, because it may be used in applications where it is directly applied to the land, such as building foundations, this reuse potentially constitutes disposal. Mr. Robinson said that the concrete company had tested the sand before contracting to buy it, but he was not sure for which parameters the sand was tested. He could not find a copy of the analytical report. I concluded that the facility had failed to make a waste determination on waste recycled casting sand, as required by Title 40 *Code of Federal Regulations* (40 CFR) 262.11 (NOPF No. 5).

Slag and other debris, including some metal finishing debris and waste casting sand that cannot be reused, are generated during the manufacturing process. Mr. Robinson estimated that the facility generates approximately 10 cubic yards of this waste per month. It is transported to the Landfill of North Iowa in Clear Lake, Iowa, for disposal.

The facility considers the slag waste stream nonhazardous based on product and process knowledge. As stated in Section 2, the facility did have a waste stream consisting of slag, unusable waste casting sand, and baghouse dust analyzed some time before 2009. However, Mr. Robinson could not find a copy of the analytical report or a special waste authorization and did not know if the material had been tested more recently. I concluded that the facility had failed to make a waste determination on slag, as required by 40 CFR 262.11 (NOPF No. 5).

Slag, waste casting sand that could not be reused, and other debris are piled on a concrete loading area outside the east wall of the building (Attachment 7, Photograph 13), then consolidated in an adjacent rolloff container. The container was empty at the time of the inspection.

Baghouse dust is generated from the air filtration process. Mr. Robinson estimated that the facility generates approximately 40 cubic yards of this waste every 8 to 12 months. It is transported to the Landfill of North Iowa in Clear Lake, Iowa, for disposal.

The facility considers the baghouse dust waste stream nonhazardous based on product and process knowledge. As stated in Section 2, the facility did have a waste stream consisting of slag,

unusable waste casting sand, and baghouse dust analyzed some time before 2009. However, Mr. Robinson could not find a copy of the analytical report or a special waste authorization and did not know if the material had been tested more recently. I concluded that the facility had failed to make a waste determination on baghouse dust, as required by 40 CFR 262.11 (**NOPF No. 5**).

Baghouse dust is accumulated in two 20-cubic-yard rolloff containers along the north wall of the building (Attachment 7, Photographs 14 and 15). Both containers were nearly full at the time of the inspection.

Scrap metal is generated from metal that cannot be remelted and recast. It primarily consists of waste from the foundry process and unusable metal in the scrap metal feedstock, such as stainless steel. It is considered nonhazardous based on product knowledge. Because the scrap metal is recycled, the facility considers it exempt from the definition of solid waste and thus not a hazardous waste per 40 CFR 261.4(a)(13) and 261.6(a)(3)(ii). The facility generates approximately 20 cubic yards of scrap metal every 6 months. Scrap metal is collected in a rolloff container outside the facility (Attachment 7, Photographs 11 and 12). When full, the container is collected by Schau Salvage of Ida Grove, Iowa, to be recycled.

Universal waste lamps are generated during facility maintenance. The facility manages used fluorescent and HID lamps as universal waste. Used lamps are collected in ship-back containers that are shipped to Waste Management facilities for recycling. Mr. Robinson was not sure of the generation rate for universal waste lamps. Based on the number of lamps I observed during the inspection, I estimated the facility generates approximately 100 used fluorescent tube lamps and 15 used HID lamps per year.

During the visual inspection of the boiler room, I observed two containers of used lamps, one for used HID lamps and one for used 4-foot fluorescent tube lamps (Attachment 8, Photographs 16 through 21). Both containers were in good condition and labeled as “universal waste-lamps.” However, neither was closed, as required by 40 CFR 273.13(d)(1) (**NOPF No. 1**). Neither container was marked with an accumulation start date, as required by 40 CFR 273.15(c) (**NOPF No. 2**).

I asked Mr. Robinson how long the lamps had been accumulating. He said the container of used 4-foot lamps, which held approximately 30 lamps, had been accumulating lamps since some time in December 2020. He said the container of used HID lamps, which held approximately 50 lamps, had been accumulating lamps for approximately 3 years. I concluded that the facility had failed to send universal waste for recycling within 1 year of initial accumulation, as required by 40 CFR 273.15(a) (**NOPF No. 3**).

