

# REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

## **UNIVERSITY OF IOWA – MAIN CAMPUS**

200 Newton Road  
107 HLHS  
Iowa City, Iowa 52242  
(319) 335-4625

EPA ID Number: IAD062761671

On

May 30 and 31, 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 (ECAD/CB/RCRA) of the U.S. Environmental Protection Agency (EPA) Region 7, Toeroek Associates, Inc. and its subcontractor CLÆNE Group (Toeroek team) conducted a hazardous waste compliance evaluation inspection (CEI) at the University of Iowa – Main Campus at 600 Newton Road, 107 Hardin Library for the Health Sciences (HLHS), Iowa City, 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, used oil, and universal waste generator and transporter requirements. This report and its attachments present the findings of the CEI.

## **PARTICIPANTS**

University of Iowa – Main Campus:

Jim Pyrzs, Environmental Programs Manager  
Tim Weber, Assistant Director, Environmental Safety

Toeroek Team

Steve A. Johnson, Field Inspector, (816) 520-7009

## INSPECTION PROCEDURES

Prior to conducting the CEI at the University of Iowa – Main Campus, I conducted a drive-by inspection of a few on-campus facilities including the transportation maintenance building, power plant, and the medical research building on May 29, 2024. I also drove randomly through other areas of the Main Campus and noted a significantly reduced student population due to the recent conclusion of the academic semester. I noted no potential environmental issues or areas of concern during the drive-by inspection.

On May 30, 2024, I contacted Mr. Pyrz via telephone. I introduced myself and explained the purpose of the CEI. I informed Mr. Pyrz that the planned scope of the CEI was the University of Iowa - Main Campus and asked where we could meet for the entry briefing. Mr. Pyrz explained that the Environmental Health and Safety (EHS) offices are located at the University of Iowa Environmental Management Facility (EMF) at 2260 Old Farmstead Road in Coralville, Iowa. I met Mr. Pyrz at the EMF on May 30, 2024, at approximately 7:45 a.m. to conduct the entry briefing.

During the entry briefing, I presented my EPA credential to Mr. Pyrz. I explained the scope of the inspection as well as data gathering and documentation procedures to be employed during the CEI. I informed Mr. Pyrz of the facility's right to make confidentiality claims for any or all of the information obtained and provided a Notice Regarding Proprietary/Confidential Business Information. I stated that at the conclusion of the CEI, he would be presented with a Confidentiality Notice ("Notice") with which he could make or not make a claim of confidentiality for the facility. I also provided Mr. Pyrz 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 he read. Mr. Weber joined during the entry briefing and was provided a copy of U.S. Federal Codes 1001 and 1002 at that time.

A copy of each of the following documents was left with Mr. Pyrz during the inspection:

- RCRA Facility Access Information Sheet
- RCRA Section 3007
- U.S. Federal Codes 1001 and 1002
- EPA Notice Regarding Proprietary/Confidential Business Information
- Instructions for Responding to a Notice of Preliminary Findings

The following handouts were emailed to Mr. Pyrz after the CEI:

- E-Manifest Fact Sheet: Generators
- Managing your Hazardous Waste: A Guide for Small Businesses
- U.S. EPA Small Business Resources Information Sheet
- Solvent-Contaminated Wipes Final Rule Summary Chart
- IDNR Excluded Solvent-Contaminated Wipes Rule: Management Practices for Wipes, Rags, and Shop Towels
- Recycling Electronics: A Guide for Businesses
- Lead-Based Paint Activities: Handling and Disposal
- Battery Recycling/Disposal

- Management of Fluorescent Lamps for Businesses
- Incompatible Chemicals
- Universal Wastes – Including Aerosol Cans
- TCLP – Toxicity Characteristic Leaching Procedure
- Part 279 Requirements: Used Oil Management Standards
- EPA Region 7 Emergency Response Program
- Chemical Facility Anti-Terrorism Standards
- Iowa Environmental Guide for Businesses

I reviewed the Notification Acknowledgement/Verification Report (Verification Report) with Mr. Pyrz (Attachment 1). Based on this review and observations during the CEI, I made no changes to the Verification Report.

On May 30, 2024, I conducted a visual inspection of the facility, accompanied by Messrs. Pyrz and Weber. During the entry briefing, Mr. Pyrz explained that the Main Campus network contained more than 600 individual waste accumulation stations used for collection of both hazardous and nonhazardous wastes. He ran a report of waste generation locations from the facility's operating record, sorted by number of waste collections per location from August 1, 2023, through May 30, 2024 (Attachment 2). I selected from the top tier of larger-volume satellite accumulation area (SAA) locations for visual inspection. Following visual inspection of the selected SAAs, I conducted a visual inspection of the less-than-90-day hazardous waste central accumulation area (HWCAA) at Iowa Advanced Technology Laboratories (IATL) Room E161.

Following the visual inspection, I reviewed facility records including hazardous and nonhazardous waste manifests with land disposal restriction (LDR) notifications, waste tracking and inventory records, inspection records, contingency plan, and site personnel training documentation. I returned to the facility on May 31, 2024, to complete the records review and conduct an exit briefing. I prepared and completed a site-specific inspection checklist to document my observations.

