NPDES Inspection Report – Pretreatment Non-significant Categorical Industrial User

National Database Information	
Inspection Entry Date/Time: December 20, 2022; 08:00	Inspection Type: **Pretreatment Non-significant Categorical Industrial User (NSCIU)**
Inspection Closing Date/Time: December 20, 2022; 11:30	NPDES ID Number: WYPF00101
Inspection ID: 202212_WYPF00101	
Lead inspector and affiliation: Lisa-kay Prideaux / EPA Region 8 Montana Operations Office	

Facility Location Information (*Name/Location/ Mailing Address*)	
Site/Facility Name & Location: Eagle Bronze, Inc. 130 Poppy Street Lander, Wyoming 82520 **42.812821°N; -108.70929°W**	Mail Report (Electronic Delivery) to: Monte Paddleford, President Eagle Bronze, Inc. monte@eaglebronze.com

Contact Information	
	Name(s)/Title
Person/Company meeting definition of Owner/Operator	Eagle Bronze Foundry and Gallery
Facility Contacts:	Monte Paddleford, President (present)
	Ed Hooper, Foundry Manager (present for site visit)
	Deni Castillejo, Administrative Support (not present)
Authorized Official(s)	Monte Paddleford, President

Areas Evaluated During Inspection		
Permit	Effluent/Receiving Waters	Compliance Schedule
Records/Reports	Flow Measurement	**Pollution Prevention**
Facility Site Review	**Self-Monitoring Program**	Laboratory
Stormwater	**Operations and Maintenance**	**Pretreatment**

Report Review and Signature		
Drafter Name	Date	Address/Phone Number
Prideaux, LisaKay Digitally signed by Prideaux, LisaKay Date: 2023.01.30 09:20:19 -07'00'		**U.S. EPA Region 8, Montana Operations Office** **10 West 15th Street, Suite 3200** **Helena, Montana 59626** **406-457-5022**
Reviewer Name	Date	Address/Phone Number
Emilio Llamozas	**01/24/2023**	**U.S. EPA Region 8** **1595 Wynkoop Street** **8ENF-W-NW** **Denver, Colorado 80202** **303-312-6407**
Management Reviewer Signature	Date	Address/Phone Number
MICHAEL BOEGLIN Digitally signed by MICHAEL BOEGLIN Date: 2023.01.29 14:03:03 -07'00'		**U.S. EPA Region 8** **1595 Wynkoop Street** **8ENF-W-NW** **Denver, Colorado 80202** **303-312-6250**
Michael Boeglin, NPDES and Wetlands Enforcement Section Supervisor		

Inspection Narrative and Site Description

Introduction

On December 20, 2022, the U.S. Environmental Protection Agency (EPA) conducted a compliance evaluation inspection at Eagle Bronze, Inc. (facility), located at 130 Poppy Street in Lander, Wyoming, to evaluate compliance with the requirements in 40 C.F.R. Parts 403 and 433 for the General Pretreatment Regulations and Metal Finishing Point Source Category, respectively, as well as the EPA-issued Notification of Discharge Requirements (WYPF00101), which identifies the general pretreatment and non-significant categorical industrial user (NSCIU) requirements applicable to the facility. The facility is subject to regulation under 40 C.F.R. Part 433 because of the patina coloring process onsite. Though the facility performs metal molding and casting in its foundry operations, it is not subject to regulation as a Metal Molding and Casting Point Source under 40 C.F.R. 464 because it does not perform any of the operations defined in 40 C.F.R. 464.25. The EPA is responsible for direct implementation of the pretreatment program in the state of Wyoming and is the control authority for industrial users (IUs) discharging to publicly owned treatment works (POTWs) without approved pretreatment programs. The Town of Lander does not have an approved pretreatment program; therefore, the EPA directly oversees compliance of IUs discharging to the POTW and on September 27, 2020, the EPA issued the Notification of Discharge Requirements to Eagle Bronze (WYPF00101). The inspection was announced to the facility several weeks in advance of the inspection, to coordinate logistics.

