

RCRA Inspection Report

1) Inspector and Author of Report

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U.S. Environmental Protection Agency (USEPA),
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 Louisville - ESPC
1810 Arthur Street
Louisville, Kentucky 40208

EPA ID#: KY0001012012
NAICS #: 61131 – Colleges, Universities, and
Professional Schools

3) Responsible Officials

Catherine Price
Hazardous Materials & Environmental
Manager
cathy.price@louisville.edu

4) Inspection Participants

Catherine Price, University of Louisville
John Morris, University of Louisville
Quintin Deppert, University of Louisville
Natalie Gardiner, Kentucky Department for Environmental Protection (KYDEP)
Scott Gerstner, KYDEP
Kayla Acosta, USEPA

5) Date of Inspection

June 04, 2024, at 8:30 A.M.

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 KY0-001-012-012.

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 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 [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 [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in KAR 39:080, Section 1(1) [40 C.F.R. § 262.15(a)] (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”).

Pursuant to 401 KAR 39:080, Section 3(1) [40 C.F.R. § 273.9], a large quantity handler of universal waste (LQHUW) is a universal waste handler who accumulates 5,000 kilograms or more total of universal waste (batteries, pesticides, mercury-containing equipment, lamps, or aerosol cans, calculated collectively) at any time.

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced compliance evaluation inspection to determine University of Louisville - ESPC compliance with the conditions of its RCRA Hazardous Waste Facility Operating Permit No. KY0001012012, the applicable requirements of RCRA and the corresponding Kentucky regulations. This was an EPA lead inspection.

8) Facility Description

The University of Louisville (U of L) is a state-supported research university located in Kentucky’s largest metropolitan area. It was a municipally supported public institution for many decades prior to joining the university system in 1970. The University has three campuses: the Belknap Campus, the Health Sciences Center (HSC), and the Shelby Campus.

The U of L Department of Environmental Health and Safety (DEHS) is responsible for the collection and storage of hazardous waste generated at the Belknap and Health Sciences Campuses, and occasionally the Shelby campus. The DEHS manages hazardous wastes at the Environmental Protection Services Center (EPSC). The U of L’s EPSC (known hereinafter as “EPSC” or “the facility” includes an administration building (1800 Arthur Street) and the Hazardous Waste Storage Building (1810 Arthur Street). Hazardous waste generated at the Belknap, HSC, and Shelby campuses are shipped to the Hazardous Waste Storage Building

where they are stored prior to off-site shipment for treatment and disposal. Most of the hazardous wastes managed at the EPSC are from research laboratories, trade shops, art studios, athletic facilities, teaching laboratories, and routine maintenance.

Most waste determinations are made using generator knowledge with the facility tracking waste determinations and waste profiles through a database called Chematix. For wastes that cannot be determined through generator knowledge, the facility uses Microbac Laboratories, Inc. for laboratory analysis. The Hazardous Waste Storage Building at the EPSC is covered by permit number KY0001012012 which was issued by the Commonwealth of Kentucky on January 01, 2023. The permit allows EPSC to store hazardous waste in containers and to conduct the following treatment activities: deactivation, neutralization, stabilization, and waste consolidation. Veolia ES Technical Solutions picks up waste from the facility twice a year.

The EPSC offloads hazardous wastes onto the shipping dock that is on the northwestern side of the building and transfers them to an open area of the building designated as Room 108. In Room 108, the waste containers are processed (identity verified, relabeled, and entered into a tracking system) and transferred to the designated storage area, based on characteristics and compatibility.

The U of L - EPSC has been operating since 1998 and employs three workers. The facility operates Monday through Friday from 8:00am-4:30pm. Access into the facility is controlled by a locked gate, 24/7 security, and an alarm system. Signage reading "Restricted Area—Unauthorized Persons Keep Out" was observed along the perimeter fence of the facility (Photo 1). Personnel use mobile telephones and two-way radios capable of summoning emergency assistance.

The EPSC has notified as a LQG of hazardous waste and a treater, storer, or disposer (TSD) of hazardous waste. The facility is also registered as a large quantity handler (LQH) of universal waste and collects universal waste generated at the different campuses such as used lamps and used batteries. The facility last notified of its regulated waste activity on December 18, 2023. The following waste codes are associated with waste generated at the facility:

