



REGION 1

BOSTON, MA 02109

March 19, 2025

Mr. Todd J Canedy
Technical Manager
Silvex, Incorporation.
45 Thomas Drive
Westbrook, ME 04092

Re: U.S. EPA-Region 1 Inspection Report of Silvex, Inc., January 22, 2025

Dear Mr. Canedy:

In accordance with current policy, I am providing you with a copy of the final inspection report summarizing observations made during the January 22, 2025, inspection of your facility.

This inspection was conducted under the authority of RCRA.

Please contact me at 617-918-1163 or patel.hardik@epa.gov if you have any questions.

Sincerely,

Hardik V. Patel
Environmental Engineer

cc: Cherrie F Plummer, Maine DEP

ENVIRONMENTAL PROTECTION AGENCY

REGION 1 – NEW ENGLAND

5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

RCRA Compliance Inspection of:

**Silvex, Incorporation
45 Thomas Drive
Westbrook, ME 04092**

January 22, 2025

Date(s) of Inspection

Hardik V Patel, Environmental Engineer
Waste and Chemical Compliance Section

March 18, 2025

Date Inspection Report Approved

O'Donnell,
Mary Jane

Digitally signed by O'Donnell,
Mary Jane
Date: 2025.03.18 16:57:34
-04'00'

Mary Jane O'Donnell, Manager
Waste and Chemical Compliance Section

March 18, 2025

Date Inspection Report Finalized

March 19, 2025

Date Inspection Report Transmitted to Facility

Disclaimer: Unless otherwise noted, this report describes conditions at the facility/property as observed by EPA inspector(s), and/or through records provided to and/or information reported to EPA inspector(s) by facility representatives and as understood by the inspector(s). This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on potential areas of concern. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or action.

RCRA HAZARDOUS WASTE INSPECTION REPORT

I. GENERAL INFORMATION

- a. **Facility Name:** Silvex, Incorporation ("Silvex" or the "facility")
- b. **Inspection Date(s):** January 22, 2025
- c. **Inspection Type:** RCRA Compliance Evaluation Inspection (CEI)
- d. **EPA Inspectors:** Hardik Patel, Environmental Engineer, EPA Region 1
Andrew Meyer, Environmental Scientist, EPA Region 1
- e. **EPA ID Number:** MED980910053
- f. **NAICS:** 332813 – Electroplating, plating, polishing, anodizing, and coloring
- g. **Street Address:** 45 Thomas Drive, Westbrook, ME 04092
- h. **Mailing Address:** 45 Thomas Drive, Westbrook, ME 04092
- i. **Facility Contact(s):** Todd J Canedy, Technical Manager
Email: Toddcanedy@silvexinc.com
- j. **Generator Status:** Large Quantity Generator (LQG)
- k. **Date first notified as a generator (per RCRAInfo):** 03/20/1984
- l. **Date of most recent notification in RCRAInfo:** 05/20/2024
- m. **Current Property Owner:** Phil Ridley
- n. **Current Operator:** Phil Ridley
- o. **Wastes generated (per most recent RCRAInfo notifications):** D001, D002, D007, D011, F006, F007, F008

Report Attachments:

ATTACHMENT 1 – Photo Log

II. FACILITY DESCRIPTION

Silvex is a full-service electroplating and surface finishing company, which is in the Colonel Westbrook Executive Park just off Route 22 in Westbrook, Maine. It provides internal and outer surface finishing through such processes as electroplating, anodizing, electroless plating, conversion coatings, phosphate coatings and other custom and proprietary processes. Silvex has been servicing leading manufacturers from all over the United States for over fifty (50) years. Silvex manufactures plating and polishing products and provides blasting machines, parts washers, light booth, rectifiers, and x-ray fluorescence as per the information found on the facility's website. Although Silvex specializes in the defense and silverware industries and platinum plating, they also offer a wide variety of finishes processed to ISO 9001:2015, NADCAP, and AS 9100 and numerous other company standards for the defense, aerospace, telecommunications, water purification, power generation, and hotel-ware industries. These processes deal at various times with materials such as gold, silver, rhodium, brass, copper, nickel, tin, and zinc.

Silvex operates a state-of-the-art, 40,000 square foot facility that it has occupied since 1984. Process lines involving plating, rinsing, and polishing stations are arranged in the facility. These process lines can be reconfigured to meet customer needs and changing process orders. In addition, Silvex maintains a laboratory, wastewater treatment area, shipping area, and office space at the facility.

On 03/20/1984, silvex made an initial notification as an LQG. The facility has maintained its LQG status since 1984. There are approximately 54 employees working at the facility of which three (3) are on a temporary basis. The facility runs three shifts per day: day shift, in-between shift, and a night shift. Day shift runs 8 hours long starting at 4:30 am to 1:00 pm from Monday to Friday. The in-between as well as the night shift run 10- hour. long shifts from Monday to Thursday. The in-between shift starts from 12:00 pm to 10:30 pm while the night shift starts at 5:30 pm until 4:00 am. The facility generates multiple waste streams but primarily generates waste with the following waste codes: D001, D002, D007, D011, F006, F007, F008 as per the review of the most recent biennial report (2023) submitted on 05/20/2024.

III. INSPECTION OPENING CONFERENCE

EPA inspectors arrived unannounced at the facility located at 45 Thomas Drive, Westbrook, ME 04092 at approximately 8:00 AM on the 22nd of January 2025. The EPA inspection team ("inspection team") consisted of Hardik V. Patel (EPA Region 1) and Andrew Meyer (EPA Region 1).

The inspection team gained entrance to the facility at approximately 8:05 AM. The inspection team signed in at the front desk and was asked to wait until someone from management could be notified of their arrival. The inspection team then was greeted by Mr. George Johnson, director of operations. Both inspectors then showed their EPA ID before asking Mr. George

Johnson to take them to a room where they could sit and go over the inspection process. Mr. George Johnson then escorted the inspection team to the conference room on the 2nd floor near the administrative offices. Once at the conference room, the inspection team conducted an opening conference with Mr. George Johnson at 08:10 AM.

The inspection team then distributed their business cards for future communication. Inspector Patel started the opening conference with the discussion of the inspection activities including the right to claim confidential business information (CBI) as well as the right to claim that the facility is a small business and the need to take photographs during the inspection. Mr. George Johnson then explained that the products WASTES? being generated, raw material being used as Mr. George Johnson stated that the process lines were proprietary business to Silvex. Inspector Meyer then further elaborated on what the CBI meant and what the inspectors were trying to make note of during the inspection. Inspector Patel then provided the CBI information sheet along with the question-and-answer sheet about what is and isn't considered CBI by the regulator. Inspector Patel then continued with the overview of the inspection scope to Mr. George Johnson, including why the facility was selected for the inspection. Inspector Patel then informed Mr. George Johnson that a closing conference would be conducted at the end of the inspection to discuss the findings, or the areas of concern observed during the inspection. Hence, Inspector Patel told Mr. George Johnson if he wanted to invite anyone else from the management, he could let them know. At this time, Mr. George Johnson informed the inspection team that technical manager, Todd J. Canedy would have been the best person to answer any question the inspection team had but that he was willing to answer to the best of his ability. Mr. George Johnson also informed the president of the facility, Phil Ridely, about the facility inspection. Mr. Ridley joined the in-brief after some time had passed. The following personnel were present for all or part of the opening conference:

EPA:	Hardik Patel, Environmental Engineer, EPA Region 1 Andrew Meyer, Environmental Scientist, EPA Region 1
Vicor:	George Johnson, Director of Operations Phil Ridley, President

Mr. George Johnson, Mr. Ridely, and EPA inspectors discussed the following information about the facility and its processes and operations during the opening conference as well as during the walkthrough portion of the inspection:

Mr. George Johnson first described the management team at the facility. Mr. George Johnson explained that he had been working at this facility for the last eight (8) years. Mr. Canedy worked as technical manager and Mr. Ridley was a current part-owner of the business. Mr. George Johnson then stated that Dan Atkinson is an executive vice president and Richard Atkinson is a part-owner of the business. Mr. George Johnson then provided background information about the facility which is summarized partly in section II of this inspection report under facility description.

Silvex has been operating at this facility since 1984 but had been in business since 1957. Prior to moving to this location, Silvex had a facility located in the same town. Silvex has been operating and producing a high volume of products which indicates that the facility did not have a conventional shop type of setting. Instead, the chemical processes are divided into four different lines. The facility does not have any other building under the control of the facility owner. Silvex also has a wastewater area where the water is treated before entering the municipal sewer. The wastewater output has been continuously monitored by Portland Water District as per Mr. George Johnson. At this time, Mr. George Johnson asked the inspection team to pause the opening conference so that the part-owner, Mr. Ridley, could join and answer some of the facility related questions. Mr. Ridley also informed the inspection team that he had not been involved in the production side for almost a decade. Inspector Patel started asking questions related to waste generation and management at the facility.

After waiting for an approximately hour, Mr. Ridley joined the opening conference and started answering questions that the inspection team had about the facility and its operations.

