

RCRA Inspection Report

1) Inspector and Author of Report

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U.S. Environmental Protection Agency, Region 4
Enforcement and Compliance Assurance Division
Chemical Safety and Land Enforcement Branch
RCRA Enforcement Section
61 Forsyth Street, S.W.
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2) Facility Information

University of Kentucky –
Environmental Management
355 Cooper Dr
Lexington, KY 40546

EPA ID#: KYD000830851
NAICS #: 611310 – Colleges, Universities, and
Professional Schools

3) Responsible Officials

Robert D. Kjelland
Director
robert.kjelland@uky.edu

4) Inspection Participants

Maridely M. Loyselle, University of
Kentucky – Environmental
Management
Robert D. Kjelland, University of
Kentucky – Environmental
Management

Amy McCracken, KDEP
Scott Gerstner, KDEP
Mark Anthony Relon, USEPA

5) Date of Inspection

August 23, 2023 9:18am

6) Applicable Regulations¹

Resource Conservation and Recovery Act (RCRA) Sections 3002 (42 U.S. Code – Annotated U.S.C.A. 6925 and 6927), and 40 Code of Federal Regulation (C.F.R.) Parts 260 - 270, 273, 278, & 279; Kentucky Revised Statutes Title XVIII, Chapter 224, Subchapter 46-Hazardous Waste et seq. (2006), and Title 401 of the Kentucky Administrative Regulations (K.A.R.) Chapters 30 through 38, 43 and 44 (2006); and Hazardous Waste Permit 47594.

¹ As the State's authorized hazardous waste program operates in lieu of the federal RCRA program, the citations of those authorized provisions will be to the authorized State program. However, for ease of reference, the federal citations will follow in brackets.

Pursuant to 401 KAR 39:005, Section 1 [40 C.F.R. § 260.10], a large quantity generator of hazardous waste (LQG) is a generator who generates greater than or equal to 1,000 kilograms (2,200 pounds) of non-acute hazardous waste in a calendar month.

Pursuant to 401 KAR 39:080, Section 3(1) [40 C.F.R. § 273.9], a small quantity handler of universal waste (SQHUW) is a universal waste handler who does not accumulate 5,000 kilograms or more of universal waste (batteries, pesticides, mercury-containing equipment, lamps, or aerosol cans, calculated collectively) at any time.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.15(a)], a generator may accumulate as much as 55 gallons of non-acute hazardous waste in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or without having interim status, as required by KRS § 224.46-520(1) [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.16(b) or § 262.17(a)], except as required in 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.15] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17], an LQG may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by KRS § 224.46-520 [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced compliance evaluation inspection to determine University of Kentucky – Environmental Management (hereinafter, “EQMC” or the “Facility”) compliance with the conditions of its RCRA Hazardous Waste Facility Operating Permit [47594], the applicable requirements of RCRA and the corresponding Kentucky regulations. This was an EPA lead inspection.

8) Facility Description

The University of Kentucky (UK) is a land grant state university. The university was founded in 1865 and is located on approximately 800 acres of property. There are approximately 180 academic and educational buildings on campus. The university consists of sixteen colleges and professional schools, which offer over 200 academic programs. The university has over 30,000 faculty, staff, and students. The City of Lexington provides the facility with potable water and domestic sewer services.

The EQMC is a hazardous waste storage facility which manages the hazardous waste produced by the daily activities of the university. It receives and manages waste only from university operated facilities. These wastes are routinely generated by university activities such as research laboratories, teaching laboratories, medical facilities, and grounds

keeping/maintenance. Wastes are received chiefly from sources on the main campus, though there are a small number of university operations conducted off-site from which the EQMC receives waste.

The DWM issued a Part B hazardous waste operating permit to EQMC on December 31, 2017 (Permit Number KYD-000-830-851) for the storage and limited onsite treatment of hazardous waste in containers at the EQMC. The permit expires on December 31, 2027, unless revoked and reissued, or terminated. In addition to the hazardous waste management activities in the EQMC permitted hazardous waste area, EQMC is also registered as a Large Quantity Generator (LQG) and a transporter of hazardous waste. The latest notification is February 15, 2023.

