REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

IOWA STATE UNIVERSITY – MAIN CAMPUS
2408 Wanda Daley Drive
Ames, Iowa 50011
(515) 294-5359

EPA RCRA ID No. IAD984621383

On

May 13, 2024

By

TOEROEK ASSOCIATES, INC.

For

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 7
Enforcement and Compliance Assurance Division

INTRODUCTION

At the request of the Enforcement and Compliance Assurance Division/Chemical Branch/RCRA Section of the U.S. Environmental Protection Agency (EPA) Region 7, Toeroek Associates, Inc. and its subcontractor CLAENE Group (Toeroek team) conducted a hazardous waste compliance evaluation inspection (CEI) at the Iowa State University – Main Campus (ISU), at 2408 Wanda Daley Drive, Ames, Iowa. The CEI was conducted under the authority of Section 3007 of the Resource Conservation and Recovery Act (RCRA), as amended. The CEI covered hazardous waste generator, used oil, and universal waste requirements as applicable. This report and its attachments present the findings of the CEI.

PARTICIPANTS

ISU:

Kaylin Contag, EHS, Assistant Director of Environmental Programs
William Diesslin, Environmental Health and Safety (EHS) Director
Mark Early, Research Scientist, Food Science Building

Toeroek Team:

John D. Dixon, Inspector, (703) 473-8717

INSPECTION PROCEDURES

Prior to the CEI at ISU on May 13, 2024, I conducted a drive-by visual inspection. I did not observe any areas of concern during the drive-by inspection. After the drive-by inspection, I entered the main entrance to the Regulated Materials Facility (RMF) and approached the reception desk. I introduced myself to personnel at the reception desk, presented my EPA credentials, and explained the purpose of the CEI. They contacted Mr. Diesslin and Ms. Contag to inform them of my arrival. Ms. Contag met me in the reception area approximately 5 minutes later. She escorted me to a conference room where we were met by Mr. Diesslin. I then conducted an entry briefing with Mr. Diesslin and Ms. Contag.

During the entry briefing, I presented my business card to Mr. Diesslin and Ms. Contag. I explained the scope and procedures for the CEI. I explained the facility's right to make confidentiality claims and provided a Notice Regarding Proprietary/Confidential Business Information. I stated that at the conclusion of the CEI, they would be presented with a Confidentiality Notice (Notice) with which they could make or not make a claim of confidentiality for the facility. I also provided Mr. Diesslin and Ms. Contag a copy of U.S. Federal Codes 1001 and 1002, concerning communication of false statements and documents to federal inspectors, and RCRA Section 3007, explaining EPA's inspection authority, both of which they read.

A copy of each of the following documents was left with the facility during the inspection:

- RCRA Facility Access Information Sheet
- Mr. Trevor Urban's contact information (a business card was not available)
- RCRA Section 3007
- U.S. Federal Codes 1001 and 1002
- Instructions for Responding to a Notice of Preliminary Findings

I discussed the other compliance assistance documents and handouts typically provided to hazardous waste generators during CEIs. Mr. Diesslin stated that he had copies of the materials, and that additional copies were not needed. Therefore, I only provided the documents listed above.

I reviewed the Notification Acknowledgement/Verification Report (Verification Report) with Mr. Diesslin and Ms. Contag (Attachment 1). Based on this review, I made no changes to the Verification Report.

I conducted the visual inspection on May 13, 2024, accompanied by Ms. Contag. Prior to the visual inspection, I asked Ms. Contag for a list of hazardous waste satellite accumulation areas (SAA) at the facility (Attachment 2). Ms. Contag explained that the facility was between semesters at the time of the CEI, and that many of the SAA locations would be locked or empty. I selected the following locations for visual inspection:

- Veterinary Diagnostic Laboratory (VDL)
- Frederick Douglass Patterson Hall (FDPH)

- Food Science Building
- General Services Building
- Campus Services Shop
- Hach Building
- Transportation Services
- Biorenewable Laboratories (BRL)

I conducted a visual inspection of available SAAs within the selected buildings/locations. I also inspected the RMF, which houses the facility's less-than-90-day hazardous waste central accumulation area (HWCAA). Following the visual inspection, I conducted a records review on May 13, 2024, accompanied by Mr. Diesslin and Ms. Contag. During the records review, I reviewed facility documentation such as waste shipping records, waste profiles, Safety Data Sheets (SDS), inspection logs, RCRA Contingency Plan, training records, and written job descriptions. I prepared and completed a site-specific inspection checklist to document my observations.

I conducted an exit briefing on May 13, 2024, with Mr. Diesslin and Ms. Contag. During the exit briefing, I provided a Receipt for Documents and Samples, which Mr. Diesslin signed, acknowledging receipt (Attachment 3). I provided Mr. Diesslin the Notice, which he signed indicating no confidential business information had been provided (Attachment 4). I also provided Mr. Diesslin a Notice of Preliminary Findings (NOPF), which he signed to acknowledge receipt (Attachment 5).

Maps of the facility were obtained during the CEI and are in Attachment 6. An aerial photograph of the facility was downloaded after the CEI and is in Attachment 7. The 129 photographs taken during the CEI are in Attachment 8; of these, 125 are discussed in this report.

FINDINGS AND OBSERVATIONS

1. Facility Description and General Information

ISU is a public land-grant research university. The facility was founded in 1858 as the Iowa Agricultural College and Model Farm and was renamed Iowa State University of Science and Technology in 1859. The facility was designated a public land-grant research university in 1862, and the first coeducational class was enrolled in 1869. Currently, the facility offers undergraduate and graduate degrees through eight colleges and two schools and has an enrollment of approximately 31,000 students. The university consists of several buildings and encompasses approximately 2,000 acres of land within the Ames city limits.

Educational and research activities at ISU generate a variety of regulated and nonregulated wastes. These wastes are collected from SAAs and nonhazardous waste accumulation areas throughout the facility by five full-time EHS staff and brought to the RMF (Attachment 8, Photograph 1) for accumulation and management in the HWCAA. EHS staff work one shift (varying hours to accommodate needs) Monday through Friday. In addition to wastes generated on the ISU campus, EHS personnel collect wastes from nine very small quantity generators (VSQG) of hazardous waste (generating less than 100 kilograms [kg] or 220 pounds of

hazardous waste in any single month). These VSQG facilities are non-contiguous properties owned by the State of Iowa and affiliated with and operated by ISU.

Wastes generated from educational and research activities include halogenated/flammable solvents; metals, corrosive wastes (acidic and alkali); labpack wastes (non-acute and acute hazardous waste); flammable silica gel; waste oxidizers; and mixed waste. Hazardous waste determinations are made for all wastes based on product and process knowledge. Analytical testing through an offsite laboratory is employed as needed to assist with hazardous waste determinations for unknown wastes. Wastes are transferred to separate rooms within the RMF, depending on waste type, for bulking, accumulation, and management. No hazardous waste treatment is performed at the RMF.

