REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

UNITED STATES DEPARTMENT OF AGRICULTURE – NATIONAL CENTERS FOR ANIMAL HEALTH
1920 Dayton Avenue
Ames, Iowa 50010
(515) 337-7194

EPA ID Number: IA8123490007

On

January 18, 2023

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 United States Department of Agriculture – National Centers for Animal Health (NCAH), at 1920 Dayton Avenue, 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

NCAH:

Wayne Douet, Environmental, Industrial Hygienist and Safety (EIHS) Manager
Renee M. Schnurr, Director, Center for Veterinary Biologics (CVB)-Inspection and Compliance
David White, Director – Policy, Evaluation, and Licensing
Ben A'hearn, Facility Chief Engineer

Greg Macdonald, Safety Specialist
Don Davidson, Safety Technician
Nathan Ferrie, Automotive Maintenance Mechanic

Toeroek Team:

William F, Starks, Environmental Consultant, (816) 286-6951

INSPECTION PROCEDURES

Prior to the CEI at NCAH on January 18, 2023, I conducted a drive-by inspection at 8:00 a.m. I did not observe any areas of concern during the drive-by. Upon my arrival, I stopped at the guard shack and advised the guard of the reason for the CEI. The guard asked for my driver's license and the name and telephone number for my site contact, each of which I provided. The guard directed me to the visitor's parking lot and facility entrance. I entered the main lobby at 8:15 a.m. I checked in with the guard in the lobby area, completed the security protocol, and was issued a visitor's badge. I waited in the lobby for approximately five minutes before Mr. Douet arrived. After a brief introduction, Mr. Douet accompanied me to a conference room where he introduced me to Ms. Schnurr and Messrs. White, Macdonald, Davidson, and A'hearn. I then proceeded to conduct an entry briefing with Ms. Schnurr and Messrs. Douet, White, Macdonald, Davidson, and A'hearn (NCAH Team).

During the entry briefing, I presented my business card and EPA credentials to the NCAH Team. 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 the NCAH Team 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 business card
- RCRA Section 3007
- U.S. Federal Codes 1001 and 1002
- Instructions for Responding to a Notice of Preliminary Findings
- Notice Regarding Proprietary/Confidential Business Information
- U.S. EPA Small Business Resources Information Sheet
- Chemical Facility Anti-Terrorism Standards
- Solvent-Contaminated Wipes Final Rule Summary Chart
- E-Manifest Fact Sheet: Generators
- Small Quantity Generator Reminder to Re-notify
- Managing your Hazardous Waste: A Guide for Small Businesses

- Part 279 Requirements: Used Oil Management Standards
- EPA Region 7 Emergency Response Program
- Recycling Electronics: A Guide for Businesses
- IDNR Excluded Solvent-Contaminated Wipes Rule: Management Practices for Wipes, Rags, and Shop Towels
- Battery Recycling/Disposal
- Management of Fluorescent Lamps for Businesses
- Incompatible Chemicals
- Universal Wastes – Including Aerosol Cans
- TCLP – Toxicity Characteristic Leaching Procedure
- Iowa Environmental Guide for Businesses

I reviewed the Notification Acknowledgement/Verification Report with Mr. Douet (Attachment 1). Based on this review, as well as observations during the CEI, I updated the Site Contact Information of the Notification Acknowledgment/Verification Report and made no other changes.

I conducted the visual inspection and the records review on January 18, 2023, accompanied by Messrs. Douet, Macdonald, and Davidson. During the records review, I reviewed facility documentation such as hazardous waste determination records, waste summary reports, inspection logs, shipping manifests, training records, and the contingency plan. I prepared and completed a site-specific inspection checklist to document my observations.