Mr. Ridley informed the inspection team that the business had been slow since the Covid-19 pandemic. At this time, Inspector Patel asked Mr. George Johnson to provide basic facility and process flow diagrams so that the inspection team could ask more questions regarding processes and waste generation. Mr. Ridley then reminded the inspection team that Mr. Canedy, who had knowledge about the current operation and would have been the best person to answer some of the process related questions, was away at a conference. Nonetheless, Mr. Ridley explained the process to the inspection. Mr. Ridley added that Silvex has been in the plating business since its inception. Silvex had been serving its customers for over 65 years for their plating/finishing need associated with silver and platinum plating or aluminum anodizing, and phosphating. Mr. Ridley then explained that Silvex offered silver, gold, platinum, nickel, tin, and copper plating in direct response to their customer/market demands. Mr. Ridley then explained that the unfinished products/parts first arrive at the loading/unloading area which are then first prepared through cleaning, degreasing, and polishing processes which are merely surface preparation step in the plating operation. Once the parts/products are cleaned, they are processed through etching process followed by flushing, activation, particular metal plating, rinsing, and drying. The finished products/parts are then sent to the shipping area for repackaging and then out for the delivery to the customers. Mr. Ridley then started describing the wastewater process at the facility. Wastewater treatment at Silvex involves pre-treatment through screening and pH adjustment followed by chemical precipitation, flocculation, sedimentation, sludge removal through filter press, and then discharge of the treated wastewater. Mr. Ridley then started describing waste generation at the facility.

Silvex primarily generates hazardous waste with the F006 waste code as its operation hadn't changed since its inception. Mr. Ridley then added that there is no evaporation or distillation processes at the facility. There are also no hazardous waste tanks or solvent tanks at the facility. The facility generates universal waste such as waste batteries and fluorescent bulbs.

The facility does not have mixed waste, exempted waste, or pharmaceutical waste. The facility does not have clean-up team, rather it has a mutual agreement with Environmental Projects, Incorporation (EPI) which is confirmed annually. Furthermore, the generated waste had been the same for a long time and the treatment, storage, and disposal facility (TSDF) has profiled all the hazardous waste. In addition, the facility does not use cadmium for any of its plating or finishing operations. Most of the product material is supplied through approximately five (5) to six (6) vendors. Moreover, the police and fire departments come to the facility time to time for inspections. The facility does not provide hazardous waste training internally. An outside contractor provides hazardous waste training to. The facility also has an industrial wastewater discharge permit from the Portland Water District. Mr. Ridley added that he is listed as a primary emergency coordinator in the contingency plan while Mr. Canedy is listed as an alternate emergency coordinator.

The inspection team then requested a facility map which was provided by Mr. George Johnson. The inspection team then confirmed with both Mr. Ridley and Mr. George Johnson that there was no area where an intrinsically safe camera was needed to take photographs. Inspector Patel stated that the inspection team would mainly focus on taking photographs related to hazardous waste generation and management at the facility.

IV. FACILITY TOUR

The walkthrough of the facility began at approximately 10:45 AM on January 22, 2025. The following personnel were present for all or part of the tour:

EPA:	Hardik Patel, Environmental Engineer, EPA Region 1 Andrew Meyer, Environmental Scientist, EPA Region 1
Silvex:	George Johnson, Director of Operations Phil Ridley, President Tyler Johnson, Quality Manager

Inspector Meyer took photographs to document the observation made during the inspection which are included in Attachment 1.

The inspection team asked Mr. Ridley to take them to the CAAs before inspecting any other area of the facility. Mr. Ridley suggested walking through the 2nd floor where most of the administrative offices were located. At these offices, there were no hazardous waste accumulation sites as per the visual inspection. The inspection team then was escorted to the laboratory on the same floor.

Quality Control Laboratory (QC lab):

At the QC lab, the inspection team met Tyler Johnson, who works at the area as quality manager. Mr. Tyler Johnson confirmed that there was no hazardous waste accumulation in the area. The facility tests for physical properties of the finished products/parts in this lab. The inspection team inspected the QC lab and did not see any hazardous waste accumulation. The inspection team, however, observed a small flammables locker in the area. In addition, the inspection team observed an overhead universal waste sign at the exit door which was outdated as per Mr. Tyler Johnson, who immediately removed it. The inspection team then asked Mr. Ridley to see the central accumulation area (CAA) where the hazardous waste containers were located.

Central Accumulation Area (CAA) for Hazardous Waste:

The inspection team was then escorted to the CAA where the facility was accumulating hazardous waste containers of various sizes. The inspection team met Matthew Peters, chemical handler, at the CAA. Mr. Peters' work duties included picking up hazardous waste from the point of generation, signing waste manifests, and performing weekly inspections. As per Mr. Peters, he has been with the facility for ten (10) years and had received RCRA and/or DOT trainings to perform the hazardous waste management duties. The inspection team also met Michael Dean, who is also chemical handler. He is also responsible for signing the waste manifests. Mr. Dean had been with the facility for the last twelve (12) years.

At the CAA, the inspection team observed a hazardous waste storage area sign as well as unauthorized personnel keep away, and caution signs. There was also an eyewash station next to the shelf where the hazardous waste containers were placed. In addition, the inspection team observed an overhead sprinkler system which was inspected monthly and tested yearly as per Mr. Peters. Moreover, the inspection team observed a fire extinguisher located across the CAA. As per Mr. Peters, Maintenance department were performing monthly inspection of the fire extinguisher. The inspection team noticed that the last inspection was performed on 10/26/2024. The inspection team did not observe a physical phone in the area. The nearest phone available to anyone working in the CAA was in the analytical laboratory on the 1st floor next to the wastewater treatment area which was adjacent to the CAA as per Mr. Peters. The inspection team did not observe a No Smoking sign at the CAA. In addition, the inspection team also did not observe an emergency contact list, and an evacuation route posted in the CAA. As per Mr. Peters, the emergency contact list was posted in the analytical laboratory on the 1st floor. The inspection team then asked Mr. Peters to show the location of the spill kit which was nearest to the CAA. Mr. Peters then pointed out to the absorbent packs placed behind the acidic product raw material that was located across the CAA on the 2nd shelf from the floor. Inspector Patel then asked Mr. Peters to describe the process/steps involved in case of a hazardous waste related emergency. Mr. Peters explained that the operator working in the area would first contact the primary coordinator to discuss the situation but would call 911 directly for a bigger spill. Lastly, the inspection team did not observe any label or demarcation tape on the floor separating hazardous waste containers from non-hazardous waste containers.

At the CAA, the inspection team observed total of seven (7) waste containers placed on two shelves. The top shelf included two (2) cubic yard totes while the bottom shelf included the remaining five (5) waste containers which were stored next to each other. At the time of the inspection, the inspection team noticed that the containers in the bottom shelf were stored next to each other and did not appear to have more than six (6) inches of aisle space between them. The containers were placed on the wooden pellets with no secondary containments. Any spill from the CAA would be captured through floor drains which lead to the wastewater treatment area as per Mr. Peters. The inspection team observed following containers at the CAA:

- Two (2) cubic-yard totes, closed, hazardous waste label, filter press solids from drying process, F006 waste code, dated 1/7/2025 and 1/14/2025.
- One (1) 55-gallon drum, closed, "NON-HAZARDOUS WASTE" written label with tarniban empties, dated 1/5/2025.
- One (1) 55-gallon drum, closed, "NON-HAZARDOUS WASTE" written label with waste oil, dated 1/13/2025.
- One (1) 55-gallon drum, closed, "HAZARDOUS WASTE" written label, F006 waste debris, dated, 1/20/2025.
- One (1) 55-gallon drum, closed, "HAZARDOUS WASTE" written label, black oxide sludge, dated 1/15/2025.
- One (1) 30-gallon drum, closed, empty.

The inspection team then inspected the chemical warehouse area which was adjacent to the CAA.

Chemical Warehouse:

This area is primarily used for storage of the chemical products used in the plating operation. The stored products include oxidizers, acids, alcohols, and salts. The inspection team observed that some of the virgin products which were stored next to each other were incompatible. The inspection team did not observe physical separation of those incompatible products. As per Mr. Peters, all virgin products stored in this area have at least one (1) year of shelf life but can be reused with certification from the manufacturer/supplier. Regardless, the products are used within a month or so as per Mr. Peters. Besides the central waste accumulation area, there was no other waste accumulation point at the chemical warehouse.

Main Production Area:

The inspection team then moved to the main production area where most of the baths are located for the plating operation. As per Mr. George Johnson, the floor drains from the production area were connected to the wastewater treatment. Hence, any spills would be contained and diverted to the wastewater treatment area. During the changeout of the baths, the plating paths are always drummed. The inspection team witnessed received parts being

washed and then plated. As per Mr. Ridley, there are no points of satellite accumulation for hazardous waste. As per Mr. Ridley, waste generation would only occur during the change out of plating baths, which happened once a year. Inspector Patel then asked Mr. George Johnson if any solvents were used to clean the parts to which Mr. George Johnson said there is no cleaning of parts using solvent. The inspection team toured the remainder of the production area and did not see any containers of hazardous waste.

Shipping & Loading Area:

The inspection team was then escorted to the shipping and loading area where the inspection team observed packages of finished products as well as a forklift parked in the area. The inspection team then asked Mr. George Johnson to describe the maintenance process on the forklift. Mr. George Johnson then explained that a third-party contractor performs maintenance on the forklift and the forklift itself was electric. Hence, no used oil was produced from the maintenance of the forklift. The inspection team then inspected the remainder of this area and did not observe any waste containers.

