RCRA Inspection Report

1) Inspector and Author of Report

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Enforcement and Compliance Assurance Division
Chemical Safety and Land Enforcement Branch
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2) Facility Information

University of Florida
3076 Longleaf Road
Gainesville, Florida 32611
Duval County

EPA ID# FLD000823393

3) Responsible Officials

Matthew Doty
Hazardous Material Program Manager

4) Inspection Participants

Matthew Doty	University of Florida
Bonnie Bradshaw	Florida Department of Environmental Protection (FDEP)
Raj Aiyar	US EPA

5) Date of Inspections

March 9, 2023, 9:30 a.m.

6) Applicable Regulations[1]

Subtitle C of the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. §§ 6921 – 6939g), the Chapter 403 of the Florida Statutes (Fla. Stat.), Fla. Stat. §§ 403.702 et seq.; 40 Code of Federal Regulation (C.F.R.), Parts 260 - 270, 273 & 279, and Rule 62-730 et seq. of the Fla. Admin. Code Ann.

Pursuant to Fla. Admin. Code Ann. r. 62-730.020(1) [40 C.F.R. § 262.10], a Large Quantity Generator (LQG) is a generator who generates greater than or equal to 1,000 kilograms (2200 lbs) of non-acute hazardous waste in a calendar month.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17], a LQG may accumulate hazardous waste on-site for 90 days or less without a permit or without having

[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.

interim status, as required by Section 403.722 of the Florida Statutes, Fla. Stat. § 403.722 [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17] (hereinafter referred to as the "LQG Permit Exemption").

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(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 the 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 Fla. Admin. Code Ann. r. 62-730.160(1) [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.16(b) or §262.17(a)], except as required in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)] (hereinafter referred to as the "SAA Permit Exemption").

Pursuant to Fla. Admin. Code Ann. r. 62-730.185(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, or lamps, calculated collectively) at any time.

NOTE: As of June 18, 2018, the State of Florida has adopted the recently updated Federal hazardous waste rules, more commonly known as the Generator Improvement Rule. Final Operating and Corrective Action Permit 17756-006-HO-006, effective March 27, 2019.

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced compliance evaluation inspection to determine University of Florida (thereinafter UF, University, or the facility) compliance with the applicable requirements of RCRA and the corresponding Florida Department of Environmental Protection (FDEP) regulations. This inspection was conducted jointly with a representative of FDEP.

8) Facility Description

The University is a state-supported, public, land-grant research university located in Gainesville, Florida. The property is owned by the State University system and consists of approximately 1,900 acres (main campus). The UF operates approximately 2,700 teaching and research laboratories distributed through approximately 132 buildings and 20 colleges. The University covers all areas of engineering, biomedical, genetic, nuclear, medical, agricultural, and natural science research studies. Each laboratory is a potential satellite accumulation area (SAA) for hazardous waste generated within the laboratory. The UF operations also include several support services such as maintenance, grounds, motor pool and an athletic department. The UF also provides all areas of liberal and performing arts studies. The UF was founded in 1858 and has been operating at its present location since September 26, 1906. UF now serves over 55,000 students.

In its most recent notification of regulated waste activity (FDEP Form 8700-12FL) dated November 15, 2022, UF identified itself as a large quantity generator (LQG) of hazardous waste, a mixed waste (hazardous and radioactive) generator, and a transporter of hazardous waste. On March 27, 2019, UF was issued FDEP Permit Number 17756-HO-006 for container storage of hazardous waste and site-wide Hazardous and Solid Waste Amendments (HSWA) Corrective Action. The expiration date of this permit is April 5, 2024. UF's North American Industry Classification System (NAICS) code is 611310-Colleges, Universities and Professional schools. The quantity of hazardous waste generated in 2021 was approximately less than 80,000 kilograms (kg) and in 2022, it exceeded over 95,000 kg.

9) Previous Inspection History

On December 16-17, 2021, EPA and FDEP conducted a RCRA compliance evaluation inspection (CEI) at the facility and RCRA deficiencies were discovered. The facility returned to compliance on February 8, 2022.

