ENVIRONMENTAL PROTECTION AGENCY
REGION 1 – NEW ENGLAND
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

July 17, 2024

Mr. Jacob C. Bruce, EH&S Officer
Katahdin Analytical Services, LLC
600 Technology Way
Scarborough, ME 04074

Re: U.S. EPA-Region 1 Inspection Report of Katahdin Analytical Services, LLC. June 4-5, 2024

Dear Mr. Bruce:

In accordance with current policy, I am providing you with a copy of the final inspection report summarizing observations made during the June 4-5, 2024, inspection of your facility.

This inspection was conducted under the authority of RCRA.

Please contact me at 617-918-1760 or wilkinson.cheryl@epa.gov if you have any questions.

Sincerely,

CHERYL WILKINSON Digitally signed by CHERYL WILKINSON
Date: 2024.07.18 08:24:25 -04'00'

Cheryl Wilkinson, Life Scientist
Waste and Chemical Compliance Section

cc: Cherrie Plummer, ME DEP

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.

ENVIRONMENTAL PROTECTION AGENCY
REGION 1 – NEW ENGLAND
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

RCRA Compliance Inspection of:

Katahdin Analytical Services, LLC
600 Technology Way
Scarborough, ME 04074

June 4-5, 2024
Date of Inspection

CHERYL WILKINSON
Digitally signed by CHERYL WILKINSON
Date: 2024.07.18 08:23:44 -04'00'

Cheryl Wilkinson, Life Scientist
Waste and Chemical Compliance Section

July 17, 2024
Date Inspection Report Approved

O'Donnell, Mary Jane
Digitally signed by O'Donnell, Mary Jane
Date: 2024.07.17 15:01:36 -04'00'

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

July 17, 2024
Date Inspection Report Finalized

July 18, 2024
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:** Katahdin Analytical Services, LLC ("Katahdin" or the "Facility")

b. **Inspection Date:** June 4-5, 2024

c. **Inspection Type:** RCRA Compliance Evaluation Inspection (CEI)

d. **EPA Inspectors:** Cheryl Wilkinson, Life Scientist
Ryan Maisano, Physical Scientist
Hardik Patel, Environmental Engineer

e. **EPA ID Number:** MER000503995

f. **NAICS:** 54138- Testing laboratories and services

g. **Street Address:** 600 Technology Way, Scarborough, ME 04074

h. **Mailing Address:** PO BOX 540, Scarborough, ME 04074

i. **Facility Contacts:** Jacob C. Bruce
EHS Officer
Email: jbruce@katahdinlab.com

j. **Generator Status (per RCRAInfo):** Large Quantity Generator (LQG)

k. **Date first notified as a generator (per RCRAInfo):** 11/13/2006

l. **Date of most recent notification in RCRAInfo:** 02/20/2023

m. **Current Property Owner:** KAS Holdings, INC. PO BOX 540, Scarborough, ME 04074

n. **Current Operator:** Katahdin Analytical Services, LLC

o. **Wastes generated (per most recent RCRAInfo notification)**:
Waste codes on Biennial Report Notification: D001 D002 D004 D005 D006 D007 D008 D009 D010 D011 D018 D022 D035 D040 F002 F003 F005

Report Attachments:

ATTACHMENT 1 – Digital photo log

II. FACILITY DESCRIPTION

Katahdin Analytical Services is a full service, environmental testing laboratory specializing in the analysis of soil, sediment, sludge, groundwater, surface water, effluent/wastewater, soil vapor gas, indoor and outdoor air samples, hazardous waste, and biota samples for a wide variety of pollutants and contaminants. Katahdin Analytical Services provides sampling services to a wide range of industries including military bases, brownfields, RCRA facilities, state, and local agencies.

III. INSPECTION IN-BRIEF

The EPA inspection team ("inspection team") of, Cheryl Wilkinson, Ryan Maisano and Hardik Patel arrived at Katahdin Analytical Services, LLC at 600 Technology Way, Scarborough, Maine on Tuesday, June 4, 2024. The inspection team was escorted to the sample receiving area where they met Jacob C. Bruce, the Environmental Health and Safety (EH&S) Officer. The inspection team presented their EPA identification and was escorted to a conference room where an in-brief took place. The following personnel were present for all or part of the in-brief:

EPA:	Cheryl Wilkinson, Life Scientist Ryan Maisano, Physical Scientist Hardik Patel, Environmental Engineer
Katahdin:	Jacob C. Bruce, EH&S Officer

The inspection team explained that they would be conducting a routine large quantity generator (LQG) compliance evaluation inspection (CEI) under the authority of the resource conservation and recovery act, (RCRA). The inspection team explained the inspection process included an in-brief, walk through of the facility, record review and out-brief. Inspector Wilkinson explained that if, at any time, Mr. Bruce felt that the information the inspection team was requesting was confidential business information (CBI), to please let the inspection team know so that it may be handled appropriately. Inspector Wilkinson provided Mr. Bruce the CBI claim form, and frequently asked questions document, along with EPA's small business information sheet. The inspection team explained that they would be taking photos during the inspection, and that the photos would be shared with the facility after the inspection.

Mr. Bruce informed the inspection team of the following information about the facility during the in-brief:
The company has been at the 600 Technology Way location since approximately 2005, the previous location was in Westbrook, Maine, and the company has existed for more than forty years. In 2014 Michael Flanders purchased the company and is the current owner. The facility

employs approximately forty people. The hours of operation are Monday through Friday 8:00-5:00, though at times employees work earlier/later and on Saturdays. Mr. Bruce has been with Katahdin since 2017 and has been in the role of EH&S Officer since 2021. The facility is an environmental safety and food testing laboratory. Clients have the option to drop samples off at the facility, send them through a courier system, or the facility offers field services for third party customers. The facility has three field service staff who conduct sampling for the company.

