NPDES Inspection Report – Pretreatment Categorical Industrial User

National Database Information	
Inspection Entry Date/Time: 02/26/2025 / 1300	Inspection Type: **Pretreatment Categorical Industrial User (CIU)**
Inspection Closing Date/Time: 02/26/2025 / 1512	NPDES ID Number: MTPF00102
Inspection ID: 202502_MTPF00102	
Lead inspector and affiliation: Lisa-kay Prideaux / EPA Region 8 Montana Operations Office	

Facility Location Information	
Site/Facility Name & Location: **C. Sharps Arms Company, Inc.** **100 Centennial Drive** **Big Timber, Montana 59011** **45.8392866; -109.9415455**	Mail Report (Electronic Delivery) to: **Zach Schoffstall, President** **C. Sharps Arms Company, Inc.** **info@csharpsarms.com**

Contact Information	
	Name(s)/Title
Person/Company meeting definition of Owner/Operator	**C. Sharps Arms Company, Inc.**
Facility Contacts:	**Zach Schoffstall / C. Sharps Arms Company, Inc. / President (present)**
	Tim Corwin / C. Sharps Arms Company, Inc. / Gunsmith (present)
Authorized Official(s)	**Zach Schoffstall / C. Sharps Arms Company, Inc. / 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	Address/Phone Number	Date
LISA-KAY PRIDEAUX Digitally signed by LISA-KAY PRIDEAUX Date: 2025.04.04 08:38:16 -06'00'	**U.S. EPA Region 8, Montana Operations Office** **Prideaux.Lisakay@epa.gov** **406-457-5022**	**03.06.2025**
Reviewer Name	Address/Phone Number	Date
Jennifer Ferrando	**U.S. EPA Region 8** **Ferrando.jennifer@epa.gov** **303-312-6601**	**3/11/2025**
Management Reviewer Signature	Address/Phone Number	Date
EMILIO LLAMOZAS Digitally signed by EMILIO LLAMOZAS Date: 2025.04.03 07:46:54 -06'00'	**U.S. EPA Region 8** **NPDES & Wetlands Section Supervisor** **Llamozas.Emilio@epa.gov**	**04/02/2025**
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Inspection Narrative and Site Description

Introduction

The U.S. Environmental Protection Agency (EPA) promulgated regulations at 40 C.F.R. Part 403 establishing the General Pretreatment Regulations and pretreatment standards for various point source categories at 40 C.F.R. Parts 405 – 471. These regulations are designed to regulate the introduction into publicly owned treatment works (POTWs) of pollutants which are determined not to be susceptible to treatment by such treatment works or which could interfere with the operation of such treatment works. The State of Montana has not sought authorization to administer the pretreatment component of the National Pollution Discharge Elimination System (NPDES) program, and the City of Big Timber has not developed an EPA-approved pretreatment program. EPA administers the pretreatment portion of the NPDES program in Montana and is the pretreatment "Control Authority," as defined by 40 C.F.R. Part 403.3(f), for industrial users that discharge to the Big Timber POTW. The Big Timber POTW discharges into the Boulder River.

Metal finishing facilities that discharge wastewater to a POTW are subject to the Metal Finishing Point Source Category Pretreatment Standards found at 40 C.F.R. Part 433. The applicability section of the Metal Finishing Point Source Category states at 40 C.F.R. Part 433.10(a), "the provisions of this subpart apply to plants which perform any of the following six metal finishing operations on any basis material: … If any of those six operations are present, then this part applies to discharges from those operations and to discharges from any of the following 40 process operations." Coating (chromating, phosphating, and coloring) is one of the six metal finishing operations and is described in Table 3-1 on page 3-2 of EPA's 1984 *Guidance Manual for Electroplating and Metal Finishing Pretreatment Standards*: "Coatings – Any operation that includes chromating, phosphating, metal coloring and passivating… Metal coloring involves the chemical method of converting the metal surface into an oxide or similar metallic compound to produce a decorative finish."

