



NPDES Pretreatment Compliance Sampling Inspection Report

G.W. Lisk Company Inc.
2 South Street
Clifton Springs, New York

July 22, 2021

Report Prepared by:

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1.0 OBJECTIVE

On July 22, 2021, at the request of the Water Compliance Branch, the United States Environmental Protection Agency (USEPA) conducted a National Pollutant Discharge Elimination System (NPDES) Pretreatment Compliance Sampling Inspection (CSI) at G.W. Lisk Company Incorporated in Clifton Springs, New York. The objective of the CSI was to gather information necessary to determine compliance with the requirements and limitations of 40 CFR Part 433 (Metal Finishing Point Source Category).

2.0 KEY PARTICIPANTS

Listed below are key inspection participants and contact information, grouped by organization.

U.S. Environmental Protection Agency
Robert Morrell, Geologist, Lead Inspector
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G.W. Lisk Company Inc.
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3.0 FACILITY DESCRIPTION

3.1 General Information

G.W. Lisk Company is located at 2 South Street in Clifton Springs, New York. The facility was founded by George Washington Lisk in 1928 as a manufacturer of tin bug sprayers. The company expanded to include cookware in its manufacturing operations until 1947, when Drew Morris converted the product line to manufacture industrial equipment, military components, and aerospace parts. Presently, the company manufactures solenoids, linear variable differential transformers (LVDT's), valves, flame arrestors, in-flight fueling connectors, and exhaust gas recirculation (EGR) valves. The company is categorized as Standard Industrial Classification (SIC) Code 3499 (Fabricated Metal Products). The 12-acre facility consists of three buildings, with Building 1 housing the Plating Department. G.W. Lisk employs approximately 800 people. There are three 8-hour shifts that operate 24 hours per day, 6 days per week.

3.2 Process Information

Incoming stainless steel comes into the receiving dock. The stainless steel stock is machined using lathes and computer numeric controlled (CNC) machines. The parts are manufactured by soldering, brazing, welding, metal finishing, assembly, testing, and packaging. Approximately 80 different products are shipped to various customers.

The metal finishing operations are isolated from the other manufacturing operations. The metal parts pass through an aqueous cleaning line in preparation for electroless and electroplating processes. The process baths include electroless nickel, acid zinc, zinc nickel, bluing, and passivation.

The water used in the aqueous cleaning line is provided by the Village of Newark, which has an intake on Canandaigua Lake. The facility uses approximately 39,000 gallons per day. Industrial wastewater is generated from the rinsing component of the plating process. Cyanide-bearing wastewater is separated from the non-cyanide-bearing wastewater prior to entering the plating wastewater treatment plant. Cyanide process wastewater is collected in Tank TR-1, the cyanide destruct tank, where sodium hypochlorite is added. The wastewater then flow into Tank TR-2, where second stage cyanide oxidation occurs. The wastewater from Tank TR-2 flows into Tank NR-1, neutralization reactor 1. The non-cyanide process wastewater, consisting of mixed acid/alkaline process wastewater, is collected in Tank TR-3. The wastewater from Tank TR-3 flows into Tank NR-1 where it is combined with the treated cyanide process wastewater. The combined wastewater then flows into Tank FT-1, the flocculation tank, where a polymer is added. The wastewater enters Tank CL-1, the slope plate clarifier tank. The wastewater from Tank CL-1 is conveyed to the Final pH Tank, where sodium hydroxide or sulfuric acid are added for pH adjustment. The wastewater then flows into Tank SD-1, the sewer discharge tank. The wastewater is then pumped to the Village of Clifton Springs Wastewater Treatment Plant. Approximately 157,000 gallons are discharged per month.

The sludge from Tank CL-1 is conveyed to Tank SH-1, the sludge holding tank. The sludge is directed to a filter press for dewatering. The dewatered sludge is placed in a hopper and shipped as an F006 hazardous waste to Environmental Services Group on Buffalo, New York.

