

REPORT OF INDUSTRIAL USER COMPLIANCE SAMPLING INSPECTION

AT
Labconco Corporation
2500 Liberty Bell Road
Fort Scott, Kansas 66701

KANSAS PRETREATMENT PERMIT: KSP000116

BY
U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 7

Enforcement and Compliance Assurance Division
January 17-18, 2023

INTRODUCTION

I conducted an Industrial User Compliance Sampling Inspection at Labconco Corporation (Labconco), Fort Scott, Kansas, on January 17-18, 2023. The inspection was conducted under the authority of Section 308 of the Clean Water Act (as amended) and in accordance with EPA Region 7 Standard Operating Procedures. This narrative report and attachments present the results of the inspection.

PARTICIPANTS

Labconco Corporation:

Brandon Smith, Plant Manager (620) 644-7418

Email: bsmith@labconco.com

Kevin Wagner, Senior Manufacturing Engineer

U.S. Environmental Protection Agency (EPA), Region 7:

Joe Heafner, Life Scientist, (913) 551-7091

Email: heafner.joseph@epa.gov

Caitlin Dix, Physical Scientist

FACILITY DESCRIPTION

Labconco manufactures metal laboratory equipment. The operations consist of various steps of assembly including cutting, punching, and forming cold rolled steel, stainless steel, and galvanized steel. Assembled products are prepared for painting by sending the parts through a two-stage acid wash.

This facility is classified as subject to the Metal Finishing Standard for Existing Sources, 40 CFR Part 433.15, due to the washing operation being considered as a conversion coating process.

INSPECTION PROCEDURES

Facility personnel were not notified prior to the inspection. I arrived at the facility unannounced on the morning of January 17, 2023, presented my credentials to Mr. Smith, explained the purpose and procedures of the inspection. I also stated that during the inspection, I would collect a sample of the facility's process wastewater that is discharged to the city of Fort Scott. Nine photos were taken during the inspection (attachment 1). I completed the Region 7 inspection checklist after the completion of the inspection (attachment 2).

SAMPLING PROCEDURES:

On January 17, 2023, I installed two ISCO Model 3710 automatic samplers to collect samples of the facility's wastewater from each stage of the parts washing system. Process wastewater from each stage is collected in a pit before being discharged to the sanitary sewer. Each pit is covered by a metal grate. For the sampling event, the metal grate was removed and a weighted length of Tygon tubing was suspended in the pit then and connected to each sampler.

Each sampler was stocked with ice and programmed to collect equal volume aliquots every 30 minutes. A composite sample of the effluent from each pit was successfully collected from January 17 through 18, 2023, and submitted for metals analysis only. Mr. Wagner stated that 80% of the flow comes from the 1st pit while 20% of the flow comes from the 2nd pit. To get a representative sample of the combined discharge, I collected 800 milliliters of wastewater from the 1st stage pit and combined it with 200 milliliters of wastewater from the 2nd stage pit. The combined effluent was poured into a clean container for analysis, preserved as appropriate, cooled with ice to maintain 4 degrees Celsius. The temperature and pH analyses were performed immediately on site.

All samples collected were transported to the EPA Region 7 Laboratory. Chain-of-custody procedures were used for all samples. All appropriate Region 7 standard operating procedures in the collection, packaging, transportation, and handling of the samples were followed.

FINDINGS AND OBSERVATIONS

1. Permit: A Kansas Pretreatment Permit for Labconco became effective on June 1, 2019, and will expire May 31, 2024 (attachment 3). The permit requires the facility to monitor its effluent for flow, pH, metals (cadmium, chromium, copper, lead, nickel, silver, zinc), total toxic organics (TTOs), and cyanide. The permit also places numerical limitations on those parameters. The permit further requires the facility to sample and analyze the parameters on a quarterly basis and submit discharge monitoring reports (DMRs) to the Kansas Department of Health and Environment on a semi-annual basis, by January 28 and July 28 of each year.