Maintenance Room:

After returning from the lunch break, the inspection team asked Mr. Ridley and Mr. George Johnson to escort them to the analytical laboratory on the 1st floor. Mr. Ridley then suggested that the inspection team could inspect the maintenance room first as it was next to the analytical laboratory. The inspection team inspected the maintenance room where the facility operators do maintenance work on motors, racks, pumps etc. At this area, the inspection team observed one (1) cardboard box of used fluorescent bulbs which was closed. The box held total of twenty-three (23) size T5, fifteen (15) size T8, and eight (8) size T12 fluorescent bulbs. The inspection team did not observe accumulation start date on the box. Mr. Ridley pointed out that the ongoing fluorescent bulb changeout work may be the reason the box was not labeled. The inspection team then inspected the remainder of the room but did not see any waste containers. However, the inspection team did see one (1) 30-gallon open container which had copper wires inside for reclamation. There was no additional label on the container. The inspection team also observed a booth where the facility operator did welding work on equipment. In the welding area, the inspection team observed a weld-aid (nozzle kleen #2) product on the table. Mr. Ridley explained that the product was still in use by the operator working in the area.

Analytical Laboratory:

Next, the inspection team moved to the analytical laboratory on the 1st floor where the operators test wastewater to determine if it meets the pre-treatment permit conditions as well as to check the concentration of different baths used in plating operation. Inspector Meyer then asked the person working in the area, Mr. Michael Dean, about the sampling process. Mr. Dean explained that the samples collected from different tank baths are tested. Any of the

sample remains are, is discharged into the sink which is connected to the wastewater treatment area with the exceptions of few materials. Excepted materials include products with cyanide, silver, nickel, and chromate contamination which would be brought back to the tank baths as per Mr. Ridley. Glassware used during the analysis of samples are triple rinsed and the rinse water would also be discharged into the sink as per Mr. Dean. Upon thorough inspection of the area, inspector Patel located expired oxidizing product as described below on the product shelf located next to the work desk. Mr. Dean stated that the oxidizer was still in use past its expiration through a recertification process. At the time, the facility did not provide a valid certification available for the product. Mr. Dean stated that the recertification would be made available to the inspection team upon request. Inspector Patel asked Mr. Dean to provide that as part of the record review.

- One (1) 2-gallon closed container (Iridite 14-2 Brush on Kit) toxic label, Lot # 160097, expired 12/2024.

The inspection team received a post-inspection response from Mr. Dean with more information about the product. On Wednesday, January 22, 2025, Michael Dean reached out to the supplier, Gilbert and Jones, to contact the manufacturer (MacDermid) to re-certify the expired lot found in the lab. MacDermid denied this recertification request due to the aerospace certification requirements. Silvex is planning on using this material in their "brite dip" process in the future and does not consider it a waste. As per Mr. Dean, the above-mentioned product was purchased for touch-ups of anodizing contact marks on aerospace products. A portion of this material is used to make up small amounts of dilute chromate solution which is used to impart corrosion resistance where the anodize coating is reduced or absent due to the contact of racking materials. Other use of this material is included in a "brite dip" process on commercial copper components, where copper parts are immersed in a blend of acids for cleaning. For this process, the material can be used outside of its expiration without a need for recertification.

The inspection team then observed a telephone at the work desk in the area where the emergency contact list was posted. A list of emergency equipment, which was last updated on 09/30/2022, was also posted. In addition, the inspection team observed a product shelf where containers of bleach were placed next to the phosphoric acid. The inspection team then observed absorbent packs next to the product shelf. The inspection team did not observe any waste containers in the room.

Wastewater Treatment Area:

Mr. Dean then escorted the inspection team to the wastewater treatment area which was located between the chemical warehouse and the analytical laboratory. Mr. Dean then started describing the wastewater treatment process which includes processes in different tanks. Wastewater treatment tanks included: neutralization tank I, neutralization tank II, flocculation tank, clarification/settlement Tank (lamella tank), and a final tank. The inspection team also

observed an overflow tank which was next to the sludge batch tank that processed sludges from the final tank. Moreover, the wastewater treatment area had a floor wash tank which collected discharges from the floor drains from the facility. As per Mr. Dean, the only point of waste generation was at the filter press which receives sludge from the connected sludge thickener. Mr. Dean then informed the inspection team that the sampling points for the wastewater treatment area included: sampling point – 1 (SP-1) which was between the neutralization tanks, SP-2 which was before the filter press, and SP-3 which was after the lamella tank. Mr. Dean then explained the inspection team that neutralization tank I receives wastewater from non-cyanide, non-chromium process which includes acid/alkaline contamination and from chromium [Cr(VI) and Cr(III)] process while neutralization tank II receives wastewater from a cyanide-bearing process. The inspection team was then briefed about the wastewater treatment at lamella tank which uses inclined plates to separate solids from liquid in the wastewater. The inspection team also observed different virgin product tanks in the wastewater area. Before moving to the filter press, Inspector Meyer asked Mr. Dean for the wastewater permit application to see the allowed wastewater effluent limits. Mr. George Johnson informed Inspector Meyer that a permit renewal was in-process with the Portland Water District for 2025, but an electronic copy of the previous wastewater permit would be made available to the inspection team for a review.

The inspection team then inspected the filter press which was connected to the sludge thickener and was not active during the inspection. The inspection team observed one (1) cubic-yard tote connected to the filter press which was accumulating filter press solids and had a hazardous waste label affixed on it.

Pre-Boiler Room:

Mr. Ridley then took the inspection team to inspect the universal waste storage area which was located in the pre-boiler room. The inspection team observed below universal waste containers in the area.

- One (1) cardboard box with empty sleeves, open.
- One (1) cardboard box with thirty-nine (39) size T8 fluorescent lamps, closed, with no accumulation start date.

The inspection team also observed a closet with three (3) 5-gallon containers with universal waste as well as an open box with a loose battery pack on it. This closet was located in the pre-boiler room next to the entrance door. In addition, the wall behind the closet had a "UNIVERSAL HAZARDOUS WASTE" sign posted.

- One (1) 5-gallon container, closed, labeled with "BATTERIES" on the lid, with no accumulation start date.
- One (1) 5-gallon container, closed, labeled with "M. BULBS" on the lid, with no accumulation start date.

- One (1) 5-gallon container, closed, no label, empty at the time of inspection.
- One (1) 2-L cardboard box, open, used batteries and battery packs, with no accumulation start date.

The inspection team then inspected the remainder of the pre-boiler room but did not see any other waste container or point of waste generation.

At this stage, the inspection team concluded the walkthrough portion of the inspection and asked Mr. Ridley to escort them to the conference room where the record review portion of the inspection could commence.

V. RECORDS REVIEW

Inspector Patel asked Mr. George Johnson if there were any paper records available for the inspection team for a review. At this time, the inspection team received an integrated contingency plan from Mr. George Johnson which was last reviewed in 03/25/2022. The inspection team also reviewed the proof of contingency plan being submitted to the local emergency response facilities, including Maine Medical Center, Westbrook Fire Department, and Westbrook Police Department. Mr. Ridley clarified that a more recent, 2024 contingency plan was available digitally. However, Mr. George Johnson explained that due to Mr. Canedy, technical manager being unavailable to participate in the inspection, most of the records would be made available upon his return. Therefore, the records review portion of the inspection did not take place at the facility. Hence, the inspection team prepared a document request list, copy of which was provided to Mr. George Johnson on the day of inspection. Inspector Patel requested the following documents to be uploaded on a cloud based sharepoint folder by 01/31/2025 so that the inspection team could complete the record review portion of the inspection. Inspector Patel also informed the facility that any photographs taken during the inspection would also be made available to the facility on the same sharepoint folder.

- Current hazardous waste contingency plan
- List of employees with hazardous waste duties
- Hazardous waste training plan
- Hazardous waste training records
- Hazardous waste storage area inspection logs
- Hazardous waste manifests and land disposal restriction (LDR) notification
- Non-hazardous waste shipping documents
- Waste profiles
- Waste determination documentation
- DOT training records for hazardous waste manifest signers
- 2024 PWD permit for wastewater treatment
- Recertification for the expired oxidizer observed in the analytical laboratory
- Material Safety Data Sheet (MSDS) for weld-aid (Nozzle Kleen #2) observed in the maintenance room.

At this point, Inspector Patel asked the facility representatives to provide some time to discuss observations made during the walkthrough portion of the inspection with Inspector Meyer.

After receiving the requested documents, Inspector Patel performed an off-site record review to conclude the inspection. Inspector Patel reviewed:

Hazardous Waste Manifests

Inspector Patel first reviewed hazardous waste manifests on 1/31/2025. Based on manifests from calendar year 2022 to 2024, the following employee(s) had signed waste manifests:

- Matthew Peters (2022, 2023, 2024)
- Michael Dean (2023, 2024)
- Martin Emerson (2024)

The following treatment, storage, and disposal facility (TSDF) received the waste generated from Silvex from calendar year 2022 to 2024:

- Northland Environmental LLC located in Providence, RI
- Electrum Inc, located in Rahway, NJ.

Inspector Patel also noted that final copy of manifest and LDR notifications were completed and available for the reviewed hazardous waste manifests.