10) Opening Conference

On March 9, 2023, inspectors from the U.S. EPA and FDEP arrived at UF to inspect the facility to determine its compliance status with both RCRA and the State of Florida hazardous waste regulations. UF was represented by Matt Doty, Hazardous Material Program Manager. Upon entering the facility, the inspectors introduced themselves, showed their credentials, stated the purpose of the visit, and discussed the scope of the inspection.

The EPA inspector 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 facility did not assert a business confidentiality claim during the inspection. The inspectors described the anticipated use of equipment a digital camera during the inspection and requested a list of records to be reviewed as part of the inspection.

The Small Business Regulatory Enforcement Fairness Act's (SBREFA) classification of a "small business" is generally set by the Small Business Administration. 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 facility representative provided an overview of the facility's history and current operations during the opening conference. The inspection participants discussed the health and safety protocols and the required personal protective equipment. The facility representative later led the inspectors on a tour of the facility's operations.

11) Findings

Leigh Hall Analytical Chemistry Research (Building 9, Room 348)

The study of the structure and function of biological molecules, such as proteins and genetic materials, are conducted in Room 348. There was one 5-gallon container of "Solid Waste Contaminated with Ethidium Bromide" accumulating that was being managed as hazardous waste. The container was closed and labeled. The Lab was equipped with emergency equipment.

Leigh Hall Analytical Chemistry Research (Building 9, Room 350)

Room 350 is adjacent and accessible through Room 348. The same research conducted in Room 348 is also conducted in Room 350. There were three 1-gallon containers of various mixed spent solvents and spent acid accumulating. Two containers were marked as flammable and corrosive, and one was marked as flammable only. All of the containers were observed to be closed and labeled as "Hazardous Waste" and with an indication of the hazards of the contents. The Lab was equipped with emergency equipment.

Leigh Hall Butler Polymer Research Lab (Building 9, Room 322)

Organic synthesis of materials and the study of shape-change polymer materials are conducted in Room 322. There was one 30-gallon container, one 5-gallon container, six 1-gallon containers, two 1-liter containers, two small containers of hazardous waste and one 1-gallon container of used oil, accumulating in the Satellite Accumulation Area (SAA) (Photo 1). All of the containers were closed and labeled as "Hazardous Waste" and with an indication of the hazards of the contents.

There were also three 1-gallon containers of non-hazardous "CEHR Media," product containers and empty containers accumulating in the SAA. It was recommended that hazardous waste be segregated from non-hazardous waste, products, and empty containers. It was also recommended that the lab consider relocating the SAA away from the lab entrance to avoid any potential spill related incidents.

There was an approximately 5-gallon step-can of solids contaminated with organic solvents in another area of the lab. The container was labeled as "Hazardous Waste" and with an indication of the hazards of the contents but was not closed (Photo 2).

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)(4)], which is a condition of the SAA Permit Exemption, a generator is required to keep containers of hazardous waste closed at all times during accumulation, except when adding, removing, or consolidating waste; or when temporary venting of a container is necessary for the proper operation of equipment, or to prevent dangerous situations, such as build-up of extreme pressure.

There was one 5-gallon container of ethidium bromide gels being managed as hazardous waste accumulating in another area of the lab. The container was closed and labeled. The Lab was equipped with emergency equipment.

Scott Family Hall Undergraduate Chemistry Building (Building 275, Room 110)

Room 110 is used for teaching undergraduate chemistry labs. There is a full-time Lab Manager responsible for the lab, supplemented by trained teaching assistants (TAs) for overseeing and assisting the students when the lab is in the session. One fume hood is operated as an SAA (Photo 3). There were five 5-gallon carboys and two smaller containers of hazardous waste accumulating in the SAA. One of the 5-gallon carboys was closed and labeled as "Hazardous Waste," but was not labeled with an indication of the hazards of the contents. The container was labeled with indication of the hazards of the contents during the inspection (Photo 4).

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(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.

All other hazardous waste containers were closed and labeled as "Hazardous Waste" with an indication of the hazards of the contents. The Lab was equipped with appropriate emergency equipment.

Building 831- Permitted Container Storage

The permitted hazardous waste storage area is in Building 831. The hazardous waste codes for the waste stored in the permitted storage facility include D001 through D043, F001 through F005, F019, F022, F027, and numerous P and U listed hazardous wastes. The permitted storage area is divided into Phase I and Phase II. The permit limits the volume of waste that can be stored in each phase. The permit also limits the container size for storage of hazardous waste to 1, 2, 5, 12, 30, and 55-gallon containers. This concrete building is equipped with a fire suppression system, fire extinguishers, and shower stations.

