Region 4 Enforcement Division
61 Forsyth Street, SW
Atlanta, GA 30303

INSPECTION REPORT

Inspection Date(s):	7/17/2024		**Inspection Announced:** Yes
Time:	**Entry:** 8:10 a.m.		**Exit:** 11:55 a.m.
Media:	Water		
Regulatory Program(s)	NPDES – Industrial Pretreatment Program		
Company Name:	Daewon America, Inc.		
Facility Name:	Daewon America, Inc.		
Facility/Site Physical Location:	4600 N Park Drive		
(city, state, zip code)	Opelika, AL 36801		
Geographic Coordinates (latitude, longitude):	32.71711, -85.31663		
Facility/Site Contact:	Thomas Gauntt	HR Senior Manager	
	gauntt@dwku.com		
	334-524-8708		
Industrial User Permit No:	IU344100164		
Publicly Owned Treatment Works (POTW):	City of Opelika (City)		
POTW Permit Nos.:	Opelika Eastside Wastewater Treatment Plant (AL0059218)		

Facility/Site Personnel Participating in Inspection:			
Thomas Gauntt	Daewon America, Inc.	HR Senior Manager	334-524-8708

Inspector(s):			
Chuck Durham (Lead Inspector)	Signature: Chuck Durham Digitally signed by Chuck Durham Date: 2024.10.18 19:50:52 -05'00'		Date:
	Eastern Research Group	EPA Contract Inspector	615-888-2928
Yatasha Moore (Report Author)	Signature: Yatasha Moore Digitally signed by Yatasha Moore Date: 2024.10.18 13:13:04 -05'00'		
	Eastern Research Group	EPA Contract Inspector	615-776-3169
EPA Supervisor:			
Jairo Castillo	Signature: JAIRO CASTILLO Digitally signed by JAIRO CASTILLO Date: 2024.12.20 15:58:03 -05'00'		Date:
	US EPA Region 4	EPA Manager	404-562-9257

Additional Persons Participating in Inspection:			
Victoria Kim	Alabama Department of Environmental Management (ADEM)	Environmental Engineer	334-271-7895
Eric Rudolph	ADEM	Environmental Scientist	334-260-2710
Brevard Williams	ADEM	Environmental Scientist	334-260-2744

SECTION I – INTRODUCTION

Purpose of the Inspection

On July 17, 2024, Chuck Durham and Yatasha Moore, U.S. Environmental Protection Agency (EPA) Contract Inspectors (hereinafter, collectively termed the inspection team), conducted a pretreatment industrial user inspection of the Daewon America, Inc. facility (hereinafter, termed the facility or permittee). The purpose of the inspection was to evaluate compliance with the requirements of the Federal Pretreatment Regulations at 40 CFR Part 403. The inspection consisted of conversations with facility personnel and an inspection of the facility's process areas, wastewater generating processes, pretreatment system, sampling location, and chemical storage areas.

The facility is permitted to discharge industrial wastewater into the City of Opelika (City) POTW under State Indirect Discharge permit number IU344100164, which EPA identifies as NPDES number ALP000407. The Alabama Department of Environmental Management (ADEM) has correctly classified this facility as a categorical industrial user (CIU), additionally subject to the Metal Finishing Point Source Category's Pretreatment Standards for New Sources in 40 CFR 433.17.

Opening Conference

Upon arriving at approximately 8:10 a.m. on July 17, 2024, the inspection team met with facility representative Mr. Thomas Gauntt (HR Senior Manager). At this point, the inspection team was joined by ADEM representatives Ms. Victoria Kim, Mr. Eric Rudolph, and Mr. Brevard Williams. The inspection team presented credentials, provided business cards, and informed the facility representative of the purpose and intent of the inspection.

The facility representative explained that the facility manufactures coil springs and stabilizer bars for other automotive suppliers. During the facility's annual maintenance shutdown in July 2024, one of the production lines was moved from an "L" configuration to a "straight" configuration in order to free up production space in the back of the building. The material receiving operations from its Auburn, Alabama, location, and the assembly operations from its LaGrange, Georgia, location, are planned to be consolidated at the facility by May 2025.