D001 D002 D003 D004 D005 D006 D007 D008 D009 D010 D011 D016 D017 D018 D019 D020 D021 D022 D023 D024 D026 D027 D028 D029 D035 D036 D037 D038 D039 D040 D041 D042
F001 F002 F003 F004 F005 F027
P001 P003 P005 P012 P022 P028 P030 P042 P043 P048 P063 P066 P075P077 P081 P087 P098 P101 P105 P106 P108 P119 P188 P204
U001 U002 U003 U006 U007 U010 U012 U019 U020 U028 U031 U034 U035 U036 U037 U044 U052 U053 U056 U057 U058 U059 U067 U068 U069 U071 U072 U076 U077 U080 U081 U088 U091 U092 U107 U108 U110 U112 U113 U117 U122 U123 U124 U129 U133 U134 U135 U136 U138 U144 U145 U147 U150 U151 U154 U157 U159 U160 U161 U162 U165 U169 U170 U177 U181 U184 U187 U188 U190 U196 U201 U204 U205 U206 U210

EPSC's hazardous waste permit No. KY0001012012 allows EPSC to store hazardous waste in containers and to conduct the following treatment activities: deactivation, neutralization, stabilization, and waste consolidation. The hazardous waste permit expires on January 01, 2033. The following table is from the RCRA permit and shows the facility's permitted storage limits.

TABLE III.1 TREATMENT AND/OR STORAGE PERMITTED AREAS/UNITS			
Unit Type	Number of Units	Maximum Capacity	Unit Specific Requirement
Liquid or Solid Waste Container Storage Areas ¹	10	6,910 gallons	Permit Condition III.K
Confined Gas Container Storage Area	1	2,000 pounds	Permit Condition III.K
Container Treatment	1	15 gallons per day	Permit Condition III.K
Total Permitted Units ²	11	See Above	

9) Previous Inspection History

The KYDEP and the USEPA have conducted four joint RCRA CEIs at the subject facility between 2019 and 2024.

On August 22, 2023, the KYDEP and the USEPA conducted the most recent RCRA CEI at the subject facility and found three apparent violations of RCRA's requirements for container labeling, weekly inspections of the central accumulation area (CAA), and record keeping. No enforcement action was issued, and the facility made corrective actions to returned to compliance.

10) Opening Conference

On June 04, EPA inspector Kayla Acosta, accompanied by KYDEP inspectors Natalie Gardiner and Scott Gerstner, arrived at EPSC at approximately 8:30 A.M. John Morris, Chemical Regulatory Specialist immediately received the inspectors. John Morris and the inspectors were joined by Quinton Deppert, Hazmat Technician for the opening conference. The inspectors introduced themselves, showed their credentials, and explained the purpose of the visit.

The inspectors described the anticipated use of equipment (iPad) 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.

John Morris 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 Mr. Morris led the inspectors on a tour of the Facility operations.

11) Inspection Observations

ROOM 108

In Room 108, the waste containers are processed and data is entered into a waste tracking system. Waste containers are then transferred to the designated storage area, based on characteristics and compatibility. Wastes are segregated via a concrete berm with signage for each segregated area. The following segregated areas were observed: Organic Acids, Oxidizers and Peroxides, Inorganic Acids, Acute Toxics, Caustics and Bases, Non-flammable organics, and Heavy Metals (Photos 2-7). Veolia ES Technical Solutions was at the facility working on packing waste to transport offsite during the inspection. This room contains fire control equipment and spill control equipment. During this part of the inspection the inspectors were joined by Catherine Price, Hazardous Materials & Environmental Manager.

All hazardous waste containers (except for two in the Acute Toxics section) were closed, labeled hazardous waste, marked with an indication of the hazards and were labeled with an accumulation start date. The oldest date observed was 08/28/2023. In the Acute Toxics section, the inspectors observed one 30-gallon container and one 55-gallon container of hazardous waste that were not labeled with an indication of the hazard of the contents. Both containers did have a hazardous waste label, an accumulation start date, and were closed.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17(a)(5)(i)(B)], a large quantity generator must mark or label its containers with the following: (B) An indication of the hazards of the contents (examples include, but are not limited to, the applicable hazardous waste characteristic(s) (i.e., ignitable, corrosive, reactive, toxic); hazard communication consistent with the Department of Transportation requirements at 49 CFR part 172 subpart E (labeling) or subpart F (placarding); a hazard statement or pictogram consistent with the Occupational Safety and Health Administration Hazard Communication Standard at 29 CFR 1910.1200; or a chemical hazard label consistent with the National Fire Protection Association code 704).

The facility representatives immediately marked the containers with an indication of the hazard for toxicity.

There was also a separate section for universal waste storage (Photos 8-9). All containers of universal waste were labeled “Universal Waste”, closed, and marked with an accumulation start date. The oldest date observed was 12/15/2023.

Compressed gases that are waste are also located within Room 108 next to the loading dock inside a cage. The inspectors observed one small 1-liter container labeled “Hazardous Waste”, closed, dated 03/18/2024, and marked with an indication of the hazard of the contents (Photos 10).