At the conclusion of the CEI on January 18, 2023, I conducted an exit briefing with the NCAH Team. During the exit briefing, I provided a Receipt for Documents and Samples, which Ms. Schnurr signed, acknowledging receipt (Attachment 2). I also provided Ms. Schnurr the Notice, which she signed to indicate that confidential business information had been collected during the CEI (Attachment 3). Specifically, Ms. Schnurr indicated on the Notice that the facility considers the map of the facility to be CBI. The facility map for which the CBI claim was made was handled as CBI and is included under separate cover (CBI file). I also provided Ms. Schnurr a Notice of Preliminary Findings (NOPF), which she signed to acknowledge receipt (Attachment 4).

The map of the facility is included in the CBI file as Attachment 5, and an aerial photograph of the facility downloaded from a publicly available website (Google Maps) is Attachment 6. The 26 photographs taken during the CEI are in Attachment 7, 25 of which are included in this report.

FINDINGS AND OBSERVATIONS

1. Facility Description and General Information

NCAH is a federal research facility, divided into the Agricultural Research Service, which operates the National Animal Disease Center (NADC); Animal and Plant Health Inspection Service (APHIS), which operates the National Veterinary Services Laboratory (NVSL); and CVB. Mr. Douet explained that NADC is primarily responsible for investigating animal disease

outbreaks, CVB is primarily responsible for investigating and regulating animal pharmaceuticals, and NVSL is primarily responsible for planning for and responding to animal health emergencies. All three of these entities have numerous laboratories that generate hazardous waste. NCAH also has its own wastewater treatment operation, fleet services, maintenance shop, and physical plant. Raw materials used by NCAH include solvents, chemical reagents, pharmaceuticals, and other chemicals related to the operations of the laboratories. NCAH has notified for multiple D-list (11), U list (12), and P-list (3) hazardous wastes, and one F-list hazardous wastes (Attachment 1).

The facility began operations at this location in the 1950s. NCAH currently employs a maximum of approximately 650 people. Personnel primarily work standard office hours Monday through Friday, although security, utility, and animal care personnel are present 24 hours per day, 7 days per week. The new primary office and laboratory (lab) building at the center of the facility was constructed in 2008. The facility consists of approximately 92 buildings on approximately 480 acres of land.

Mr. Douet provided a copy of the facility's 2021 Biennial Report (Attachment 8). The facility has identified 18 hazardous waste streams based on waste type and generating process. According to Mr. Douet, the facility has approximately 100 satellite accumulation areas (SAAs), from which hazardous waste is collected. The hazardous and nonhazardous wastes I observed during the CEI are described in Section 3. Information about additional waste streams is available in the Biennial Report.

Lab operations generate a variety of wastes, including vaccine waste, spent solvents, lab pack waste, solvent-contaminated wipes, and waste aerosol cans. Hazardous waste determinations are made for all lab wastes. The majority of hazardous lab wastes are collected in SAAs and transferred to a hazardous waste container accumulation area (CAA). Solvent-contaminated wipes are managed under the hazardous waste exclusion found in Title 40 *Code of Federal Regulations* (40 CFR) 261.4(b)(18). Waste aerosol cans are managed as universal waste according to provisions of 40 CFR 273.

Facility maintenance generates used oil, used oil filters, used lamps, used batteries, and waste aerosol cans. The facility manages used oil per 40 CFR 279. Used oil filters are punctured, hot drained and managed as nonhazardous waste. Used lamps, used batteries, and waste aerosol cans are managed as universal waste according to provisions 40 CFR 273.

Wastewater is generated during laboratory processes and animal care. Depending on the Biosafety Level (BSL) of the wastewater-generating process, wastewater is either directly discharged to the City of Ames sanitary sewer system or is heat-treated and cooled prior to sewer discharge. The facility has two wastewater discharge permits from the City of Ames, one for each of two permitted outfalls (North and South). NCAH considers wastewater discharged to the sanitary sewer for treatment at the City of Ames publicly-owned treatment works (POTW) to be nonhazardous per 40 CFR 261.4(a)(1)(ii).