The EQMC is located at 355 Cooper Drive, Lexington, in Fayette County, Kentucky. The EQMC has been in operation since 1998. Hazardous waste is received from the main campus' research laboratories, chemistry teaching laboratories, medical and pharmacy schools, hospital operations, and maintenance operations. Hazardous waste is also received from UK farms, animal disease and diagnostic laboratory, community colleges and other offsite related UK facilities.

The facility consists of a single-story structure on the university campus which houses twelve (12) container storage areas for various types of waste. Treatment is conducted in two of those areas – one for bulking compatible wastes into larger containers for off-site disposal, and another for conducting bench-scale neutralization and oxidation/reduction to make wastes safer to handle and transport.

EQMC's RCRA hazardous wastes may include all characteristic waste; F002, F003, F004, F005, and F027 listed hazardous waste; P001-P205 acute hazardous waste; and U001-U401 non-acute hazardous waste. EQMC's non-RCRA regulated wastes include pesticides, asbestos containing materials, non-RCRA pharmaceuticals and used oils. All wastes, both hazardous and non-hazardous, are eventually sent off for final treatment and/or disposal.

The EQMC building is 11,000 square feet. The building is equipped with security doors and an alarm system that includes door alarms, fire alarms, five LEL fixed combustion gas sensors, two CO2 sensors and motion detectors. Access to the facility was through security personnel with access cards at the entrance. EQMC is constructed with a covered exterior loading dock for the shipment of hazardous waste to an offsite TSDF. The facility manages various sized containers ranging from the small laboratory bottles to 110-gallon containers. The maximum number of 55-gallon containers allowed in the main container storage area is 130 containers (Room 115). Containers are placed one high with a three-foot buffer between containers and walls. Small containers are stored on container storage racks. Marking and labeling of small containers is conducted using the hazardous waste E-TRAX waste card attached to the container or an E-TRAX waste card placed inside a plastic bag that is labeled as "Hazardous Waste" and the characteristic of the waste.

The permitted storage building consists of areas described by the types of waste storage. Each area has a coated floor that is sloped to a concrete collection trench and surrounded by a concrete curb. The areas in the EQMC are as follows:

- Receiving Area;
- Cylinder Cutting/Drum Crushing (117B);
- Emergency Response Supplies (117C);
- General Maintenance (117F);
- Acid Storage (117G);
- Non-Hazardous Storage/Chemical Redistribution/Recycling (117M);
- Non-Hazardous Storage (117L);
- Metals Storage (117K);
- Cyanides/Base Storage (117J)-cyanides and bases are stored separately;
- X-RAD Storage (117H)- mixed waste is stored more than one year-radiation regulations take precedence;
- Oxidizer Storage (112);
- Mechanical Room (113)-EQMC does not have access to this room. The door to the room is located on the outside of the building and is used by Facilities Management;
- Gas Cylinder Storage (114);
- Flammable Storage (115);
- Bulking Room (120);
- Treatment Room (118)- acid neutralization and oxidizer reduction;
- Reactive Storage (119)-organic peroxides, flammable solids, water reactive material, pyrophoric material, shock sensitive material and D003 storage;
- Non-Organics/Used Oil/Poisons/PCBs/Biohazardous Storage (117D);
- Drum Storage (117E)-empty drums storage.

Waste shipments are sent offsite approximately quarterly, and personnel track the storage area container inventory by recording the date waste was received and removed from the storage area in the E-TRAX system. Larger shipments of waste are conducted twice a year-in June and December when the university conducts laboratory cleanouts. All containers in storage were closed, labeled and in good condition.

Several routine operations occur during the handling of hazardous waste at the permitted storage facility prior to shipment to another TSDF. These routine operations consist of:

- Adding absorbents to containers.
- Lab packing of waste.
- Neutralization of caustics and acids.
- Blending/bulking of compatible materials into larger containers.
- Stabilization of reactive wastes.
- Crushing spent scintillation vials.

Most of the hazardous waste generated at UK's campus is generated in laboratories and accumulated in containers that are 5 gallons or less. When a container becomes full at a satellite accumulation area (SAA), a trained staff person from the laboratory who is in control of the container, fills out an electronic waste pickup request form. EQMC staff reviews the waste information for accuracy and the information on the waste is entered into a hazardous waste tracking system (E-TRAX). The E-TRAX system then generates a "waste ticket" to be physically attached to the waste container. Each waste ticket includes the following information: ticket number; name of the person created the ticket, accumulation start date, location (building, room); waste profile; and container size. Responsible personnel at each satellite accumulation area must complete an online hazardous waste training to be granted access to the E-TRAX system. The system will automatically deny access if an individual's annual training expires.