Currently six full-time employees work in this building handling hazardous waste. The hazardous waste personnel pick up the containers from the various campus labs and transport them in box trucks to Building 831. Bulking and lab packing are conducted in both the Chemical Hazardous Waste and Radiological storage areas.

Phase I Area

The Phase I Area is used for the management of non-radioactive chemical wastes and universal waste lamps. The Phase I Area, which is the northern half of the building, is separated into five container storage areas. Each of the five container storage areas is constructed with a six-inch reinforced concrete slab and is separated by a secondary containment berm. The long-term hazardous waste storage areas are in Area 2B and Area 5. These areas are permitted to store waste for one year.

Hazardous waste is also stored for less than 90-days within the Phase I Area. The inspectors observed containers staged on secondary containment pallets in this area. All containers were closed, labeled as "Hazardous Waste", and dated. There was, however, one small box of (Photo 5), three 2.5-gallon containers (Photo 6), one 5-gallon carboy (Photos 7), three 55-gallon drums (Photo 8) and one 5-gallon bucket of hazardous waste that were not labeled with an indication of the hazards of the contents.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17(a)(5)(i)], which is a condition of the LQG Permit Exemption, a generator must mark or label its containers with the following: the words "Hazardous Waste"; an indication of the hazards of the contents; and the date upon which each period of accumulation begins clearly visible for inspection on each container.

The facility representative labeled all of the containers at the time of inspection. In addition, it was recommended that markings on container labeling be minimized, and old labels be removed to ensure the minimum labeling requirements are clearly visible. It was also recommended that containers be placed so that labels are visible from the aisle to allow for easier inspection.

Universal waste is also accumulated in this area. The inspectors observed containers staged on secondary containment pallets in this area. All containers were closed, labeled, and dated. There were, however, two five-gallon containers of universal waste and one fiberboard container that were not properly labeled (Photo 9 and Photo 10). The containers were labeled as "Universal Waste Mercury (Hg) Device" and were re-labeled during the inspection with a pre-printed labels as "Universal Waste Mercury Devices" however, neither of these labels are correct.

Pursuant to Fla. Admin. Code Ann. r. 62-730.185(1) [40 C.F.R. § 273.14(d)(1)], a LQHUW must label or mark Mercury-containing equipment (i.e., each device), or a container in which the equipment is contained, must be labeled, or marked clearly with any of the following phrases: "Universal Waste- Mercury Containing Equipment," "Waste Mercury-Containing Equipment," or "Used Mercury-Containing Equipment."

Area 2B Storage

Area 2B Storage is a permitted storage area for non-reactive hazardous waste to be stored up to a year. The Area 2B Storage is separated by a yellow berm from the Chemical Waste Staging and Storage Area. The inspectors observed all containers staged on secondary containment pallets. All the containers observed were closed, labeled as "Hazardous Waste", dated and with an indication of the hazards of the contents. All the containers observed were dated within one year of storage time.

Area 5 Storage

The Area 5 Storage is a permitted storage area for reactive (flammable) hazardous waste to be stored for up to a year. The reactive (flammable) hazardous wastes are stored in a walled room at the back of the Phase I Area. The inspectors observed seven 5-gallon containers of hazardous waste to be closed, labeled as "Hazardous Waste" dated and with an indication of the hazards of the contents in this area. All the containers observed were dated within one year of storage time. The cumulative number of containers and the quantity of waste in the Phase I storage areas did not exceed the permitted limits.

Chem Swap Cabinets

The UF's "Chem Swap" cabinets are also located in the Phase I Area. When the Environmental Health and Safety (EH&S) personnel picks up a new, sealed chemical container as part of a regular waste pickup, EH&S evaluates the material for consideration in the Chem Swap program. Unopened containers of chemicals with no expiration date are kept in the cabinets for potential "resale." EH&S keeps a list of available materials on-line and the Labs can place an order for the materials from EH&S free of charge. This program began as part of the campus-wide "zero waste initiative."