General trash, such as packaging and office-type refuse, is generated in all areas of the facility and is managed as nonhazardous waste.

On September 24, 2013, NCAH was inspected by EPA contractor, Tetra Tech, Inc. Following the CEI, the inspector left the following preliminary findings:

- Failure to close containers in the less-than-90-day CAA
- Failure to close a SAA container
- Failure to label a SAA container as hazardous waste or with its contents
- Failure to label universal waste lamps as "used lamps," "waste lamps," or "universal waste lamps"
- Accumulation of universal waste lamps for longer than I year
- Failure to describe in the contingency plan the capabilities of emergency equipment
- Failure to train all hazardous waste management personnel on the provisions and implementation of the contingency plan
- Failure to include in all job descriptions for hazardous waste management personnel a description of the requirements for initial and ongoing training

On March 5, 2018, NCAH was inspected by an EPA contractor. However, the report was not available for review prior to the CEI.

2. RCRA Status

The Notification Acknowledgement/Verification Report (Attachment 1) indicates that NCAH is a large quantity generator (LQG), generating more than 1,000 kilograms (kg) of hazardous waste per month or more than 1 kg of acutely toxic hazardous waste per month. Based on my review of documents, including the 2021 Biennial Report (Attachment 8) and facility manifests (Attachment 9), as well as my interviews with facility personnel, I determined the facility typically generates approximately 1,424 kilograms (kg) of hazardous waste per month. Therefore, I inspected the facility as a LQG of hazardous waste. I also inspected NCAH as a small quantity handler (SQH) of universal waste lamps, batteries, aerosol cans, and mercury-containing equipment (accumulating less than 5,000 kg of universal waste at any time) and a used oil generator.

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. The following discussion of waste streams is based on my interviews with Messrs. Douet, Macdonald, and Donaldson, the visual inspection, and my review of available documentation. In addition to Messrs. Douet, Macdonald, and Donaldson, I received information from Mr. Ferrie. Since Mr. Ferrie was not present at the entrance conference, I presented to him a copy of U.S. Federal Codes 1001 and 1002, which he read.

During the inspection, I obtained copies of Hazardous Waste Determination Sheets (HWDSs) for various wastes. I noted the HWDSs included the Lab Unit and Satellite Accumulation Room Number. This ensures that the hazardous waste determinations are made at the point of generation. I did not obtain copies of all HWDSs reviewed as the same wastes or types of waste

Vaccine waste is generated during use, research, and quality testing on animal vaccines in multiple areas of the facility. The waste is collected in satellite accumulation containers (SACs) in the lab SAAs, and transferred to the Lab Pack CAA. The facility considers this waste hazardous (D009) based on product and process knowledge. In 2021, the facility generated approximately 2,158 kg of vaccine waste (Attachment 8, Page 2). Vaccine waste is collected by Clean Earth Specialty Waste Solutions (CESWS) and transported to Solvent Recovery, LLC in Kansas City, Missouri, for disposal. It was last collected on December 21, 2022 (Attachment 9, Page 27).

Mr. Douet supplied a copy of the HWDS for vaccine waste (Attachment 11). Based upon my review of the HWDSs, it appears the hazardous waste determination for vaccine waste is adequate.

Mr. Douet explained the process of transferring waste to the CAAs. Lab personnel complete the HWDS which identifies the waste and whether the waste is hazardous. A subsequent turn-in form is also completed. These forms are automatically emailed to the Industrial Health and Safety (IHS) section (Messrs. Douet, Macdonald, and Donaldson) after completion. Lab personnel post a printed copy of the turn-in form next to the waste they want picked up from the SAA (Attachment 7, Photograph 4). IHS section personnel review the HWDS and turn-in form for accuracy and, if there are no issues, IHS section personnel collect the waste and transport it to the CAA. IHS section personnel mark the accumulation start date on everything that is placed into the CAA. Hazardous waste is collected from SAAs on Tuesdays and Thursdays.