Facility Description

The facility is located at 4600 N Park Drive in Opelika, Alabama, and began operations at this location in 2007. The facility employs 165-175 people and operates 24 hours per day, Monday through Friday, by employing two 12-hour shifts. The facility consists of offices and separate areas for raw materials storage, the production process, wastewater pretreatment, and chemical storage.

According to the facility representative, the steel raw material for coil springs is received in bar and sheet form. The steel is preheated prior to being formed using a robotic system. The formed parts are quenched in an oil bath and oven-tempered. Parts are prepared through a zinc phosphate wash system prior to being painted.

Wastewater collected for pretreatment and discharge to the City includes rinse water from the zinc phosphate wash system and mop sinks. In addition to rinse waters, each process tank in the phosphate line is scheduled for cleaning monthly; the tanks are pumped to a holding tank during cleaning. The facility discharges approximately 5,000-14,000 gallons of wastewater per day.

The facility's wastewater pretreatment system consists of flow equalization, pH adjustment, and solids separation. The facility representative stated that there have been no recent significant changes to the wastewater pretreatment system. The facility plans to move the entire wastewater pretreatment system outside the building and under cover by May 2025.

SECTION II – OBSERVATIONS

Production Area (Stabilizer Line)

The inspection team began the walk-through portion of the inspection by walking through the facility's stabilizer bar production process in reverse order. The inspection team also observed the drying ovens that are used after the paint process on the stabilizer bar production line.

The inspection team proceeded to the phosphating line. A testing lab for the phosphate process was also observed in this area. Facility staff test the quality of each stage of the phosphate process in this lab. According to the facility representative, the sink in this test area discharges to the wastewater pit. The inspection team observed that the phosphate line consists of the following stages:

- City water rinse
- City water rinse
- Conditioner with reverse osmosis water
- Zinc phosphate
- City water rinse
- Reverse osmosis rinse
- Reverse osmosis water with Gardolene (a silane-based sealant)

The inspection team proceeded to the tempering area, where the inspection team observed cooling water used at the end of this process. According to the facility representative, this is a closed loop system and the water from this process is not discharged.

Non-Hazardous Waste Area

The inspection team proceeded outside to the facility's non-hazardous waste storage area (see Photograph 1). The facility stored non-hazardous waste in 55-gallon drums and totes outside under cover. Non-hazardous waste stored at the time of the inspection included oily rags, shop rags, baghouse dust, and waste paint.

Production Area (Coil Springs) and Wastewater Area

The inspection team proceeded to walk through the production area for coil springs. The production process for these is similar to the stabilizer bar process. However, the coil springs line has an additional City water rinse at the beginning of the zinc phosphating process for a total of three City water rinses prior to the conditioner.

The inspection team then proceeded to the wastewater pretreatment area. Phosphating wastewater from both coil spring and stabilizer bar production lines overflows into a pit under each phosphate line (see Photograph 2). Wastewater from this pit flows to a 38,000-gallon pit (holding tank) located outside the building. From the holding tank, wastewater is pumped to a 500-gallon treatment tank where an emulsion breaker and a short-chain polymer are added. Wastewater is then pumped into another 500-gallon treatment tank where the pH is adjusted using sodium hydroxide. Wastewater is then pumped into a 250-gallon tank, where a long-chain polymer is added (see Photographs 3 and 4). Wastewater then flows through a clarifier before being discharged to the City.

At the time of the inspection, the facility's sludge press had not been operational for approximately four months. Sludge from the clarifier was going to a holding tank that is designed to overflow into the 38,000-gallon wastewater holding pit. According to the facility representative, pressed sludge had previously been hauled off-site for landfill disposal by Waste Management.

The inspection team observed the quality lab for the coil springs line. Similar to the lab for the stabilizer bar line, this lab conducts quality testing of the phosphate line for the coil springs production process. The inspection team asked to see the pH buffer solutions used to calibrate the facility's wastewater pH meter (see Areas of Concern 1 and 2 below).