At the conclusion of the CEI, I conducted an exit briefing with Messrs. Pyrz and Weber. During the exit briefing, I provided a Receipt for Documents and Samples, which Mr. Pyrz signed, acknowledging receipt (Attachment 3). I provided Mr. Pyrz the Notice, which he signed indicating no confidential business information had been provided (Attachment 4). I also provided Mr. Pyrz a Notice of Preliminary Findings (NOPF), which he signed to acknowledge receipt (Attachment 5). A map of the Main Campus was obtained from Mr. Weber and is included as Attachment 6. The 32 photographs taken during the CEI are included in Attachment 7.

## **FINDINGS AND OBSERVATIONS**

### **1. Facility Description and General Information**

The University of Iowa - Main Campus is an approximately 2,840-acre public university located on the Iowa River in Iowa City, Iowa. The university was founded in 1847 and is not a land grant

institution. Its curricula include twelve (12) disciplinary colleges including Business, Dentistry, Education, Engineering, Graduate, Law, Liberal Arts and Sciences, Medicine, Nursing, Pharmacy, Public Health with more than 210 undergraduate programs. In addition, the University of Iowa - Main Campus includes the University of Iowa Hospitals and Clinics. The medical centers include a 930-bed comprehensive academic medical center and regional referral center. I did not perform visual inspection of waste generating areas within the University of Iowa Hospitals and Clinics due to time limitations and health-based access restrictions for most areas of the facilities.

Per the University of Iowa website, enrollment for the Fall 2023 term was 31,452 students. Mr. Pyrz reported university staff employment as roughly 20,000 full and part-time workers. University employees work varying hours and schedules depending upon task assignment. Hospital staff work various 8, 10 and 12-hour shifts on a 24/7 operating schedule. The preponderance of academic service and support employees generally work a weekly day shift schedule Monday through Friday.

Hazardous and nonhazardous wastes are generated throughout the University of Iowa - Main Campus from activities such as teaching and research laboratory operations, laboratory cleanouts, hospital operations, facility maintenance, and transport fleet maintenance. These wastes are accumulated in discrete SAAs at each waste generating location. EHS staff personnel make routine (for example, weekly or bi-weekly) waste pickups at many of the higher-volume SAAs. For other SAAs, waste pickups are scheduled with EHS staff on an as-needed basis. A few locations are described as very infrequent with collection intervals exceeding 1 year or more.

EHS staff collect and transport the hazardous and nonhazardous wastes to the less-than-90-day HWCAA at IATL Room E161. All hazardous wastes and most nonhazardous wastes are manifested and transported to the university's RCRA-permitted treatment, storage, and disposal facility (TSDF), which is the EMF at the Oakdale Campus in Coralville, Iowa. Mr. Weber reported that the university continues to dispose of very small volumes of nonhazardous aqueous wastes via the sanitary sewer at IATL Room E161. I observed no waste in the IATL Room E161 at the time of inspection as the HWCAA was emptied at the close of the academic semester. According to Mr. Pyrz, full-time EHS staff work 7:30 a.m. to 4:30 p.m. Monday through Friday. Accumulated waste is catalogued and shipped to the EMF three times per week (Monday, Tuesday, and Wednesday) exclusive of holiday weeks and intra-semester periods.

The University of Iowa - Main Campus generates waste materials that include various hazardous and nonhazardous wastes, mixed radioactive waste, used oil, used oil filters, waste lamps, waste batteries, waste mercury-containing equipment, waste aerosol cans, waste ballasts, and general trash from research, academic instruction, healthcare services, transportation maintenance, grounds maintenance and related activities. Waste determinations are made for each waste using product and process knowledge.

Radioactive waste bearing no RCRA hazardous characteristic, or listed constituents, is considered nonhazardous waste and is regulated under the Atomic Energy Act (AEA). Radioactive waste is managed per conditions of the facility's State of Iowa-issued radioactive

materials license. No radioactive waste materials were observed during the CEI. Radioactive waste is not discussed further in this report. Mixed waste (hazardous waste that is also radioactive), however, is jointly regulated under RCRA and AEA. The facility manages mixed waste in accordance with the RCRA low-level mixed waste (LLMW) eligibility requirements and conditions of Title 40 *Code of Federal Regulations* (40 CFR) 266 Subpart N. As such, the facility considers mixed waste conditionally exempt from the definition of hazardous waste per 40 CFR 261.3(h)(1).

Used oil and used oil filters generated through fleet maintenance and equipment maintenance are managed as used oil under provisions of 40 CFR Part 279. Used oil and used oil filters are accumulated in used oil storage containers in discrete locations, and in a single horizontal above-ground storage tank (AST) estimated to be approximately 800 gallons in volume on the north side of the Central Maintenance Facility/bus barn. Used oils and oily wastes/filters are collected and shipped to the EMF for aggregation or shipped directly off site for recycling to permitted facilities.