Wastes generated during maintenance activities include waste batteries, lamps, and mercury-containing equipment; flammable paint and waste paint thinner; waste aerosols; spent parts washer solvent; used oil; used oil filters; used antifreeze; waste lead-acid batteries; and waste ballasts. The facility manages waste batteries, lamps, and mercury-containing equipment as universal waste according to provisions of Title 40 *Code of Federal Regulations* (40 CFR) Part 273. ISU considers flammable paint, waste paint thinner, and waste aerosols to be hazardous waste based on product and process knowledge. Spent parts washer solvent consists of spent Barsol 142 Solvent (flashpoint of 142 ºF) and is considered to be nonhazardous based on product and process knowledge. The facility manages used oil according to provisions of 40 CFR Part 279. Used oil filters are hot-drained and crushed. The crushed filters are recycled as excluded scrap metal per 40 CFR 261.6(a)(3)(ii). Used antifreeze and waste ballasts are considered to be nonhazardous based on product and process knowledge. Waste lead-acid batteries are managed according to provisions of 40 CFR 266 Subpart G and are collected for reclamation.

Other wastes generated at the facility include expired hand sanitizer, biohazardous waste, incinerator ash, waste cardboard, mixed stream recycling waste, and general trash. Expired hand sanitizer is considered to be hazardous based on product and process knowledge. The waste is transported off site for fuel blending or is re-distributed as a product when requested by researchers. Biohazardous waste consists of sharps and other materials contaminated with bodily fluids. The facility manages biohazardous waste as nonhazardous medical waste based on product and process knowledge. Incinerator ash is considered nonhazardous based on product and process knowledge and is transported off site for landfill disposal under a special waste authorization (SWA). Waste cardboard and mixed stream recycling waste are considered nonhazardous based on product and process knowledge, are collected for offsite recycling. General trash is considered to be nonhazardous based on product and process knowledge and is transported to the Resource Recovery Plant in Ames, Iowa, for energy recovery.

The facility has also notified as a healthcare facility for the management of hazardous pharmaceutical waste as described in 40 CFR 266 Subpart P. However, I did not observe any wastes managed as waste pharmaceuticals during this inspection.

On December 14, 2020, ISU was inspected by an EPA contractor. During the CEI, the inspector made the following preliminary findings:

1. Failure to make a hazardous waste determination on a waste
2. Failure to label SAA containers with the words "hazardous waste"
3. Failure to label SAA containers with an indication of the nature of the hazard
4. Failure to keep SAA containers closed
5. Failure to accumulate waste in a SAA container in good condition
6. Failure to determine if a waste exhibited a hazardous waste characteristic
7. Failure to determine if a waste met a hazardous waste listing

Of these preliminary findings, numbers 2, 3, and 4 were repeated during this CEI.

2. RCRA Status

ISU was identified as a large quantity generator (LQG) of hazardous waste (generating more than 1,000 kg [2,200 pounds] of hazardous waste or 1 kg [2.2 pounds] of acute hazardous waste per month) on the Verification Report provided by EPA (Attachment 1). During the CEI, I confirmed ISUs LQG status through a review of current operations, an interview with Mr. Diesslin and Ms. Contag, a review of waste disposal records (uniform hazardous waste manifests), and the facility's 2023 hazardous waste biennial report (Attachment 9).

According to the hazardous waste biennial report, ISU generated 116,816 pounds (52,987 kg) of hazardous waste in 2023. Included with this quantity was 205 pounds (93 kg) of labpacks with acute hazardous wastes. Both the total quantity of hazardous waste generated in 2023 as well as the quantity of acute hazardous waste generated in 2023 are above the thresholds for LQG status. Copies of the uniform hazardous waste manifests for wastes shipped in 2024 to date are included in Attachment 10 and reflect similar generation rates for hazardous waste and acute hazardous waste. Additionally, Ms. Contag provided inventory logs for the wastes in the RMF at the time of the CEI (Attachments 11 and 12). The current inventory demonstrates the facility's LQG status. Therefore, I inspected ISU as a LQG of hazardous waste. Based on waste shipping records and visual observations, I also inspected ISU as a small quantity handler (SQH) of universal waste (accumulating less than 5,000 kg of universal waste at any time) and a used oil generator.

ISU is a LQG that may receive hazardous waste from nine VSQGs of hazardous waste that are affiliated with and operated by ISU (Attachment 9). During the inspection, I verified that ISU had met the requirements for consolidation of hazardous waste received from VSQGs outlined in 40 CFR 262.17(f), thus not requiring a storage permit. No wastes generated by the VSQGs were present at the facility during my inspection. A discussion of the recordkeeping review is included in Section 6.

ISU accumulates hazardous waste in designated SAAs throughout the facility. A list of the facility's SAAs is in Attachment 2. Full SAA containers are transferred to the HWCAA in the RMF. I inspected 19 SAAs and the HWCAA during the CEI. I also inspected an ad-hoc HWCAA in the Food Science Building which was identified by the facility as a SAA but did not meet the definition of a SAA at the time of the CEI.

3. Waste Streams

This section of the CEI report describes waste streams generated by the facility, including the facility's waste determination and waste codes, generation process and rate, management at the facility, and ultimate disposition. Ms. Contag accompanied me during the visual inspection, and Mr. Diesslin joined the visual inspection of the RMF. The following discussion of waste streams is based on my interviews with Mr. Diesslin and Ms. Contag, observations during the visual inspection, and my review of available documentation.

Ms. Contag explained the satellite accumulation procedures employed by the facility. Each room where wastes are generated is allowed one SAA in a dedicated area approved by EHS. The SAA is designated by signage posted at the area instructing operators how to manage and label containers (Attachment 8, Photograph 3). A hard copy of the SAA signage is in Attachment 13. Ms. Contag explained that a waste description tag with four "steps" is affixed to each SAA container. Step 1 includes identification of the waste as hazardous or nonhazardous. Step 2 includes indication of the nature of the hazard. Step 3 includes generator information, and Step 4 includes an inventory of the contents. Photographs of representative waste description tags and steps are in Attachment 8, Photographs 4, 5, and 11 through 14. A hard copy of a waste description tag is in Attachment 14.

During the CEI, I observed only nonhazardous wastes in accumulation at the VDL Room 1521 SAA (Attachment 8, Photograph 10). I also observed empty SAAs at the Food Service Rooms 1384, 1554, and 1313 SAAs, as well as the Hach Building Room 3241 SAA. These SAAs are not discussed further in this report.

