

REPORT OF INDUSTRIAL USER COMPLIANCE SAMPLING INSPECTION

AT

**Heatron Inc. Plant 1
3000 Wilson Ave
Leavenworth, KS 66048**

KANSAS PRETREATMENT PERMIT: KSP000108

BY

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 7: Enforcement and Compliance Assurance Division**

December 6, 2023

INTRODUCTION

I conducted an Industrial User Compliance Sampling Inspection at the Heatron Inc. Plant 1 (Heatron) 3000 Wilson Ave, Leavenworth, Kansas, on December 6, 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

Heatron Inc:

Austen Miller, Chemical Engineer, (913) 651-4420

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Glen Weichold, Manufacturing Engineer

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

Hannah Lewis, Life Scientist, (913) 551-7679

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FACILITY DESCRIPTION

Heatron manufactures flexible heaters. Raw materials utilized in the process include but are not limited to: stainless steel, copper, nickel, Inconel®, silicone, and Kapton®. Circuit images are printed on heat bonded substrate and foil. The monomer is dissolved by a developer. Chemical etching is followed by a stripping process, rinsing, and drying. Process wastewater is produced from post-developer rinsing, post-etching rinsing, post-stripper rinsing, and “clean line” post-alkaline rinsing. Reject water from a reverse osmosis system is discharge separately to the sanitary sewer. Process wastewater is directed to a treatment train which includes 1,000-gallon holding tank; 1,000-gallon SBS tank to precipitate metals by increasing pH with sodium hydroxide and polymer; 500-gallon clear well tank; and 1,000-gallon neutralization tank where pH is continuously measured and adjusted with either sulfuric acid or sodium hydroxide and discharged continuously. Solids from the SBS tank

are sent to a filter press. Solids from the press are disposed of by a contractor, Heritage Environmental. The facility is subject to the 40 C.F.R. Part 433 Metal Finishing Regulations for new sources.

INSPECTION PROCEDURES

Facility personnel were not notified prior to the inspection. I arrived at the facility unannounced at 9:15 a.m. on December 6, 2023, presented my credentials to Mr. Miller and Mr. Weichold, and explained the purpose and procedures of the inspection. I also stated that during the inspection, I would collect samples of the facility's process wastewater that is discharged to the city of Leavenworth. Ten 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 December 6, 2023, I collected grab samples from a sample tap on the neutralization tank (Outfall 001). The samples were submitted for metals analysis. The samples were collected in clean containers 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 Heatron, issued by the Kansas Department of Health and Environment (KDHE), 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 KDHE on a semi-annual basis, by January 28 and July 28 of each year.

Mr. Weichold stated that the facility operates two shifts, five days per week and has approximately 114 employees.

Mr. Miller described each process wastewater operation. Process wastewater is produced from rinsing activities at different stages of production (chemical etching, developer, stripper, and clean line) and directed to a holding tank. From the holding tank, wastewater flows into the SBS tank for precipitating out metals by raising the pH along with a polymer. Wastewater then flows to a clear well tank and finally a neutralization tank. Process wastewater is mixed in the neutralization tank and continuously adjusted for pH during continuous discharges through Outfall 001.

Mr. Miller also explained that solids from the SBS tank are sent through a filter press. Wastewater from the filter press is sent back to the holding tank while the solids are placed in a 55-gallon drum for proper disposal. The facility produces 700 pounds of solids on average each year.

2. Discharge Monitoring Reports (DMRs): I reviewed the facility's analytical results from April 2020 – November 2023. After the review, I placed the files in the ECAD electronic file system. I found no exceedances of the effluent limits during the review. The facility routinely reports a discharge rate of 10,000 GPD on the DMRs because there are no flowmeters located at the facility for determining a more accurate discharge rate, and this is the historical practice of facility personnel.

3. Water Balance: A reasonable water balance was not achieved following the inspection with an understood unknown evaporation factor. The facility provided a spreadsheet with estimated water losses because there are no flowmeters within the facility. Domestic wastewater and reverse osmosis reject water are discharged separately than process wastewater. According to water purchase records provided by the facility, from May 2023 to November 2023, it was determined that the facility consumed an average of 6,694 gallons per day. The facility estimates 1,500 gallons per day lost during production. Other estimated losses include domestic use (2,280 gallons per day), reverse osmosis system (1,000 gallons per day), and evaporation (unknown).

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. Miller 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 4.

Results from Samples Collected during the Inspection, mg/L

Analyte	Value	Dmax	Mavg
Ag	ND	0.43	0.24
Cd	ND	0.11	0.26
Cr	0.0264	2.77	1.71
Cu	0.202	3.38	2.07
Ni	0.0522	3.98	2.38
Pb	ND	0.69	0.43
Zn	0.0672	2.61	1.48
Cn	not analyzed	NA	NA
pH (s.u.)	9.33	5.0 min	10.0 max

Results of the sampling indicate that the facility was in compliance during the inspection on December 6, 2023.

SUMMARY

The facility appeared to be well maintained and operated at the time of the inspection. The facility has not exceeded effluent limits in at least two years. Documentation was available upon request. The facility should implement a more accurate method for reporting its discharge rate through Outfall 001.

**HANNAH
LEWIS**

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Attachments:

1. Digital Image Log (12 pages)
2. Region 7 Industrial User Inspection Checklist (6 pages)
3. Kansas Pretreatment Permit (15 pages)
4. Data Transmittal Packet for Activity HML2405 (11 pages)