Phase II Area

The Phase II Area is used for the management of radioactive and radioactive mixed wastes. The Phase II Area is separated into four container storage areas (6-radioactive, 7-mixed poisons, 8-mixed corrosive, and 9-mixed flammable). Each of the four container storage areas is separated by a secondary containment structure. The entire container storage area is separated from the loading/unloading areas by a secondary containment structure.

The incoming wastes are tested for pH, oxidizer, and the radiation levels. If possible, the wastes are neutralized before processing and storage. Radioactive wastes are segregated by individual radioisotope for storage and disposal at a permitted treatment, storage, and disposal facility. Radioactive mixed wastes are classified as poisons, flammables or corrosives and processed accordingly. The mixed wastes are either bulked or lab-packed in 30 or 55-gallon containers, which are placed directly into storage. Mixed wastes may be sent for incineration, energy recovery or disposal.

The Radioactive Sources Area, listed as Radioactive Waste Bay Area 6 on the facility plan, contained only radioactive waste. The drums are stored together and UF allows the radioactive waste to decay for 20 half-lives before shipping out. The individual containers in this area were not inspected.

At the time of the inspection, Waste Bay Area 7 was storing one 30-gallon drum of D004 hazardous waste. There was no waste stored in Waste Bay Area 8. Waste Bay Area 9 was storing one 55-gallon drum of D001/D022 hazardous waste, one 55-gallon drum of D001 hazardous waste and one 5-gallon container of D001/D009 hazardous waste. The drums were closed, labeled as "Hazardous Waste", dated and with an indication of the hazards of the contents. The cumulative number of containers and the quantity of waste in the Phase II storage areas did not exceed the permitted limits.

Freezer

The Phase II Area has a freezer storing animal carcasses that have been used in laboratory experiments and exposed to radiation. UF stores the carcasses for 20 half-lives before shipping out for disposal. No mixed or hazardous wastes are stored in this area.

Record Review

Once the walkthrough of the facility was completed, the inspectors were escorted to a conference room to conduct a review of the required documentation. The records reviewed included the

following:

- Contingency Plan with quick reference guide
- Personnel Training
- Daily and Weekly Hazardous Waste Inspection Log
- Hazardous Waste Manifests
- Documents showing emergency arrangement with local authorities
- Waste Profiles
- Permit and Permit Application

The Quick Reference Guide to the Contingency Plan addressed only the satellite accumulation areas (SAAs) and not the 90-day accumulation areas.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.262(b)], A large quantity generator that first becomes subject to these provisions after May 30, 2017, or a large quantity generator that is otherwise amending its contingency plan must at that time submit a quick reference guide of the contingency plan to the local emergency responders identified in paragraph (a) of this section or as appropriate, the Local Emergency Planning Committee.

12) Closing Conference

An exit briefing was conducted at the conclusion of the inspection. The observations made during the inspection were discussed and the inspection was concluded.

13) Signed

RAJAGOPAL AIYAR

Digitally signed by RAJAGOPAL AIYAR
Date: 2023.06.29 12:33:18 -04'00'

Raj Aiyar
Environmental Engineer

Date

Concurrence

ARACELI CHAVEZ

Digitally signed by ARACELI CHAVEZ
Date: 2023.06.29 14:30:33 -04'00'

Araceli B. Chavez, Chief
RCRA Enforcement Section

Date

Attachment A
Photographs of University of Florida
EPA ID# FLR000823393
Photos-FDEP

Photo-1 Leigh Hall Butler Polymer Research Lab (Building 9, Room 322), SAA

Photo-2 Leigh Hall Butler Polymer Research Lab, (Building 9, Room 322), Open SAA Container

Photo-3 Scott Family Hall Undergraduate Chemistry, Building 275, Room 110), SAA, Fume Hood

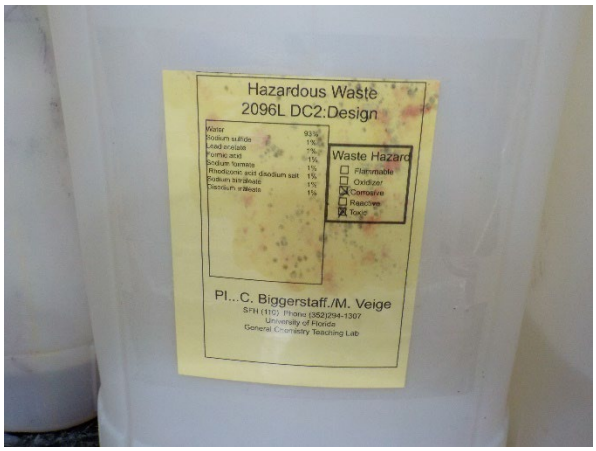

Photo-4 Scott Family Hall Undergraduate Chemistry, building 275, Room 110), SAA container labeled with hazard indications during the inspection