On Wednesday, February 26, 2025, at approximately 1300, EPA inspector Lisa-kay Prideaux (inspector) conducted an announced pretreatment Significant Industrial User (SIU) inspection of C. Sharps Arms Company, Inc. (facility) located at 100 Centennial Drive in Big Timber, Montana. The purpose of the inspection was to evaluate the facility's compliance with the requirements in 40 C.F.R. Parts 403 and 433 for the General Pretreatment Regulations and Metal Finishing Point Source Category Pretreatment Standards (Subpart A), respectively. The inspector introduced herself and met with Zach Schoffstall, President and Tim Corwin, Gunsmith, presented their inspector credentials and held an opening conference to explain the purpose of the inspection and discuss the role of the EPA regarding pretreatment regulations in Montana. The inspector asked a series of questions throughout the inspection; responses to the questions, observations, and photograph descriptions were documented in a bound notebook and/or checklist. All photographs taken during the inspection are included in the attached photo log and are maintained by EPA in accordance with the Quality Assurance Field Activities Procedure and Standard Operating Procedure.

The facility was first issued a control mechanism on September 26, 2019, with the authorization to discharge to the City of Big Timber, Montana. The facility notified the EPA on October 8, 2024, of a change in wastewater processing to become a zero-discharge facility. The facility's last discharge was September 2024.

Facility Description and Process Overview

Mr. Schoffstall provided an overview of the operations and processes at C. Sharps Arms Company, Inc. The company was formed in Washington in 1975 and moved to Big Timber, Montana, in 1981. In 1983, C. Sharps Arms Company constructed the current building and started to manufacture replicas of the 1874 Sharps rifles, as well as other rifles, through a combination of fabrication and assembly. Some metal components of the rifles (barrels and screws) are colored through the application of a metal salt coating during the bluing process. The bluing process includes cleaning, polishing, rinsing metal components, and immersing them in a solution of black oxide salt, to produce a decorative color finish. Other metal components (receivers and trim parts) go through a case hardening process where the metal is heat treated so the surface of the metal component is hardened, while keeping the underlying metal layer ductile. The facility has nine manufacturing staff and operates four days a week.

The process starts by taking various types of steel stock (billets and rods) and creating the steel components needed to fabricate the Sharps rifle. The metal components are fabricated using milling and grinding machines, with finish work by hand. The facility has three computer numerical control (CNC) machines that cut the steel stock to the desired specifications. Used oil from the CNC machines is collected and given to local shops to burn in oil heaters during the winter months to produce heat. Some steel components undergo a bluing process (barrels and screws) while other components undergo a case hardening process (screws, fasteners, lock plates, and bolts).

For the bluing process, the steel components are bead-blasted for texturing to hide machine and polishing marks and to give an even, uniform look to the surface of the metal parts, and then cleaned with acetone. Steel components are cleaned in a heated tank with a soap solution to remove oil from the surfaces then are rinsed in a hot water bath. After the steel components are cleaned and rinsed, the metal salt coating occurs and consists of immersing the metal components in a solution of HeatBath Nickel Pentrate®, a metal salt, to provide a decorative color. The metal components are then placed in a cold rinse tank for cooling. Parts are scrubbed with degreaser steel wool by hand and then the process, excluding the bead-blasting and soap tank, is repeated until the desired color is achieved. Steel wool is disposed of with all other scrap steel for recycling. Once the desired color is reached, metal components are then placed into the final boil-out hot water rinse tank. The final step is immersion in a water displacement oil bath.

The cold-water rinse tank has a continuous tap-water flow into the tank to keep the temperature cool and therefore has a continuous discharge via overflow into a 160-gallon open holding tank. The cold-water rinse tank is the only tank that discharges to the 160-gallon holding tank for evaporation. All remaining tanks are left filled for the next batch operation and are recharged as necessary. The facility operates the bluing process approximately once each month.