The facility is all on one level and consists of the following areas:
PFAS Lab
Volatiles Lab
Metals Lab
Wet Chemistry Lab
Extractions Lab
Prep-Lab for Metals
Food/Microbiology Department
Warehouse/shipping & receiving.
Sample Receiving/Prep Area
Office Space
Waste Room: Hazardous waste storage area
Boiler Room
Gas Storage Room

The facility has analytical instrumentation such as, inductively coupled plasma (ICP), inductively coupled plasma mass spectrometer (ICP-MS), high performance liquid chromatography (HPLC), gas chromatograph (GC), incubators, polymerase chain reactions (PCR) instrumentation, ion-chromatography, fluorescence instruments, gravimetric ovens, and a series of chemical hoods. The facility conducts preparation methods to prepare samples for analysis including, but not limited to metals digestion using acids, organic extractions using separatory funnels, and heat blocks. The facility manages approximately 20-30 satellite accumulation areas (SAAs) throughout the facility, one less than 90-day hazardous waste storage area, and one area for universal waste. The SAA containers range in size from approximately one-liter to 5-gallons. The HWSA containers are mostly 55-gallon containers, which the smaller SAA containers get consolidated into.

The facility uses Triumvirate Environmental as a hazardous waste transporter and has waste pick-ups approximately every 4-5 weeks. In the past, the facility used ACV Enviro Corporation (ACV) as a transporter, but due to ACV increasing their costs, the Facility began using Triumvirate Environmental. Triumvirate began with Katahdin in August or September of 2023, with pick-ups starting in January of 2024. The waste is destined for either Triumvirate Environmental Merrimack, in Lowell, MA or to Ross Incineration Services, Inc. in Ohio. The waste profiles were completed by either ACV or Triumvirate and are based on either generator knowledge or analysis. The facility manages the following waste streams, listed from greatest amount generated to least amount generated:

1. Acidic liquid with trace metals, generated from conducting metals analysis, effluents from instrumentation, and solvent extractions.

2. Aqueous low pH, generated from conducting separations using separatory funnels, and solvent extractions. The aqueous samples have trace organics, but are low pH from sample preparations, such as reducing the sample pH to less than 2.
3. Aqueous high pH, generated from conducting separations using separatory funnels, and solvent extractions. The aqueous samples have trace organics, but are high pH from sample preparations, such as increasing the sample pH to greater than 12.
4. Water with organics, also a corrosive waste.
5. Effluent for organics, mainly methylene chloride, which is the primary solvent used at the facility, approximately one to two containers are generated and sent out with each pick-up of waste.
6. Mixed flammable liquids, this waste is used oil, which is sampled for total petroleum hydrocarbons, for example. The facility does not conduct total halogen analysis. The facility generates approximately one to two containers between pick-ups of waste.
7. Solid waste stream, soils, and debris with organics, including filters with methylene chloride, sonication filters, and filter paper.
8. Solid waste stream, extraction vials generated by a sample preparation process of concentrating the sample. Once the sample is analyzed, the vial is discarded.

The facility retains most customer samples for approximately one month, though some are held longer if a customer requests it. The facility does a purge of the samples approximately every month, and the samples get discarded into their appropriate waste stream for disposal. The facility does not do solvent reclamation, but they do conduct elementary neutralization. Mr. Bruce explained that elementary neutralization is conducted for aqueous samples that are only hazardous for corrosivity due to the preservation of the sample. To preserve the aqueous samples, the pH is brought down to less than 2. If an aqueous sample has tested positive for other hazardous constituents, such as metals, then the samples are not neutralized, they are sent out as hazardous waste under their appropriate waste profile. To conduct the neutralization, Mr. Bruce explained that they consolidate the samples into a 5-gallon carboy until the carboy is approximately 80% full, they then make additions of sodium hydroxide solution, mix, and test the pH using pH paper until the waste is neutralized to a pH of approximately 7. Mr. Bruce explained that once the waste is neutralized it is dumped down the drain. The facility does have a standardized process for this, which inspector Wilkinson requested a copy of. The inspection team questioned whether the facility has a wastewater treatment permit, to which Mr. Bruce was unsure but stated that he would look into it.

The facility manages universal waste nickel-cadmium batteries, lead-acid batteries, lithium-ion batteries, and fluorescent bulbs. In the past, the facility has managed cathode ray tubes, ballasts with PCBs, and mercury thermometers. The facility does not send any waste for reclamation or recycling of metals. Some waste is sent to Canada, but Mr. Bruce was not sure which waste streams are sent, and they are sent to Triumvirate Environmental first. The facility does not manage aerosol cans.

The facility conducts weekly inspections of their SAAs and hazardous waste storage area (HWSA). Mr. Bruce conducts the HWSA weekly inspections, and personnel from each department are responsible for conducting the weekly SAA inspections. The manager of each department is responsible for ensuring the weekly SAA inspections are completed. The facility

has an EH&S team of three, Mr. Bruce as the EH&S lead, Michael Van Luvender, the field services coordinator, and Evan Price. Mr. Van Luvender has RCRA training, but Mr. Price does not manage hazardous waste and has not had RCRA training. Mr. Price is responsible for checking incoming samples and doing data entry of the samples into their tracking database. Mr. Price has been with the company for approximately two years. Mr. Bruce and Mr. Van Luvender are the two manifest signers for the facility, and Mr. Bruce is the primary emergency coordinator. The alternate emergency coordinator is Helene Gould, and the second alternate is the company owner, Michael Flanders.