ROOM 110—REACTIVES

Reactive waste is stored in an explosive proof room. The room also contains a CO2 fire suppression system. All hazardous waste in this room was observed to be closed, labeled with the words “Hazardous Waste”, marked with an indication of the hazard of the contents, and were labeled with an accumulation start date. The oldest date observed was 12/13/2023.

ROOM 111—BULKING AND BLENDING

This room is used for waste bulking, blending, and consolidation activities. This room is equipped with fire control equipment and spill control equipment. The inspectors observed one 55-gallon container of formalin debris. The container was closed, labeled “Hazardous Waste”, marked with an indication of the hazard of the contents, and labeled with an accumulation start date of 05/24/2024 (Photo 11).

ROOM 112—FLAMMABLE STORAGE

Flammable waste is stored in this room which is equipped with fire control equipment and spill control equipment. Waste stored in smaller containers such as quart-size containers to 5-gallon containers are consolidated into 55-gallon drums. Waste stored on shelves in smaller containers are placed in secondary containment trays (Photos 12-14). All hazardous waste in this room was observed to be closed, labeled with the words “Hazardous Waste”, marked with an indication of the hazard of the contents, and were labeled with an accumulation start date. The oldest date observed was 12/13/2023.

LOADING DOCK

The inspectors observed two pallets of shrink-wrapped lead acid batteries on the loading dock (Photos 15-16). Both pallets had one “Universal Waste” label on the shrink wrap and were labeled with accumulation start dates of 01/25/2024 and 04/12/2024. It did not appear that each lead acid battery was individually labeled with “Universal Waste”. Shrink-wrapped pallets do not constitute as a container. Therefore, each lead acid battery should have a universal waste label or, the lead acid batteries must be placed in a structurally sound container which should have a universal waste label placed on the container. No hazardous waste was observed in this area.

Pursuant to 401 KAR 39:080, Section 3(1) [40 C.F.R. § 273.34(a)], universal waste batteries (i.e., each battery), or a container or tank in which the batteries are contained, must be labeled or

marked clearly with any one of the following phrases: “Universal Waste—Battery(ies),” or “Waste Battery(ies),” or “Used Battery(ies);”

OUTSIDE

Outside on the northwest side of the property was a double-walled 200-gallon above-ground storage tank that used to be used to collect used oil (Photo 17). The tank is empty and is not in-service.

On the southwest side of the property there is a trailer that is used to store universal waste lamps (Photos 18-19). All the containers were closed, labeled “Universal Waste—Used Lamps”, and were labeled with an accumulation start state. No container was observed to be stored longer than one year.

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, which was last updated on March 14, 2023.

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. Catherine Price 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 University of Louisville Hospital, University of Louisville Police Department, and Louisville Fire Department on 03/15/2023.

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 for an environmental health technician, senior health physics technologist, chemical regulatory specialist, and hazardous materials and environmental manager. Each description included the requisite skill, education, or other qualifications, and duties of facility personnel assigned to that position.

The facility 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 2023 and 2024.

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 2022. Hazardous waste manifest records show that hazardous wastes are routinely shipped to Veolia ES Technical Solutions (EPA ID OHD093945293) in West Carrollton, Ohio. The most recent shipment was made on 12/14/2024 and on the day of the inspection Veolia employees were onsite preparing to load a new shipment.

Universal Waste Shipment Documents:

Universal waste shipment documents were available for review. Universal waste lamps and batteries are shipped to Lightning Resources, LLC in Greenwood, IN. The last shipment was on 04/08/2024.

Inspection Records:

Daily inspections include safety and emergency equipment such as shower and eyewash stations where the pressure and signs of leaking are checked. The fire alarm system is inspected daily for any signs of power failure. The permitted container storage areas are inspected for inadequate aisle space, leaking or damaged containers, incompatible waste, cracks or deterioration of secondary containment, open containers, and container labeling. The last inspection was conducted on 06/03/2024.

Weekly inspections include safety and emergency equipment such as spill control equipment, PPE, and emergency lighting. Fire control equipment such as fire extinguishers, the CO2 system, combustible gas detection system, and two-way radios are inspected for operability. The last inspection was conducted on 05/29/2024.

Monthly inspections include SCBA air packs, first aid supplies, the fire alarm system, security fence, security alarm, warning signs, and locks. The last inspection was conducted on 05/20/2024.

No issues were noted for inspection records.

Waste Determinations:

The U of L – EPSC uses generator knowledge for most waste streams and keeps waste profiles in their Chematix database, which was available for review during the inspection. Wastes that cannot be identified with generator knowledge are sent for laboratory analysis to Microbac Laboratories, Inc. and records of laboratory analysis were available for review.

Annual Reports:

The facility's annual reports have consistently been submitted on time and were available for review. No issues noted.