Mr. Wagner described the wash system operation as an acid based cleaner (for some, but not all parts) followed by a rinse of clean water. He stated that this is a two-stage parts washer that includes 5 tanks to hold process wastewater and rinse water. He stated that the tanks 1-3 discharge overflow water to the 1st pit while tanks 4 and 5 discharge overflow to the 2nd pit. He then stated that process wastewater from each pit is combined before discharging to the sanitary sewer. Mr Wagner stated that the tanks are checked for pH on a daily basis. According to Mr. Wagner, tanks 2, 3, and 5 (rinse

tanks) are drained on a monthly basis, while tanks 1 and 4 are drained every 3 months. I requested and received a copy of the Safety Data Sheet (SDS) for the acid-based cleaners (attachment 4). The cleaners contain sulfuric and hexafluorozirconic acid. The facility's process is considered a conversion coating operation due to the use of these strong acids.

2. Discharge Monitoring Reports (DMRs): I reviewed the facility's compliance status from 2020 – 2022, which were provided in the Excel spread sheet by the facility. After the review, I placed the spreadsheets in the ECAD electronic file system. I found that the facility had violated the effluent limits for Zinc (Zn) in the 1st half (January) of 2022. No other exceedances of the effluent limits were noted during the review.

3. Water Balance: An accurate water balance was achieved during the inspection. The facility uses water for only two applications: The wash system (Outfall 001) and sanitary usage. Mr. Wagner provided the water usage at the facility for 2022. The water usage indicates that the facility used approximately 8,500 gallons per day. Approximately 2,000 gallons a day is used in the Reverse Osmosis (RO) system that feeds the wash system. The RO system has a 3,000-gallon storage tank that is continuously refilled. According to the DMRs, the average flow from the wash system is approximately 5,500 gallons per day. With 90 employees, the average employee consumption is about 10 gpd. This is within the range of 5 to 25 gpd that is considered normal.

5. Total Toxic Organics: The facility can certify compliance with the Metal Finishing limit established for Total Toxic Organics (TTO) provided it is following the provisions of its approved Solvent Management Plan. Mr. Smith provided a copy of the Solvent Management Plan after the completion of the inspection. I reviewed the Solvent Management Plan, then placed the plan into the ECAD electronic file system.

6. Sample Results: Analytical results for samples collected during the inspection are presented in the table below. The complete data transmittal package is included as attachment 5.

Sample Results For Labcono, mg/L																		
	Ag		Cd		Cr		Cu		CN		Ni		Pb		Zn		pH (s.u.)	
	Dmax	Mavg	Dmax	Mavg	Dmax	Mavg	Dmax	Mavg	Dmax	Mavg	Dmax	Mavg	Dmax	Mavg	Dmax	Mavg	Min	Max
Outfall	0.43	0.24	0.11	0.07	2.77	1.71	3.38	2.07	1.2	0.65	3.98	2.38	0.69	0.43	2.61	1.48	5	10
001	0.21		ND		ND		0.0218		Not Sampled		ND		ND		ND		7.24	
Result:	C		C		C		C		NA		C		C		C		C	

Results of the sampling indicate that the facility was in compliance with the permit limits during the sampling event of January 17-18, 2023.

8. Other Observations: During the inspection, I observed uncovered dumpsters that contained scrap metal. Mr. Smith stated that the metal is removed as needed and sent to a metal recycler. Based on the facility's Standard Industrial Classification of 3821, the facility might be required to seek coverage for industrial stormwater discharges from the facility in accordance with 40 CFR 122.26 (b)(14)(xi).

SUMMARY

- Labconco utilizes a two-stage wash system to prepare parts for paint. The wash system uses acid washes and rinses within the wash system.
- Labconco violated the effluent limits for Zinc one time in the past six reporting periods.
- Samples taken during the inspection indicated that the facility did not violate effluent limits during the inspection.
- Since the facility appears to have scrap metal and other parts stored outside in dumpsters, the facility might be subject to the industrial stormwater regulations at 40 CFR 122.26 (b)(14)(ix) and should consult with KDHE CWA permit staff to determine if permit coverage is required.

**JOSEPH
HEAFNER**

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Date: 2023.02.28 07:00:32
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Joe Heafner
Life Scientist

**NICOLE
MORAN**

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Date: 2023.02.28 08:30:12
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Nicole Moran
Section Chief

Attachments:

1. Photos and Photo Log (3 pages)
2. Region 7 Industrial User Inspection Checklist (6 pages)
3. Kansas Pretreatment Permit (15 pages)
4. SDS Sheets (66 pages)
5. Data Transmittal Packet for Activity JAH2307 (13 pages)