The inspection team questioned who at the facility is responsible for consolidating the SAA waste into the 55-gallon HWSA containers, and when do they date the container. Mr. Bruce explained that various staff in the different departments are responsible for the consolidation, and that the container is labeled and dated when waste is first placed into it. Mr. Bruce explained that when an employee is hired, they are given a safety tour of the facility, and training depending on their position. The employees are not allowed to enter the HWSA or consolidate SAA waste into the 55-gallon containers unless they have had RCRA training, which Mr. Bruce provides. Mr. Bruce and Mr. Van Luvender receive additional RCRA training provided by a contract company.

The facility has not had any major releases of hazardous waste.

IV. FACILITY TOUR

The physical tour of the facility began on Tuesday, June 4, 2024. See Attachment 1 for a digital photo log of photos taken throughout the inspection. The following personnel were present for all or part of the tour:

EPA:	Cheryl Wilkinson Ryan Maisano Hardik Patel
Katahdin:	Jacob Bruce

The tour of the facility began at the hazardous waste storage room. The inspection team observed that the entry door was locked. At the entry to the area, the inspection team observed a hazardous waste storage area sign, a danger, unauthorized personnel keep out sign, emergency contact information, a no smoking sign, and a universal waste area sign. The inspection team observed a fire extinguisher in the area, spill control equipment, the room was equipped with a sprinkler, the floor was constructed of concrete, and the containers were staged on spill control pallets. The inspection team observed the following containers at the HWSA, all containers were closed *(See Attachment 1, Photos #1 - #21 and #31)*:

- Thirteen empty 55-gallon containers, some stacked two-high, one was stacked three high. The empty containers were staged in a row next to the containers that were accumulating waste. As the facility fills one container, they take another one in the row to begin filling.
- One 55-gallon, hazardous waste, “A” acid waste, corrosive diamond, dated 05/31/2024.

- One 55-gallon, hazardous waste, “K” water with organics waste, corrosive diamond, dated 05/31/2024.
- One 55-gallon, hazardous waste, “N”-Low waste, corrosive and poison diamond, dated 05/24/2024.
- One 55-gallon, hazardous waste, soil and debris with metals, dated 06/04/2024.
- One 55-gallon, hazardous waste, solid waste, soil and debris with organics, NA3077, nos (benzene, chloroform), D018, D022, dated 06/03/2024.
- One 5-gallon container, hazardous waste, “S” waste, dated 12/07/2023.
- One 30-gallon container, hazardous waste, flammable and poison diamond, dated 11/30/2023.
- One 55-gallon container, hazardous waste, “D” waste, methylene chloride, poison diamond, dated 05/23/2024.
- One 55-gallon container, hazardous waste, “O”, mixed flammable liquids, flammable, corrosive and poison diamond, dated 05/21/2024.
- Three MT containers
- One 55-gallon container, hazardous waste, “L”, solid debris with metals, corrosive diamond.
- One 55-gallon container, “L” waste, vial waste, UN1992, PCB extract vials, 20-35% glass vials, 20-30% hexane, 15-25% methylene chloride, 50-100% PBC, 5-10% plastic vials, flammable and poison diamonds, dated 11/30/2023.
- One 30-gallon container, hazardous waste, “H” waste, poison, and flammable diamonds, dated 05/30/2024.
- One empty container.

The inspection team observed some dirt and trash in the secondary containment area for the hazardous waste containers. Mr. Bruce explained that if a spill was to occur in the area, then Triumvirate Environmental would respond to the spill.

Mr. Bruce explained that the container of “S” waste, dated 12/07/2023 is COD waste generated from the chemical oxygen demand test, and is corrosive and contains mercury, (*See Attachment 1, Photo #8*). Mr. Bruce explained that the waste has not been accumulated as long as the date shows. Mr. Bruce explained that the date was put on the container when it was in the SAA in the wet chemistry lab, and the waste had not accumulated yet. He believed the waste had been there since approximately February, but that he may be able to track the date to know approximately when the waste was actually accumulated.

Mr. Bruce explained that the container of waste PCB sample vials dated 11/30/2023 does not have vials that all contain PCBs, these vials were analyzed for PCBs, and there is some PCBs in some vials, but not all, (*See Attachment 1, Photos #9 - #10*). Most of these samples are oil from transformers generated by a power company. Sample prep of this PCB waste includes the use of hexane and methylene chloride, which are also in the waste. Mr. Bruce explained that the date on this container is accurate, and that Triumvirate told him that they weren’t able to take the waste because they didn’t have a confirmed TSD for the waste to be treated. Mr. Bruce explained that ACV used to pick the waste up from them, but now they use Triumvirate, and Triumvirate won’t take it.

The inspection team observed the carboys, sodium hydroxide beads, and mixed solution that Mr. Bruce explained are used to conduct the elementary neutralization of the corrosive aqueous samples, *(See Attachment 1, Photos #13 - #15)*. Mr. Bruce explained their process is to mix the sodium hydroxide solution by dissolving sodium hydroxide beads in tap water. Mr. Bruce explained that they consolidate all of the sample waste into the carboys until the carboys are 80% full, and additions of the sodium hydroxide solution are added. After each addition of sodium hydroxide solution, the waste is mixed, and the pH is analyzed using pH paper, until the pH is approximately 7. Mr. Bruce explained that they keep acid on hand in the event that the pH goes higher than 7. Mr. Bruce explained that waste is neutralized approximately every couple of months, and they neutralize 5-6 carboys of waste at time.