For the case hardening process, the metal components are first cleaned with acetone and are then heat treated in an oven containing sodium cyanide. Sodium cyanide is heated in an oven until it turns to liquid, metal components are heated enough that they begin to absorb carbon from the sodium cyanide. The additional carbon enters the crystalline structure of the surface of the metal, and hardens when cooled, or quenched. This leaves the surface of the metal component hard, while the interior characteristics of the metal do not change. Depending on the length of time the metal component is exposed to the sodium cyanide, the process will prevent corrosion and provide a decorative finish. Once

the oven cools, the sodium cyanide returns to solid form and is reused. Spent sodium cyanide, in ash form, is placed in a drum and is disposed of when the drum is full. Once the metal components are removed from the oven, they are submerged in water in a 103-gallon quench tank. The quench tank helps to rapidly cool the heat-treated steel components and develop the desired color. Components are then rinsed in a 5-gallon cold-water rinse tank and placed in the final 8-gallon boil-out tap water tank. All tanks except the boil-out tank are left filled for the next batch operation and are recharged as necessary. Water from the boil-out tank is emptied into a 5-gallon bucket and stored for reuse in the next case hardening process.

Records

After the facility representative provided a background description of the facility operations, the inspector commenced to review facility records. C. Sharps Arms' Slug Discharge Control Plan, which contains the Solvent Management Plan, was approved by EPA on April 13, 2020. Approval of the Solvent Management Plan allows C. Sharps Arms to submit a total toxic organics (TTO) certification statement with each periodic compliance report in lieu of sampling for TTOs. The inspector performed a review of Discharge Monitoring Reports (DMRs) for the timeframe of January 1, 2024, to December 31, 2024. C. Sharps Arms had copies of all sampling and reporting documentation to support the completion of the reviewed DMRs. The facility's last discharge was in September of 2024; the last sampling event was March 18, 2024. The facility has changed the discharge system, so the facility is no longer discharging to the City of Big Timber's POTW.

Signed TTO certifications were included with each DMR submittal. Material Safety Data Sheets were kept for all chemicals on-site. Standard Operating Procedures (SOPs) were maintained for the bluing and case hardening process. Material transfer logs show one 55-gallon drum of Nickle Pentrate® transferred off-site by Mountain States Environmental Services on January 23, 2024, and one 14-gallon drum of sodium cyanide transferred off-site by Safe Harbors on February 5, 2024.

Site visit

After facility representative interviews and records review, Mr. Schoffstall walked the inspector around each of the processes. We started in the manufacturing area, where there were multiple worktables, tools, CNC machines, barrel drilling machines, and other large pieces of equipment used to manufacture the various steel components used in the Sharps rifle. Mr. Schoffstall stated the raw materials used at the facility primarily include black walnut wood and various types of steel stock (e.g., barrel stock, screw stock). Next, we entered the bluing building, located as a separate building on the southwest side of the main building, where the bluing and case hardening operations occur. The bluing and case hardening processes occur on the south side of the building, and the north side is used for dry chemical storage. The entire area encompassing the bluing and case hardening process is sunken approximately 4 inches as secondary containment to contain any minor tank top-over spills and/or drips during process flow. There are three floor drains in the bluing building which connect to the City of Big Timber's POTW. One drain is within the secondary containment area, which is the former discharge drain. It is currently plugged and sealed (photo 152). The other two drains are located on the higher portion of the building floor, in the area used for chemical storage, and are permanently sealed. All chemicals stored in this area are dry material and/or empty drums. Chemicals stored in this area include, but are not limited to Nickel Pentrate®, soaps, degreasers, sodium cyanide, and various salts. In the main building, the facility sweeps up all metal shavings and collects any used steel wool pads at

the end of each shift and puts them in a dumpster located outside the main building (photo 155). When the dumpster is full, the facility calls to have shavings removed and recycled.