At approximately 08:00 am, EPA inspector Lisa-kay Prideaux (inspector) arrived at the facility and met with Monte Paddleford, President of Eagle Bronze. The inspector presented her credentials and held an opening conference with Mr. Paddleford to explain the purpose of the inspection. The inspector proceeded to ask a series of questions to evaluate compliance. Mr. Paddleford provided an overview of the processes occuring onsite, including receipt of raw materials, wastewater generation and discharge, chemical storage and waste handling, monitoring, and shipping of the final product. Throughout the inspection, the inspector noted their observations in a bound notebook. Photographs taken during the inspection are included in the attached photo log.

Facility Process

Eagle Bronze began its foundry operations in 1985 and creates sculptures through the lost wax process. Artists create a clay or wax sculpture for bronzing. Eagle Bronze creates a reinforced plaster mold surrounding the original sculpture, which the facility refers to as the mother mold. Wax is then poured into the mother mold. The mother mold is removed leaving a wax structure, which is then coated with a ceramic shell. The ceramic piece is then placed in an oven where the interior wax is melted out leaving behind the ceramic shell cast. Molten metal is then poured into to ceramic shell cast to create a metal sculpture. The resulting sculpture cools at room temperature prior to being prepared for additional treatment prior to shipping. The source metal used to create the bronze sculptures is received in ingot form and contains 95% copper, 4% silica, and 1% manganese. Large sculptures are often created in pieces, and the parts are tungsten inert gas (tig) welded together to form the complete sculpture. Sculptures also undergo manual grinding and sand blasting. Scrap metal is collected and recycled. The facility also has a small vibratory tumbler in the Monument Building only used once or twice per year. When the vibratory tumbler is in operation, water and detergent are added to ceramic/rock media, which smooth the surface of metal sculptures placed inside. Tumbling is a regulated ancillary process under 40 C.F.R. 433 and any discharges from the tumbler flowing through a regulated outfall are required to be reported. However, the facility has changed their process to collect waste material and dispose of in a different manner (see below) and limit the potential to discharge.

Many bronze sculptures go through a patina process which can occur in two buildings; small and medium size sculptures go through the patina process in the Main Building while large sculptures that cannot fit in the main building go through the patina process in the Monument Building. The patina process is completed through the application of sulfurated potash, which oxidizes the bronze to produce a dark color on the surface of the sculpture. Sulfurated potash is mixed and applied manually onto sculptures, rubbed with rags, and rinsed off. In the Main Building, rinse water from the patina process flows through a floor drain or shop sink to a 7-gallon sump. The wastewater is discharged through Outfall 001 by manually operating the sump pump, which discharges the wastewater to the POTW. In the Monument Building, if present, the rinse water flows to a trench drain that is connected to a 37-gallon sump that is plumbed to overflow to the POTW via Outfall 002. There is no wastewater treatment at the facility.

Records Review

After a review of the facility process, the inspector reviewed records to include a copy of the Notification of Discharge Requirements with attachments, current Toxic Organics Management Plan (TOMP), and NSCIU annual report for 2021 with certification statement and discharge monitoring reports (dated January 5, 2022). The inspector reviewed monitoring records for the timeframe of January to December 2022; Mr. Paddleford provided two calendar printouts for each month requested, one for outfall 001 and one for outfall 002. Mr. Paddleford explained that on each day there is a discharge at outfall 001, the height of the wastewater in the sump is measured and written down; that height is then used to calculate the volume of the wastewater which is also written down. Outfall 001 calendar also tracks the number of acetone laden rags that are sent to the launder for cleaning. At the end of the month, Mr. Paddleford uses the recorded numbers to calculate the number of days discharged, total gallons discharged, average gallons discharged, and the daily maximum gallons discharged (photo 565). Eagle Bronze typically discharges less than 1 gallon per day, between three and five times per week from the patina room in the Main Building. For outfall 002, Mr. Paddleford indicated that discharge from the Monument Building does not occur because rinse water generation in the building is minimal and absorbed by saw dust and solids in the trench; however, if there were an accumulation of water in the sump, the same process for recording height and amount discharged as outfall 001 would occur. The outfall 002 calendar discharge documentation will indicate when the patina process occurs in the Monument Building (photo 566). The facility records reviewed confirm that total discharges are less than 100 gallons per day of categorical wastewater, the facility has complied with all applicable Pretreatment Standards, and annually submits a certification statement per 40CFR 403.12(q), and have not discharged any untreated concentrated wastewater; therefore, continues to meet the definition of a NSCIU.