The inspection team proceeded to the facility's self-monitoring point. Under its State Indirect Discharge permit, the facility collects self-monitoring samples from Outfall 001 which is located behind the guard shack near the northeast corner of the building. Outfall 001 is a combined wastewater discharge point that consists of both process and wastewater from the facility.

SECTION III – REPORTING AND MONITORING RESULTS

The inspection team reviewed the facility's self-monitoring reports for June 2022 through June 2024. The facility experienced exceedances of the nickel, zinc, and pH permit limits as noted in the table below[1].

[1] ADEM issued the facility Consent Order No. 24—015-CWP on November 9, 2023 for effluent discharge violations.

Date	Parameter	Limit	Sample Result	Percent Exceedance
June 2, 2022	pH	5.0 min; 10.5 max	11.60 s.u.	Not applicable (N/A)
June 30, 2022	Nickel Daily Maximum	3.98 mg/l	6.59 mg/l	65.6%
July 2022	Nickel Monthly Average	2.38 mg/l	4.609 mg/l	93.7%
July 7, 2022	Nickel Daily Maximum	3.98 mg/l	15.0 mg/l	276.9%
July 14, 2022	pH	5.0 min; 10.5 max	10.85 s.u.	N/A
September 2022	Nickel Monthly Average	2.38 mg/l	8.5475 mg/l	259.1%
September 2022	Zinc Monthly Average	1.48 mg/l	2.975 mg/l	101.0%
September 7, 2022	Nickel Daily Maximum	3.98 mg/l	16.5 mg/l	314.6%
September 7, 2022	Zinc Daily Maximum	2.61 mg/l	4.57 mg/l	75.1%
September 21, 2022	Nickel Daily Maximum	3.98 mg/l	12.9 mg/l	224.1%
September 21, 2022	Zinc Daily Maximum	1.48 mg/l	7.10 mg/l	379.7%
November 16, 2022	pH	5.0 min; 10.5 max	11.23 s.u.	N/A
December 2022	Nickel Monthly Average	2.38 mg/l	35.1195 mg/l	1375.6%
December 7, 2022	Nickel Daily Maximum	3.98 mg/l	5.16 mg/l	29.6%
December 28, 2022	Nickel Daily Maximum	3.98 mg/l	133 mg/l	3241.7%
January 10, 2023	pH	5.0 min; 10.5 max	12.03 s.u.	N/A
February 22, 2023	pH	5.0 min; 10.5 max	11.26 s.u.	N/A
March 2023	Nickel Monthly Average	2.38 mg/l	7.3554 mg/l	209.1%
March 1, 2023	Nickel Daily Maximum	3.98 mg/l	7.61 mg/l	91.2%
March 8, 2023	pH	5.0 min; 10.5 max	12.11 s.u.	N/A
March 15, 2023	Nickel Daily Maximum	3.98 mg/l	9.32 mg/l	134.2%
March 22, 2023	Nickel Daily Maximum	3.98 mg/l	4.81 mg/l	20.9%