Bulk halogenated/flammable solvents consists of solvent-containing wastes collected from SAAs and received from VSQG facilities. The majority of halogenated and non-halogenated solvent-containing wastes are bulked together at the RMF. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 64,285 pounds of bulk halogenated/flammable solvents per year. The facility considers bulk halogenated/flammable solvents to be hazardous (D001, D018, D019, D021, D022, F002, F003, F004, F005) based on product and process knowledge. The waste is accumulated in various sized SAA containers, and full containers are transferred to the RMF HWCAA. Bulk halogenated/flammable solvents are transported to Tradebe Treatment and Recycling in East Chicago, Indiana (Tradebe), for fuel blending.

During the CEI, I observed bulk halogenated/flammable solvents (SAA containers with solvent-containing wastes) in the following locations:

- VDL Room 1500 SAA (Attachment 8, Photographs 2, 4, and 5)
- FDPH Room 1630A SAA (Attachment 8, Photographs 19 through 22)
- FDPH Room 1524 SAA (Attachment 8, Photographs 23 through 25)
- Food Science Room 1312 SAA (Attachment 8, Photograph 37)
- Hach Building Room 3162 SAA (Attachment 8, Photographs 74 and 75)
- BRL Room 2115 SAA (Attachment 8, Photograph 91)
- BRL Room 3129 SAA (Attachment 8, Photographs 92 and 93)

Each of the above SAAs included one or more containers that held solvent-containing waste. The containers were near the point of generation, under control of the operator, structurally sound, and closed. They were labeled with the words "hazardous waste" and an indication of the nature of the hazard. No incompatible waste were observed within the same SAA, and the cumulative hazardous waste volume in each SAA was less than 55 gallons.

At the VDL Room 2220 SAA, I observed two SAA containers labeled as methyl ethyl ketone waste, kept in a cabinet (Attachment 8, Photographs 6 through 9). Both containers were near the point of generation, under control of the operator, structurally sound, and closed. Neither container had the waste description tag affixed. Although one container had hazard pictograms indicating the nature of the hazard, the other did not have an indication of the nature of the hazard, as required by 40 CFR 262.15(a)(5)(ii) **(NOPF No. 2)**. Neither container was labeled with the words "hazardous waste," as required by 40 CFR 262.15(a)(5)(i) **(NOPF No. 1)**.

At the Hach Building Room 3191 SAA, I observed a total of seven SAA containers with solvent-containing waste (three 4-liter, two 20-liter, and two 5-gallon containers) (Attachment 8, Photographs 76 through 84). All containers were near the point of generation, under control of the operator, and structurally sound. However, Step 1 and Step 2 of the waste description tag were not completed for one 5-gallon and one 4-liter SAA container; therefore, neither were labeled with the words "hazardous waste," as required by 40 CFR 262.15(a)(5)(i) **(NOPF No. 1)**. The 5-gallon container with the incomplete waste description tag had original product labeling on the container with the Globally Harmonized System (GHS) label for flame hazard. The 4-liter SAA container with the incomplete waste description tag did not; therefore, the 4-liter SAA container was not labeled with an indication of the nature of the hazard, as required by 40 CFR 262.15(a)(5)(ii) **(NOPF No. 2)**. Additionally, two 4-liter SAA containers had funnels that were not latched shut and therefore, were not closed, as required by 40 CFR 262.15(a)(4) **(NOPF No. 3)**.

At the Hach Building Room 2242 SAA, I observed several SAA containers that held solvent-containing and aqueous wastes (Attachment 8, Photographs 85 and 86). The containers were near the point of generation, under control of the operator, structurally sound, labeled with the words "hazardous waste" and an indication of the nature of the hazard. However, two SAA containers were not closed, as required by 40 CFR 262.15(a)(4) **(NOPF No. 3)**.

During the visual inspection of the VDL Room 1544 SAA, I observed two 20-liter SAA containers of waste acidic and waste alkali solutions (Attachment 8, Photographs 35 and 36). I asked the operator, Mr. Early, how often he requests waste pickup from EHS. Mr. Early stated that he does not request waste pickup. Instead, he transfers full waste containers to the VDL Room 1311 SAA. I determined that the facility-designated SAA in VDL Room 1311 did not meet the definition of a SAA since it receives waste generated from another point of generation that was no longer under control of the operator who generated the waste. I inspected the VDL Room 1311 waste accumulation area as an ad-hoc less-than-90-day HWCAA.

At the ad-hoc HWCAA in VDL Room 1311, I observed a total of five hazardous waste accumulation containers (HWACs) ranging in size from 4-liter to 20-liter containers (Attachment 8, Photographs 26, 27, and 29-34). The waste determination tags were not

completed for four of the containers. Therefore, four HWACs were not labeled with the words "hazardous waste," as required by 40 CFR 262.17(a)(5)(i)(A) **(NOPF No. 9)**. Three HWACs were not labeled with an indication of the nature of the hazard, as required by 40 CFR 262.17(a)(5)(i)(B) **(NOPF No. 10)**. One HWAC of waste acetone was not closed, as required by 40 CFR 262.17(a)(1)(iv)(A) **(NOPF No. 12)**.

Because the facility considered the VDL Room 1311 waste accumulation area to be a SAA, none of the five ad-hoc HWACs were marked with accumulation start dates, as required by 40 CFR 262.17(a)(5)(i)(C) **(NOPF No. 11)**. In addition, the ad-hoc HWCAA was not inspected weekly, as required by 40 CFR 262.17(a)(1)(v) **(NOPF No. 8)**. The exact accumulation start dates for the wastes observed in the VDL Room 1311 waste accumulation area were unknown; however, wastes are collected from the area every Monday on a standing schedule.

I explained each of the preliminary findings to Mr. Diesslin and Ms. Contag during the CEI, and provided compliance assistance regarding management of wastes in SAAs and HWCAAs.

During the visual inspection of the RMF, I observed accumulation of bulk halogenated/flammable solvents in RMF Room 1442 (Bulk Solvents) (Attachment 8, Photographs 100 through 102), RMF Room 1446 (Flammable Storage [Bulk]) (Attachment 8, Photograph 110), RMF Room 1448 (Flammable Storage [Bulk/Acidic]) (Attachment 8, Photograph 111), and RMF Room 1450 (Flammable Storage [Bulk/Caustic] (Attachment 8, Photograph 112). All HWACs were structurally sound, closed, and dated. They were labeled with the words "hazardous waste" and an indication of the nature of the hazard. Based on my observations and current inventory records (Attachment 11), none of the waste had been in accumulation for longer than 90 days. I noted no concerns with accumulation of bulk halogenated/flammable solvents in the RMF during the CEI.