Based on the number of findings related to management of universal waste, I also concluded that the facility had failed to train employees in management of universal waste, as required by 40 CFR 273.16 (**NOPF No. 4**). I provided compliance assistance regarding management of universal waste.

General trash is generated from facility maintenance, cleaning, and office trash. Wood waste generated during manufacture of forms is also consolidated with the general trash. Seabee considers the general facility trash nonhazardous based on product and process knowledge. The facility generates approximately 20 cubic yards per month. Trash is collected by Waste Management and transported to the Landfill of North Iowa in Clear Lake, Iowa, for disposal.

4. Summary of Preliminary Findings

In summary, as part of the CEI, I made the following preliminary findings:

- (1) Failure to close containers of universal waste lamps, as required by 40 CFR 273.13(d)(1) (**NOPF No. 1**).
- (2) Failure to mark containers of universal waste lamps with an accumulation start date, as required by 40 CFR 273.15(c) (**NOPF No. 2**).
- (3) Failure to send universal waste for recycling within 1 year of initial accumulation, as required by 40 CFR 273.15(a) (**NOPF No. 3**).
- (4) Failure to train employees in management of universal waste, as required by 40 CFR 273.16 (**NOPF No. 4**).
- (5) Failure to make a waste determination on slag, baghouse dust, and waste recycled casting sand, as required by 40 CFR 262.11(d) (**NOPF No. 5**).

Other than items specifically noted in the narrative, I observed no additional issues. However, further review by EPA may change or add to my findings.



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Date: 2021.04.01 13:01:54 -05'00'

Date: _____

Heather K. Wood, Inspector
Tetra Tech Inc.

AMBER WHISNANT

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WHISNANT

Date: 2021.04.28 21:12:55 -05'00'

Date: _____

Amber Whisnant, Section Chief
ECAD/CB/RCRA

Attachments:

1. Hazardous Waste Site Info Verification Report (2 Pages)
2. Data Gathering Worksheets and Checklists (13 Pages)
3. Confidentiality Notice (1 Page)
4. Notice of Preliminary Findings (1 Page)
5. Facility Map (1 Page)
6. Aerial Image of the Facility (1 Page)
7. Photographic Documentation (Photolog and 21 Images) (14 Pages)

NOTICE OF PRELIMINARY FINDINGS

FACILITY NAME: SEABEE FOUNDRY
ADDRESS: 1483 HIGHWAY 3
HAMPTON LA 50441
EPA ID NUMBER: NONE DATE: 2/26/21

NOTICE: I am not an employee of the Environmental Protection Agency ("EPA"). I am a contractor for EPA retained to conduct compliance evaluation inspections. The following is a list of observations/recommendations found during this inspection which will be reported back to EPA. This is not to be construed as a complete list of observations/recommendations. The EPA will be evaluating the report prepared as a result of this inspection and making the determinations as to what violations may have occurred at your facility.

1. FAILURE TO CLOSE CONTAINERS OF UNIVERSAL WASTE ^(U.W.) LAMPS
(40 CFR 273.13(d)(1))
2. FAILURE TO DATE OR OTHERWISE DOCUMENT ACCUMULATION TIME FOR
U.W. LAMPS (40 CFR 273.15(c))
3. ACCUMULATION OF U.W. LAMPS FOR LONGER THAN 1 YEAR
(40 CFR 273.15(a))
4. FAILURE TO TRAIN EMPLOYEES IN MANAGEMENT OF UNIVERSAL
WASTE (40 CFR 273.16)
5. FAILURE TO MAKE A WASTE DETERMINATION ON SLAG AND CASTING
SAND (40 CFR 262.11)
6. FAILURE TO TRAIN EMPLOYEE ^(U)
7. _____

If you have any questions regarding these findings please contact TREVOR URBAN, EPA REGION 7, LENEXA KS

The undersigned person hereby acknowledges receipt of a copy of this document and has read the same.

PRINTED NAME: Tim Robinson TITLE: Plant Mgr
SIGNATURE: 

This document was prepared by HEATHER K. WOOD