

RCRA Inspection Report

1) Inspector and Author of the Report

Daryl R. Himes
Environmental Engineer
RCRA Enforcement Section
Chemical Safety and Land Enforcement Branch
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW
Atlanta, Georgia 30303
(404) 562-8993

2) Facility Information

The University of North Carolina at Chapel Hill (UNC)
1000-A Estes Drive Extension
UNC Buildings 488 and 531
Chapel Hill, North Carolina 27599-1650
EPA ID No.: NCD982093783

The University of North Carolina at Chapel Hill (UNC Campus)
300 South Building
CB#1000
Chapel Hill, North Carolina 27599-1000
EPA ID No.: NCD980515308

3) Responsible Official

Catherine Brennan, Executive Director, Environment, Health & Safety (EHS)

4) Inspection Participants

Cathy Brennan	UNC
Douglas Benjamin	UNC (Senior Hazardous Waste Specialist)
Daryl Himes	US EPA Region 4
Aram Kim	North Carolina Department of Environmental Quality

5) Date of Inspection

February 28, 2023, 9:00 a.m.

6) Applicable Regulations

North Carolina General Statutes (NCGS), 130A BOA-Article 9, Solid Waste Management Act as amended, Resource Conservation and Recovery Act (RCRA) Section 3005 and 3007 (42 U.S.C. §§ 6925 and 6927) and the North Carolina Administrative Code (NCAC) Title 15 A Chapter 13A, [40 Code of Federal Regulation (C.F.R.) Parts 260-270, 273 and 279].

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced RCRA compliance evaluation inspection (CEI) to determine the facility's compliance with the applicable regulations.

8) Facility Description

The University of North Carolina at Chapel Hill's Main Campus generates hazardous waste at various research and teaching labs. Hazardous wastes are also generated in pharmacies and clinics operated by the various clinics located in the UNC Health Care System.

The hazardous waste generated from The University of North Carolina at Chapel Hill's Main Campus and clinics is transported (via hazardous waste manifest) to the University of North Carolina at Chapel Hill's Hazardous Waste Materials Facility (HWMF). The HWMF is a permitted storage facility at 1080 Estes Drive Extension, Chapel Hill, North Carolina. The HWMF includes Buildings 488 and 531. The current permit for the storage facility became effective on September 26, 2016 and expires on September 26, 2026.

Building 488 has a container unloading/loading dock, a consolidation room, and a liquid waste bulking and neutralization area. Building 531 has a container unloading/loading dock, flammable storage room eight hazardous waste storage bays, and several non-hazardous waste storage areas. According to the most recent generator notification submitted to the North Carolina Department of Environmental Quality (NCDEQ), the UNC-Main Campus (the largest contributor of hazardous wastes shipped to the HWMF) is registered as a large quantity generator of hazardous waste.

As part of the inspection, incoming manifests to the University at North Carolina at Chapel Hill's HWMF from the University of North Carolina at Chapel Hill's Main Campus were reviewed as a focused compliance inspection of operations at that facility.

8) Previous Inspection History

Violations of the manifest system and container management were observed during the previous inspection of The University of North Carolina at Chapel Hill's TSD facility on July 20, 2022.

At the start of the inspection, a copy of the Consent Agreement and Final Order executed between EPA and the facility for their failure to sign hazardous waste manifests upon the facility receiving hazardous wastes from off-site was hand delivered to Catherine Brennan.

No violations were observed during the previous inspection of the campus or generating entity of the University of North Carolina at Chapel Hill on December 15, 2021.

9) **Opening Conference**

EPA inspector Daryl Himes, accompanied by Aram Kim of NCDEQ, arrived at The University of North Carolina Chapel Hill at approximately 9:00 a.m. Catherine Brennan, Executive Director of Environment, Health, and Safety immediately received the inspectors. Catherine Brennan and the inspectors were joined by Douglas Benjamin, Senior Hazardous Waste Specialist, for the opening conference. The inspectors introduced themselves, showed their credentials to Catherine Brennan, 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 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>. At the time of the inspection, the facility would not meet the classification of a small business.

The facility did not assert a business confidentiality claim, pursuant to 40 C.F.R. § 2.203, at the time of the inspection for areas of the facility which would be inspected. 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. Facility personnel also explained the operations of Building 488 and Building 531 and then proceeded to take the inspection team through each of the buildings.

10) **Findings**

Building 488

Buildings 488 and 531 are both within a gated chain-link fence. Building 488 is approximately 50 feet long by 36 feet wide and is constructed on a concrete slab. The floors in the hazardous waste storage area have been coated with an epoxy sealer that has been determined to be compatible with the stored hazardous waste. Hazardous wastes are initially received into Building 488. Once received, hazardous wastes are inventoried, packaged for storage, or bulked/blended for storage in Building 531. Incoming wastes which are hazardous solely for corrosivity (D002) might be treated using elementary neutralization under a hood in Building 488.