Waste fluorescent lighting ballasts (both polychlorinated biphenyl [PCB]-containing and non-PCB-containing) are generated from general facility maintenance. PCB-containing ballasts received at the IATL are managed as Toxic Substances Control Act (TSCA)-regulated, nonhazardous waste by product knowledge. Maintenance technicians refer to individual products labels to verify PCB content. Ballasts that bear no label, or labels that are illegible, are managed as PCB ballasts by default.

Waste batteries, waste lamps, waste mercury-containing equipment, and waste aerosol cans generated through facility and equipment maintenance are managed as universal waste according to 40 CFR Part 273. These wastes are managed in universal waste accumulation containers throughout the campus stations. Waste batteries, waste mercury-containing equipment, and waste aerosol cans are transported to the EMF for aggregation, storage and off-site recycling. Waste lamps are self-transported by facility maintenance staff to the Mossman Business Services Building (MSBS), where they are consolidated with lamps from other University of Iowa facilities then sent for recycling. Officials on-site at the Mossman building stated that the facility is also referred to internally as Central Receiving.

Waste automotive batteries are managed under a service contract with a local distributor and exchanged for new batteries. Waste automotive batteries are managed according to 40 CFR 266 Subpart G and are reclaimed.

General trash generated at the Main Campus consists of packaging, food, office-type, and other non-chemical refuse. General trash is accumulated in multiple roll-off and front end-load (FEL) containers throughout the campus, and is collected for landfill disposal. The primary trash disposal service utilized at the Main Campus was identified as Waste Management of Iowa (disposal and recycling services).

On November 17- November 18, 2020, an EPA contractor conducted a CEI for EPA at the University of Iowa – Main Campus. Following the CEI, the inspector left the following preliminary findings:

- Failure to label one SAA container with the words “hazardous waste,” as required by 40 CFR 262.15(a)(5)(i)
- Failure to label six SAA containers with an indication of the nature of the hazard, as required by 40 CFR 262.15(a)(5)(ii)
- Failure to label one used oil storage container with the words “used oil,” as required by 40 CFR 279.22(c)(1)
- Failure to update the list of emergency coordinators in the RCRA contingency plan, as required by 40 CFR 262.17(a)(6) referencing 40 CFR 262.261(d)

Of the previous findings, failure to mark a satellite accumulation container with the words “hazardous waste,” failure to mark SAA containers with an indication of the nature of the hazard, and failure to label a used oil storage container with the words “used oil” were repeated during this CEI.

## **2. RCRA Status**

The University of Iowa – Main Campus is identified as a large quantity generator (LQG) of hazardous waste (generating more than 1,000 kilograms [kg] or 2,200 pounds of hazardous waste per calendar month or accumulating more than 1 kg or 2.2 pounds of acute hazardous waste at any time) on the Verification Report provided by EPA (Attachment 1). According to manifest records, I estimated the facility generates approximately 1,130 to 1,900 pounds (511 to 860 kg) of hazardous waste per week. Based on manifest records and interviews with Messrs. Pyrz and Weber, I determined that the facility’s hazardous waste generation rate easily exceeds the LQG threshold. Therefore, I inspected the University of Iowa – Main Campus as a LQG of hazardous waste.

The Verification Report also identifies the facility as a hazardous waste transporter and used oil transporter. I confirmed each of these activities during the CEI. I also confirmed that the facility is continuing to operate as a used oil generator and a small quantity handler (SQH) of universal waste (accumulating less than 5,000 kg of universal waste at any time).

During the CEI, I inspected the University of Iowa – Main Campus less than 90-day HWCAA at IATL Room E161. At the time of the inspection, the HWCAA held no wastes following a post-semester clean-out of waste inventory. I also inspected 29 SAAs in 12 Main Campus buildings during the CEI, as well as universal waste and used oil storage areas at three other buildings. These buildings included the Chemistry Building (CB), Biology Building (BB), Campus Maintenance Facility (CMF), Madison Street Services Building (MSSB), Pharmacy (PHAR), College of Pharmacy Building (CPB), Eckstein Medical Research Building (EMRB), Medical Research Center (MRC), Bowen Science Building (BSB), Medical Education Research Facility (MERF), Carver Biomedical Research Building (CBRB), Dental Sciences Building (DSB), Visual Arts building, Finkbein Maintenance Shop and the Mossman Business Services Building.

Prior to the start of SAA inspections, Mr. Pyrz explained that many of the facilities and labs were operating at reduced capacities or were inactive in the interval between school sessions. Most of the more active waste generating stations had been cleared of accumulated hazardous waste within the previous two (2) weeks. Mr. Pyrz provided a list of SAA locations that identified the most active waste-generating locations. Mr. Weber explained that four (4) of the locations on the list reflected laboratory cleanouts or other episodic events. Messrs. Pyrz and Weber consulted in my presence and identified buildings and specific teaching rooms where waste generation was most likely to be observable during the CEI, and I selected the SAAs for inspection. Messrs. Pyrz and Weber accompanied me throughout the visual inspection and provided inter-location transport with an official vehicle permitted access to restricted parking on the campus.