During the visual inspection, I observed three 18-gallon containers in the SAAs of Room 2308, Room 2311, and Room 2322. The containers were closed, in good condition, and labeled with the words “hazardous waste” and an indication of the nature of the hazard. However, each SAC was empty at the time of the inspection.

In the Lab Waste CAA, I observed a 55-gallon hazardous waste accumulation container (HWAC) of vaccine waste. The HWAC was closed, in good condition, labeled with the words “hazardous waste” and an indication of the nature of the hazard, and dated January 11, 2023. The HWAC held approximately 55 gallons of vaccine waste. I noted no deficiencies related to vaccine waste during the CEI.

Ventanna waste is a sodium hydroxide solution waste generated during laboratory procedures. The waste is accumulated in SAAs and transferred to 55-gallon HWACs in the Flammable CAA. The facility considers this waste hazardous (D002) based on product and process knowledge. In 2021, the facility generated approximately 2,673 kg of ventanna waste (Attachment 8, Page 3). Ventanna waste is collected by Clean Earth Specialty Waste Solutions (CESWS) and transported to Solvent Recovery, LLC in Kansas City, Missouri for disposal. It was last collected on December 21, 2022 (Attachment 9, Page 27). I did not observe ventanna waste in accumulation during the CEI.

Mr. Douet supplied a copy of the Generator’s Waste Profile for ventanna waste (Attachment 12). Based upon my review of the Generator’s Waste Profile, it appears the hazardous waste determination for ventanna waste is adequate.

Spent solvents are generated during laboratory processes in multiple areas of the facility. Solvents used at the facility include ethanol, methanol, acetone, xylene, acetonitrile, and chloroform. Spent solvent waste is collected in SACs in SAAs. When full, the SAAs are transferred to the CAA and decanted into a HWAC. The facility considers this waste hazardous (D001, F003) based on product and process knowledge. In 2021, the facility generated approximately 7,374 kg of spent solvents (Attachment 8, Page 4). Spent solvents are transported to Solvent Recovery LLC in Kansas City, Missouri for fuel blending. It was last collected on December 21, 2022 (Attachment 9, Page 27).

Mr. Douet supplied a copy of the HWDS for Ethyl Alcohol (Attachment 13). During the CEI, I reviewed copies of HWDSs for spent solvents that contained acetone and xylene (F003 spent solvents), but I did not request copies of these HWDSs. Based upon my review of the HWDSs, it appears the hazardous waste determination for spent solvents is adequate.

During the visual inspection, I observed spent solvents in the following SAAs. All SACs were at or near the point of generation, closed, labeled with the words "hazardous waste" and an indication of the nature of the hazard, and in good condition.

- Room 1714 – two, 2.5-gallon SACs (Attachment 7, Photographs 1, 2 and 3); approximately 2 gallons of spent solvent
- Room 1710 – three, 2.5-gallon; two, 1-gallon; approximately 4 gallons of spent solvent
- Room 1713 – two, .25-gallon SACs; less than 0.25 gallons in accumulation
- Room 1716 – one 2.5-gallon SAC; empty
- Room 2331 – one 2.5-gallon SAC; approximately 1.5 gallons in accumulation
- Room 2332 – one 2.5-gallon SAC; approximately 1.5 gallons in accumulation
- Room 2334 – one 2.5-gallon SAC (Attachment 7, Photograph 5); approximately 1 gallon of spent solvent
- Room 206 – one 2.5-gallon SAC; empty

During my inspection of the CAA, I observed one 55-gallon HWAC of spent solvent (Attachment 7, Photograph 15). The HWAC held approximately 45 gallons of spent solvent. The HWAC was in good condition, closed, and labeled with the words "hazardous waste" and an indication of the nature of the hazard. However, the HWAC was not marked with an accumulation start date (Attachment 7, Photographs 15 through 18). I determined the facility failed to mark a HWAC with an accumulation start date, as required by 40 CFR 262.17(a)(5)(i)(C) (**NOPF No. 2)**.