Inspection Logs

Silvex conducted daily inspections of the CAA on weekdays at their facility. Weekly inspection logs from January 2022 through 2025 were reviewed during the off-site record review by Inspector Patel. The inspection logs included date of review, reviewed by, signature of the reviewer, inspection date and time, inspector initials, labeling, accumulation start date on containers, waste being in closed, non-leaking and properly stored containers away from incompatible wastes, presence of fire extinguisher and its status, eye wash station status, general housekeeping status, number of containers, and comments. The following observations were made during the review of the inspection logs.

- Inspections performed daily on weekdays except on holidays.
- Inspector List included Martin Emerson, Michael Dean, Matthew Peters, and Issac Emerson.

No additional observations were made related to the inspection logs.

Wastewater Treatment Permit

Inspector Patel reviewed the 2024 wastewater treatment permit on 1/23/2025 which was authorized by Portland Water District. The permit is applicable until 2027 and has conditions to meet the effluent standards. In addition, the permit also included monthly monitoring and reporting requirements for the facility as well as report submission every month as well as semi-annually. The permit also included discharge limit on the effluent.

No additional observations were made related to this wastewater treatment permit.

Safety Data Sheet (SDS)

Inspector Patel reviewed MSDS for Nozzle Kleen #2 which was requested from the facility. MSDS observations revealed that the product was hazardous and had toxic hazard symbol. The primary use of the product was for welding process to protect from spatter build up. The product has methylene chloride with F002 waste code for disposal.

No additional observations were made related to this SDS.

2023 Biennial Report

Inspector Patel reviewed 2023 biennial report shared by the facility on 1/27/2025. The facility was listed as an LQG and had NAICS code of 332813 which represents electroplating, plating, polishing, anodizing, and coloring industry. In addition, the biennial report included waste codes D001, D002, D007, D011, F006, F007, and F008. The facility also marked that it was not an LQG for universal waste.

No additional observations were made for the biennial report.

EPI Agreement

Inspector Patel reviewed Silvex's mutual aid agreement with Environmental Projects, Inc. (EPI). The agreement sets out the assistance EPI will provide for release response, remediation, or disposal services. EPI claimed to have fully trained HAZMAT technicians on the agreement. This mutual aid agreement is renewed annually between the facility and EPI. The last renewal took place on 12/06/2024 and was received by Mr. Canedy. Mutual aid agreements were available with Maine medical center (sent on 12/06/2024), Sysco (adjacent property owner, sent on 12/06/2024), Westbrook fire and police departments (sent on 12/06/2024), and Wingfoot LLC (sent on 12/06/2024).

No additional observations were made for the mutual air agreement

Waste Profiles & Waste Determination Documents

Inspector Patel reviewed copies of waste profiles for hazardous and non-hazardous waste streams generated at the site. The following waste profiles, along with their corresponding federal or state waste codes, applicability, and underlying constituents, were reviewed:

- Dismantled cyanide tank from tank dismantling, 06/03/2024 – 06/03/2025, D011, F006, F008, Cyanide Reactive hazard with Sodium & Silver Cyanide.
- Oxiblack solution from Dip tank cleaning, 05/17/2024 – 05/17/2025, D001, D002, Oxidizer hazard with Sodium Hydroxide and Sodium Nitrate.
- Granulated carbon with trace cyanide from equipment dismantling process, 07/26/2024 – 07/26/2025, D007, F006, F008, Cyanide Reactive hazard with Potassium Cyanide and Silver Cyanide.
- Bondal from plating bath solution, 06/10/2024 – 06/10/2025, D002, Cyanide Reactive hazard with Sodium Hydroxide and Sodium Cyanide.
- Non-etch strip acid from dismantling acid tank, 07/10/2024 – 07/10/2025, D002, D007 waste codes with Phosphoric and Chromic Acids.
- F006 sludge from wastewater treatment filter press, 12/31/2024 – 12/31/2025, D007, F006, F008 waste codes with metal Hydroxide sludge and Chromium
- F006 debris from cleaning around the plating line, 1/2/2025 – 1/2/2026, F006 and F008 waste codes with metal Hydroxide sludge.
- Oil from machine change outs, 6/3/2024 – 6/3/2025, R015 waste code which had Non-RCRA, Non-DOT markings.
- Cyanide filters from Cyanide plating line filtration, 6/10/2024 – 6/10/2025, D007, F006, F008, Cyanide reactive hazard with Sodium and Potassium Cyanide.
- Etch solids from alkaline dip tank for copper material, 10/23/2024 – 10/23/2025, D002 waste code with Potassium and Sodium Hydroxide.
- Nickel stripe acid bath from cleaning suspended solids, 9/17/2024 – 9/17/2025, D002 waste code with Hydrochloric acid and Nickel.
- Hydrogen Peroxide from outdated chemical clean out, 1/6/2024 – 1/17/2025, D001, D002, Oxidizer hazard with Hydrogen Peroxide.
- Chemeon TCP from chemical cleanout, 11/25/2024 – 11/25/2025, D007 waste code with Chrome.
- Ammonium Hydroxide from plating process, 6/3/2024 – 6/3/2025, D002 waste code with Ammonium Hydroxide.
- Tarniban concentrate – low BTU from plating process maintenance, 5/15/2024 – 5/15/2025, D039 waste code with Trichloroethylene (TCE).
- F006 debris – low Cyanide from general maintenance around plating area, 4/25/2024 – 4/26/2025, F006, Cyanide reactive hazard with Sodium and Potassium Cyanide.
- Ultraclean from maintenance at plating facility, 8/19/2024 – 8/19/2025, R015 waste code with Sodium Metasilicate.

- Solder stripper from dip tank cleaning, 2/2/2024 – 2/4/2025, D001 and D002 waste codes with Nitric acid.
- Enstrip NP-2 from plating process, 6/3/2024 – 6/3/2025, D001 and D002 waste codes with subpart CC applicability and Amine and Sodium Diethyldithiocarbamate.
- Acid filters and debris from acid plating bath filters, 8/13/2024 – 8/13/2025, D002 and D007 waste codes with Sulfuric acid and Chromium.
- Oxidizer solids from disposal of unused products, 3/7/2024 – 3/7/2025, D001 waste code with Oxidizer hazard.
- Alkaline liquids (Sodium Tetrasulfide) from disposal of unwanted chemicals, 3/7/2024 – 3/7/2025, D002 waste code with Sodium Tetrasulfide.
- Phosphate sludge from cleanout of contaminant, 5/17/2024 – 5/17/2025, D002 waste code with Phosphoric acid.
- Microbrite from suspended solids tank cleanout, 9/18/2024 – 9/18/2025, D002 and D007 waste codes, Oxidizer hazard with Chromic acid and Nitric acid.
- Brite dip liquid from cleaning of copper pieces, 3/7/2024 – 3/8/2025, D002 waste code with Sulfuric and Nitric acids.

No additional observations were made from the review of the waste profiles and waste determination documents.

Recertification Document

Inspector Patel received the recertification documentation for the Iridite 14-2 Bush kit found in the analytical laboratory (expired oxidizer) during the walkthrough portion of the inspection on 2/6/2025. The product was being used for touch-ups of anodizing contact marks on aerospace processes as well as for dilute chromate solution which is used to impart corrosion resistance. As per the certificate, the product is not authorized by the manufacturer (MacDermid) for reuse on aerospace process, but the facility was planning to use it for its “brite dip” process on commercial copper components. The product can be exclusively used past its expiry date for “brite dip” process without a need for recertification as indicated on the recertification document.

No additional observations were made on the recertification document provided to the inspection team.

On 2/6/2025, Inspector Patel called Mr. Canedy to inquire about the pending documents for the remaining portion of the record review. At the time Mr. Canedy was not available to pick up the call. Inspector Patel left a voice message on 207-887-1825 at 12:54 pm ET to remind about the pending documents that had not been uploaded.

Training Records

Inspector Patel had received completed training records from Silvex on 2/7/2025. The training records included following employees who had received hazardous waste training (RCRA) on the corresponding dates:

- Matthew Peters (1/25/2022, 12/27/2023, 12/11/2024)
- Michael Dean (1/25/2022, 12/31/2024, 12/12/2024)
- Martin Emerson (1/25/2022, 12/16/2023, 11/19/2024)
- Isaac Emerson (12/08/2023, 12/08/2023, 11/18/2024)

The RCRA trainings for calendar years 2022, 2023, and 2024 were provided by an outside contractor, Lion Technology's online training program which provided training on waste compliance activities at both LQG and SQG sites as well as for TSDFs.

In addition, US DOT Hazmat training records were also available for Matthew Peters, Michale Dean, and Martin Emerson. The training date was 04/05/2022.

No additional observations were made related to the training records.

Hazardous Waste Contingency Plan

Inspector Patel received certain sections of the most recent integrated contingency plan (ICP) from Silvex on 2/10/2025. The following observations were made with respect to the below subtopics.

- Emergency Coordinators (List 8-1 on the ICP):
 - Primary – Phil Ridley (President)
 - Alternate – Dan Atkinson (Vice President), George Johnson (Director of Operation), Todd Canedy (Technical Manager), and Rodney Footer (Production Manager)
 - Work/Cell Phone Number and Address Available for all personnel listed above.
- Emergency Equipment (Chapter 6 of ICP):
 - Included emergency equipment for fire prevention, spill control, personal protective equipment, eyewash and chemical safety equipment
 - Included locations of the emergency equipment and their inspection frequencies
 - Included physical description of the emergency equipment
 - Included internal communication system or alarm system discussion (also included in Chapters 5 & 10 of ICP)
 - Provided site security monitoring plan by an outside contractor, Protection One Security System.
- Emergency Procedures (Chapter 10 of ICP):
 - Definitions of emergency (Chapter 9)
 - Procedures for spills, fires, loss of plant heat and power.