In the hazardous waste storage room, the inspection team also observed four two-liter bottles with material in them. None of them were labeled as hazardous waste, they did not have a waste description, and they were not dated. All four bottles were closed and had markings on them. The following is a description of the bottles, *(See Attachment 1, Photos #22 - #23)*:

1. Marked with an "O" on the top of the bottle with residual material at the bottom of the bottle.
2. Marked with an "O-C" on the top of the bottle, with material filling approximately ¾ of the bottle.
3. Marked with an "O-L" on the top of the bottle with material filling approximately ¼ of the bottle.
4. Marked with an "O-I" on the top of the bottle with material filling approximately $^1/_3$ of the bottle.

Mr. Bruce explained these bottles are used for consolidating the waste methanol from waste soil samples that have been tested for volatile organics. To analyze the sample, methanol is added to the soil, which makes the waste hazardous for ignitability. Mr. Bruce explained that it is difficult to decant the small sample vials into the 55-gallon waste container, so they consolidate the samples into these smaller bottles for easier decanting and results in less of the soil ending up in the 55-gallon container. Mr. Bruce explained that the "O" designation is for flammable liquid waste. The "O-C" marking on the bottles means that the sample is flammable liquid waste that is clean, meaning it did not test positive for volatile organics, metals, or other hazards. The "O-L" marking is for flammable liquid waste that is hazardous for metals, and the "O-I" designation is for flammable liquid waste that contains toxic organics. The bottle that was just marked with an "O", that had residual material was lubricant oil that was sampled and is flammable liquid waste. Mr. Bruce explained that these bottles have been there since approximately late February when they purged their sample inventory. Mr. Bruce placed a hazardous waste label, and flammable diamond on to the containers at the time of the inspection, placed them into a secondary containment bin, and created a new SAA for the containers.

Behind the entry door to the hazardous waste storage room was universal waste storage. The inspection team observed a shelf that was labeled universal waste, and there was a cardboard box with a lead-acid battery inside that was dated, 05/03/2024, the box was closed. Additionally, there was a cardboard box with spent batteries, labeled, "Dead Lead acid 12V batteries", the box was not dated, but was closed. Additionally, there was one lead-acid battery, not in a box, not

labeled and not dated. Mr. Bruce explained that the waste was all brought to him on 05/03/2024 by one of the employees, *(See Attachment 1, Photo #24 - #28 and #30)*.

The inspection team continued the inspection in the warehouse/shipping and receiving area. This area was used for chemical storage, including virgin solvents, such as methylene chloride, there was no waste in this area. The inspection team continued the inspection at the gas storage room where compressed gas tanks are stored, and then to the boiler room, there was no waste in either of these areas.

The inspection team continued the inspection in the maintenance area and observed a box of chemicals including three aerosol cans. Mr. Bruce explained these chemicals were awaiting sorting and to be lab-packed, if necessary. Mr. Bruce explained that the field services group was recently cleaning out their household products, *(See Attachment 1, Photo #33 - #34)*.

The inspection team continued the inspection in the sample receiving/prep area, where samples are received and logged into the Facility's tracking system. Samples are also prepped for analysis in this area. The inspection team observed the following SAAs, (*See Attachment 1, Photo #36*):

- SAA in a bench cabinet. There was one bin with one, one-liter bottle labeled hazardous waste, "O" flammable waste with a flammable diamond. The bottle was closed.
- SAA in a bench cabinet. There was one bin with a one-liter bottle labeled as hazardous waste, "A" liquid acid waste with a corrosive diamond. The bottle was closed.

The inspection team observed approximately eight bottles of varying sizes between 40-mL and one-liter sitting on the lab bench. Mr. Bruce explained that when samples are finished, employees place them in this specific area on the lab bench for Mr. Bruce to dispose of them. According to Mr. Bruce, these bottles were awaiting consolidation into the 55-gallon HWSA containers and that the samples were all "A" waste, liquid acidic waste, (*See Attachment 1, Photo #37*).

The inspection team observed two cardboard boxes, one against the wall, and one under the lab bench. Both boxes contained bottles of varying sizes including 250-mL, 500-mL, and up to one-liter. Mr. Bruce explained that the bottles in these boxes were all awaiting elementary neutralization, and that they were all aqueous samples that were preserved to a pH of less than two or greater than 12. The inspection team observed that the box against the wall was holding approximately forty containers, some labeled acidic, and some labeled basic, but most were acidic. Mr. Bruce explained that the types of acid used in these samples were different acids, not all the same acid. The box was labeled as "N" (clean), which Mr. Bruce explained that "N" is for separatory funnel waste, and that "clean" meant they were negative for the constituent they were tested for, meaning they were only hazardous for corrosivity, (*See Attachment 1, Photos #38 - #39*). The other box with samples that was under the lab bench had approximately fifty bottles, mostly 125-mL bottles and Mr. Bruce explained that these samples were all preserved with sulfuric acid to a pH of less than 2. The box had the words, "Old, clean acidic samples for Neutralization" written on it, (*See Attachment 1, Photos #40 - #41*). The inspection team observed some of the sample dates on the bottles, which included dates back to January of 2024, Mr. Bruce explained that these bottles have been there since they purged their sample inventory, which was May 21, 2024, and that the earliest dates in the box would be March of 2024. The two

cardboard boxes were approximately 10-liter boxes. The boxes were not labeled as hazardous waste and were not dated with an accumulation start date.

Day 2, June 5, 2024

The inspection team signed into the facility, met Mr. Bruce, and continued the walk-through of the facility, beginning at the PFAS Lab. The inspection team observed the following SAAs in the PFAS Lab, all of the containers were labeled, in secondary containment and closed, *(See Attachment 1, Photos #42 - #50)*:

- Hazardous waste, solids with organics, the container had used syringes, scoops, and wooden tongue depressors.
- Hazardous waste, 5-gallon container, "O" mixed flammable waste, Mr. Bruce explained that this wastestream is mostly methanol from sample preparation.
- Hazardous waste, 5-gallon container, "P" organic vial waste, flammable/poison.
- Three 2.5-liter containers collecting LCMS instrument waste, hazardous waste, "O" mixed flammable waste, Mr. Bruce explained it is mostly methanol, but some acetonitrile.

