



Industrial User Facility Inspection Report

U.S. EPA, Region 8

Name of industry and location:

Birko Corporation
9152 Yosemite Street
Henderson, CO 80640

Control Authority / NPDES Permit No.

South Adams County Water and Sanitation District
NPDES Permit No. CO-0026662

IU – NPDES ID

COPIU0011

Date of visit:

January 29, 2025

Approximate Time of visit:

0920 – 1045

Name(s) / Affiliation / email of inspector(s):U.S. EPA:

Al Garcia, garcia.al@epa.gov
Monica Crosby, crosby.monica@epa.gov

South Adams County Water and Sanitation District:

- Gary Bassett, gbassett@sacwsd.org
- Carrissa Cumine, ccumine@sacwsd.org

General Facility Information:Representatives at Inspection:

- Jeremy Heronemus – Director of Operations, jheronemus@solenis.com
- Lloyd Coombe – Quality/EHS Manager, lcoombe@solenis.com

Type of Business Operations:

- Manufacture of liquid and dry soaps/detergents, including the blending of raw material ingredients and bottling/packaging of finished products.

Facility Information:

- 24 employees
- five days/week, (Monday through Friday).
- 8-hour shift

Inspection Description:

Al Garcia and Monica Crosby from the U.S. Environmental Protection Agency (EPA) and Gary Bassett and Carrissa Cumine from the South Adams County Water and Sanitation District (District) conducted a significant industrial user (SIU) inspection of the Birko Corporation facility (facility) located at 9152 Yosemite Street, Henderson, CO 80640. The SIU inspection was conducted as part of the EPA Pretreatment Audit of the District's Publicly Owned Treatment Works (POTW) and EPA-approved Pretreatment Program. The inspection of the facility provides current conditions of the facility's unit operations and consisted of an evaluation of the waste streams generated from the unit operations, management of these waste streams, including potential for spills and

slug discharges. The facility discharges to the sewer collection system leading to the District's POTW.

Upon arriving at the facility on January 29, 2024 at approximately 9:20 a.m., Al Garcia and Monica Crosby of the EPA presented credentials to the facility representatives and explained the purpose of the inspection. During the opening interview, the facility representatives provided an overview of the operations and processes at the facility, waste streams generated, and the management/discharge of these waste streams. The opening interview was followed by a facility tour to visually inspect the unit operations. The EPA conducted a closing conference to discuss potential findings and recommendations identified during the inspection.

Process Description:

The facility located at 9152 Yosemite Street, Henderson, CO 80640 manufactures dry and liquid soaps and detergents used for sanitization in food processing and beverage manufacturing. The facility has about 24 onsite employees and operates one 8-hour shift from Monday through Friday. The Google Maps view of the facility is shown in Figure 1.



Figure 1 – Birko Corporation -Google Maps View

Chemical and Raw Materials Storage –

The facility receives raw materials into its warehouse located on the east side of the building. The majority of the raw materials are received in barrels, totes, and through bulk material delivery. The EPA did not gather a

complete list of raw materials during the inspection due to the facility storing a significant number of raw material supply products. However, the following list are general types of raw materials at the facility:

- Acids
 - Sulfuric – barrels/totes
 - Phosphoric – 40,000 lbs bulk tank
 - Nitric – five totes at the time of the inspection
 - Hydrochloric -- totes
- Caustics
 - 50% sodium hydroxide – 40,000 lbs bulk tank
 - Sodium hydroxide/potassium hydroxide – 40,000 lbs bulk tank
 - Potassium hydroxide – 40,000 lbs bulk tank
 - Caustic soda beads – barrels/50 lb bags
- Hydrogen peroxide – 40,000 lbs bulk tank
- Surfactants – barrels/totes
- Chelators – barrels/totes
- Mineral oils
 - 60 weight - 40,000 lbs bulk tank
 - 220 weight - 40,000 lbs bulk tank
- Ethanol – barrels

The barrels and totes are received on the east dock and are transported to the raw materials racks. The bulk material is delivered to the 40,000 lbs bulk tank through hose connections at the bulk tank manifold. According to Mr. Heronemus, a facility representative is present during these deliveries to eliminate/minimize connection mistakes and ensure the material is plumbed to the correct bulk storage tank.

The facility has two product lines: dry soaps and detergents and liquid soap and detergents. The dry product line is located in the southwest side of the building and the liquid product line is located on the north side of the building.

Liquid Blending Process –

The facility has the following liquid blending tanks used to mix ingredients for the various product types:

- Caustic – 2,750 gallons and 1,500 gallons
- Acid – 2,300 gallons
- Oil – 2,650 gallons
- Food Grade – 2,640 gallons – located near the bulk storage in the warehouse
- Four Ink – range from 450 to 950 gallons

The raw materials for the liquid product line are either plumbed (bulk storage tanks) or transported by dolly or forklift to the liquid blending tanks. During the inspection, the facility stated that it uses approximately 450 recipes, and that the recipes determine how the bulk storage, barrels, or totes are transported to the blending tank.. In addition, it was estimated by facility representatives that caustic recipes are mixed/blended daily, acid recipes are mixed/blended about 80% of the time, food-grade recipes about 60 to 80% of the time, and ink/oil recipes on an as-needed basis.