- Level III emergency (beyond facility's capabilities) procedure (Tab 23)
- Evacuation Plan (Chapter 10):
 - Evacuation procedure
 - Evacuation routes identified
 - Assembly areas identified
- Mutual Aid Agreements:
 - Copy of the contingency plan submitted to the local emergency response agencies.
 - Mutual aid agreement arrangement with EPI, confirmed continued agreement on 12/06/2024.
 - Mutual aid agreement with the following agencies sent on 12/06/2024:
 - Maine medical center
 - Sysco (Adjacent property owner)
 - Westbrook fire department
 - Westbrook police department
 - Wingfoot, LLC

No additional observations were made for the hazardous waste contingency plan.

VI. INSPECTION CLOSING CONFERENCE

An outbrief regarding the facility walkthrough portion of the inspection was conducted on January 22 from 02:20 PM by the inspection team, prior to leaving the facility. The following personnel were present for the closing conference:

EPA:	Hardik Patel, Environmental Engineer, EPA Region 1 Andrew Meyer, Environmental Scientist, EPA Region 1
Vicor:	George Johnson, Director of Operations Phil Ridley, President

Inspector Patel started the closing conference by making a document request. Inspector Patel requested that the requested documents be submitted to EPA with deadline of 01/31/2025. Inspector Patel asked Mr. George Johnson to upload the requested documents into the SharePoint online folder (shared by Inspector Patel) which was provided to the facility on 01/22/2025. Mr. George Johnson then inquired about the photographs which were taken during the inspection. To which, Inspector Patel stated that the photographs would be uploaded on the same SharePoint folder for the facility to access post on-site inspection activities.

Inspector Patel then relayed the areas of concern observed during the on-site inspection activities. Inspector Patel then informed the facility that any areas of concern found during the off-site record review portion of the inspection would be included in the inspection report.

Areas of Concern:

Inspector Patel stated that the presentation of areas of concern does not constitute a formal compliance determination or violation.

1. No secondary containment under the two (2) 55-gallon hazardous waste containers at the CAA.
2. Insufficient labeling language on the two (2) 55-gallon hazardous waste containers at the CAA.
3. The placement of the spill kit in the CAA area, which was behind the acidic products adjacent to the CAA on the 2nd shelf from the ground.
4. Location of the fire extinguisher at or near the CAA.
5. Location of the physical phone at or near the CAA.
6. Location of the emergency contact list at or near the CAA.
7. No evacuation route posted at the CAA.
8. Aisle space between the hazardous waste containers at the CAA.
9. No "NO SMOKING" sign posted at the CAA.

After discussing the above areas of concern, the inspection team explained the next steps in the inspection process, which included the inspection team writing an inspection report and providing a copy to the facility within 70 days of the inspection. Once completed, the inspection team would discuss the areas of concern with EPA regional management and determine if any violations were found. Once a violation determination was established, a decision would be made on which enforcement follow up would be appropriate for the facility.

Lastly, the inspection team thanked facility personnels for their time and cooperation with the inspection activities and left the premises at 02:55 pm ET, concluding the on-site portion of the inspection.

Silvex, Incorporation
45 Thomas Drive, Westbrook, ME 04092
Inspection Date(s): 01/22/2025

ATTACHMENT 1
Photo Log

Photographer: Andrew Meyer	
Photo #	Description
1	Quality Control Laboratory - Flammables Locker
2	90-Day CAA Non-Hazardous Waste Container #1 Label
3	90-Day CAA Non-Hazardous Waste Container #2 Label
4	90-Day CAA Hazardous Waste Container #1 Label
5	90-Day CAA Hazardous Waste Container #2 Label
6	90-Day CAA Hazardous Waste Area Signage
7	90-Day CAA Hazardous Waste Container #3 Label
8	90-Day CAA Hazardous Waste Container #4 Label
9	Chemical Warehouse - Virgin Products
10	Chemical Warehouse - Virgin Products
11	Chemical Warehouse - Virgin Products
12	Chemical Warehouse - Virgin Products
13	Chemical Warehouse - Virgin Products
14	Chemical Warehouse - Virgin Products
15	Chemical Warehouse - Virgin Products
16	Chemical Warehouse - Virgin Products
17	Chemical Warehouse - Virgin Products
18	Chemical Warehouse - Virgin Products
19	Spill Kit Location across from the CAA
20	Maintenance Room - Closed box of fluorescent bulbs
21	Analytical Laboratory - Virgin Products & Absorbent Pack
22	Analytical Laboratory - Expired Solvent (with Oxidizer Hazard)
23	Analytical Laboratory - Contact List of different employees at the work desk
24	Analytical Laboratory - Additional posts near the work desk.
25	Analytical Laboratory - Contact List of different employees near the Phone.
26	Wastewater Treatment Area - Neutralizing Tanks
27	Wastewater Treatment Area - Tanks with incoming wastewater
28	Wastewater Treatment Area - Control Unit
29	Pre-boiler Room - Closed box of universal waste and open box with no universal waste inside.
30	Pre-boiler Room - Universal waste storage closet
31	Pre-boiler Room - Universal Hazardous Waste signage

Photo #	Description	Date
1	Quality Control Laboratory - Flammables Locker	1/22/2025



Photo #	Description	Date
2	90-Day CAA Non-Hazardous Waste Container #1 Label	1/22/2025



Photo #	Description	Date
3	90-Day CAA Non-Hazardous Waste Container #2 Label	1/22/2025



Photo #	Description	Date
4	90-Day CAA Hazardous Waste Container #1 Label	1/22/2025

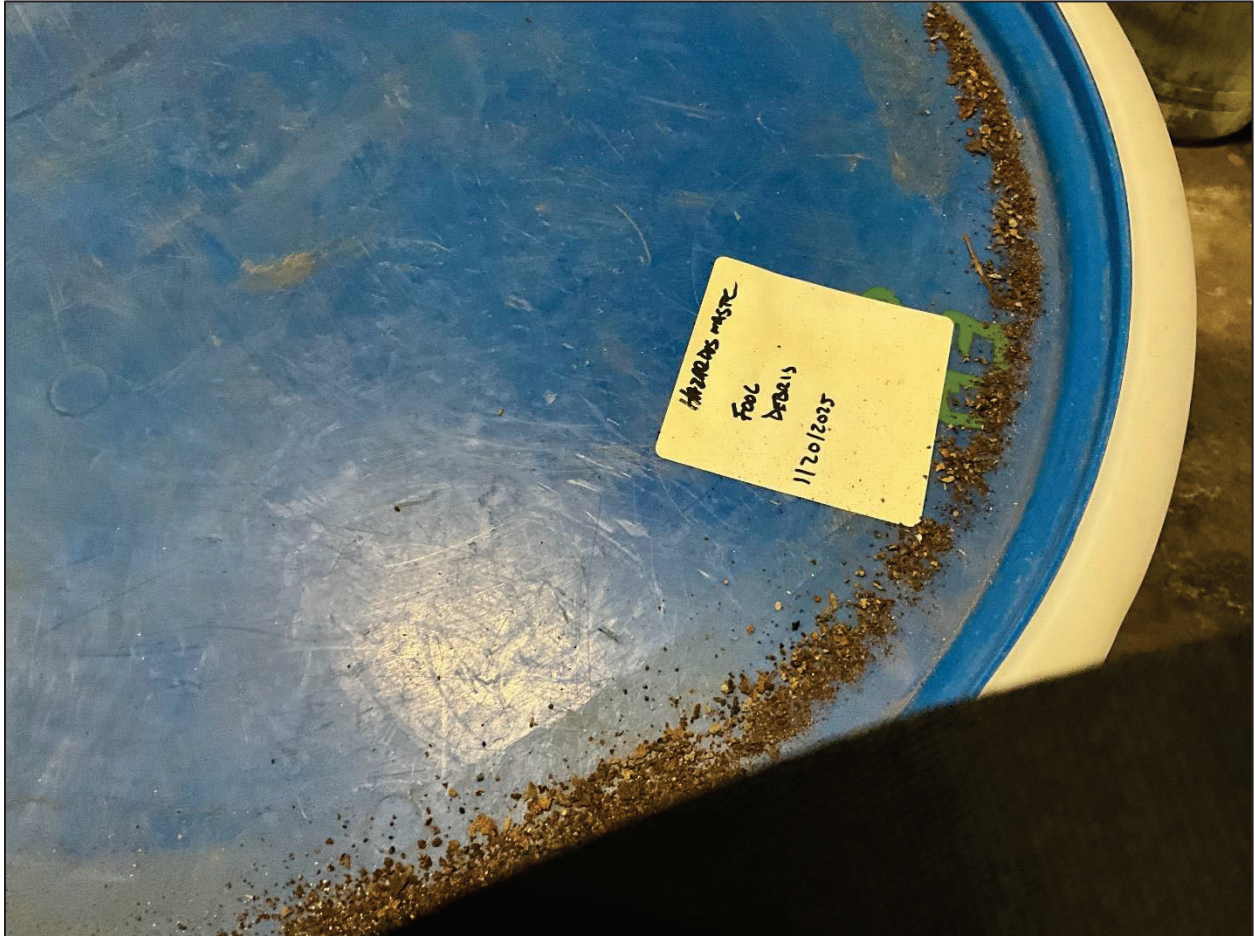


Photo #	Description	Date
5	90-Day CAA Hazardous Waste Container #2 Label	1/22/2025