The inspection team reviewed the weekly SAA inspection logs for each department, while in each area. The weekly inspection logs all had the name of the inspector, date and time of inspection, an area for deficiencies and corrective actions, all of the logs looked for labeling, closure of the containers, spills, and secondary containment. The weekly inspections of the SAAs in the PFAS Lab were consistently being completed throughout the time the inspectors reviewed, 03-15-2024 through 05-31-2024.

The inspection team continued the inspection in the Volatile Organics Lab, and observed the following SAAs, all containers were labeled, in secondary containment and closed, (*See Attachment 1, Photos #51 - #65*):

- Nine hazardous waste, 5-gallon containers, "K" waste, corrosive, one container was not currently being used.
- Hazardous waste, 5-gallon container, "P" solvent extraction vials.
- Hazardous waste, 2.5-liter container, "I" solid with organics waste, and a 1-liter container of hazardous waste, "O" waste located in a chemical hood.
- Hazardous waste, 5-gallon container, "K" water with organics waste, the 5-gallon container was on the bench, and was equipped with a tube that fed another 5-gallon container for the same waste underneath the bench. Mr. Bruce explained that the lab workers set this up to avoid having to bend over to dispose of the waste.

The SAA weekly inspection log for the Volatile Organics Lab had eleven SAAs, though the inspection team observed twelve SAAs. Mr. Bruce explained that one of the 5-gallon containers of "K" waste is no longer being used. It was for collecting waste from an instrument in the lab, but the instrument is no longer being used. The lab personnel confirmed that the container was no longer being used, and the inspection team observed that the container was empty. The inspection team reviewed the logs between December 2022 through December 2023. The weekly inspections were consistently being completed.

The inspection team continued the inspection in the Low-Level Mercury Prep Lab. The inspection team observed the following SAAs in the Low-Level Mercury Prep Lab, all containers were labeled and closed (*See Attachment 1, Photos #66 - #70*):

- Hazardous waste, 2.5-liter container, "A" liquid acidic waste, corrosive diamond, located in a hood.
- Hazardous waste, 5-liter container, "A" liquid acidic waste, corrosive diamond.
- Hazardous waste, one-gallon container, soda lime, base, located in a cabinet.

The inspection team continued the inspection in the general Metals Prep Lab. The inspection team observed the following SAAs in the Metals Prep Lab, all containers were labeled and closed (*See Attachment 1, Photos #71 - #74*):

- Hazardous waste, 5-gallon container, "A" liquid acidic waste, corrosive.
- Hazardous waste, approximately 2.5-liter container, "L" waste soil with metals.

The inspection team observed the SAA weekly inspection log, which included the SAAs in the Low-Level Mercury Lab and the general metals prep lab. The inspection team did not see the SAA for the soda lime container. Mr. Bruce explained that he was not aware this SAA was here, and that this waste will be sent as a lab pack because it is not one of their common waste streams. The inspection team observed that the container was in good condition and was not full. The inspection team reviewed the inspection logs for weeks between May 19, 2023, May 17, 2024. The weekly inspections were consistently being completed.

The inspection team continued the inspection in the Wet Chemistry Lab. The inspection team observed the following SAAs in the Wet Chemistry Lab, all containers were labeled and closed (*See Attachment 1, Photos #75 - #89*):

- Hazardous waste, 2.5-gallon container, "A" liquid acidic waste, corrosive.
- Hazardous waste, 5-gallon container, "E" phenol waste, corrosive and poison diamonds.
- Hazardous waste, 5-gallon container, "A" liquid acidic waste, collecting waste generated from an ICP-MS.
- Hazardous waste, 5-gallon container, "N-Hi" separatory funnel waste, high pH.
- Hazardous waste, 2.5-gallon container, "N-Hi" separatory funnel waste, high pH.
- Hazardous waste, 5-gallon container, "N-Hi" separatory funnel waste, basic high pH.
- Five hazardous waste, 5-gallon container, "A" liquid acidic waste.
- Hazardous waste, 5-gallon container, "K" water with organics waste.
- Hazardous waste, one-liter container, "I" solid debris with organics waste.
- Hazardous waste, 2-liter container, "O" flammable liquid waste.
- Hazardous waste, 3-gallon container, "A" liquid acidic waste
- Hazardous waste, 5-gallon container, "S" COD waste, dated 04/17/2024.
- Hazardous waste, 2-liter container, "A" liquid acidic waste.

Mr. Bruce pointed out that the container of "S" COD waste that was dated 04/17/2024 is the same waste stream the inspection team observed in the hazardous waste room that was dated December 7, 2023. Mr. Bruce explained that, like this container is dated when it should not be because it is an SAA container, the one in the hazardous waste room was dated when it was still an SAA container. Mr. Bruce explained that the COD waste in the hazardous waste room was

accumulated and should have been dated approximately early April when the container here in this lab was replaced.

The inspection team reviewed the SAA weekly inspection log for the Wet Chemistry Lab, which started July 22, 2022, and ended with May 24, 2024. The inspection team reviewed a sample of the logs and observed that the inspections were being conducted consistently.

The inspection team continued the inspection in the Food/Microbiology Lab. The inspection team observed one SAA, which had one 2-liter container labeled as, hazardous waste, "A" liquid acidic waste, that was being used for collecting stain waste, such as Gram stain. The container was labeled and closed, (*See Attachment 1, Photos #90 - #91*). The inspection team observed the weekly inspection log, and a sample of the inspections conducted, and observed that the inspections were being conducted consistently.