Bulk metals, corrosive (acidic) consists of acidic metals-containing wastes collected from SAAs and received from VSQG facilities. Metals-containing acidic wastes are bulked together at the RMF. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 13,112 pounds of bulk metals, corrosive (acidic) waste per year. The facility considers the waste to be hazardous (D002, D004, D005, D006, D007, D008, D010, D011) based on product and process knowledge. The waste is accumulated in various sized SAA containers, and full containers are transferred to the RMF HWCAA. Bulk metals, corrosive (acidic) wastes are transported to Tradebe for bulking and offsite transfer.

During the CEI, I observed SAA containers with metals, corrosive (acidic) waste in Food Science Room 1544 (Attachment 8, Photographs 35 and 36) and Food Science Room 1312 (Attachment 8, Photograph 37). Containers of acidic and alkaline metal solutions were kept in separate secondary containment tubs. All SAA containers were near the point of generation, under control of the operator, structurally sound, and closed. They were labeled with the words "hazardous waste" and an indication of the nature of the hazard.

I observed HWACs of bulk metals, corrosive (acidic) wastes in RMF Room 1441 (Chemical Treatment (Attachment 8, Photographs 123 through 126). Although the room was named "Chemical Treatment," Mr. Diesslin stated that elementary neutralization or other waste treatment was not performed at the RMF. I also observed bulk metals, corrosive (acidic) wastes

in RMF Room 1443 (Corrosive Storage, Low pH) (Attachment 8, Photograph 121). All HWACs in Room 1441 and 1443 were structurally sound, closed, and dated. They were labeled with the words "hazardous waste" and an indication of the nature of the hazard. Based on my observations and current inventory records (Attachment 11), none of the waste had been in accumulation for longer than 90 days. I noted no deficiencies with accumulation of bulk metals, corrosive (acidic) wastes during the CEI.

Bulk metals, corrosive (alkali) consists of alkaline metals-containing wastes collected from SAAs and received from VSQG facilities. Metals-containing alkali wastes are bulked together at the RMF. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 2,849 pounds of bulk metals, corrosive (alkali) waste per year. The facility considers the waste to be hazardous (D002, D004, D005, D006, D007, D008, D010, D011) based on product and process knowledge. The waste is accumulated in various sized SAA containers, and full containers are transferred to the RMF HWCAA. Bulk metals, corrosive (alkali) wastes are transported to Tradebe for bulking and offsite transfer.

During the CEI, I observed a SAA container with metals, corrosive (alkali) waste in Food Science Room 1544 (Attachment 8, Photographs 35 and 36). Containers of acidic and alkaline metal solutions were kept in separate secondary containment tubs. The SAA container was near the point of generation, under control of the operator, structurally sound, and closed. It was labeled with the words "hazardous waste" and an indication of the nature of the hazard.

I observed HWACs of bulk metals, corrosive (alkali) wastes in RMF Room 1445 (Caustics Storage) (Attachment 8, Photograph 120). The HWACs in Room 1445 were structurally sound, closed, and dated. They were labeled with the words "hazardous waste" and an indication of the nature of the hazard. Based on my observations and current inventory records (Attachment 11), none of the waste had been in accumulation for longer than 90 days. I noted no deficiencies with accumulation of bulk metals, corrosive (alkali) wastes during the CEI.

Labpack – non-acute wastes consist of various small-size containers of non-acute hazardous waste collected from SAAs and received from VSQG facilities. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 10,362 pounds of labpack – non-acute waste per year. The facility considers the waste to be hazardous (various D-, F-, and U-waste codes) based on product and process knowledge. The waste is accumulated in SAA containers, and full containers are transferred to the RMF HWCAA. The wastes are not bulked, but are labpacked with like wastes and transported to Tradebe for bulking and offsite transfer.

During the CEI, I observed small volume HWACs for labpack disposal (including labpack – non-acute wastes) in RMF Room 1444 (Flammable Storage [Lab Pack]) (Attachment 8, Photographs 105 through 107) and RMF Room 1454 (Toxics) (Attachment 8, Photograph 114, 115, 117, and 119). The HWACs were structurally sound, closed, and dated. They were labeled with the words "hazardous waste" and an indication of the nature of the hazard. Based on my observations and current inventory records (Attachment 12), none of the waste had been in accumulation for longer than 90 days. I noted no deficiencies with accumulation of labpack – non-acute wastes during the CEI.

Labpack – acute wastes consist of various small-size containers of acute hazardous waste collected from SAAs and received from VSQG facilities. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 205 pounds of labpack – acute waste per year. The facility considers the waste to be hazardous (various D-, P-waste codes) based on product and process knowledge. The waste is accumulated in SAA containers, and full containers are transferred to the RMF HWCAA. The wastes are not bulked, but are labpacked with like wastes and transported to Tradebe for bulking and offsite transfer.

During the CEI, I observed small volume HWACs for labpack disposal (including labpack – non-acute wastes) in RMF Room 1454 (Toxics) (Attachment 8, Photographs 114, 115, 117, and 119). The HWACs were structurally sound, closed, labeled with the words "hazardous waste" and an indication of the nature of the hazard, and dated. Based on my observations and current inventory records (Attachment 12), none of the waste had been in accumulation for longer than 90 days. I noted no deficiencies with accumulation of labpack – acute wastes during the CEI.

Flammable silica gel consists of waste silica gel collected from SAAs. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 788 pounds of flammable silica gel per year. The facility considers the waste to be hazardous (D001, F003) based on product and process knowledge. The waste is accumulated in SAA containers, and full containers are transferred to the RMF HWCAA. The waste is transported to Tradebe for solvent recovery.

During the CEI, I observed flammable silica gel in accumulation in the RMF. The HWACs of flammable silica gel were structurally sound, closed, and dated. They were labeled with the words "hazardous waste" and an indication of the nature of the hazard. Based on my observations and current inventory records (Attachment 12), none of the waste had been in accumulation for longer than 90 days. I noted no deficiencies with accumulation of flammable silica gel during the CEI.

Flammable paint consists of waste paint generated from the General Services Building, Campus Services Shop, and other areas where painting is performed. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 581 pounds of flammable paint per year. The facility considers the waste to be hazardous (D001, D005, D006, D007, D008, D011) based on product and process knowledge. The waste is accumulated in SAA containers, and full containers are transferred to the RMF HWCAA. The waste is transported to Tradebe for bulking and offsite transfer.

During the CEI, I observed the paint booth at the General Services Building (Attachment 8, Photograph 42). No SAA containers of waste paint were observed in the General Services Building or Campus Services Shop during the CEI.

Waste paint thinner consists of waste paint thinners generated from the General Services Building, Campus Services Shop, and other areas where painting is performed. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 1,389 pounds of waste paint thinner per year. The facility considers the waste to be hazardous (D001, F003, F005) based on product and process knowledge. The waste is accumulated in SAA containers, and full

containers are transferred to the RMF HWCAA. The waste is transported to Tradebe for fuel blending.