EQMC staff is responsible for transferring hazardous waste from numerous SAAs (approximately 850 laboratories), and the 90-day central accumulation area (CAA) located in the Jacobs Science Center to the RCRA permitted storage area daily. The CAA is used to manage hazardous waste generated in the teaching laboratories located in the Jacobs Science Center. Universal waste at the university is primarily managed by the UK's Recycling Center.

9) Previous Inspection History

Kentucky Department for Environmental Protection (KDEP) has conducted 3 RCRA CEIs at the subject facility between 2020 and 2023 and found 14 violations during those inspections.

On August 30, 2022, KDEP conducted the most recent RCRA CEI at the subject facility and found 5 apparent violations of RCRA's requirements for making a hazardous waste determination, condition of SAA containers, closing containers, labeling containers, and maintenance and operation of facility.

10) Opening Conference

On August 23, 2023, EPA inspector Mark Anthony Relon, accompanied by KDEP inspector Amy McCracken and Scott Gerstner, arrived at the EQMC at approximately 9:18am. Maridely Loyselle, Environmental Affairs Compliance Assistant Director, immediately received the inspectors. Maridely Loyselle, and the inspectors were joined by Thomas Murrell, for the

opening conference. The inspectors introduced themselves, showed their credentials to Maridely Loyselle and Thomas Murrell, and explained the purpose of the visit.

The inspectors described the anticipated use of equipment (digital camera) during the inspection and provided a request for records. The EPA inspector explained that the Small Business Regulatory Enforcement Fairness Act's classification of a "small business" is generally set by the Small Business Administration using the business' SIC/NAICS code and annual receipts or number of employees. A copy of the EPA's information sheet for small businesses can be found at <https://www.epa.gov/sites/production/files/2017-06/documents/smallbusinessinfo.pdf>. The EPA inspector also discussed the company's ability, pursuant to 40 C.F.R. § 2.203, to assert a business confidentiality claim for information submitted to EPA. The company did not assert a business confidentiality claim.

Maridely Loyselle provided an overview of the facility's history and current operations during the opening conference. The inspection participants also discussed health and safety protocols and required personal protective equipment before Facility representative led the inspectors on a tour of the Facility operations.

11) Inspection Observations

EQMC

Acid Storage

EQMC manages a permitted storage area in the Acid Storage for managing hazardous waste acids that are generated by university operations (Figure 1). The inspectors observed two (2) 35-gallon containers and one 55-gallon container in this area. The containers were located adjacent to smaller containers of waste shelved on metal racks (Figures 2 through 4). The containers were equipped with drum cover lids, which were closed. One of the 35-gallon containers was labeled D001, D002 hazardous waste, included an accumulation start date, and identified with an indication of the hazards of the contents (Figure 3).

Metals Storage

EQMC manages a permitted storage area in the Metals Storage for managing hazardous waste metals that are generated by university operations. The inspectors observed two (2) 35-gallon containers and six (6) 55-gallon containers, and four (4) 5-gallon containers in this area. The containers were located adjacent to smaller containers of waste shelved on metal racks (Figures 5-10). The containers were equipped with drum cover lids, which were closed. The containers were labeled hazardous waste, included an accumulation start date, and identified with an indication of the hazards of the contents.

Oxidizer Storage

EQMC manages a permitted storage area in the Oxidizer Storage for managing hazardous waste oxidizers that are generated by university operations (Figure 11). The inspectors observed one 1-liter container in this area. The container was located with smaller containers of waste

shelved on metal racks adjacent to two (2) flammable cabinets (Figure 12). The container was equipped with a sealable lid, which was closed. The container was labeled hazardous waste hydrogen peroxide solution, included an accumulation start date, and identified with an indication of the hazards of the contents (Figure 13).

Gas Cylinder Storage

EQMC manages a permitted storage area in the Gas Cylinder Storage for managing hazardous waste compressed gas cylinders that is generated by university operations. The inspectors observed two (2) 1-liter containers in this area. The containers were located inside a box container (Figure 14). The containers were equipped with pressure cap lids, which were closed. The container was labeled hazardous waste, included an accumulation start date, and identified with an indication of the hazards of the contents.