The inspection team continued the inspection in the Extractable Organics Lab, and observed the following SAAs, all containers were labeled and closed (*See Attachment 1, Photos #92 - #103 and #107 - #108*):

- Hazardous waste, 5-gallon container, "A" liquid acidic waste.
- Hazardous waste, 5-gallon container, "N" low pH waste.
- Hazardous waste, 5-gallon container, "N" high pH waste.
- Hazardous waste, 1.5-liter container, "O" flammable waste.
- Three Hazardous waste, storage bin in hood, "I" solids with organics waste.
- Two hazardous waste, 5-gallon containers, "O" mixed flammable waste.
- Hazardous waste, 2.5-gallon container, "O" mixed flammable waste.
- Hazardous waste, 500-millilter container, "D" methylene chloride waste.
- Hazardous waste, 1-liter container, "O" mixed flammable waste.
- Two hazardous waste, 5-gallon container, "D" methylene chloride waste.
- Hazardous waste, 5-gallon container, "P" solvent vials waste, flammable and poison.
- Hazardous waste, 5-gallon container, "H" PCB solvent vials waste, flammable and poison.

The inspection team observed an approximately 10-gallon, clear storage bin on a lab bench, next to a sink that was approximately ¾ full of a solution. The storage bin had dates and initials written on it, and a line marking how high to fill the container. The earliest date was 04/15/24 and the latest date was, 06/03/24. Additionally, the bin had the following statements written on it, "+750mL Contrad", and "Add 12-15mL NITRIC ACID before dumping", (*See Attachment 1, Photos #104 - # 106*). The inspection team questioned what the bin was used for, and spoke to Natalie Harmon, Laboratory Scientist 1. Ms. Harmon explained that the lab personnel add deionized (DI) water to the fill line and add 750-mL of Contrad 70 (potassium hydroxide) soap, ("Contrad"). The solution is used for cleaning lab glassware. Ms. Harmon explained that to clean the glassware, the lab personnel will first rinse the dirty glassware in the chemical hood with methylene chloride three times, then let it dry, they then place the glassware into this Contrad soap solution for between one-hour to twenty-four hours, then rinse the glassware with tap water or DI water three times. Ms. Harmon explained that the glassware is dirty from using it for samples which the Extractable Organics Lab mainly tests for, which include the following six classes: herbicides, pesticides, PCBs, organics, petroleum's, and explosives. Furthermore, Ms.

Harmon explained that on a weekly basis, the lab will neutralize the waste Contrad solution using 12-15 milliliters of nitric acid, and then dump it down the sink. Ms. Harmon explained that when they add the nitric acid, the solution is mixed, and tested for pH, which is in the neutral pH 7 range after adding the 12-15 milliliters of nitric acid. The inspection team observed that the sink is equipped with a solids separator, but per Jacob, there is no pH neutralization system.

The inspection team continued the inspection in the Grain Size Room, which is attached to the Extractables Organics Lab. The inspection team observed sieves for particle sizing, there was no waste in this room. The inspection team reviewed the SAA weekly inspection log for the Extractables Organics Lab, which started April 10, 2023, and ended with June 3, 2024. The inspection team observed that the inspections were being conducted, but there were some weeks missing, including the entire month of September 2023.

The inspection team continued the inspection in the walk-in cooler, and the volatiles walk-in storage where samples are stored. There was no waste in these areas. The inspection team continued to the Utility Room and observed five, approximately 750-mL bottles of iCAP ICP-OES Corrosion Inhibitor Havoline XLI32765, made by Thermo Scientific. One had a white powdery cake-like substance around the cover, and one had the words, “opened 6/16/2023” written on it, (*See Attachment 1, Photos #109 - #113*). The inspection team questioned what this material is, and what it is used for. Mr. Bruce explained that the facility had replaced an ICP mass spectrometer in approximately February 2024, and it was placed in the utility room with these bottles, which were for the ICP-MS. Mr. Bruce spoke to the workers who used this old ICP-MS and they informed him that this material was used for the chiller on the instrument, and stated that they don’t have a profile for the material, so they don’t know how to dispose of it.

The walk-through of the facility ended at the Utility Room. The inspection team was escorted back to the conference room to conduct a records review.

V. RECORDS REVIEW

The inspection team requested and reviewed the following records during the inspection. The following are observations the inspection made during the review of the records:

<u>Weekly SAA and HWSA Inspection Log and Inspections</u>
The weekly SAA inspection logs were reviewed during the walk-through portion of the inspection. There were weeks missing in some of the logs, but overall, the inspections were consistently being conducted.

The inspection team reviewed the most recent three years of inspections for the hazardous waste storage area. Inspections were consistently being conducted. The inspection team observed duplicate inspection logs for the hazardous waste storage area for the timeframe of January through April of 2022. All of the logs had the same signature, time and appeared to be in the same pen ink. Mr. Bruce was unsure why there were duplicate inspection logs for that time period.

<u>Hazardous Waste Training Records</u>

The inspection team reviewed the training plan and the proof of hazardous waste training for years 2021, 2022, 2023 and 2024. Mr. Bruce explained that new employees receive safety training which includes security, fire safety, and some hazardous waste. In the year 2021 Galen Nickerson provided the training, and in year 2022, Mr. Bruce began conducting the training. Mr. Bruce explained that a few employees including himself receive RCRA training provided by a contract company. Mr. Bruce explained that no employees are allowed access to the hazardous waste storage area or are able to consolidate hazardous waste until they receive hazardous waste training. The chemical hygiene training plan, which is given to employees does not cover RCRA training. The lab hazardous waste, general safety training covers RCRA and includes SAAs, waste room, contingency plan, universal waste, it has pictures of the facility, and how to consolidate waste, including photos with the description.