During the CEI, I observed two containers of waste paint thinner in the General Services Building SAA (Attachment 8, Photographs 38 through 41). A 20-liter container held approximately 1 liter of waste paint thinner and solids, and a 2.5-gallon container held approximately 0.5 gallons of waste paint thinner. Both SAA containers were near the point of generation and under control of the operator, and structurally sound. The 20-liter container was labeled with the words "hazardous waste" and an indication of the nature of the hazard. However, the 2.5-gallon container was not labeled with the words "hazardous waste," as required by 40 CFR 262.15(a)(5)(i) **(NOPF No. 1)**, or labeled with an indication of the nature of the hazard, as required by 40 CFR 262.15(a)(5)(ii) **(NOPF No. 2)**. Additionally, neither SAA container was closed, as required by 40 CFR 262.15(a)(4) **(NOPF No. 3)**.

I observed a 55-gallon SAA container of waste paint thinner in the Campus Services Shop (Attachment 8, Photographs 61 through 65). The SAA container was near the point of generation, under control of the operator, and structurally sound. However, the container was not labeled with the words "hazardous waste," as required by 40 CFR 262.15(a)(5)(i) **(NOPF No. 1)**, or labeled with an indication of the nature of the hazard, as required by 40 CFR 262.15(a)(5)(ii) **(NOPF No. 2)**, or closed, as required by 40 CFR 262.15(a)(4) **(NOPF No. 3)**.

I explained each of the preliminary findings to Mr. Diesslin and Ms. Contag during the CEI, and provided compliance assistance regarding management of wastes in SAAs.

Waste aerosols consist of empty and unwanted aerosol can products from touchup painting applications throughout the facility and VSQG facilities. Based on the 2023 hazardous waste biennial report (Attachment 9), the facility generates approximately 1,252 pounds of waste aerosols per year. The facility considers the waste to be hazardous (D001, D018, D019, D035, D039) based on product and process knowledge. The waste is accumulated in SAA containers, and full containers are transferred to the RMF HWCAA. Waste aerosol puncturing and draining is not performed at the facility. The waste is transported to Tradebe for bulking and offsite transfer.

During the CEI, I observed a 55-gallon SAA container of waste aerosols in the Campus Services Building (Attachment 8, Photographs 66 and 67). The SAA container was structurally sound, closed, and labeled with an indication of the nature of the hazard. However, the SAA container was not labeled with the words "hazardous waste," as required by 40 CFR 262.15(a)(5)(i) **(NOPF No. 1)**.

I explained the preliminary finding to Mr. Diesslin and Ms. Contag during the CEI, and provided compliance assistance regarding management of wastes in SAAs. I also provided compliance assistance regarding management of waste aerosols as universal waste.

Waste oxidizers consist of various containers of hazardous waste oxidizers collected from SAAs and received from VSQG facilities. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 117 pounds of waste oxidizers per year. The facility considers the waste to be hazardous (D001, D002) based on product and process knowledge. The waste is

accumulated in SAA containers, and full containers are transferred to the RMF HWCAA. The wastes are transported to Clean Harbors in Aragonite, Utah, for incineration.

During the CEI, I observed HWACs of waste oxidizers in RMF Room 1422 (Oxidizers) (Attachment 8, Photograph 128). The HWACs were structurally sound, closed, and dated. They were labeled with the words "hazardous waste" and an indication of the nature of the hazard. Based on my observations and current inventory records (Attachment 12), none of the waste had been in accumulation for longer than 90 days. I noted no deficiencies with accumulation of waste oxidizers during the CEI.

Mixed waste consists of waste that is both hazardous and radioactive collected from SAAs at the facility. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generates 1 pound of mixed waste per year. The facility considers the waste to be hazardous (D001, F003, F005) and radioactive based on product and process knowledge. The waste is accumulated in SAA containers, and full containers are transferred to the RMF HWCAA. The wastes are transported to Perma-Fix of Florida in Gainesville, Florida, for bulking and offsite transfer.

During the CEI, I observed RMF Room 1421 (Mixed Waste) (Attachment 8, Photograph 129). The room was empty at the time of the CEI. I did confirm that ISU has an active broadscope radioactive materials license and appears to meet requirements for the low-level mixed waste conditional exemption from RCRA regulation outlined in 40 CFR 266 Subpart N.

Expired hand sanitizer is generated when hand sanitizer purchased to address the COVID pandemic reaches its expiration date. Based on the 2023 hazardous waste biennial report (Attachment 9), ISU generated 21,600 pounds of expired hand sanitizer (D001 hazardous waste) in 2023. The waste was transported to Tradebe for fuel blending. However, Mr. Diesslin explained that a researcher has claimed the expired hand sanitizer for use in studies, and therefore, expired hand sanitizer has been determined to not be a waste. He explained that the expired hand sanitizer is held at the RMF for the researcher because of lack of storage space in the researcher's lab space. During the CEI, I observed accumulation of expired hand sanitizer in RMF Room 1452 (Chemical Redistribution) (Attachment 8, Photograph 113). Since the material was being used by a researcher and all was expected to be used, the material did not appear to be speculatively accumulated. I noted no deficiencies with accumulation of expired hand sanitizer.

Spent parts washer solvent is generated during changeout of the solvent in the Campus Services Shop parts washer. The parts washer is used for general degreasing of tools and parts, and the solvent is Barsol 142. The facility considers spent parts washer solvent to be nonhazardous based on product and process knowledge. A copy of the SDS for Barsol 142 is in Attachment 15. According to the SDS, the solvent is a medium aliphatic solvent naphtha with a lowest known flashpoint of 145 °F. Based on the SDS, the hazardous waste determination appears to be adequate. Spent parts washer solvent is collected by EHS and transferred to the RMF. The destination facility for disposal was not determined. During the CEI, I observed the parts washer unit and noted no deficiencies.

Used oil is generated during vehicle and equipment maintenance. ISU manages used oil according to provisions of 40 CFR Part 279. The facility generates an estimated 30 to 500 gallons of used oil per year. Used oil is accumulated in various used oil storage containers

throughout the facility and in 250-gallon used oil storage tanks in the Campus Services Shop and Transportation Services Shop. Used oil is collected by RITE Environmental in Waterloo, Iowa, for recycling.