Flammables Storage

EQMC manages a permitted storage area in the Flammables Storage for managing hazardous waste flammables that is generated by university operations. The inspectors observed twenty-three (23) 55-gallon containers and four (4) 5-gallon containers in this area. The containers were located in different sections of the room (Figures 15-18). The containers were equipped with drum cover lids, which were closed. The four (4) 5-gallon containers were labeled hazardous waste, included an accumulation start date, and identified with an indication of the hazards of the contents. The twenty-three containers were labeled hazardous waste, included an accumulation start date, and identified with an indication of the hazards of the contents. Inspectors observed two 55-gallon containers of used oil (Figure 20).

EQMC also manages universal waste aerosol cans in the Flammables Storage area. The inspectors observed two 55-gallon containers of universal waste aerosol cans in this area during the inspection. Two 55-gallon containers of aerosol cans, which were closed and marked with an accumulation start date, were labeled universal waste aerosol cans (Figure 19). The oldest date observed on any container of aerosol cans was April 13, 2023.

Bulking

EQMC manages a permitted storage area in the Bulking room for bulking hazardous waste generated by university operations. The inspectors observed three (3) 55-gallon containers in this area. The containers were located in process areas for bulking and were over absorbent material (Figures 21 and 22). The containers were equipped with drum cover lids, which were closed. The first container was labeled D001, F003 hazardous waste organic solvents, and identified with an indication of the hazards of the contents. The second container was labeled hazardous waste, included an accumulation start date, and identified with an indication of the hazards of the contents. The third container was labeled used oil.

Reactives Storage

EQMC manages a permitted storage area in the Reactives Storage for managing reactive waste that is generated by university operations. The inspectors observed one 100-milliliter container

and one 500-milliliter container in this area. The containers were located with other containers of waste shelved on metal racks (Figure 23). The containers were equipped with sealable lids, which were closed. The first container was labeled D001, D003 hazardous waste, included an accumulation start date, and identified with an indication of the hazards of the contents (Figure 24). The second container was labeled D002, D003 hazardous waste, included an accumulation start date, and identified with an indication of the hazards of the contents (Figure 25).

Toxic Room

EQMC manages a permitted storage area in the Toxic Room for managing toxic waste that is generated by university operations (Figure 26). The inspectors observed containers that were located on metal racks (Figure 27). The containers were equipped with cap lids, which were closed. The containers were labeled hazardous waste, included an accumulation start dates, and identified with an indication of the hazards of the contents.

Chemistry Physics Building (CP)

EQMC manages multiple SAAs in the CP for managing hazardous waste that is generated by university activities such as research labs, teaching labs, etc.

CP 348

The inspectors observed remnants of a spill in the CP 348 SAA (Figure 28). Inspectors asked facility personnel when the spill occurred and if they needed to notify emergency response contacts. Facility personnel stated that the spill occurred approximately a month before the date of this inspection and that there was no need for emergency response to be contacted since the facility was able to handle and clean up the spill themselves. There were no containers observed in this SAA.

Inspectors observed another SAA in this area (Figures 29 and 30). No containers were observed in this SAA as well. However, access to the SAA was difficult. Therefore, inspectors recommended facility personnel to provide more space for access to the SAA.

CP 310

No containers were found in this area.

CP 239

The inspectors observed two (2) 5-gallon containers and one 3-gallon container in this SAA. The containers were located between the CP239 exit door and laboratory equipment (Figure 31). The two (2) 5-gallon containers were equipped with cap lids, which were closed. The containers were labeled hazardous waste and identified with an indication of the hazards of the contents. The one 3-gallon container was equipped with a cover lid, which was not secure. The container was not labeled hazardous waste but included an indication of the hazards of the contents (Figure 33). One 500-milliliter container of Cupric Nitrate was discovered upon observing the inside of the 3-gallon container (Figure 32). Inspectors asked facility personnel if the Cupric

Nitrate was supposed to be in a corrosive container. Facility personnel stated that Cupric Nitrate was a potential oxidizer.