3.3 Facility Self-Monitoring Information

Wastewater samples are collected twice per year by facility personnel. Samples are analyzed for the parameters listed in 40 CFR Section 433.15 and the local POTW parameters (oil and grease, arsenic, mercury, molybdenum, selenium, total suspended solids, 5-day biochemical oxygen demand, and pH). All samples, with the exception of cyanide, are collected at the sewer discharge tank. The cyanide samples are collected from a tap at Tank TR-2. Samples are analyzed by Pace Analytical Services of Melville, New York.

4.0 EPA SAMPLING/INSPECTION ACTIVITIES

4.1 Sampling Activities

An automatic composite sampler was set up at Tank SD-1, the sewer discharge tank, to collect an aliquot of the effluent wastewater every 15 minutes for 7 hours. After 7 hours, which is when the batch discharge ended, the automatic composite sampler was disassembled and a 500-ml plastic jar was filled for the analysis of metals (cadmium, chromium, copper, lead, nickel, silver, zinc, arsenic, mercury, molybdenum, and selenium). A grab composite sample was also collected at Tank SD-1 by filling one-third of the sample containers three times during the 7-hour discharge. The grab composite sample was analyzed for TTO non-volatile organics. Three grab samples for TTO volatile organics were also collected at this location during the 7-hour discharge. The three grab samples for TTO volatile organics were composited in the EPA laboratory. Another grab sample was also collected at Tank SD-1 for oil and grease. Total residual chlorine and pH were analyzed in the field and recorded in the field notebook.

A grab composite sample was collected from a tap at Tank TR-2 by filling one-third of the sample container three times during the 7-hour discharge. This sample was analyzed for total cyanide.

All sample containers, preservation techniques, and holding times were in accordance with U.S. EPA requirements specified in 40 CFR Part 136. All samples were placed in a cooler with wet ice and transported to the U.S. EPA Region 2 Laboratory in Edison, New Jersey.

The facility representative declined the EPA offer for split samples.

5.0 ANALYTICAL RESULTS**G.W. Lisk Company Pretreatment CSI
July 22, 2021**

Parameter	Discharge to POTW	Daily Maximum Pretreatment Standards for Existing Sources – Metal Finishing Point Source Category (40 CFR Section 433.15)	Local Discharge Limit – Daily Maximum
Total Residual Chlorine (mg/l)	0.08	--	--
pH (su)	9.42	5.0 minimum	5.0 – 10.0
Cadmium (mg/l)	Not detected	0.69	0.1
Chromium (mg/l)	0.0695	2.77	1.0
Copper (mg/l)	Not detected	3.38	0.50
Lead (mg/l)	Not detected	0.69	0.10
Nickel (mg/l)	0.082	3.98	1.0
Silver (mg/l)	Not detected	0.43	0.25
Zinc (mg/l)	0.201	2.61	0.50
Arsenic (mg/l)	Not detected	--	0.023
Mercury (mg/l)	Not detected	--	0.0056
Molybdenum (mg/l)	Not detected	--	0.022
Selenium (mg/l)	Not detected	--	0.056
Total Cyanide (mg/l)	2.71*	1.20	--
TTO (mg/l)	0.0245	2.13	2.13
Oil and Grease (mg/l)	Not detected	--	100

*The total cyanide sample was collected at Tank TR-2.

6.0 FINDINGS**6.1 Sampling Result Findings**

Based on the EPA analytical results for the samples that were collected on July 22, 2021, G.W. Lisk Company was not in compliance with the effluent guidelines and pretreatment standards for existing sources in the Metal Finishing Point Source Category (40 CFR Part 433). The sample for total cyanide exceeded the daily maximum limitation of 1.20 mg/l. On August 24, 2021, the facility representative contacted EPA to disclose that they had collected a cyanide sample on the same day of the EPA sampling inspection and that the cyanide results were higher than normal. He suspects that an employee turned off the sodium hypochlorite line, causing an exceedance for cyanide. The new wastewater treatment operator was not aware that the sodium hypochlorite line was off during the EPA sampling inspection. EPA sampling results confirmed that the total cyanide result exceeded the daily maximum limitation.

7.0 ATTACHMENTS

Photograph (#1 - #2)

Laboratory Data Report

Chain of Custody / Field Data Form

Photo #1: View of the sample tap at Tank TR-2 where the cyanide sample was collected.



Photo #2: View of Tank SD-1, where discharge effluent samples were collected.