- Jacob Bruce received hazardous waste training and began giving the training to employees in 2022, 2023, and 2024.
- Helene Gould, who is the secondary emergency coordinator received training in 2021, 2023, and 2024.
- Michael Van Luvender, who signs hazardous waste manifests has received hazardous waste training in 2022, 2023, and 2024.

Hazardous Waste Contingency Plan and documentation of transmittal to local authorities
Mr. Bruce explained that he is currently in the process of updating the contingency plan and is 35-40% finished with the update. Mr. Bruce explained that he was not sure if the contingency plan has been submitted to local emergency response agencies in the past, and he was looking for any documentation of submission. The contingency plan mentioned that arrangements were made with the following authorities, Scarborough Fire Department, Scarborough Police Department, and Triumvirate Environmental. It also states that medical treatment would be given at Maine Medical Center.

The inspection team did not receive any further information on whether the contingency plan was submitted or not. Mr. Bruce pointed out that in the mutual aid agreement letters to the response companies, which include the police department, fire department, Maine DEP, hospital and Triumvirate Environmental, the letter states that the company can request Katahdin's Environmental Health & Safety Manual, which includes the Contingency Plan.

The inspection team reviewed the contingency plan and noted the following:

- The inspection team received the 2008 and 2016 versions of the contingency plan. The 2016 version of the contingency plan only had the first few pages updated, which included the signatures, and chapters, the remainder of the 2016 contingency plan was the same as the 2008 plan, including emergency coordinators recently.
- The emergency coordinators changed in 2022, which is when Jacob Bruce became the primary emergency coordinator, but the contingency plan listed George Brewer as the primary emergency coordinator, the first alternative as Galen Nickerson, and the second alternative as Michael Flanders.
- The contingency plan listed 51 SAAs and 14 hazardous waste streams.
- The contingency plan is part of the SPCC and ERP plan.

Hazardous Waste Manifests and Land Disposal Restriction Notifications

The inspection team reviewed the hazardous waste manifests and LDR notifications for the most recent three years. The inspection team noted that the generator's initial copy of the manifest was on-site, but not the final destination copies. The inspection team compared the manifests on-site to the manifests in e-manifest and found that all but two manifests had been uploaded into e-manifest. The following are notes for specific years:

2021

All manifests were singed by Galen Nickerson or Jacob Bruce. There were twelve manifests.

2022

All manifests were signed by Jacob Bruce or Galen Nickerson. Two manifests were not uploaded to e-Manifest. Both manifests had the final destination as US Ecology Burlington Inc, in Williston Vermont. The manifest numbers are 024064581JJK, ship date of 10/27/2022 and 024064806JJK, ship date of 06/16/2022. There were LDR notifications that were not signed for three shipments of waste, dated 08/31/22, 10/28/22, and 11/30/22.

2023

All manifests were signed by Jacob Bruce, and all were sent to Cycle Chem in New Jersey, and transported by ACV Environmental Services, Inc.

2024

All manifests went to either Triumvirate Environmental Merrimack, in Lowell, MA or to Ross Incineration in Ohio, and all were transported by Triumvirate.

Universal Waste Tracking Documentation

The inspection team reviewed the universal waste tracking information provided by the facility. The following dates are when the company shipped universal waste:

January 27, 2020
February 16, 2023
August 14, 2023
March 6, 2024

Waste Determination Documentation/SDS

The inspection team reviewed the following SDS's, waste profiles and analytical documents:

SDS

- Contrad SDS: This is the chemical used and disolved in the bath for cleaning glassware that the facility conducts elementary neutralization on. The pH of Contrad is 12-14

Waste Profiles

Hazardous waste, by Triumvirate Environmental or Veolia

Mixed flammable liquids, corrosive, D001, D002, F003, F002, (O waste)
Methylene chloride, F002, (D waste)
PCB Extract vials, flash point 101-140, D001, F002, (H waste)
COD waste, D002, D007, D009, D011 (S waste)
Acid liquid, D002, (A waste)

Aqueous Phenolic, D002, (E waste)
Soil with metals, D004, D005, D006, D007, D008, D009, D010, D011, (L waste)
Solvent vials, D001, D018, D022, D035, F002, F003, F005, (P waste)
SEP Funnel waste high pH, D002, F002, (Nhi waste)
Soil with organics, D018, D022, D035, D040
Soil and debris with organics, D018, D022, D035, D040, (I waste)
Water with organics, D002, D018, D022, D035, D040, (K waste)

Elementary Neutralization Information:

The inspection team requested any WWT permits, licenses or agreements authorizing the facility to conduct elementary neutralization. Mr. Bruce explained that the facility has been conducting elementary neutralization since before he started with the company in 2017. Mr. Bruce provided a letter from the Scarborough Sanitary District, dated September 30, 2008, stating that the Scarborough Sanitary District has no objection to the facility's elementary neutralization program and will accept the wastewater from the process. Additionally, Mr. Bruce provided the inspection team with section 7.10 of SOP Number SD-903-07, issued 04/23 for Sample Disposal, which states "Pursuant to Maine DEP regulations, Katahdin has the necessary agreements, processes and documentation in place to neutralize samples without a license." The SOP continues to describe the process by which the elementary neutralization takes place. The inspection team noted that there were differences in the SOP versus what Mr. Bruce explained to the inspection team that the steps of the process were. The two differences were that the SOP states the sodium hydroxide pellets are added directly to the carboy versus Mr. Bruce explaining that they use a pre-mixed solution of the sodium hydroxide pellets dissolved in water, and Mr. Bruce explained that they fill the carboy to approximately 80% full of the sample waste, whereas the SOP states the carboy is to be 60% filled.