Inspectors asked facility personnel for a waste profile of the Cupric Nitrate. Facility personnel provided in an email on September 14, 2023, information about the Cupric Nitrate waste profile. The Cupric Nitrate was confirmed to be an oxidizer.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.15(a)(2)], which is a condition of the SAA Permit Exemption, a generator is required to use a container made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous waste to be accumulated, so that the ability of the container to contain the waste is not impaired.

CP 243

No containers were found in this area.

CP 245

No containers were found in this area.

CP34

No containers were found in this area.

CP8

No containers were found in this area.

Chemical Engineering Building

EQMC manages multiple SAAs in the Chemical Engineering Building for managing waste that is generated by university activities such as research labs, teaching labs, etc.

Room 770

The inspectors observed two (2) bag containers and one 2.5-liter container in this area's SAA. The containers were located in a separate room within the lab. The two (2) bag containers were equipped with a sealable lid, which were closed. The containers were labeled hazardous waste and not identified with an indication of the hazards of the contents (Figures 34 and 35). The one 2.5-liter container was equipped with a cap lid, which was closed. The container was labeled hazardous waste and not identified with an indication of the hazards of the contents (Figure 36).

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.15(a)(5)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers (i) with the words "Hazardous Waste" and (ii) with an indication of the hazards of the contents.

Inspectors observed processing containers within the SAA. Inspectors recommended facility personnel to move processing containers outside the SAA.

Room 763

Inspectors observed one 15-gallon container in this area (Figure 38). The container was located in the SAA, and it was equipped with a bung lid, which was closed. The container was labeled hazardous waste and identified with no indication of the hazards of the contents (Figure 37).

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.15(a)(5)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers (i) with the words “Hazardous Waste” and (ii) with an indication of the hazards of the contents.

Room 9 and 12 (Machining Lab)

EQMC manages a SAA in Room 9 and Room 12 for managing hazardous waste that is generated by machining labs, fabrication, etc.

The inspectors observed facility personnel making hazardous waste determinations in this SAA.

Jacobs Science Building

Central Accumulation Area (CAA)

EQMC manages a hazardous waste CAA. The area is located near a loading dock. The area was identified with a sign which read “danger, hazardous waste storage.” EQMC manages ignitable waste ignitable waste in this CAA, and the inspectors observed “No Smoking” signs near the entrance of the CAA.

The CAA is equipped with an internal communications or alarm system capable of providing immediate emergency instruction to facility personnel; it is equipped with a device capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams; it is equipped with portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment; and it is equipped with water to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray system.

HSRB

Room 142

EQMC manages a SAA in HSRB Room 142 for managing waste that is generated by laboratory activities such as research, teaching, etc. (Figure 40). The inspectors observed one 50-milliliter container in this SAA (Figure 39). The container was located inside a laboratory drawer at Lab Space 450, and it was equipped with a cap lid, which was closed. The container was not labeled hazardous waste but identified with an indication of the hazards of the contents. Inspectors asked facility personnel if it was hazardous waste. Facility personnel stated that it was determined as hazardous waste but did not properly label the container.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.15(a)(5)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers (i) with the words “Hazardous Waste” and (ii) with an indication of the hazards of the contents.

12) Records Review

Contingency Plan and Quick Reference Guide (QRG):

The actions that facility personnel should take in response to an emergency are described in the facility’s Contingency Plan Contingency Plan, which was last updated on December 1, 2017.

The plan describes actions facility personnel must take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.

The plan describes arrangements agreed to with the local police department, fire department, other emergency response teams, emergency response contractors, equipment suppliers, local hospitals or the Local Emergency Planning Committee.

The plan lists the names and emergency telephone numbers for persons identified as emergency coordinators. Robert Kjelland is listed as the primary emergency coordinator, and the other individuals are listed in the order in which they will assume responsibility as alternates.

The plan includes a list of all emergency equipment at the facility. The list includes fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment. The list appears to be up to date. The plan includes the location and a physical description of each item on the list, and a brief outline of its capabilities.

The plan includes an evacuation plan for personnel. This plan describes signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.

A copy of the Contingency Plan (and its quick reference guide) was most recently submitted to the police department, fire department, state and local emergency response teams and the local emergency planning committee on December 8, 2017.