Photo #	Description	Date
6	90-Day CAA Hazardous Waste Area Signage	1/22/2025



Silvex, Incorporation
45 Thomas Drive, Westbrook, ME 04092
Inspection Date(s): 01/22/2025

Photo #	Description	Date
7	90-Day CAA Hazardous Waste Container #3 Label	1/22/2025

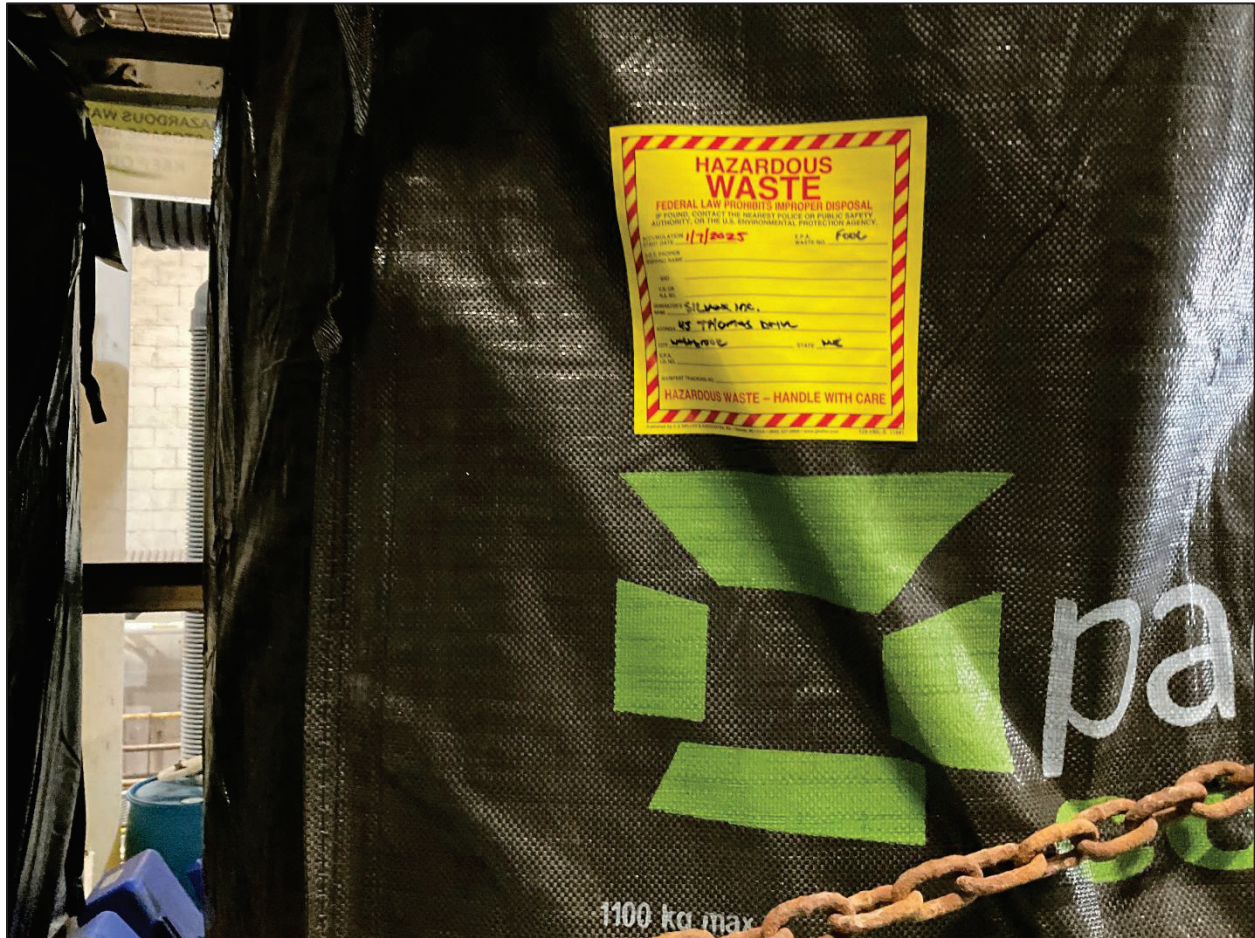


Photo #	Description	Date
8	90-Day CAA Hazardous Waste Container #4 Label	1/22/2025