Mr. Bruce explained that the SOP and agreements for the elementary neutralization process is only for the neutralization of the corrosive sample waste, not the Contrad bath in the lab that is used to clean glassware. Mr. Bruce was not sure how long that process had been occurring.

The inspection team requested that Mr. Bruce send the inspection team any documents he finds regarding the authorization for Katahdin to conduct elementary neutralization, or a WWT permit allowing the elementary neutralization by June 14, 2024. On June 10, 2024, Mr. Bruce emailed the pdf document, "Elementary Neutralization Items". This document included letters between Katahdin and Maine DEP, Katahdin and Woodard & Curran, Inc., and Katahdin and Scarborough Sanitary District dating back to 2003, 2004 and 2008.
The Facility keeps an elementary neutralization logbook, which includes the date, time, analyst of when elementary neutralization takes place for the waste corrosive samples. The log includes the number of gallons neutralized, the final pH, condition of drain and sink area before and after neutralization, and significant repairs or corrective actions. The following are the dates and how much waste was neutralized that the inspection team observed in the logbook:

- February 13, 2024, a total of 20-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6 or 7.
- March 19, 2024, a total of 15-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6, 7, or 8.

- October 24, 2023, a total of 15-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6, 7, or 8.
- November 6, 2023, a total of 20-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 7 or 8.
- August 25, 2023, a total of 25-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6, 7, or 8.
- September 14, 2023, a total of 20-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 7 or 8.
- June 19, 2023, a total of 15-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 7 or 8.
- August 21, 2023, a total of 20-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6, 7, or 8.
- April 25, 2023, a total of 20-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6 or 8.
- May 23, 2023, a total of 10-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 7 or 8.
- March 16, 2023, a total of 10-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 7 or 8.
- April 4, 2023, a total of 15-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6 or 7.
- February 13, 2023, a total of 15-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 7 or 8.
- February 14, 2023, a total of 15-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6, 7, or 8.
- December 28, 2022, a total of 30-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6, 7, or 8.
- January 26, 2023, a total of 30-gallons, neutralizing the waste in increments of 5-gallons each, with a final pH of 6, 7, or 8.

Mutual Aid Agreements:
Katahdin sent the following mutual agreements to the following agencies for the year 2024:

- State of Maine Response Services in Portland, Maine
- Maine Medical Center
- Scarborough Fire Department
- Scarborough Police Department
- Triumvirate Environmental Inc.

In the mutual aid agreement letter to the response companies, the letter states that the company can request Katahdin's Environmental Health & Safety Manual, which includes the Contingency Plan.

VI. INSPECTION OUTBRIEF

The following personnel were present for the out-brief:

EPA: Cheryl Wilkinson, Life Scientist

Ryan Maisano, Physical Scientist
Hardik Patel, Environmental Engineer

Katahdin: Jacob Bruce, EH&S Officer

The inspection team discussed the following areas of concern that were observed during the inspection:

- There were two containers in the hazardous waste storage area that were stored for greater than 90-days. The two containers were one 30-gallon container of PCB waste and one 5-gallon container of "S", COD waste. Mr. Bruce explained that the COD waste was dated when the container began being filled in the SAA and is not the accurate accumulation date.
- Katahdin is conducting elementary neutralization of the corrosive aqueous samples and the Contrad bath for cleaning glassware. The inspection team is still looking into the requirements for elementary neutralization and waiting for any licenses, permits or agreements to conduct the elementary neutralization from the Facility.
- There were four, two-liter bottles for used to decant methanol into from soil samples. These bottles were not labeled as hazardous waste, were not in secondary containment, and were not in a designated SAA.
- There was one box of universal waste batteries that was not dated, and one lead-acid battery not containerized, labeled, or dated, but was in the universal waste area.
- There were two boxes of corrosive aqueous waste samples in the Receiving Area. One box contained samples that were preserved with sulfuric acid, while the other had samples that were preserved with different acids and bases. The boxes nor sample bottles were labeled as hazardous waste, they were not dated, and there were acids stored with bases.
- There were some SAA weekly inspections missing, and the soda lime SAA was not on the weekly SAA inspection log.
- There were five 750-mL bottles of iCAP ICP-OES Corrosion Inhibitor Havoline XLI32765 that was chiller solution for an old ICP-MS, that the facility was no longer using, located in the Utility Room.
- There were two manifests from 2022 that had the transporter, US Ecology that were not uploaded to e-Manifest. The manifest numbers were 024064581JJK, dated 10/27/2022 and 024064806JJK, dated 06/16/2022.
- The contingency plan was not updated and was not sent to local emergency response agencies. Mr. Bruce was still looking to see if there is proof that the contingency plan was ever sent.

Mr. Bruce explained that they have created three new SAAs because of the inspection, one being the decant waste containers in the hazardous waste accumulation area.

The inspection team explained the next steps in the inspection process, which included the inspection team writing an inspection report and providing it to the facility within 60 days of the inspection. Once complete, the inspection team will discuss the areas of concern with

management and determine if any violations were found. Once a violation determination is made, a decision on what enforcement follow will be appropriate based on violations found. The inspection team explained that the agency has the following options for potential enforcement, lowest would be a notice of violation; next highest would be an enforcement action, with or without penalty; and in egregious situations a deferral to the Department of Justice or Criminal could be made.

The inspection team stated that if the facility makes any changes as a result of the areas of concern, to please inform and send documentation to Inspector Wilkinson. The inspection team thanked Mr. Bruce for his time, the inspection team signed out of the facility, and left the site.