The quick reference guide includes the types/names of hazardous waste in layman’s terms and the associated hazard associated with each hazardous waste present at any one time; the estimated maximum amount of each hazardous waste that may be present at any one time; the identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff; a map of the facility showing where hazardous wastes are generated, accumulated and treated and routes for accessing these wastes; a street map of the facility in relation to surrounding businesses, schools and residential areas; the locations of water supply; the identification of on-site notification systems; and the name of the emergency coordinator(s) and emergency telephone number(s).

Training Records:

The inspectors reviewed facility job descriptions and employee names that were provided. Each description included the requisite skill, education, or other qualifications, and duties of facility personnel assigned to that position.

EQMC provided a written description of the type and amount of both introductory and continuing training to be given to each person filling the positions listed above. The inspectors reviewed records of employee hazardous waste training completed in 2020 through 2023.

Waste Manifest and Land Disposal Restriction (LDR) Records:

The inspectors reviewed available hazardous waste manifest records and land disposal restriction forms for shipments of hazardous waste sent since calendar year 2020. Hazardous waste manifest records show that D005, D006, D007, D011 hazardous waste liquid (barium, lead), D001, U058, U150 hazardous waste liquid (lindane, melphalan), and D001, F003 hazardous waste liquid (xylene, ethanol), are routinely shipped to Veolia ES Technical Solutions, L.L.C. (OHD093945293, ILD098642424, and TXD000838896), and the most recent shipment was made on August 23, 2023.

Weekly Inspection Records:

The inspectors reviewed EQMC's available records of inspections of the hazardous waste central accumulation area (CAA) since calendar year 2020. The inspection log includes a checklist to record observations about leaking containers and for deterioration of containers caused by corrosion or other factors. The inspection log includes a checklist to record observations about aisle space, visible container labels, complete container labels, closed lids and bungs, condition of containers, container stacking, container storage time, housekeeping, emergency communication, fire extinguisher, spill response kit, etc. The records include the date and time of the inspection and the name, signature and initials of the employee conducting the inspection. Employees do routinely record inspection observations and subsequent follow-up actions on the inspection log. No inspection records were provided for the time period(s) of February 3, 2021 to February 12, 2021; January 12, 2022 to January 26, 2022; November 2, 2022 through January 4, 2023; and February 1, 2023 to February 15, 2023.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17(a)(1)(v)], which is a condition of the LQG Permit Exemption, a generator is required to, at least weekly, inspect central accumulation areas looking for leaking containers and for deterioration of containers caused by corrosion or other factors.

Monthly Inspection Records:

Inspectors observed monthly inspection records for the EQMC. Inspectors observed no inspection records for the month of March and May of calendar year 2021.

Pursuant to HW Permit 47594, III.C.3 Testing and Maintenance of Equipment, the Permittee shall comply with all requirements set forth under 401 KAR 34:030, Section 4. Permittee shall

test and maintain all equipment specified on Permit Condition III.C.1 and Permit Condition III.C.2 to ensure proper operation in time of emergency. In addition to the inspection schedule given in Attachment F-2, all emergency equipment described in the Contingency Plan shall be checked at least once a month for quality and proper functional assurance unless more often is necessary.

13) Closing Conference

The inspectors conducted the exit meeting at 4:08pm with Robert Kjelland, Maridely Loyselle, and David Hibbard. During this meeting, the inspectors stated their preliminary conclusions of the inspection. EQMC agreed to provide hazardous waste determinations of the Cupric Nitrate and Sodium Thiosulfate and proper labeling of containers. On September 14, 2023, Robert Kjelland provided a response for the request of records in an email to Mark Anthony Relon and Amy McCracken.

14) List of Attachments

Attachment 1 – Photo Log:

15) Signed

MARK ANTHONY RELON Digitally signed by MARK ANTHONY
RELON
Date: 2023.12.19 07:43:16 -08'00'

Mark Anthony Relon
Environmental Engineer

16) Concurrence

ARACELI CHAVEZ Digitally signed by ARACELI CHAVEZ
Date: 2023.12.21 10:31:06 -05'00'

Araceli B. Chavez
RCRA Enforcement Section

Attachment 1 – Photo Log

40 Photos taken on: August 23, 2023

Photos taken by: Mark Anthony Relon

Photos taken with: Kodak PixPro Digital Camera

EPA Property Tag: SX9088

Attachment 1- University of Kentucky

RCRA CEI Photographs



Figure 1: 10:21 AM Acid Storage
Signage of Acid Storage area.