During the CEI, I observed two small used oil storage containers in SAAs that held used oil from vacuum pump servicing. I observed used oil storage containers and the 250-gallon used oil storage tanks in the Campus Services Shop (Attachment 8, Photographs 68, 69, and 71) and the Transportation Services Shop (Attachment 8, Photographs 87 and 90). I also observed 55-gallon used oil storage containers in RMF Room 1409 (PCB/Oil Storage) (Attachment 8, Photograph 127). All used oil storage containers and tanks appeared to be structurally sound and were labeled with the words "used oil." Stains around the used oil storage container in Attachment 8, Photograph 71 were from incidental drips from the used oil filter crusher above, and were not leaks from the container itself. It was not a release to the environment. During the CEI, I noted no deficiencies regarding management of used oil.

Used oil filters are generated during vehicle and equipment maintenance. The generation rate could not be determined during the CEI. Used oil filters are hot drained and crushed at the point of generation, or hot drained at the point of generation and crushed upon receipt at the RMF. ISU considers hot drained and crushed used oil filters to be excluded scrap metal. The crushed used oil filters are containerized and transported to Tradebe for recycling.

During the CEI, I observed used oil filters, used oil drain stands, used oil filter crushers at the Campus Services Shop (Attachment 8, Photographs 70 and 71) and the Transportation Services Shop (Attachment 8, Photographs 87 through 89). I also observed a used oil filter crusher and accumulation container in RMF Room 1442 (Bulk Solvents) (Attachment 8, Photographs 103 and 104). I noted no deficiencies with management of used oil filters during the CEI.

Used antifreeze is generated during vehicle and equipment maintenance. ISU considers used antifreeze to be nonhazardous based on product and product knowledge. I did not determine a generation rate for used antifreeze during the CEI. The waste is accumulated in 55-gallon containers and full containers are transferred to the RMF. I did not determine the destination facility for used antifreeze. During the CEI, I observed a 55-gallon container of used antifreeze in the Campus Services Shop (Attachment 8, Photograph 66) and noted no deficiencies.

Waste automotive lead-acid batteries are generated during vehicle and equipment maintenance. The facility manages waste lead-acid batteries according to provisions of 40 CFR 266 Subpart G. I did not determine the generation rate for waste automotive lead-acid batteries. The waste is collected by Interstate Battery for reclamation. During the CEI, I observed waste automotive lead-acid batteries in the Transportation Services Shop and noted no deficiencies.

Waste batteries are generated during equipment maintenance, and include small (non-automotive) lead-acid, lithium-ion, nickel-cadmium, and alkaline batteries. ISU manages all waste batteries except large automotive batteries as universal waste according to provisions of 40 CFR Part 273. I did not determine the generation rate for waste batteries. Waste batteries are accumulated in 5-gallon and 55-gallon universal waste accumulation containers. The waste is collected by EHS and transferred to the RMF. The waste is transported off site for recycling. I did not determine the destination facility for waste batteries.

During the CEI, I observed universal waste containers with waste batteries in the General Services Shop (Attachment 8, Photographs 48 and 49). The universal waste container was structurally sound, labeled with the words "universal waste batteries," and dated April 3, 2024. I also observed universal waste containers with waste batteries in RMF Room 1443 (Attachment 8, Photograph 122). The universal waste containers in RMF Room 1443 were structurally sound, labeled with the words "universal waste batteries," and dated. No universal waste accumulation containers were observed with dates older than 3 months. I noted no deficiencies regarding management of waste batteries.

Waste lamps are generated during facility maintenance, and includes fluorescent, sodium, high-intensity discharge (HID), and other lamp types. ISU manages all waste lamps as universal waste according to provisions of 40 CFR Part 273. I did not determine the generation rate for waste lamps during the CEI. Waste lamps are accumulated in universal waste accumulation containers upon generation, and are staged at the facility for EHS collection or transferred to the General Services Building for aggregation. The waste is ultimately collected by A-TEC in Des Moines, Iowa, for recycling.

During the CEI, I observed the following waste lamps accumulation containers:

- General Services Building, one fiberboard container for accumulation of 4-foot fluorescent lamps (approximately half full) (Attachment 8, Photographs 43 through 47). The container was closed and labeled as "universal waste lamps," but was not marked with an accumulation start date. Electricians estimated the lamps had been accumulating since mid-April 2024.
- General Services Building, three 2.5-gallon fiberboard containers of waste lamps (Attachment 8, Photographs 52 through 55). The containers were not closed, labeled, or marked with accumulation start dates. Electricians stated that the lamps had been accumulating for a couple of months.
- General Services Building, one approximately 5-gallon container of waste lamps (Attachment 8, Photographs 56 through 58). The container was labeled with the words "universal waste lamps," but was not closed or marked with an accumulation start date. Electricians stated that the lamps had been accumulating for a couple of months.
- General Services Building, one fiberboard container for accumulation of 8-foot fluorescent lamps (Attachment 8, Photographs 59 and 60). The container was closed and labeled as "universal waste lamps," but was not marked with an accumulation start date. Electricians estimated the lamps had been accumulating for approximately 4 years.

Based on the above, I determined that the facility accumulated universal waste lamps (one container) for longer than one year, prohibited by 40 CFR 273.15(a) **(NOPF No. 4)**. The facility failed to keep four universal waste containers closed, as required by 40 CFR 273.13(d)(1) **(NOPF No. 5)**. The facility failed to label three universal waste containers with the words "universal waste lamps" or "waste lamps" or "used lamps," as required by 40 CFR 273.14(e) **(NOPF No. 6)**. The facility failed to date or otherwise track accumulation times for six universal waste containers, as required by 40 CFR 273.15(c) **(NOPF No. 7)**.

I explained the preliminary finding to Mr. Diesslin and Ms. Contag during the CEI, and provided compliance assistance regarding management of universal waste lamps.

I also observed a waste lamps accumulation container at the Hach Building dock (Attachment 8, Photographs 72 and 73) and three waste lamps accumulation containers at RMF Room 1460 (Dock) (Attachment 8, Photographs 94 through 97). These four universal waste containers were structurally sound, closed, labeled with the words "universal waste lamps," and dated. The Hach Building container was dated September 27, 2023, and the earliest date for the RMF Room 1460 containers was March 29, 2024.

Waste mercury-containing equipment is generated during equipment maintenance. ISU manages waste mercury-containing equipment as universal waste according to provisions of 40 CFR Part 273. I did not determine the generation rate for waste mercury-containing equipment during the CEI. The waste is accumulated in universal waste accumulation containers upon generation and transferred to the RMF HWCAA. Waste mercury-containing equipment is transported off site for recycling. I did not determine the destination facility during the CEI. I did not observe waste mercury-containing equipment in accumulation during the CEI.

Waste ballasts are generated during maintenance of facility lighting. ISU considers waste ballasts to be nonhazardous based on product and process knowledge. I did not determine the generation rate for waste ballasts during the CEI. The waste is accumulated in 55-gallon accumulation containers upon generation and transferred to the RMF HWCAA. Waste ballasts are transported off site for recycling. I did not determine the destination facility. During the CEI, I observed accumulation of waste ballasts in the General Services Building (Attachment 8, Photographs 50 and 51) and noted no deficiencies.