### **3. Waste Streams**

This section of the CEI report denotes the waste streams generated by the academic and research facilities, including the facility's waste determination and waste codes, generation process and rate, management at the facility, and ultimate disposition. The following discussion of waste streams is based on conversations with Messrs. Pyrz and Weber, the visual inspection, and summary review of waste shipping documents.

**Various hazardous wastes** are generated from research and teaching labs, healthcare, maintenance, and other activities throughout the Main Campus. The facility considers these wastes hazardous by product and process knowledge. These wastes are collected in SAAs at each generating location. Hazardous wastes are collected from SAAs by EHS staff and are transported to the IATL Room E161 HWCAA. These wastes are then manifested to the EMF in Coralville, Iowa, for storage prior to offsite shipment. Waste shipments to the EMF occur on Monday, Tuesday, and Wednesday of each week as needed. The generation rate varies week-to-week. Based on recent manifest records, I estimated that the facility collects and manifests approximately 1,130 to 1,900 pounds (511 to 860 kg) of hazardous waste per week. Hazardous wastes were last manifested and transferred to the EMF on May 28, 2024. Copies of manifests and LDR notifications for the period May 13 through May 21, 2024, are included in Attachment 8.

Included with nonhazardous waste is the parts washer solvent generated from the Transportation Maintenance barn located on the north side of the Main Campus. According to Mr. Pyrz, the university continues to utilize Northland Products (IAD022365480) located in Waterloo, Iowa, to manage the spent parts washer solvent under toll agreement. Copies of a shipping document dated November 8, 2022, and the SDS for the parts washer solvent are in Attachment 9. I asked Mr. Pyrz regarding use of Northland Products given a purported loss of secondary materials process authorization. Mr. Pyrz stated that the provider had not advised the university of any loss of handling authorization but would research the matter to determine options, as needed. He asked if there was a listing of authorized providers within the state that could be referenced. I replied that I was unaware of a listing of facilities but that he could reach out to the Region VII office for compliance assistance. The University of Iowa – Main Campus did ship spent parts washer solvent to Northland Products on April 2, 2024, as a hazardous waste using uniform hazardous waste manifest number 022867623 JJK (Attachment 10).

Standardized university-specific SAA container labels are used at the majority of waste accumulation locations on the Main Campus. These labels are pre-printed with the words “hazardous waste,” and prompt the generator to enter the room and building where the waste was generated, contents of the container, and the hazards of the waste (Attachment 7, Photographs 23 and 24). The specific labels are left intact throughout the process of accumulation and transportation to the EMF.

During the CEI, I inspected 32 SAAs at 10 buildings that had one or more hazardous waste SAA containers. The SAAs included:

- CB Rooms W516, W276, W344, W375, W475 and E411
- Mossman Services Building (1)
- MSSB
- Finkbein Maintenance Shop (1)
- CMB -Transportation Maintenance (1)
- PHAR-IBIF Rooms 5232, 5233, and 5015
- RCP-Pathology Rooms 143, 245, 5222, 5228 and 5238
- MRC Rooms 142, 143, 3125, 4283-A and 245
- Dental Sciences (DSB) Rooms W339 and 5387
- MERF -Ophthalmology Room 4125-A
- Visual Arts Building Room 154, E325, E422 and E425, W145, W350 and W324

The types and volumes of hazardous waste observed at each SAA are described in the site-specific inspection checklist I completed as part of the CEI. Unless otherwise described below, all SAAs held less than 55 gallons of hazardous waste. All SAA containers were structurally sound, near the point of generation, under control of the operator, labeled with the words “hazardous waste” and an indication of the nature of the hazard, and closed. Representative photographs of the SAA locations and containers are in Attachment 7, Photographs 13 through 17, 24, and 25.

At MRC Room 143, I observed several SAA containers. The cumulative volume of hazardous waste in accumulation was less than 55 gallons. All SAA containers were structurally sound and closed. However, four 5-gallon SAA containers and one 1-gallon SAA container were not labeled with the words “hazardous waste,” as required by 40 CFR 262.15(a)(5)(i) (**NOPF No. 1**). These five SAA containers did not have the university-specific SAA labels and original product labeling had been crossed out or overwritten. The SAA containers were not clearly labeled with an indication of the nature of the hazard, as required by 40 CFR 262.15(a)(5)(ii) (**NOPF No. 6**). NOPF Nos. 1 and 6 were repeated from the previous inspection.

I provided compliance assistance regarding labeling of SAA containers during the CEI. Mr. Weber explained that the operator for the MRC Room 143 SAA had transferred to another location and there had been no one to replace that individual. Messrs. Pyrz and Weber stated that the oversight would be corrected as soon as possible.

I initially included satellite accumulation of hazardous waste for longer than one year as NOPF No. 2; however, since there is no time limit for satellite accumulation, the preliminary finding was rescinded after the CEI.