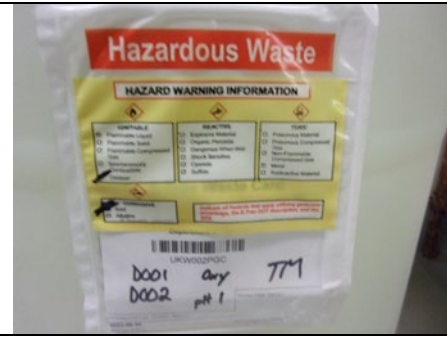


Figure 2: 10:21 AM Acid Storage
(Photo 1 of 2) One of two 35-gallon containers
observed with hazardous waste label,
accumulation start date, and indication of the
hazards of the contents.



Figure 3: 10:22 AM Acid Storage
(Photo 2 of 2) One of two 35-gallon containers
observed with hazardous waste label,
accumulation start date, and indication of the
hazards of the contents.



Figure 4: 10:24 AM Acid Storage
Overall perspective of Acid Storage area with one
55-gallon container observed.

Attachment 1- University of Kentucky

RCRA CEI Photographs



Figure 5: 10:26 AM Metals Storage
Two of six 55-gallon containers and two 35-gallon containers with hazardous waste label, accumulation start date, and indication of the hazards of the contents.



Figure 6: 10:26 AM Metals Storage
Four (4) 5-gallon containers with hazardous waste label, accumulation start date, and indication of the hazards of the contents.



Figure 7: 10:27 AM Metals Storage
(Photo 1 of 2) Three of six 55-gallon containers with hazardous waste label, accumulation start date, and indication of the hazards of the contents.



Figure 8: 10:27 AM Metals Storage
(Photo 2 of 2) Three of six 55-gallon containers with hazardous waste label, accumulation start date, and indication of the hazards of the contents.

Attachment 1- University of Kentucky

RCRA CEI Photographs



Figure 9: 10:27 AM Metals Storage
Four of six 55-gallon containers with hazardous waste label, accumulation start date, and indication of the hazards of the contents.



Figure 10: 10:27 AM Metals Storage
Two of six 55-gallon containers with hazardous waste label, accumulation start date, and indication of the hazards of the contents.



Figure 11: 10:29 AM Oxidizer Storage
Signage of Oxidizer Storage area.



Figure 12: 10:29 AM Oxidizer Storage
Two flammable cabinets observed.

Attachment 1- University of Kentucky

RCRA CEI Photographs



Figure 13: 10:32 AM Oxidizer Storage
One 1-liter container with hazardous waste label, accumulation start date, and no proper indication of the hazards of the contents.

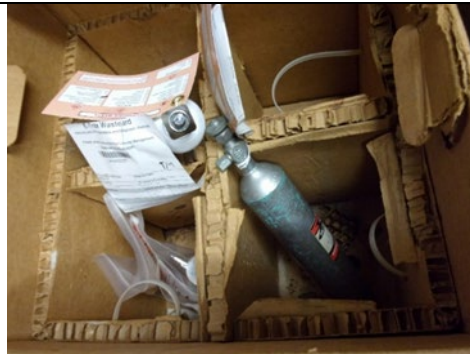


Figure 14: 10:34 AM Gas Cylinder Storage
Two (2) 1-liter container with hazardous waste label, accumulation start date, and no proper indication of the hazards of the contents.



Figure 15: 10:34 AM Flammables Storage
Four (4) 5-gallon containers and one of twenty-three 55-gallon containers with hazardous waste label, accumulation start date, and an indication of the hazards of the contents.



Figure 16: 10:39 AM Flammables Storage
Eight of twenty-three 55-gal containers with hazardous waste label, accumulation start date, and an indication of the hazards of the contents.

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Figure 17: 10:42 AM Flammables Storage
Nine of twenty-three 55-gal containers with hazardous waste label, accumulation start date, and no proper indication of the hazards of the contents.



Figure 18: 10:42 AM Flammables Storage
Four of twenty-three 55-gal containers with hazardous waste label, accumulation start date, and no proper indication of the hazards of the contents.