For the bluing process (photos 149-152), steel components are placed into an 8-gallon tank with a soap/degreaser solution bath (tank 6) then are rinsed with hot water in an 8-gallon tank (tank 5). Steel components are placed in one of the two 8-gallon bluing tanks (tanks 1 or 2) for varying lengths of time. The metal components are then placed in an 8-gallon cold rinse tank (tank 3) for cooling. Next, metal components are placed into the final 8-gallon boil-out hot water rinse tank (tank 4). The final step is immersion into an 8-gallon water displacement oil bath (tank 7). During production, tank 3 has a continuous flow of tap water for temperature control, and therefore a continuous overflow into a 160-gallon open holding tank located directly south of tank 3 (photo 150). During production the facility estimates approximately 80-85 gallons of overflow enter the tank. The tank has a heater (photos 150 and 151) to help evaporate the water in the tank. The facility recently removed a different holding tank that included a discharge into Big Timber's POTW; with the addition of the open tank and heater for evaporation, the facility no longer discharges. The previous discharge pipe and drain to the POTW have been removed, plugged, and sealed to remove the potential to discharge (photo 152).

The metal components that undergo the case hardening process are heat treated in an oven containing sodium cyanide (photo 153). Once metal components are removed from the oven, they are submerged in a 103-gallon quench tank containing water (tank 9 – photo 154) and then rinsed in a 5-gallon water tank (tank 10); neither tank is emptied, only tap water is added. Components are then placed in the final 8-gallon boil-out tap water tank (tank 8). Tank 8 is the only tank in the case hardening process which is emptied after each use into a 5-gallon bucket (off photo). Prior to the case hardening operation beginning, tank 8 is filled with water from the last operation (stored in the 5-gallon bucket) and additional tap water if required. At the end of the process, water from tank 8 is then transferred back into the 5-gallon bucket until the next production use.

Once metal parts are processed, they are polished and assembled in the main building to a final product.

Closing and Follow-Up

A closing conference was held on-site with Mr. Schoffstall, during which the process for the inspection report was discussed. The inspection concluded at 1512.

Findings, Corrective Actions and Recommendations

Finding #1: The facility improperly reported No Discharge Indicator codes on the Discharge Monitoring Report for monitoring period ending December 31, 2024.

Specifically, for the July 1, 2024, to December 31, 2024, monitoring period, the facility indicated a No Discharge Indicator (NODI) code C which represents "no discharge". Since the facility's last discharge was September 2024, during the monitoring period between July 1, 2024, and December 31, 2024, the NODI code C was not appropriate; this is because the facility did have a discharge at least once per month from July 1, 2024, to September 2024. The facility had the ability to collect a sample during the monitoring period and report the results on the corresponding DMR.

Pretreatment Requirement:

Title 40 of the Code of Regulations Part 403.12(e) and Part II.C of the *Discharge Requirements Under General Pretreatment Regulations and Metal Finishing Point Source Category* control authority states all regulated process wastewater discharged must meet the limits identified in the table of the same Part. Samples or measurements must be collected using the specified sample type and at least as often as mandated in the table of Part II.C.

Corrective Action:

Update the NODI code for the July 1, 2024, to December 31, 2024, monitoring period from a NODI code C ("No Discharge") to a NODI code E ("sample not collected"). If the facility discharges in the future, even just one time during the monitoring period, the facility must collect a discharge sample during the discharge event. Provide the EPA with a description of the corrective actions taken to address this finding

Recommendation #1:

The facility is currently under an Administrative Order on Consent (CWA-08-2019-0128) which requires the issuance of a Notice of Discharge Requirements before the Administrative Order on Consent can be closed out. Due to the change in wastewater processing, a new/updated Notice of Discharge Requirements Application is required. Included as an attachment to this inspection report, is a Notice of Discharge Requirements Application for C. Sharps Arms Company, Inc. to complete and submit to the EPA.