Date	Parameter	Limit	Sample Result	Percent Exceedance
March 22, 2023	pH	5.0 min; 10.5 max	11.61 s.u.	N/A
March 29, 2023	Nickel Daily Maximum	3.98 mg/l	14.9 mg/l	274.4%
April 18, 2023	pH	5.0 min; 10.5 max	10.76 s.u.	N/A
June 2023	Nickel Monthly Average	2.38 mg/l	3.237 mg/l	36.0%
June 2023	Zinc Monthly Average	1.48 mg/l	2.4865 mg/l	68.0%
June 7, 2023	Zinc Daily Maximum	2.61 mg/l	8.79 mg/l	236.8%
June 22, 2023	pH	5.0 min; 10.5 max	10.87 s.u.	N/A
June 27, 2023	Nickel Daily Maximum	3.98 mg/l	8.52 mg/l	114.1%
July 2023	Nickel Monthly Average	2.38 mg/l	8.15 mg/l	242.4%
July 2023	Zinc Monthly Average	1.48 mg/l	2.18325 mg/l	47.5%
July 12, 2023	Nickel Daily Maximum	3.98 mg/l	6.88 mg/l	72.9%
July 12, 2023	Zinc Daily Maximum	1.48 mg/l	3.27 mg/l	120.9%
July 19, 2023	Nickel Daily Maximum	3.98 mg/l	24.1 mg/l	505.5%
July 19, 2023	Zinc Daily Maximum	1.48 mg/l	5.27 mg/l	256.1%
August 16, 20223	pH	5.0 min; 10.5 max	11.29 s.u.	N/A
September 20223	Nickel Monthly Average	2.38 mg/l	2.8813 mg/l	21.1%
September 6, 2023	Nickel Daily Maximum	3.98 mg/l	4.30 mg/l	8.0%
November 2023	Nickel Monthly Average	2.38 mg/l	4.016 mg/l	68.7%
November 15, 2023	Nickel Daily Maximum	3.98 mg/l	6.15 mg/l	54.5%
November 21, 2023	Nickel Daily Maximum	3.98 mg/l	9.10 mg/l	128.6%
January 2024	Zinc Monthly Average	1.48 mg/l	1.716 mg/l	15.9%
January 31, 2024	Zinc Daily Maximum	2.61 mg/l	5.48 mg/l	110.0%

Date	Parameter	Limit	Sample Result	Percent Exceedance
February 8, 2024	Zinc Daily Maximum	2.61 mg/l	2.74 mg/l	65.6%
April 2024	Zinc Monthly Average	1.48 mg/l	2.02667 mg/l	93.7%
April 10, 2024	Zinc Daily Maximum	2.61 mg/l	4.98 mg/l	276.9%

SECTION IV – AREAS OF CONCERN

The inspection team held a closing conference with the facility representatives that included a review of the preliminary inspection observations and areas of concern. The presentation of areas of concern listed below does not constitute a formal compliance determination:

1. During the site inspection, it was discovered that the facility is calibrating its pH meter using only a pH 10 buffer solution. However, the pH of the facility's effluent during the June 2022 – June 2024 period varied from below 6.0 to above 10 s.u. After the inspection, the facility representative was able to locate pH 4, 7, and 10 buffers (see Photograph 7). It is recommended that the facility perform a three-point calibration of the pH meter using buffer solutions that cover the entire anticipated range of the facility's discharge.

2. During the site inspection, it was discovered that the facility's pH 10 buffer solution for calibrating the pH meter expired in August 2019 (see Photograph 5). The inspection team observed the facility representative dispose of the expired buffer solution by pouring it into the sink in the quality lab in the coil production area. During the site inspection, the facility representative was able to locate an unopened bottle of pH 10 buffer that expires in March 2026 (see Photograph 6). It is recommended that the facility ensure that pH buffers used to calibrate the pH meter are not expired and that the facility properly dispose of expired solutions.

3. While reviewing the facility's self-monitoring records, the inspection team determined that chain of custody forms for the facility's self-monitoring records note that cyanide samples have been collected as composite samples. Part I A of the facility's discharge permit requires monitoring for cyanide using grab samples. The facility is required to perform self-monitoring for cyanide using grab samples as required by the discharge permit and in 40 CFR 403.12(g)(3).

4. During the site inspection, the inspection team observed that the facility did not have a manual thermometer inside the composite sampler. Footnote 2 of Table II in 40 CFR 136.3(e) states that "for a composite sample collected with an automated sampler…, refrigerate the sample at ≤6 °C during collection unless specified otherwise in this Table II or in the method(s)". It is recommended that the facility place a manual thermometer inside the composite sampler to ensure

that the inside of the composite sampler is maintaining samples below 6 ^{o}C as required in 40 CFR Part 136.

5. According to the facility representative, the facility had a preventative maintenance shutdown period in July 2024. However, the facility did not notify ADEM or the City prior to this shutdown period. During the closing meeting, the inspection team noted that the federal regulations in 40 CFR 403.12(j) require the facility to notify ADEM and the City prior to all significant changes at the facility, including shutdown periods.