I explained this preliminary finding to Mr. Douet during the CEI and asked how long the spent solvent had been in accumulation. Mr. Douet stated that the flammable CAA was empty after the December 21, 2022 shipment; and the earliest the waste would have been in accumulation was December 22, 2022. Per Mr. Douet's statement, it does not appear that spent solvent had been in accumulation over 90 days. Prior to leaving the area, Mr. Douet marked the HWAC with a December 22, 2022, accumulation start date (Attachment 7, Photograph 19).

Other hazardous lab waste is generated during various lab processes in multiple areas of the facility. This waste is collected in SAAs and transferred to the Lab Waste CAA. The facility considers this waste hazardous based on product knowledge. In 2021, the facility notified for disposal of characteristically toxic wastes (D001, D002, D003, D005 through D009, D011, D018, D022), commercial chemical products (U002, U003, U044, U057, U114, U122, U123, U135, U154, U188, U214, U239), and acutely toxic commercial chemical products (P087, P098, P105). In 2021, the facility generated approximately 4,742 kg of laboratory waste (Attachment 9, Pages 4, 7, 9 through 18). Laboratory waste is transported to Solvent Recovery LLC in Kansas City, Missouri for treatment, storage, or disposal. It was last collected on December 21, 2022 (Attachment 9, Page 27).

During the visual inspection, I observed laboratory waste in the following SAAs. All containers were closed, labeled with the words "hazardous waste" an indication of the nature of the hazard, and in good condition.

- Room 202 – approximately 1 gallon in multiple sealed plastic bags
- Room 1710 – one, 1-quart container of osmium tetroxide (P087), and one empty 1-quart container

When full, the containers of other lab waste are taken to the Lab Waste CAA. During my inspection of the CAA, I observed 11 various-sized containers (totes) of hazardous lab waste destined to be lab packed (Attachment 7, Photograph 12). All containers were marked with accumulation start dates, labeled with the words "hazardous waste" and an indication of the nature of the hazard. Approximately 22 gallons of lab waste were in accumulation. The oldest container was dated December 21, 2022.

Wastewater is generated during laboratory processes and animal care. Wastewater is discharged to the City of Ames sanitary sewer under two discharge permits. The facility has two outfalls. Wastewater discharged to the sewer from the South Outfall is BSL 2 or lower and is directly discharged. At the North Outfall, wastewater considered to be BSL 2 or lower is discharged directly to the sewer. Wastewater considered to be BSL 3 or higher is heat-treated and cooled prior to sewer discharge. No other wastewater pretreatment is performed. NCAH considers wastewater sent to the City of Ames POTW through the sanitary sewer to be non-hazardous per 40 CFR 261.4(a)(1)(ii). The average wastewater flow from the South Outfall in 2022 was approximately 19,000 gallons per day. The average wastewater flow from the North Outfall in 2022 was approximately 243,000 gallons/day (combined non-heat-treated and heat-treated). As this waste is not RCRA-regulated, I did not inspect the wastewater pretreatment system during the CEI.

Used oil is generated during maintenance of vehicles, hydraulic equipment, and grounds keeping equipment. The facility manages used oil according to provisions of 40 CFR 279. Mr. Ferrie estimated that the facility generates approximately 55 gallons of used oil every three months. Used oil is transported to Solvent Recovery LLC in Kansas City, Missouri for recycling. It was last collected on December 21, 2022 (Attachment 9, Page 31).

During the visual inspection of the motor pool, I observed a 150-gallon used oil aboveground storage tank (Attachment 7, Photograph 25). The used oil storage tank was in good condition

with no apparent leaks and labeled with the words "used oil." I noted no deficiencies related to used oil during the CEI.