Photo #	Description	Date
9	Chemical Warehouse - Virgin Products	1/22/2025



Photo #	Description	Date
10	Chemical Warehouse – Virgin Products	1/22/2025



Photo #	Description	Date
11	Chemical Warehouse - Virgin Products	1/22/2025



Photo #	Description	Date
12	Chemical Warehouse - Virgin Products	1/22/2025



Photo #	Description	Date
13	Chemical Warehouse - Virgin Products	1/22/2025



Photo #	Description	Date
14	Chemical Warehouse - Virgin Products	1/22/2025



Photo #	Description	Date
15	Chemical Warehouse - Virgin Products	1/22/2025



Photo #	Description	Date
16	Chemical Warehouse - Virgin Products	1/22/2025

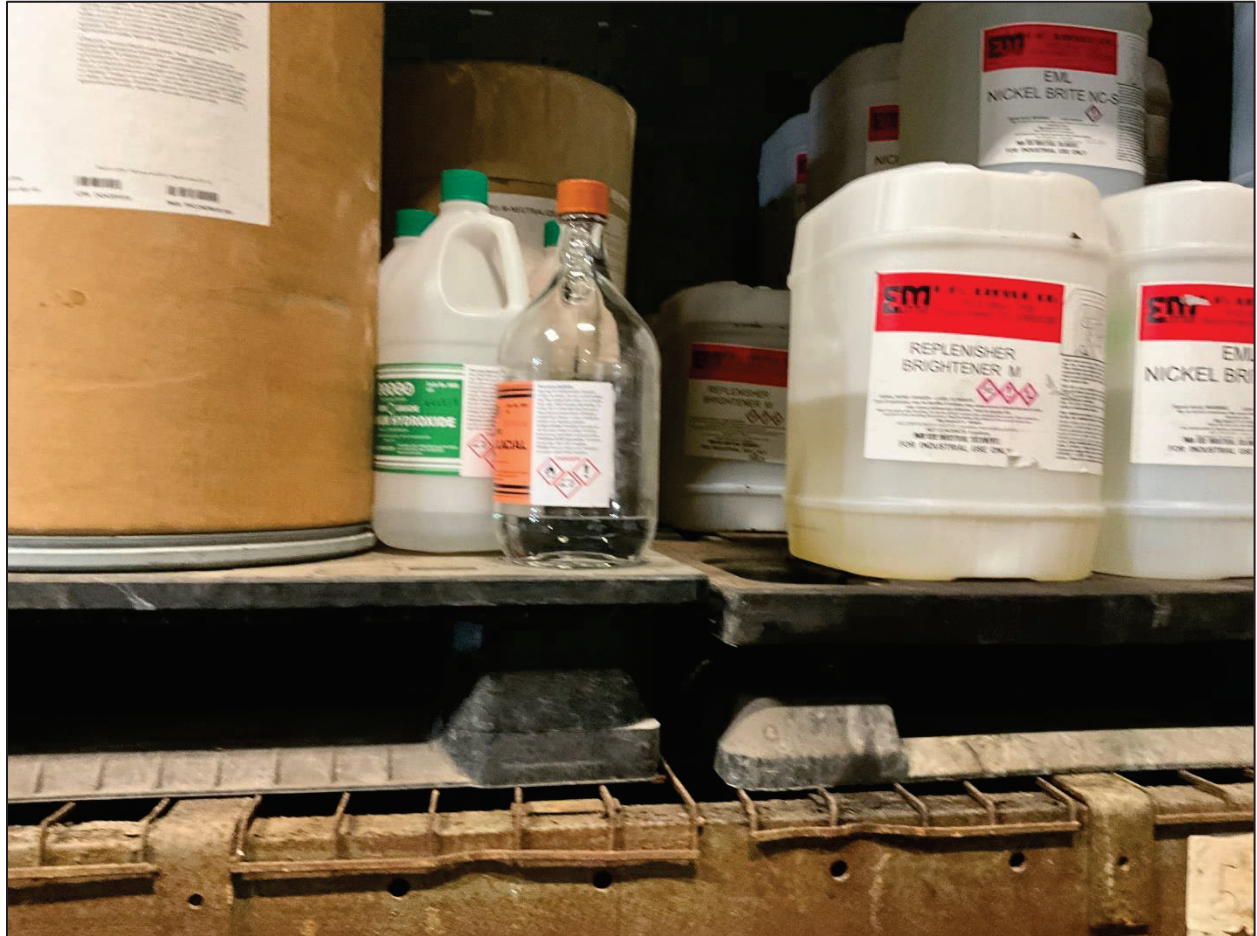


Photo #	Description	Date
17	Chemical Warehouse - Virgin Products	1/22/2025

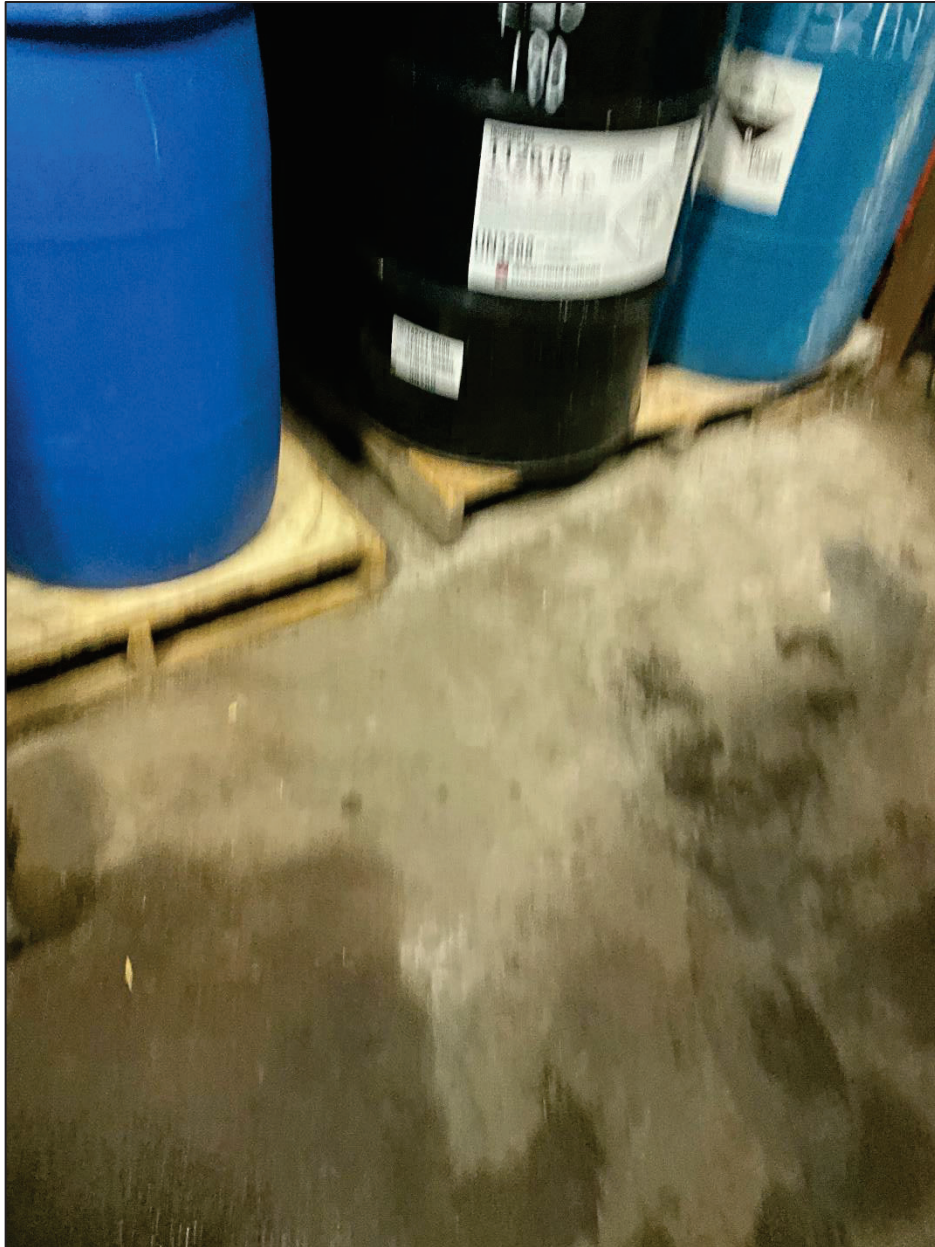


Photo #	Description	Date
18	Chemical Warehouse - Virgin Products	1/22/2025



Photo #	Description	Date
19	Spill Kit Location across from the CAA	1/22/2025



Photo #	Description	Date
20	Maintenance Room - Closed box of fluorescent bulbs	1/22/2025



Photo #	Description	Date
21	Analytical Laboratory - Virgin Products & Absorbent Pack	1/22/2025



Photo #	Description	Date
22	Analytical Laboratory - Expired Solvent (with Oxidizer Hazard)	1/22/2025



Photo #	Description	Date
23	Analytical Laboratory - Contact List of different employees at the work desk	1/22/2025

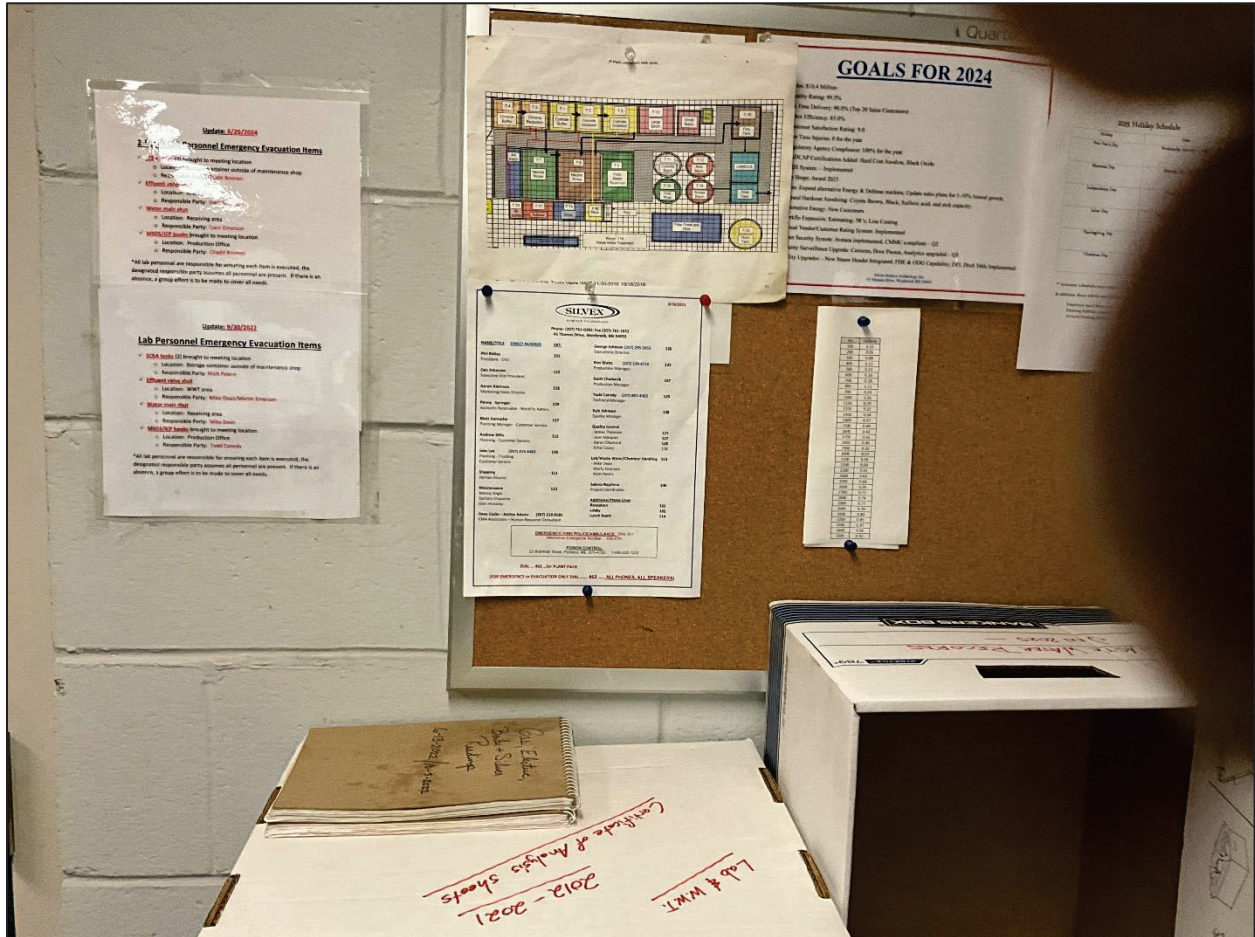


Photo #	Description	Date
24	Analytical Laboratory - Additional posts near the work desk.	1/22/2025