13) Closing Conference

The inspectors conducted the exit meeting with Catherine Price and John Morris. During this meeting, the inspectors stated their preliminary conclusions of the inspection.

14) List of Attachments

Attachment 1 – Photo Log:

15) Signed

KAYLA
ACOSTA

Digitally signed by
KAYLA ACOSTA
Date: 2024.08.09
12:25:39 -04'00'

Kayla Acosta
Physical Scientist

16) Concurrence

ALAN
NEWMAN

Digitally signed by
ALAN NEWMAN
Date: 2024.08.12
09:17:01 -04'00'

Alan R. Newman
Acting Chief
RCRA Enforcement Section

Attachment 1 – Photo Log

[19] Photos taken on: 06/04/2024

Photos taken by: Kayla Acosta

Photos taken with: iPad

EPA Property Tag: SS8386



Photo 1	IMG-2024060409584158416218661.jpg
06/04/2024 09:58 AM (ET)	Photographer: Kayla Acosta
Outside, signage along perimeter fence.	38.22124275, -85.75287269



Photo 2	IMG-2024060409043443481263.jpg
06/04/2024 09:04 AM (ET)	Photographer: Kayla Acosta
Room 108, organic acids section.	38.22069271, -85.75231105



Photo 3	IMG-2024060409182418241705603.jpg
06/04/2024 09:18 AM (ET)	Photographer: Kayla Acosta
Room 108, inorganic acids section.	38.22056701, -85.75217558



Photo 4	IMG-2024060409231823181593812.jpg
06/04/2024 09:23 AM (ET)	Photographer: Kayla Acosta
Room 108, acute toxics section.	38.22056276, -85.75217213



Photo 05	IMG-2024060409334333431697276.jpg
06/04/2024 09:33 AM (ET)	Photographer: Kayla Acosta
Room 108, caustics and bases section.	38.22056205, -85.75217076



Photo 06	IMG-2024060409361536151804067.jpg
06/04/2024 09:36 AM (ET)	Photographer: Kayla Acosta
Room 108, non-flammable organics section.	38.22055019, -85.75216035



Photo 07	IMG-2024060409391739171515029.jpg
06/04/2024 09:39 AM (ET)	Photographer: Kayla Acosta
Room 108 heavy metals section.	38.22063451, -85.7522507



Photo 08	IMG-202406040910041041687416.jpg
06/04/2024 09:10 AM (ET)	Photographer: Kayla Acosta
Room 108, universal waste section.	38.22069108, -85.75231095



Photo 09	IMG-2024060409101210121719929.jpg
06/04/2024 09:10 AM (ET)	Photographer: Kayla Acosta
Room 108, universal waste section.	38.22069235, -85.75231103



Photo 10	IMG-2024060409533253322032840.jpg
06/04/2024 09:53 AM (ET)	Photographer: Kayla Acosta
Compressed gases storage.	38.22059208, -85.75220258



Photo 11	IMG-202406040946054651709519.jpg
06/04/2024 09:46 AM (ET)	Photographer: Kayla Acosta
Room 111, bulking and blending.	38.22057276, -85.75218247



Photo 12	IMG-202406040949004902121942.jpg
06/04/2024 09:49 AM (ET)	Photographer: Kayla Acosta
Room 112, flammable storage.	38.22058928, -85.75219344



Photo 13	IMG-2024060409503850381612512.jpg
06/04/2024 09:50 AM (ET)	Photographer: Kayla Acosta
Room 112, flammable storage.	38.2205813, -85.75219134



Photo 14	IMG-2024060409514851481602888.jpg
06/04/2024 09:51 AM (ET)	Photographer: Kayla Acosta
Room 112, flammable storage.	38.22057778, -85.75218154



Photo 15	IMG-2024060409564556452430891.jpg
06/04/2024 09:56 AM (ET)	Photographer: Kayla Acosta
Loading dock.	38.22068884, -85.75231118



Photo 16	IMG-2024060409565256522442738.jpg
06/04/2024 09:56 AM (ET)	Photographer: Kayla Acosta
Loading dock.	38.22068853, -85.75231085



Photo 17	IMG-2024060409585058504577398.jpg
06/04/2024 09:58 AM (ET)	Photographer: Kayla Acosta
Above ground storage tank for used oil, no longer in service.	38.22123969, -85.75287044



Photo 18	IMG-202406041001221222217065.jpg
06/04/2024 10:01 AM (ET)	Photographer: Kayla Acosta
Trailer for universal waste lamps.	38.22054894, -85.75230444



Photo 19	IMG-202406041001221222217065.jpg
06/04/2024 10:01 AM (ET)	Photographer: Kayla Acosta
Trailer for universal waste lamps.	38.22085018, -85.75250553