I observed no hazardous wastes in accumulation in IATL Room E161 during the CEI. The accumulation shelves held only nonhazardous wastes, and the cabinets dedicated for accumulation of flammable hazardous wastes were empty (Attachment 7, Photograph 30).

**A variety of nonhazardous wastes** are generated from research and academic laboratories, healthcare services, maintenance support, housekeeping and other service activities throughout the Main Campus. The facility considers these wastes nonhazardous by product and process knowledge. These wastes are collected in discrete SAAs at each generating location. Nonhazardous wastes are collected from SAAs by EHS staff in the same manner as hazardous waste. Select small-volume nonhazardous liquid wastes are discharged to the sanitary sewer at IATL Room E161. However, the university manifests most nonhazardous wastes collected from Main Campus collection points to the EMF in Coralville, Iowa, for storage prior to off-site shipment. The generation rate of nonhazardous waste is variable depending upon specific service needs. Based on recent manifest records, I estimated that the facility collects and manifests approximately 620 to 800 pounds (280 to 362 kg) of nonhazardous waste per week. Copies of manifests and LDR notifications for the period May 13 through May 21, 2024, are included in Attachment 8.

During the CEI, I observed numerous nonhazardous waste accumulation containers throughout the buildings inspected. All nonhazardous waste accumulation containers observed were structurally sound and labeled (Attachment 7, Photograph 28). I noted no deficiencies with management of nonhazardous waste during the CEI.

**Radioactive Mixed Wastes** are generated from materials research, imaging methodologies, teaching labs, and healthcare monitoring activities at the Main Campus network. Based on manifest records, I estimated the facility generates 200 to 220 kg of radioactive mixed waste per year. The university considers mixed waste to be exempt from RCRA regulation via the LLMW exemption codified in 40 CFR 261.3(h)(1). Per this exemption, LLMW managed according to the eligibility requirements and conditions of 40 CFR 266 Subpart N is conditionally exempt from the definition of hazardous solid waste. Mixed wastes are collected by EHS personnel and transported to IATL Room E161 where they are placed in segregated storage cabinets and transferred to the EMF for storage pending off-site disposal. The only mixed waste container observed during the CEI was in the Medical Research Center. According to Mr. Weber, mixed waste generation rates from individual locations are typically less than 12 pounds (5.4 kilograms) per year.

I did not observe any mixed waste in accumulation during the inspection of the IATL. The Environmental Services office maintains documents verifying the facility has a current State-issued radioactive materials license, and has notified EPA of its intent to manage mixed waste per the LLMW conditional exemption. The facility has a RCRA Contingency Plan that appears to meet the fundamental requirements of 40 CFR 266.230. Therefore, I determined that the facility continues to meet the eligibility requirements for the LLMW exemption. I noted no deficiencies with management of radioactive mixed waste during the CEI

**Used oil** is generated during maintenance of fleet vehicles (automobiles and campus buses) and equipment maintenance at the Main Campus. Used oil is managed under the requirements of 40 CFR Part 279. Used oil generated from lower-volume non-fleet maintenance activities, such as pump maintenance and hydraulic services, is collected by EHS staff, transferred to the IATL Room E161 HWCAA, and manifested to the EMF. Used oil generated from fleet maintenance is stored at the generator location in used oil storage containers and in a 660-gallon aboveground storage tank (AST) adjacent to the CMF. Used oil is collected from the EMF and fleet maintenance facilities by Cedar Falls Oil Company of Cedar Falls, Iowa, for recycling. I did not determine a used oil generation rate for all Main Campus locations during the CEI.

During the CEI, I observed the 660-gallon used oil AST adjacent to the CMF (Attachment 7, Photograph 29). The used oil storage tank appeared to be structurally sound and was labeled with the words “used oil.” I observed three 55-gallon used oil storage containers at the Finkbein Maintenance Shop (Attachment 7, Photograph 11). The used oil storage containers were structurally sound and labeled with the words “used oil.”

I also observed a 55-gallon and a 35-gallon used oil storage container in the Mossman Services Building – North Room. Both used oil storage containers were partially filled and structurally sound. The 35-gallon container was labeled with the words “used oil” (Attachment 7, Photographs 9 and 10). However, the 55-gallon container was not labeled with the words “used oil,” as required by 40 CFR 279.22(c)(1) (**NOPF No. 5**) (Attachment 7, Photograph 8). I provided compliance assistance regarding labeling of used oil storage containers during the CEI.

All other used oil storage containers at other locations observed during the CEI were structurally sound and labeled with the words “Used Oil.”

**Used oil filters** are generated during maintenance of fleet vehicles (automobiles and campus buses) and hydraulic equipment maintenance at the Main Campus. Used oil filters are hot-drained on drum-mounted funnel pans upon generation but are not punctured or crushed. The facility manages used oil filters as used oil per requirements of 40 CFR Part 279. Used oil filters generated from non-fleet maintenance activities are collected by EHS staff, transferred to the IATL Room E161 HWCAA, and manifested to the EMF. Used oil filters generated from fleet maintenance are stored at the CMF in used oil storage containers. Used oil filters from fleet maintenance are collected by Cedar Falls Oil Company in Cedar Falls, Iowa, for recycling. Used oil filters received at the EMF are shipped to Tradebe Treatment and Recycling in East Chicago, Indiana, for recycling. I did not determine a generation rate for used oil filters during the CEI.