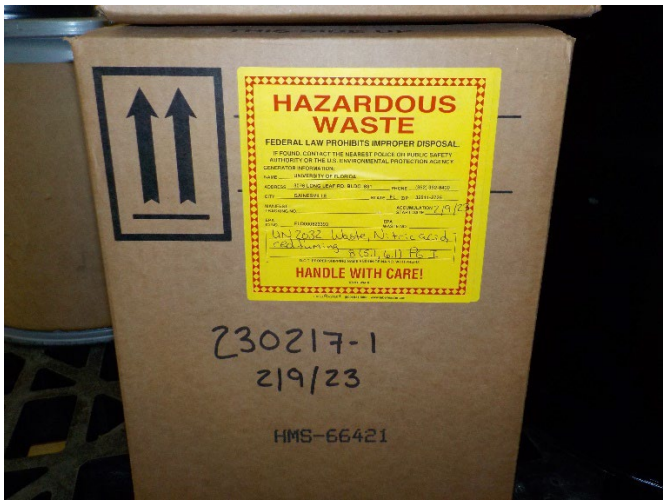

Photo-5 Building 831, Permitted Container Storage, Phase 1 Area, one box containing D002 waste with no hazard indications of the contents

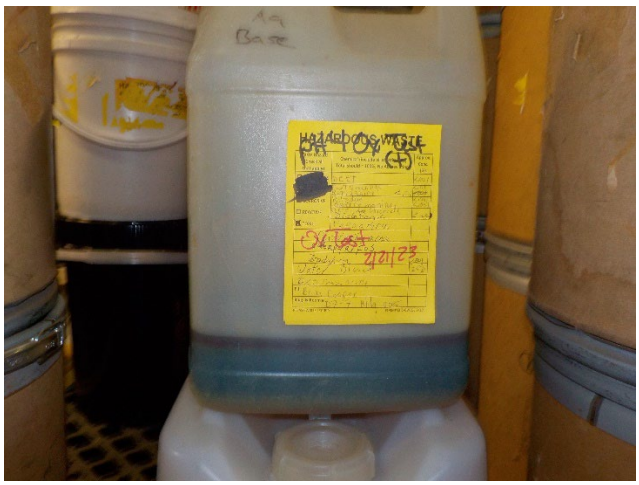
Photo-6 Building 831, Permitted Container Storage, three 2.5-gallon containers of hazardous waste

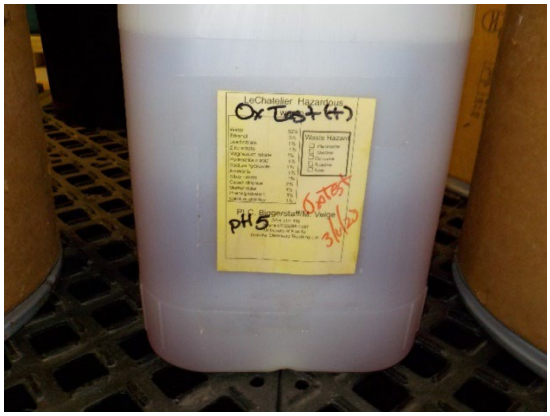

Photo-7 Building 831, Permitted Container Storage, Phase 1 Area, one 5-gallon carboy with no indication of the hazards of the contents

Photo-8 Building 831, Permitted Container Storage, Phase 1 Area, three 55-gallon hazardous waste (D001) drum with no indications of the hazards of the contents. The containers were labeled at the time of the inspection.

Photo-9 Building 831, Permitted Container Storage, Phase 1 Area, one 5-gallon container of universal waste improperly labeled as “Universal Waste Hg Device”

Photo-10 Building 831, Permitted Container Storage, Phase 1 Area, one fiberboard container of universal waste improperly labeled as “Universal Waste Mercury Devices”