Used oil filters are generated during maintenance of vehicles, hydraulic equipment, and grounds keeping equipment. The facility considers used oil filters nonhazardous based on process and product knowledge. According to Mr. Ferrie, the facility generates approximately five used oil filters per month. They are punctured, hot-drained, and consolidated with the general trash. I did not observe any used oil filters during the inspection. General trash is transported to the Resource Recovery in Ames, Iowa, for use as refuse derived fuel (RDF). I noted no deficiencies related to used oil filters during the CEI. I provided compliance assistance regarding State of Iowa solid waste regulations and used oil filters.

Used batteries are generated during facility and vehicle maintenance. Used batteries include used nickel-cadmium, alkaline, lithium, and lead-acid batteries. The facility manages all used batteries as universal waste according to provisions of 40 CFR 273. Used batteries are collected in universal waste containers and transferred to Building 24 Green Room. Based on my review of disposal documentation (Attachment 9), the facility generates approximately 2,175 kg of used batteries per year. Used batteries are transported to Solvent Recovery LLC in Kansas City, Missouri for recycling and/or reclamation. They were most recently collected on October 19, 2022 (Attachment 9, Page 25).

During the CEI, I observed a universal waste battery container in the Building 24 Green Room (Attachment 7, Photograph 10). The container was labeled with the words "universal waste batteries," an October 5, 2022, accumulation start date, and held approximately 50 universal waste batteries (Attachment 7, Photograph 11). I noted no deficiencies related to used batteries during the CEI.

Used lamps are generated during facility maintenance. The facility uses both green-tipped (nonhazardous) and silver-tipped (hazardous) fluorescent lamps. The facility manages all used lamps as universal waste according to provisions of 40 CFR 273. Used lamps are transferred to the Universal Waste building upon generation. Based on my review of disposal documentation (Attachment 9), the facility generates approximately 717 kg of used lamps per year. Used lamps are transported to Solvent Recovery LLC in Kansas City, Missouri for recycling. They were most recently collected on December 21, 2022 (Attachment 9, Page 32).

During the visual inspection of the Universal Waste building, I observed three containers of 4-foot used lamps (Attachment 7, Photograph 20). All three containers were closed, labeled with the words "used lamps," and marked with accumulation start dates of November 8, 2022, January 10, 2023, and January 18, 2023 (Attachment 7, Photographs 21 through 23). I noted no deficiencies related to used lamps during the CEI.

Waste aerosol cans are generated during facility maintenance and lab work. The facility manages waste aerosol cans as universal waste according to provisions of 40 CFR 273. Waste aerosol cans generated in the labs are taken to the Building 24 Green Room and accumulated in a universal waste accumulation container. Aerosol cans generated in areas other than the lab, such as the motor pool, are taken to the Flammable CAA and punctured/drained by an aerosol can puncture device. The waste is drained into a SAA, and the punctured can is disposed as scrap

metal. Based on my review of disposal documentation (Attachment 9), the facility generates approximately 142 kg of unpunctured waste aerosol cans per year. Waste aerosol cans are transported to Solvent Recovery LLC in Kansas City, Missouri for disposal. They were last collected on December 21, 2022 (Attachment 9, Page 32).

In the Building 24 Green Room, I observed a universal waste aerosol can container (Attachment 7, Photograph 8). The container was labeled with the words "universal waste aerosol cans," an October 19, 2022, accumulation start date, and held approximately 25 gallons of universal waste aerosol cans (Attachment 7, Photograph 9).

In the flammable CAA, I observed a waste aerosol can in a Lab Pack hazardous waste container (Attachment 7, Photograph 12). The waste aerosol can was labeled with the words "hazardous waste," an indication of the nature of the hazard, and a January 9, 2023 accumulation start date (Attachment 7, Photograph 13). However, the waste aerosol can was not in a closed container as required by 40 CFR 262.17(a)(1)(iv)(A) **(NOPF No. 1).**

I explained this preliminary finding to Mr. Douet during the CEI and asked why the aerosol can was labeled as hazardous waste. Mr. Douet explained the aerosol can should have been transferred to the Building 24 Green Room or punctured into the aerosol can puncture device.