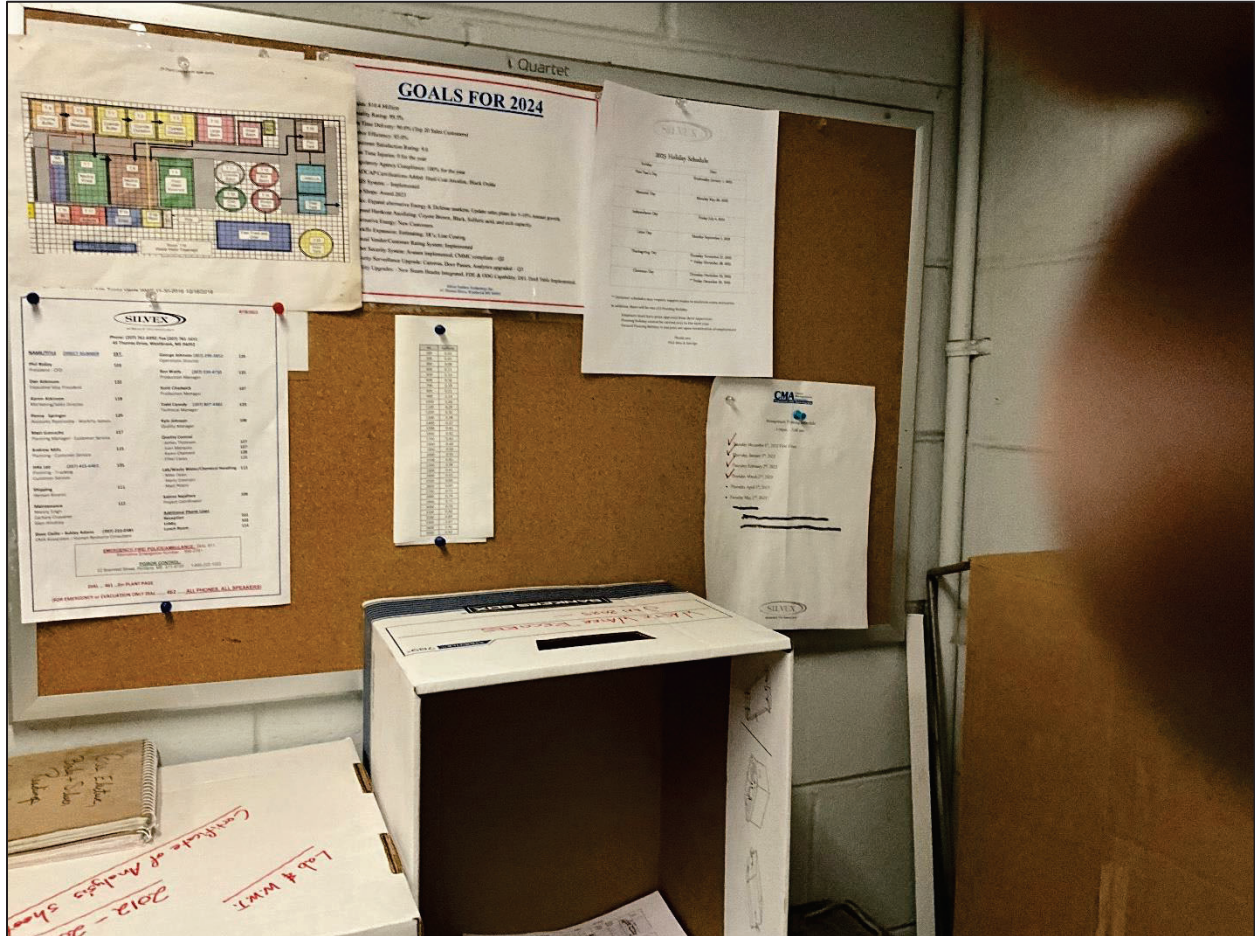


Photo #	Description	Date
25	Analytical Laboratory - Contact List of different employees near the Phone.	1/22/2025

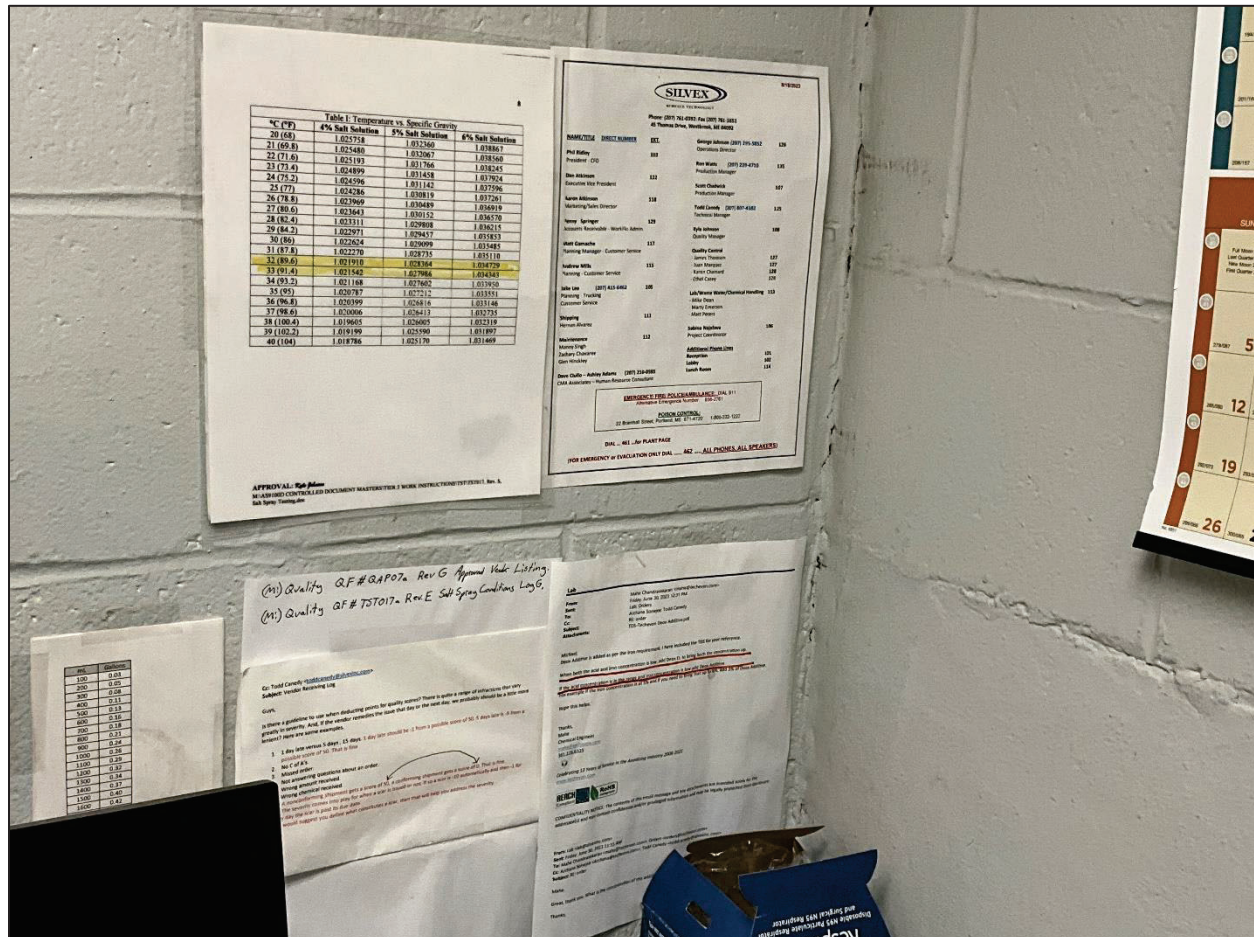


Photo #	Description	Date
26	Wastewater Treatment Area - Neutralizing Tanks	1/22/2025



Photo #	Description	Date
27	Wastewater Treatment Area - Tanks with incoming wastewater	1/22/2025

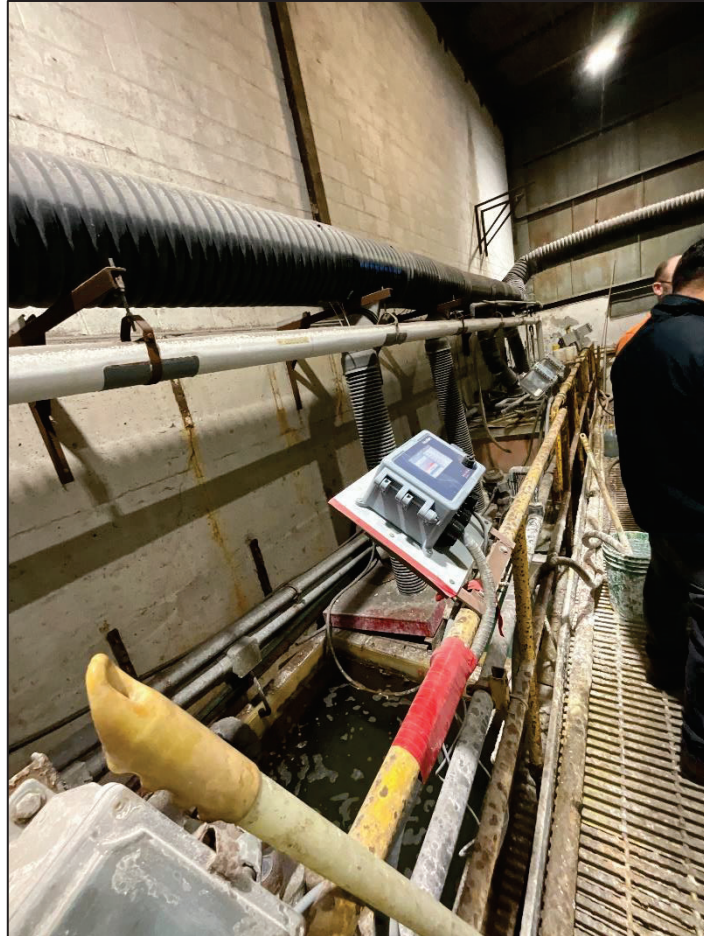


Photo #	Description	Date
28	Wastewater Treatment Area - Control Unit	1/22/2025



Photo #	Description	Date
29	Pre-boiler Room - Closed box of universal waste and open box with no universal waste inside.	1/22/2025



Photo #	Description	Date
30	Pre-boiler Room - Universal waste storage closet	1/22/2025



Photo #	Description	Date
31	Pre-boiler Room - Universal Hazardous Waste signage	1/22/2025