Figure 19: 10:42 AM Flammables Storage
Two (2) 55-gal containers of universal waste aerosol cans and one of twenty-three 55-gallon containers with hazardous waste label, accumulation start date, and no proper indication of the hazards of the contents.



Figure 20: 10:42 AM Flammables Storage
Two (2) 55-gallon containers of used oil observed.

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Figure 21: 10:46 AM Bulking
Two of three 55-gal containers observed.
Containers included a hazardous waste label, accumulation start date, and an indication of the hazards of the contents.



Figure 22: 10:46 AM Bulking
Three of three 55-gal containers observed.
Container labeled as Used Oil.



Figure 23: 10:50 AM Reactives Storage
Signage of Reactives Storage area.

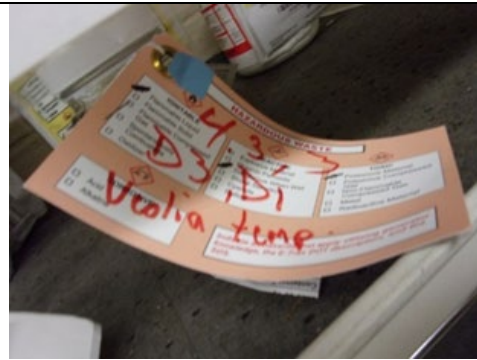


Figure 24: 10:50 AM Reactives Storage
One 100-milliliter container with hazardous waste label, accumulation start date, and an indication of the hazards of the contents.

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Figure 25: 10:50 AM Reactives Storage
One 500-milliliter container with hazardous waste label, accumulation start date, and an indication of the hazards of the contents.



Figure 26: 10:52 AM Toxic Room
Signage of Toxic Room area.



Figure 27: 10:52 AM Toxic Room
Overall perspective of Toxic Room observed.



Figure 28: 11:12 AM CP 348
Satellite accumulation area with remnants of cleaned up spill observed.

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Figure 29: 11:14 AM CP 348
(Photo 1 of 2) SAA with limited access observed.



Figure 30: 11:14 AM CP 348
(Photo 2 of 2) SAA with limited access observed.



Figure 31: 11:27 AM CP 239
Two (2) 5-gallon containers and one 3-gallon
container in SAA observed.



Figure 32: 11:32 AM CP 239
(Photo 1 of 2) 3-gallon SAA container observed
with Cupric Nitrate.

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Figure 33: 11:33 AM CP 239, 243, and 245 (Photo 2 of 2) 3-gallon SAA container observed with a corrosive indication of the hazards of the contents.



Figure 34: 12:06 PM Chemical Engineering Building: Room 770
One of two bag containers observed in SAA. No indication of the hazards of the contents.



Figure 35: 12:06 PM Chemical Engineering Building: Room 770
Two of two bag containers observed in SAA. No indication of the hazards of the contents.

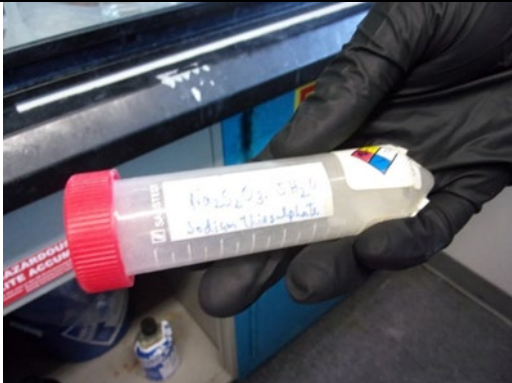


Figure 36: 12:07 PM Chemical Engineering Building: Room 770
One 2.5-liter container observed in SAA. No indication of the hazards of the contents.

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Figure 37: 12:14 PM Chemical Engineering Building: Room 763 (Photo 1 of 2) One 15-gallon container observed in SAA. No indication of the hazards of the contents.	Figure 38: 12:14 PM Chemical Engineering Building: Room 763 (Photo 2 of 2) One 15-gallon container observed in SAA. No indication of the hazards of the contents.

	
Figure 39: 1:10 PM HSRB: Room 142 One 50-milliliter container observed in SAA. Container not labeled hazardous waste.	Figure 40: 1:15 PM HSRB: Room 142 Signage of Room 142.