Aerosol can waste is generated when waste aerosol cans are punctured in an aerosol can puncture device in the Flammable CAA. The facility considers aerosol can waste hazardous (D001) based on product knowledge. According to Mr. Douet, the facility generates very little aerosol can waste since the facility started managing waste aerosol cans as universal waste. Aerosol can waste is transported to Solvent Recovery LLC in Kansas City, Missouri, for disposal.

During the CEI, I observed the aerosol can puncture device affixed to the lid of a SAC in the Flammable CAA (Attachment 7, Photograph 14). The SAC was closed, at the point of generation, in good condition, labeled with the words "hazardous waste" and an indication of the nature of the hazard, and held approximately 7 gallons of aerosol can waste.

Used mercury-containing equipment is generated during facility maintenance. The facility manages all used mercury-containing equipment as universal waste. Mr. Douet stated that generation of used mercury-containing equipment is infrequent and he estimated the rate at less than 5 pounds per year. It is transported to Solvent Recovery LLC in Kansas City, Missouri for recycling.

During the inspection, I observed three containers of used mercury-containing equipment in the Lab Waste CAA. The containers were closed in sealed plastic containers, labeled with the words "universal waste mercury-containing equipment," and marked with December 28, 2022, December 28, 2022, and January 13, 2023, accumulation start dates. I noted no deficiencies related to used mercury-containing equipment during the CEI.

Solvent contaminated wipes are generated in laboratories throughout the facility. Upon generation the wipes are placed into sealed plastic bags and placed into containers labeled "excluded solvent-contaminated wipes." Excluded solvent-contaminated wipes are excluded

from the definition of solid waste per 40 CFR 261.4(b)(18). They are collected and transferred to the Building 24 Green Room. I did not obtain a generation rate for solvent-contaminated wipes during the CEI. They are transported to Solvent Recovery LLC in Kansas City, Missouri, for disposal.

Mr. Douet provided a copy of the procedure for managing solvent-contaminated wipes (Attachment 14).

During the CEI, I observed several containers for solvent-contaminated wipes located in the lab areas. Most of the containers were empty, but all containers were labeled with the words "excluded solvent contaminated wipes." One container in Room 202 held two wipes that were in a sealed plastic bag, and another container in Room 202 held approximately seven wipes in a sealed plastic bag (Attachment 7, Photographs 6 and 7). I noted no deficiencies related to solvent contaminated wipes during the CEI.

General trash is generated from facility maintenance and cleaning, and includes office trash, food waste, and other refuse. General trash is collected in receptacles and small hoppers throughout the facility, and is consolidated in roll-off containers. The facility generated approximately 180 tons of general trash in 2022. General trash is transported to the Resource Recovery in Ames, Iowa, for use as RDF.

4. Container Accumulation Area

Messrs. Douet, Macdonald, and Donaldson accompanied me to the facility's less-than-90-day CAA. The CAA consists of three separate structures – one for universal waste, one for flammable wastes, and one for all other hazardous waste (Attachment 7, Photograph 24). All three structures had grated floors and served as a containment structure. I observed fire extinguishers and spill control equipment in the structures.

According to Douet, all personnel working in the CAA are required to carry a facility-issued mobile phone to summon emergency assistance. I asked Douet how often the facility inspects the CAA. Mr. Macdonald said that the CAA is inspected weekly, on Tuesday, and that the facility maintains inspection logs. I reviewed 3 years of inspection logs and did not note any gaps greater than 7 days. A copy of the January 17, 2023, inspection log is included in Attachment 15 as an example.