Facility Site Review

Mr. Paddleford and the inspector were joined by Ed Hooper, Foundry Manager for a walk through the process in both buildings. The site visit began in the Main Building patina room where a sculpture was amid the patina process. The inspector observed the floor drain in the middle of the patina room (photos 567 & 568), as well as the shop sink (photo 570), which both lead to the 7-gallon sump (photo 569) located at the end of the room of the shop sink and is discharged as outfall 001. The patina room in the Main Building also contained the clean/used rag buckets (photo 571) for weekly laundering and tracking, and the chemical safety cabinet (photo 572), which contains the acetone. We then walked through an open work area where the pieces of art are 'painted' plaster and undergo other preparations. We went to the wax room where the wax molding is poured and set, and the shell room where the wax structures are coated with a ceramic shell. We then walked to the metal pouring area and walked by the pallet rack/dry storage area where the inspector noted bags of silica, plaster, and silica binder. The melting pot room included the melting pot, ingots and overflow bronze to be melted, and the cooling rack for sculptures to cool. There is a floor drain in this area; however, the previous EPA inspection (on 07/02/2021) identified this drain as an unprotected drain with the potential for a slug discharge of molten metal. Corrective

actions included permanently plugging the drain from exposure of a slug discharge from the metal pour area (photo 575). There is a sink in the metal pour area used for domestic purposes only that is hard piped to this drain (photo 575).

The inspector was then brought to the Monument Building. In the front open area, there was a large sculpture where pieces were being welded together. In this front open area, the vibratory tumbler is also located. The tumbler was in use at the time of the inspection (photo 576). The tumbler uses specialty rocks with a soap detergent and water to keep the fluidity between rocks and products moving. The soap and water drain out the bottom of the tumbler and are collected in a 5-gallon bucket where the soap water is re-sprayed to the top of the tumbler while in use (photo 577). In the previous EPA inspection (on 07/02/2021), it was noted that if the tumbler unit was to discharge, the volume was not being recorded as part of a discharge through outfall 002. The facility took the corrective action of eliminating the discharge by lining the bucket and when the tumbler has completed the process, the facility allows the water to evaporate and then ties the bag up for disposal. We then walked by a room where sand blasting occurs, and through to a large open area where welding, assembly, and sculpture preparation for shipping occurs for large items. There is a long grate covered floor trench running most of the length of the Monument Building (photos 578 & 579). At the west end of the trench is a 37-gallon sump which outlets to the City of Lander's Wastewater Treatment collection system as outfall 002. There was a large sculpture over the cover to the sump, so it was not observed; however, there was no evidence of wastewater observed in the trench drain.

Outside of the two buildings were old ceramic casts that Mr. Paddleford stated would be disposed of in the spring when a dumpster will be brought in. There were no liquid containers in the outside storage area at the time of the inspection. Federal regulations at 40 C.F.R. 122.26(b)(14) require stormwater discharges associated with specific categories of industrial activity into waters of the U.S. to be covered under NPDES permits. Categories of facilities engaging in industrial activity include, among others, primary metal facilities and fabricated metal products. The facility should coordinate with Wyoming Department of Environmental Quality (WDEQ) to determine whether an industrial stormwater permit, or a no exposure certification is required.

Closing

The inspector then held a closing conference with Mr. Paddleford, where they discussed the preliminary findings, as well as the process for the inspection report. The inspection concluded at approximately 11:30am.

Findings, Corrective Actions and Recommendations

Recommendation #1:

Outside of the two manufacturing buildings were old ceramic casts to be disposed of in the spring when a dumpster will be brought in.

Pretreatment Requirement:

Federal regulations at 40 C.F.R. 122.26(b)(14) require stormwater discharges associated with specific categories of industrial activity into waters of the U.S. to be covered under NPDES permits. Categories of facilities engaging in industrial activity include, among others, primary metal facilities and fabricated metal products, are potentially required to be covered under the multi-sector general permit (MSGP) (40 C.F.R. 122.26(b)(14)(vi)).

Corrective Action:
Ensure waste material from the manufacturing process is stored onsite in a manner to minimize contact with precipitation and ultimately disposed properly offsite. If stormwater or snowmelt comes into contact with waste material on the site and flows offsite, an industrial stormwater permit from Wyoming DEQ may need to be obtained. In a response to EPA, indicate how you have addressed this issue.