Biohazardous waste consists of sharps and other materials contaminated with bodily fluids. The facility manages biohazardous waste as nonhazardous medical waste based on product and process knowledge. I did not determine the generation rate for biohazardous waste during the CEI. The waste is accumulated in several "red box" containers throughout the facility and is transferred to the RMF for consolidation and accumulation. Biohazardous waste is transported to Medshred in Des Moines, Iowa, for shredding and disposal.

During the CEI, I observed nonhazardous and universal waste accumulation containers in RMF Room 1460 (Dock), including six biohazardous waste containers (Attachment 8, Photograph 94). The containers were structurally sound and labeled as biohazardous waste. I noted no deficiencies with accumulation of biohazardous waste during the CEI.

Incinerator ash is generated during incineration of animal carcasses and other wastes in the facility's biological incinerator. The facility manages incinerator ash as nonhazardous based on product/process knowledge and analytical testing. I did not determine the generation rate for biohazardous waste during the CEI. The waste is accumulated in 55-gallon containers and transferred to the RMF for accumulation. Incinerator ash is disposed at the Boone County Landfill under a special waste authorization for landfill disposal.

During the CEI, I observed ten 55-gallon containers of incinerator ash in RMF Room 1460 (Dock) (Attachment 8, Photograph 99). The containers were structurally sound, labeled as

incinerator ash, and dated. I noted no deficiencies with accumulation of incinerator ash during the CEI

Waste cardboard consists of cardboard packaging waste generated throughout the facility. The facility considers waste cardboard to be nonhazardous based on product and process knowledge. I did not determine the generation rate for waste cardboard during the CEI. The waste is accumulated in roll-off containers outside of select buildings. Waste cardboard is collected by Waste Management in Des Moines, Iowa, for recycling. During the CEI, I observed a 4-cubic-yard container of waste cardboard outside the VDL (Attachment 8, Photographs 15 and 16) and noted no deficiencies.

Mixed waste recycling consists of recyclable materials, such as cardboard, paper, and plastic, generated throughout the facility. The facility considers mixed waste recycling to be nonhazardous based on product and process knowledge. I did not determine the generation rate for mixed waste recycling during the CEI. The waste is accumulated in roll-off containers outside of select buildings. Mixed waste recycling is collected by Waste Management in Des Moines, Iowa, for recycling. During the CEI, I observed a 6-cubic-yard container of mixed waste recycling outside the VDL (Attachment 8, Photographs 17 and 18) and noted no deficiencies.

General trash consists of general office type refuse, other than waste cardboard and mixed waste recycling, generated throughout the facility. I did not determine a generation rate during the CEI. The facility considers general trash nonhazardous based on product and process knowledge. General trash is accumulated in several containers throughout the facility and transferred to roll-off containers. The waste is transported to the Resource Recovery Plant in Ames, Iowa, for energy recovery. During the CEI, I observed general trash accumulation containers and noted no deficiencies.

4. Required Response Equipment and Hazard Management

Per 40 CFR 262.15(a)(8) and 262.17(a)(6), a LQG must operate to minimize possibility of a fire, explosion, or spill, and must maintain emergency response equipment. During the CEI, I observed adequate aisle space for emergency response in the RMF HWCAA, and no evidence of spills or leaks. I observed a fire suppression system at the RMF HWCAA and fire extinguishers near the SAAs and ad-hoc HWCAA. The door to the flammable materials storage room at the RMF was placarded (Attachment 8, Photograph 109). I observed spill control materials and other emergency response materials readily available at the HWCAAs and SAAs. I also observed the grated floors in the RMF HWCAA that led to underground secondary containment sumps (Attachment 8, Photograph 108). I noted no deficiencies with required response equipment and hazardous management during the CEI.

5. HWCAAs

At the time of the CEI, the RMF HWCAA was nearly full. A hazardous waste shipment was scheduled for later in the week. Each HWAC observed at the RMF HWCAA was structurally sound, closed, labeled with the words “hazardous waste” and an indication of the nature of the hazard, and marked with an accumulation start date. None of the HWACs were older than

90 days. Copies of the drum log and package log showing all wastes in the RMF HWCAA at the time of the CEI are in Attachments 11 and 12.

I asked Mr. Diesslin and Ms. Contag if the RMF HWCAA is inspected. Ms. Contag explained that inspections are performed weekly. She provided the standard operating procedure (SOP) for weekly inspections and the inspection logs for inspections performed in 2024 (Attachment 16). I reviewed inspection records for the last 3 years during the CEI and noted no missed weeks. The facility also performs more comprehensive inspections of waste accumulation areas on a monthly basis. I noted no deficiencies with management of HWACs in the HWCAA during the CEI.

I also inspected the waste accumulation area at Food Science Room 1131 as an ad hoc HWCAA. Preliminary findings associated with the ad hoc HWCAA are described in Section 3 of this report.

6. Manifests, Bills of Lading, Biennial Report

ISU generated approximately 30 uniform hazardous waste manifests over the past 3 years. I reviewed approximately 20 manifests and associated LDR notifications during the CEI (including all 2024 and 2023 manifests and approximately half of the remaining manifests). Copies of the manifests and LDR notifications from 2024 to date are in Attachment 10. I also reviewed the facility's 2023 Hazardous Waste Biennial Report (Attachment 9). I noted no deficiencies during my review of manifests and the Biennial Report.

I asked Ms. Contag what records the facility maintains for shipments of hazardous waste from the nine VSQGs that are affiliated with and operated by ISU. She explained that the same information is entered into the waste management database for wastes generated at the VSQGs as wastes collected from on-campus SAAs. This information includes name, location, and contact information for the generator, description of the waste, quantity, waste codes, date received, RMF accumulation location, and date shipped off site. These records are maintained indefinitely (more than 3 years). I noted no concerns with recordkeeping for wastes received from the VSQG facilities.

7. Personnel Training Requirements

Personnel training is required by LQG regulations specified in 40 CFR 262.17(a)(7) to ensure that employees are thoroughly familiar with proper waste handling procedures relevant to their responsibilities. During the CEI, I discussed personnel training requirements with Ms. Contag. She explained that all personnel who manage hazardous waste receive initial and annual RMF training, which is specifically designed to meet all LQG training requirements. A copy of the RMF Training database showing training records for the last 3 years is in Attachment 17. I noted no deficiencies with the frequency and content of RCRA training during the CEI.

According to Ms. Contag, personnel who handle universal wastes (for example, electricians and maintenance personnel) receive universal waste training. However, based on the number of preliminary findings associated with universal waste management, I determined that the facility failed to provide adequate universal waste training, as required by 40 CFR 273.16 **(NOPF No. 13)**.