During the CEI, I observed a 55-gallon used oil storage container for used oil filters at the Finkbein Maintenance Shop (Attachment 7, Photograph 12). The used oil storage container was structurally sound and labeled with the words “used oil.” I also observed a 55-gallon used oil storage container for used oil filters in the Mossman Services Building – North Room (Attachment 7, Photographs 6 and 7). The used oil storage container was structurally sound, but was not labeled with the words “used oil,” as required by 40 CFR 279.22(c)(1) (**NOPF No. 5**). I provided compliance assistance regarding labeling of used oil storage containers during the CEI.

**Waste lamps** consist of linear fluorescent lamps generated through facility maintenance, as well as “odd-shaped” and specialty lamps generated through equipment maintenance. Based on available records, I estimated the facility generates more than 1,800 pounds of waste lamps per year. Waste lamps are managed as universal waste according to requirements of 40 CFR Part 273. Linear fluorescent lamps are self-transported by facility maintenance staff to the Mossman Services Building where they are aggregated and shipped off site for recycling. Odd-shaped and specialty lamps are occasionally accumulated at SAA locations. However, nearly all waste lamps observed during the CEI were 4-foot lamps. Waste lamps collected by EHS personnel at discrete locations on the Main Campus are sometimes transported to the IATL Room E161 HWCAA and manifested to the EMF.

I did not observe waste lamps in accumulation at IATL Room E161 during the CEI. I did observe waste lamps in accumulation at the Mossman Services Building. A copy of a layout drawing for the Mossman Services Building is included as Attachment 11. Mossman Services Building personnel maintain an inventory log to track waste lamps received at the building (Attachment 7, Photograph 1). Waste lamps are accumulated in the building’s receiving area (Attachment 7, Photograph 5). I observed several fiberboard universal waste accumulation containers at the time of the CEI (Attachment 7, Photograph 4). I noted that a large majority of the fluorescent lamps were green-tipped, low-mercury lamps. Mr. Weber stated that current university policy is to manage all fluorescent lamps as hazardous until re-lamping is completed through the campus buildings.

All containers of waste lamps in the Mossman Services Building were structurally sound, closed, labeled with the words “universal waste lamps,” and marked with accumulation start dates. Most of the universal waste containers were marked with accumulation start dates less than one year old. However, one container was dated February 8, 2023, and another was dated January 21, 2022 (Attachment 7, Photographs 2 and 3). I determined the facility accumulated universal waste lamps for longer than one year, as prohibited by 40 CFR 273.15(a) (**NOPF No. 4**). I provided compliance assistance regarding the accumulation time limit for universal waste during the CEI.

**Waste batteries** consist of spent lead-acid, nickel-cadmium, and lithium-ion batteries generated from fleet maintenance and equipment maintenance throughout the Main Campus. Waste lead-acid batteries generated from fleet maintenance activities are managed as spent lead-acid batteries being reclaimed, per the exemption provided in 40 CFR 266 Subpart G. These waste batteries are exchanged for new batteries through battery vendors. Waste non-automotive lead-acid, nickel-cadmium, and lithium-ion batteries are managed as universal waste per requirements of 40 CFR Part 273. Based on available records, I estimated the facility generates approximately 75 to 85 kg of universal waste batteries per month. Universal waste batteries are accumulated at SAA locations and are routinely collected by EHS staff during scheduled waste pickups. Some waste batteries collected by EHS personnel and transferred to IATL Room E161 and manifested to the EMF. Waste batteries are shipped off site for recycling.

I did not observe universal waste batteries or spent automotive batteries in accumulation during the visual inspection of IATL Room E161. Three locations in the CB, EMRB and the Medical Sciences building did have containers with small amounts of waste batteries (under 0.5 kg each).

These universal waste accumulation containers were structurally sound and labeled with the words “universal waste batteries.” I noted no deficiencies with management of waste batteries during the CEI.

**Waste mercury-containing equipment** is generated from facility maintenance and equipment maintenance throughout the Main Campus. Waste mercury-containing equipment is managed as universal waste under provisions of 40 CFR Part 273. Universal waste mercury-containing equipment is labeled and staged at SAA locations upon generation. The waste items are collected by EHS staff concurrent with scheduled waste pickups. Waste mercury-containing equipment collected by EHS personnel is transported to IATL Room E161 and manifested to the EMF. From the EMF, the mercury-containing waste is transported off site for recycling. I estimated that the EMF receives approximately 4.5 kg of waste mercury-containing equipment per month from the Oakdale Research Campus and the Main Campus networks. I did not observe waste mercury-containing equipment in accumulation during the visual inspection of IATL Room E161 or Main Campus SAA locations.