5. Manifests, Bills of Lading, Biennial Report

The facility generated 32 manifests from January 2020 through December 2022. I reviewed all 32 manifests. I obtained copies of the manifests generated in 2022 (Attachment 9). Land disposal restriction (LDR) notifications were attached to all manifests; however, I only requested a copy of the LDR notifications for the December 21, 2022 shipments. I reviewed the 2021 Biennial Report, which had been submitted to EPA before the March 1, 2022, deadline (Attachment 8). No deficiencies were noted during review of the manifests or the Biennial Report.

6. 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. I did not request copies of all documents reviewed.

I reviewed the training materials documenting the topics included in the facility's hazardous waste training, and verified that the training included emergency response and hazardous waste management.

During the CEI, I requested written job descriptions for personnel responsible for management of hazardous waste and implementation of the contingency plan, Messrs. Douet and Macdonald. These descriptions include duties, qualifications, skills, and education. They also contained a description of the required initial and ongoing hazardous waste training.

NCAH maintains documentation confirming that training has been completed. Mr. Douet provided a copy of training certificates awarded to Mr. Macdonald and himself for RCRA Refresher training from 2020 through 2022 (Attachments 16 and 17).

7. Preparedness and Prevention and Contingency Plan

As a LQG, NCAH 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. I reviewed the contingency plan during the CEI. According to the plan, the facility has made arrangements for emergency response with local emergency agencies, including the Ames Fire Department and Police Department, Mary Greeley Hospital, and the county local emergency planning commission.

The contingency plan includes the telephone numbers of the primary EC (Mr. Douet) and alternate ECs (Mr. Macdonald and Mr. Davidson). The contingency plan includes descriptions of required responses to fire, spill, and explosion; evacuation route and procedures from the CAA; arrangements with local response agencies (for example, Ames Fire and Police Departments, Mary Greeley Mobile Intensive Care Services, and Story County Sheriff's Office); and location of emergency response equipment and capabilities. I noted no deficiencies with content of the RCRA contingency plan during the CEI.

8. Summary of Preliminary Findings

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

(1) Failure to close hazardous waste accumulation container as required by 40 CFR 262.17(a)(1)(iv)(A) **(NOPF No. 1)**.

(2) Failure to mark accumulation start date on a hazardous waste accumulation container as required by 40 CFR 262.17(a)(5)(i)(C) **(NOPF No. 2)**.

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.

William F Starks Digitally signed by William F Starks Date: 2023.03.08 15:20:01 -06'00' Date: _____

William F. Starks
Environmental Consultant
CLAENE Group, LLC.

AMBER WHISNANT Digitally signed by AMBER WHISNANT Date: 2023.03.17 20:00:44 -05'00' Date: _____

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

Attachments:

1. Notification Acknowledgement/Verification Report (2 Pages)
2. Receipt for Documents and Samples (1 Page)
3. Confidentiality Notice (1 Page)
4. Notice of Preliminary Findings (NOPF) (1 Page)
5. Facility Map (1 Page) (See CBI File)
6. Aerial Image of the Facility (1 Page)
7. Photographic Documentation (26 Photos and Photolog) (16 Pages)
8. 2021 Biennial Hazardous Waste Report (18 Pages)
9. Hazardous Waste Manifests for 2022 (34 Pages)
10. Satellite Accumulation Area List (3 Pages)
11. Hazardous Waste Determination Sheet for Vaccine Waste (12 Pages)
12. Generator Waste Profile 685801-07 for Ventanna Waste (2 Pages)
13. Hazardous Waste Determination Sheet for Ethyl Alcohol (10 Pages)
14. Solvent-Contaminated Wipes Procedure (2 Pages)
15. Hazardous Waste CAA Inspection Log, Dated January 17, 2023 (2 Pages)
16. Wayne Douet Training Certificates, Dated March 17, 2020, February 2, 2021, and January 26, 2022 (3 Pages)
17. Greg Macdonald Training Certificates, Dated March 31, 2020, February 2, 2021, and January 26, 2022 (3 Pages)