8. Preparedness and Prevention and Contingency Plan

As a LQG, ISU is required to arrange for emergency response with local emergency agencies, to designate an emergency coordinator (EC) for the facility, and maintain a RCRA Contingency Plan. ISU's RCRA Contingency Plan was last updated July 2022.

I noted the Contingency Plan included a description of actions needed to respond to fires, explosions, and spills; a description of arrangements with the local emergency agencies; a list of emergency response equipment (including capabilities and location); and a complete evacuation plan with a description of the signals used, as required by 40 CFR 262.17(a)(6) referencing 262.261(a, c, e, and f). The Contingency Plan also included names and telephone numbers of the primary EC (Mr. Diesslin) and first alternate EC (Ms. Contag), as required by 40 CFR 262.17(a)(6) referencing 262.261(d).

I also reviewed the facility's Quick Reference Guide, required by 40 CFR 262.17(a)(6) referencing 262.262(b). The Quick Reference Guide included a list with descriptions and maximum quantities of hazardous wastes onsite; identification of special hazards; maps showing hazardous wastes locations, overall facility location, and water supplies; identification of notification systems; and EC contact information. A copy of the Quick Reference Guide and Contingency Plan is in Attachment . I noted no deficiencies regarding preparedness and prevention or with content of the Contingency Plan and Quick Reference Guide during the CEI.

I also obtained a copy of the SOP for collection, segregation, and transportation of chemical waste during the CEI (Attachment 19). This SOP describes procedures, including provision of compliance assistance, employed by EHS during and after waste collection.

9. Air Emissions: 40 CFR Part 265 Subparts AA, BB, CC

EPA regulations in 40 CFR Part 265, Subparts AA, BB, and CC apply to LQGs. If a LQG manages hazardous waste with an organic concentration greater than 10 parts per million by weight (ppmw), the standards specified in Subpart AA apply to hazardous waste air emissions from certain process vents. A process vent used in distillation, fractionation, solvent extraction, thin-film evaporation, air stripping, or steam stripping is regulated by Subpart AA. ISU is not subject to the Subpart AA regulations because the facility does not have any of the process vents listed above.

If a LQG has equipment that contains or contacts hazardous waste composed of 10 percent or greater organics by weight, the facility is subject to Subpart BB standards for inspection and monitoring of the equipment. ISU is not subject to the Subpart BB regulations because it does not have equipment that contains or comes in contact with hazardous waste.

The standards found in Subpart CC apply to LQGs that manage hazardous waste in containers with organic compounds (VOC) concentration that exceeds 500 ppmw. The Subpart CC standards are applicable because the facility accumulates hazardous waste that contains VOCs in 55-gallon hazardous waste accumulation containers. During the CEI, I determined that ISU meets the Subpart CC requirements for containers by using Container Level 1 controls

(hazardous waste accumulation containers smaller than 122 gallons that are Department of Transportation [DOT]-approved). I noted no concerns with management of hazardous waste per the Subpart CC air emissions requirements.

10. Summary of Preliminary Findings

In summary, as part of the CEI, I made the following preliminary findings:

1. Failure to label seven SAA containers with the words "hazardous waste," as required by 40 CFR 262.15(a)(5)(i) **(NOPF No. 1)**

2. Failure to label four SAA containers with an indication of the nature of the hazard, as required by 40 CFR 262.15(a)(5)(ii) **(NOPF No. 2)**

3. Failure to keep seven SAA containers closed, as required by 40 CFR 262.15(a)(4) **(NOPF No. 3)**

4. Accumulation of universal waste lamps (one container) for longer than one year, prohibited by 40 CFR 273.15(a) **(NOPF No. 4)**

5. Failure to keep four universal waste containers closed, as required by 40 CFR 273.13(d)(1) **(NOPF No. 5)**

6. Failure to label three universal waste containers with the words "universal waste lamps" or "waste lamps" or "used lamps," as required by 40 CFR 273.14(e) **(NOPF No. 6)**

7. Failure to date or otherwise track accumulation times for six universal waste containers, as required by 40 CFR 273.15(c) **(NOPF No. 7)**

8. Failure to inspect an ad-hoc HWCAA weekly, as required by 40 CFR 262.17(a)(1)(v) **(NOPF No. 8)**

9. Failure to label four HWACs with the words "hazardous waste," as required by 40 CFR 262.17(a)(5)(i)(A) **(NOPF No. 9)**

10. Failure to label three HWACs with an indication of the nature of the hazard, as required by 40 CFR 262.17(a)(5)(i)(B) **(NOPF No. 10)**

11. Failure to mark five HWACs with accumulation start dates, as required by 40 CFR 262.17(a)(5)(i)(C) **(NOPF No. 11)**

12. Failure to keep one HWAC closed, as required by 40 CFR 262.17(a)(1)(iv)(A) **(NOPF No. 12)**

13. Failure to provide adequate universal waste training, as required by 40 CFR 273.16 **(NOPF No. 13)**

Other than items specifically noted in the narrative, I observed no additional issues. However, further review by EPA may change or add to my findings.

John D. Dixon

Digitally signed by John D. Dixon
DN: cn=John D. Dixon gn=John D. Dixon c=US United States l=US United States
Reason:
Location:
Date: 2024-07-11 11:15-05:00

Date: _____

John D. Dixon
Inspector
CLAENE Group, LLC.

AMBER WHISNANT

Digitally signed by AMBER WHISNANT
Date: 2024.07.19 14:26:05 -05'00'

Date: _____

Amber Whisnant
Section Chief
ECAD/CB/RCRA, EPA Region 7

Attachments

1. Notification Acknowledgement/Verification Report (2 Pages)
2. SAA List (1 Page)
3. Receipt for Documents and Samples (1 Page)
4. Confidentiality Notice (1 Page)
5. Notice of Preliminary Findings (2 Pages)
6. Facility Maps (3 Pages)
7. Google Earth Aerial Photograph (1 Page)
8. Photographic Documentation (129 Photos and Photolog) (76 Pages)
9. Hazardous Waste Biennial Report for 2023 (11 Pages)
10. 2024 Manifest Records (17 Pages)
11. Current Drum Log (2 Pages)
12. Current Package Log (27 Pages)
13. Copy of SAA Signage (1 Page)
14. Copy of SAA Waste Description Tag (2 Pages)
15. SDS for Barsol 142 (10 Pages)
16. SOP and Weekly Inspection Logs 2024 (4 Pages)
17. RCRA Training Records (3 Pages)
18. Quick Reference Guide and Contingency Plan (21 Pages)
19. SOP for Collection, Segregation, and Transportation of Chemical Waste (6 Pages)