**Waste aerosol cans** are generated from a variety of applications throughout the Main Campus. Waste aerosol cans are collected and managed as universal waste per requirements of 40 CFR Part 273. Universal waste aerosol cans are collected by EHS staff during waste pickup and transferred to IATL Room E161. From there, the waste is manifested to the EMF for puncturing/draining or direct shipment offsite for recycling. Based on manifest records, the EMF receives approximately 80-110 waste aerosol cans per month from Main Campus SAA locations.

During the CEI, I observed universal waste aerosol cans accumulation containers in the CMF, Visual Arts Building and the Finkbein Grounds Maintenance building (Attachment 7, Photographs 26 and 27). The universal waste accumulation containers were structurally sound, closed, labeled with the words “universal waste aerosol cans,” and marked with an accumulation start dates less than one year from the date of the CEI. I noted no deficiencies with management of waste aerosol cans during the CEI.

**Waste ballasts** are generated during facility maintenance activities and are accumulated at facility maintenance shops. According to Mr. Pyrz, the facility considers waste ballasts nonhazardous by product knowledge and manages all waste ballasts as PCB-containing waste. Waste ballast accumulation containers are collected by EHS staff and transported to the EMF for storage prior to shipment off site for recycling. Based on manifest records, I estimated the facility generates 60-80 kg of waste ballasts per month. During the CEI, I observed a single 55-gallon waste ballast accumulation container in MSSB Room 190. The container was structurally sound and labeled. I noted no deficiencies with management of waste ballasts during the CEI.

**General trash** consists of nonhazardous production wastes, packaging wastes, food service wastes and general office and laboratory refuse. General trash is considered nonhazardous and is accumulated in roll-off containers and front-end load receptacles dispersed throughout the Main Campus. General trash is collected by Waste Management of Iowa City, Iowa, for landfill disposal. I observed general trash in accumulation during the CEI and noted no deficiencies.

#### **4. Required Response Equipment and Hazard Management**

As provided in 40 CFR 262.15(a)(8) and 262.17(a)(6), a LQG must operate to minimize the possibility of a fire, explosion, or spill, and must maintain emergency response equipment. During the visual inspection of the less-than-90-day HWCAA at IATL Room E161, I observed land-line telephones for summoning emergency assistance. In addition, Messrs. Pyrz and Weber stated that all personnel assigned to hazardous waste management duties have cellular telephones that can be utilized for emergency assistance. I noted emergency reporting numbers posted near the telephone.

I observed emergency response materials and equipment such as fire extinguishers, emergency shower/eye wash station, booms, pads, brooms and shovels, and specialty granular absorbents and neutralizers located within the HWCAA on horizontal storage racks (Attachment 7, Photograph 31). During the visual inspection of Main Campus SAA locations, I noted availability of appropriate emergency response materials and emergency contact listings near each SAA. I did not observe any deficiencies related to emergency response equipment.

#### **5. Container Accumulation Area**

University of Iowa – Main Campus maintains a single HWCAA at IATL Room E161. No hazardous wastes were in accumulation in IATL Room E161 at the time of the visual inspection as the HWCAA was emptied at the close of the academic semester. Mr. Weber noted that an exhaust hood located on the south wall of the room was idled pending replacement (Attachment 7, Photograph 32). Inspection of the hood and cabinet spaces beneath it revealed no waste in accumulation.

According to Mr. Weber, the HWCAA is inspected weekly, and the inspections are documented on a checklist. I reviewed the weekly inspection checklists for the last two years and noted no missed inspections. Deficiencies noted on inspection checklists were marked as corrected, usually within 2 days. Copies of the last three inspection checklists are in Attachment 12 as examples. I noted no deficiencies with management of the HWCAA.

#### **6. Manifests and Biennial Report**

Hazardous and nonhazardous wastes are currently manifested from IATL Room E161 to the EMF three times per week (Monday, Tuesday, and Wednesday). Some wastes that do not get transported to the EMF, such as certain hospital wastes, are manifested from the generator location to the destination facility. During the CEI, I reviewed a total of 60 manifests (two per month from December 2021, through April 2024, and all manifests for April and May 2024). I noted no apparent discrepancies during the manifest review. Copies of representative manifests are included in Attachments 8, 13, and 14.

The Hazardous Waste Biennial Report for 2023 was submitted on February 7, 2024. A complete copy is maintained at the facility. Copies of the cover letter and first six pages are included in Attachment 15.

## **7. Preparedness and Prevention, and Contingency Plan**

As an LQG, the University of Iowa – Main Campus is required by 40 CFR 262.17(a)(6) to meet the emergency preparedness, prevention, and procedures requirements outlined in 40 CFR 262 Subpart M, including preparation of a RCRA Contingency Plan and documented arrangements with response agencies. During the CEI, I reviewed the facility's RCRA Contingency Plan prepared specific to the IATL location. The primary emergency coordinator (EC) is listed as Mr. Pyrz, followed by Tim Weber as alternate coordinator. I asked Mr. Pyrz if the names, addresses, and telephone numbers listed in the Contingency Plan were accurate and updated. He stated that all information was correct.