According to the facility representatives, the facility schedules product runs in each blending tank to minimize the need for cleaning and to reuse liquid blending residues as ingredients for subsequent blends. This helps to reduce the amount of wastewater generated from the blending process. The oil and four inks blending tanks do not get washed out because they are dedicated to similar products for each blending batch. To clean the caustic and acid tanks, the contents are sprayed down with a garden hose and then recirculated through pumps until

the tank is certified clean. The facility representative estimates about 100 gallons are used for this cleaning event. The wastewater generated from the cleaning events in the caustic and acid tanks is released to the floor that slopes to a collection sump. The facility pumps the sumps through a flexible hose to a 1,000-gallon wastewater pit. The wastewater collection pit, located in a space near the blending tanks, is an open pit protected with industrial grating.

The food-grade tank is cleaned using programmed Clean-In-Place equipment and about 80% of the wastewater generated is reused in the next batch. The remaining wastewater is collected in totes and transported to the wastewater pit, where it is poured over the grating into the pit.

The liquid products in the blending tanks are pumped into finish containers and then containerized in drums or totes; finished products are stored in the product racking, located in the warehouse.

Dry blending process –

The dry blending process is performed in a 3,000 lbs blending tank using dry raw materials in barrels or 50 lbs bags. According to facility representatives, the recipes for dry products use the entire barrel or bag contents in a recipe to minimize the need for storage of partial raw material containers and cleaning. The blending tank is located about 20 feet above ground on a platform and dry products are emptied from the blending tank into fiber drums. These product drums are transported to the product racking located in the warehouse.

The facility uses about 50 gallons of water to clean the dry blending tank with a garden spray. This wastewater is collected and transported to the wastewater collection pit.

Wastewater Treatment –

The contents of the wastewater pit are pumped to the 2,500-gallon neutralization tank, and pH is adjusted to a pH range from 6 to 10, but typically a pH of 7. The tank is aerated, and a drum of NaOH and a tote of H₂SO₄ are used for neutralization. The treated wastewater in the tank is pumped to a 3,500-gallon discharge tank that overflows to the sanitary sewer through flexible hosing. The sanitary sewer discharge point is located near the wastewater collection pit, and according to facility representatives, the flexible hosing is moved from the discharge point to the wastewater collection pit when sampling occurs.

EPA Classification of the Industrial User

Based on observations and information received during the inspection, the facility is categorized as a facility subject to the Soap and Detergent Manufacturing for Liquid Detergents found at 40 C.F.R. § 417, Subpart P and for Dry Detergents by Blending found at 40 C.F.R. § 417, Subpart Q. The Categorical Pretreatment Standard for New Sources (PSNS) for Liquid Detergents is found at 40 C.F.R. § 417.166 and the Categorical PSNS for Dry Detergents is found at 40 C.F.R. § 417.176.

Summary of Findings

Birko Corporation
NPDES ID# COPIU0011
January 29, 2025

Pretreatment Inspection Findings	Follow up Action Items
1. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vi) require the facility to control slug discharges defined as any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, local limits or Permit conditions. If a slug discharge potential is identified, the facility is required by the Pretreatment Regulations to develop a plan to control slug discharges, including the following in 40 CFR 403.8(f)(2)(vi)(D): “If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.” During the inspection, the EPA identified the use of flexible hosing to transport treated wastewater to the discharge point leading to the monitoring manhole and to the District’s sanitary sewer system. The flexible hosing can be moved from the discharge point to the wastewater collection pit or potentially other points of discharge not allowed in the facility’s permit. The facility is required to evaluate the use of flexible hosing for transporting treated wastewater from the discharge tank to the sanitary sewer discharge point. The EPA recommends the facility replace the flexible hosing with hard pipe to minimize/eliminate the potential for a slug discharge to occur from operator error.	<u>Pretreatment Requirements</u> 40 CFR 403.8(f)(2)(vi)(D) <u>Corrective Action Item</u> Evaluate the use of flexible hosing for transporting treated wastewater from the discharge tank to the sanitary sewer discharge point.

Report Review and Signature		
Drafter Name	Address/Phone Number	Date
Al Garcia	U.S. EPA Region 8 1595 Wynkoop Street 8WD-CWW Denver, Colorado 80202 303-312-6382	02/10/25
Reviewer Name	Address/Phone Number	Date
Monica Crosby	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NP Denver, Colorado 80202 303-312-6196	02/11/25
Supervisor Signature/Name	Address/Phone Number	Date
	U.S. EPA Region 8 1595 Wynkoop Street 8WD-CWW Denver, Colorado 80202	2/13/2025
Michael Boeglin	303-312-6250	