6. According to the facility representative, the facility collects self-monitoring composite samples over a 24-hour period. However, the facility does not discharge process wastewater during this entire period. Because the facility is collecting time-proportional composite samples, these samples are not representative of the facility's discharge since they are mostly sanitary wastewater. The inspection team recommends that the facility collect samples during the period that the facility is discharging process wastewater.

SECTION V – DOCUMENTS REQUESTED AFTER THE INSPECTION

During the closing conference, the inspection team requested the documents listed below from the facility. The facility representative provided these documents to the inspection team on July 19 and August 28, 2024.

- Self-monitoring sampling data (June 2022 – present)
- Copy of the current State Indirect Discharge permit
- June 2023 wastewater discharge log

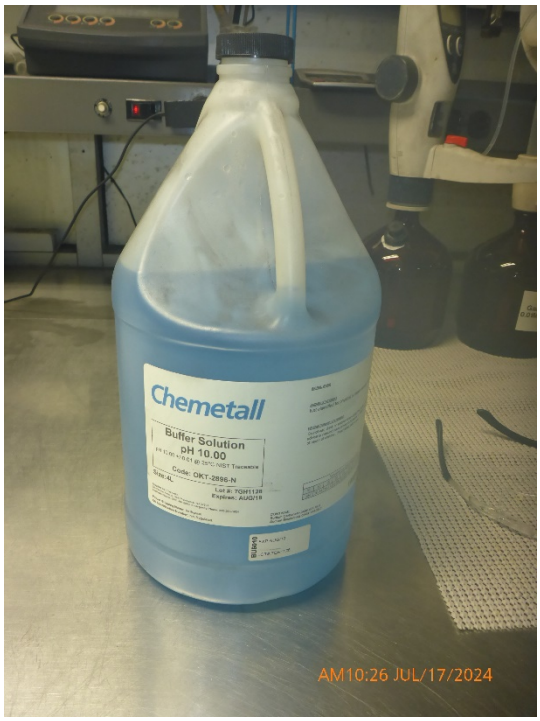
SECTION VI – PHOTOGRAPH LOG

Photograph 1: Non-hazardous waste storage area.

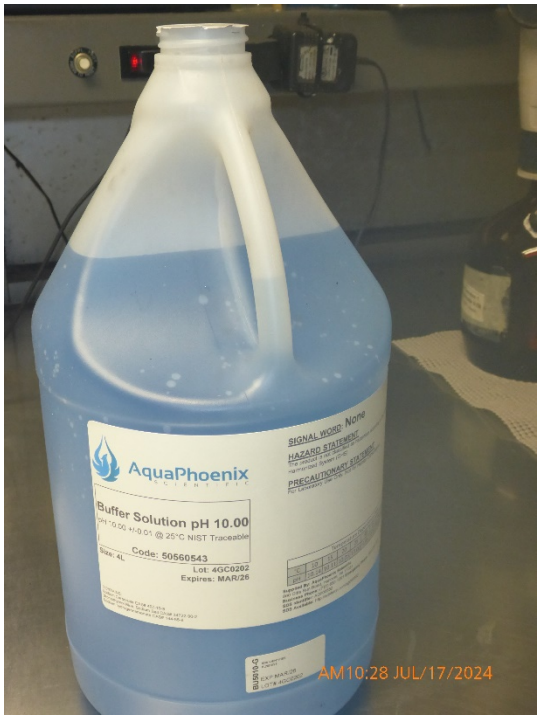
Photograph 2: Drain from the phosphate line to the wastewater pit.

Photograph 3: Current wastewater pretreatment area inside the building.

Photograph 4: View of the future wastewater pretreatment area. The wastewater holding tank is below ground and not visible.



Photograph 5: Expired pH 10 buffer solution used for calibrating the pH meter.



Photograph 6: Unopened pH 10 buffer solution located by the facility representative during the inspection.

Photograph 7: Unexpired pH 4, 7, and 10 buffers located by facility representative post inspection.

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