During the CEI, I reviewed content of the Contingency Plan and determined that it included the following required elements:

- Response activities for fires, spills, and explosions
- Description of formal arrangements with emergency response agencies and selected medical care facilities.
- Location and capabilities of emergency response equipment
- Evacuation plan from the HWCAA along with description of alarm initiation procedures and primary escape routes.

I noted during review of the Contingency Plan that there was no copy of the Quick Reference Guide (QRG) in the tab provided in the plan. Mr. Weber stated that a QRG is normally found in the plan and that every effort would be made to return the QRG as soon as possible. I initially included failure to have a QRG as part of the RCRA Contingency Plan as NOPF No. 3. However, during the exit briefing on May 31, 2024, Mr. Weber provided a copy of the Contingency Plan QRG and stated that it had been placed in the formal record at the IATL location (Attachment 16). I reviewed the QRG against the content requirements and noted that the QRG appeared to be complete. NOPF No. 3 was subsequently rescinded. I noted no deficiencies regarding preparedness and prevention, and the contingency plan during the CEI.

## **8. 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 reviewed job titles, job descriptions, and training requirements for EHS personnel. I also reviewed training documentation for all EHS personnel for the previous 3 calendar years (2021 through 2023). Training for 2024 had not yet occurred, as training is typically conducted in December each year. Copies of the 2023 training records for EHS personnel are included in Attachment 17 as examples.

Based on the records reviewed during the CEI, I determined that the facility is providing appropriate task-specific training to employees whose job descriptions include hazardous waste handling and management inclusive of all personnel identified as emergency contacts in the Contingency Plan. I noted no deficiencies regarding personnel training during the CEI.

## 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 found 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. The University of Iowa – Main Campus is not subject to the Subpart AA regulations because the facility does not operate any equipment that employs the process vents listed by regulation.

If an observed Large Quantity Generator of hazardous waste has equipment that contains or contacts hazardous waste composed of 10 percent or greater organics by weight, the HWCAA facility is subject to Subpart BB standards for inspection and monitoring of the equipment. The University of Iowa – Main Campus does not presently have equipment that contains, or comes in contact with, hazardous waste bearing that description. It is therefore not observed to be subject to the Subpart BB regulations.

The standards found in Subpart CC apply to LQGs that manage hazardous waste in containers with volatile organic compounds (VOC) concentration that exceeds 500 ppmw. The Subpart CC standards are applicable at the University of Iowa – Main Campus HWCAA because the facility accumulates hazardous waste that contains VOCs in containers larger than 26 gallons in capacity. During the CEI, I determined that the facility complies with the Subpart CC requirements for 55-gallon containers by using Container Level 1 controls (containers smaller than 122 gallons that are U.S. Department of Transportation [DOT]-approved). There were no containers of hazardous waste in the designated HWCAA. I observed no apparent discrepancies related to management of hazardous waste under the 40 CFR 265 Subpart CC air emissions requirements.

## 10. Summary of Preliminary Findings

In summation of the observations made during the CEI, I made the following preliminary findings:

- (1) Failure to label SAA containers with the words “hazardous waste,” as required by 40 CFR 262.15(a)(5)(i) (**NOPF No. 1**)
- (2) Rescinded
- (3) Rescinded
- (4) Accumulation of universal waste lamps for longer 1 year, as prohibited by 40 CFR 273.15 (a) (**NOPF No. 4**)
- (5) Failure to label used oil storage containers with the words “used oil,” as required by 40 CFR Part 279.22(c)(1) [**NOPF No. 5**]
- (6) Failure to mark SAA containers with an indication of the nature of the hazard, as required by 40 CFR 262.15 (a)(5)(ii) [**NOPF No. 6**]

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.

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Date: \_\_\_\_\_

Steve A. Johnson  
Inspector  
CLÆNE Group

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Date: \_\_\_\_\_

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

Attachments:

1. Notification Acknowledgement/Verification Report (2 Pages)
2. Satellite Accumulation Area List (6 Pages)
3. Receipt for Documents and Samples (1 Page)
4. Confidentiality Notice (1 Page)
5. Notice of Preliminary Findings (1 Page)
6. Facility Map (1 Page)
7. Photographic Documentation (Photolog and 32 Photos) (20 Pages)
8. Manifests and LDR Notifications Dated May 13-21, 2023 (21 Pages)
9. Northland Shipping Document and SDS for Parts Washer Solvent (10 Pages)
10. Manifest for Parts Washer Solvent to Northland Dated April 2, 2024 (1 Page)
11. Mossman Services Building Layout (1 Page)
12. Hazardous Waste Central Accumulation Area Inspection Checklists (3 Pages)
13. Nonhazardous and Universal Waste Manifests Dated April 23-24, 2024 (6 Pages)
14. Hospital Waste Manifest Dated July 21, 2023 (1 Page)
15. 2023 Biennial Report Cover and First Six Pages (7 Pages)
16. Quick Reference Guide (2 Pages)
17. 2023 Training Records (4 Pages)