Wastes coming into Building 488 are in containers up to 30-gallons in size for hazardous wastes and 55-gallons in size for nonhazardous wastes. Upon being received, they are characterized and segregated into waste types which include water reactive, flammable corrosives, alkaline flammable/corrosive, alkaline corrosive, oxidizing acids, acidic corrosives, organic acids, and toxic liquids.

The segregated wastes, up to one gallon, are then placed into plastic secondary containment pans on storage shelves. These pans can accommodate six to twelve 4-liter bottles, depending on the size of the pan. Individual containers are then placed into plastic lab pack drums located in front of the shelving units until full. Wastes in the lab packing area are consolidated in 2-gallon, 5-gallon, 15-gallon, 30-gallon or 55-gallon lab pack containers.

At the time of the inspection, 55 and 5-gallon containers were being used to manage hazardous wastes which had been characterized and subsequently lab packed into one of these containers. Each of the containers were closed, labeled with the words “Hazardous Waste,” an indication of the hazards of the contents and marked with an accumulation start date of less than one year. The oldest date observed on a container in this area was September 8, 2022.

A room for universal and nonhazardous waste was also located in Building 488. The room measured approximately 15 feet by 18 feet. At the time of the inspection, three 55-gallon containers of universal waste lead acid batteries were observed to be closed, labeled with appropriate universal waste labeling, and marked with accumulation start dates of less than one year. Ten 55-gallon containers of nonhazardous wastes

Loading Dock

No hazardous wastes were observed on the loading dock area to Buildings 488 and 531 at the time of the inspection. A box truck is used to transport hazardous wastes to the facility from the various campuses.

Building 531

The storage area within Building 531 is segregated by three-foot concrete block walls. Nine separate bays were identified and one bulking area. All containers in this area were labeled with the words “Hazardous Waste,” an indication of the hazards of the contents and were closed and marked with an accumulation start date of less than one year unless noted otherwise. Below is a visual inventory of containers observed in this area at the time of the inspection.

Bay 1 had eight 55-gallon containers of ignitable hazardous wastes present at the time of the inspection.

Bay 2 had seven 55-gallon and one 5-gallon container of ignitable hazardous wastes present at the time of the inspection.

At the time of the CEI, inspectors observed that Bay 3 contained seven 55-gallon and three 30-gallon containers of hazardous waste flammables in this area.

Bay 4 contained five 55-gallon and two 30-gallon containers of nonhazardous wastes.

Bay 5 contained five 55-gallon containers of hazardous waste corrosives.

Bay 6 contained five 55-gallon containers of universal waste batteries. Each was labeled with proper universal waste labeling and accumulation start dates of less than one year.

Bay 7 contained various radioactive mixed wastes awaiting a reduction in radiation which will allow for their shipment to an off-site treatment, storage, or disposal facility. Mixed wastes, by definition, are hazardous wastes, characteristic or listed, which contain one or more radionuclides. These generally licensed radiation sources (radionuclides) are authorized at the University under the auspices of the Division of Radiation Protection of NCDEQ. Long-lived

mixed wastes are stored at the HWMF until they have decayed below regulated levels. Short-lived mixed waste radionuclides are allowed to decay, then the waste is handled as a hazardous waste. Following radioactive decay to below regulated levels, these wastes are shipped to an off-site hazardous waste disposal facility.

Bay 8 contained eight 55-gallon, one 15-gallon, two 5-gallon and three 2.5-gallon containers of toxic organic hazardous wastes. Copies of letters to NCDEQ documenting the facility's attempts to ship transport several small containers of hazardous waste dioxin (F027) off-site were forwarded to EPA during the CEI.

Bay 9 contained ten 55-gallon and four 30-gallon containers of hazardous waste corrosives, and one 55-gallon container of used oil labeled as "Used Oil."

An intrinsically safe room was also used by the facility to store ignitable hazardous wastes. At the time of the inspection, fifteen empty 55-gallon containers were present in this area.

No evidence of spills was observed in Building 531 and aisle space was maintained. The building was equipped with an eye wash station, spill kits and fire extinguishers. The flooring of the building appeared to be free of cracks or gaps during the inspection.

Records Review:

After the walk-through inspection of the facility, a review of the facility's records since EPA's last inspection on July 20, 2022. The review included the facility's hazardous waste manifests, hazardous waste training records and weekly inspection logs for that period. A review of the facility's hazardous waste contingency plan was also performed.

During a review of the facility's hazardous waste manifests from July 20, 2022, it was determined that hazardous waste manifests for 39 shipments of incoming hazardous waste from the University of North Carolina at Chapel Hill's Main Campus (NCD980515308), an off-site large quantity generator, were not filled out to include the address and phone number of the specific entity responsible for being the generator of hazardous waste sent to the permitted treatment and storage facility. Furthermore, Item 5, the generator section, was left completely blank on four of these manifests. Also, one manifest did not include the name of the transporter of the hazardous waste. Attachment A identifies manifests that did not include the site address from which the shipments were originated, the site mailing address, or the transporter.

Pursuant to 15A NCAC 13A .0107(b) [40 C.F.R. § 262.20(a)(1)], a generator that offers for transport a hazardous waste for offsite treatment, storage, or disposal must prepare a Manifest (OMB Control number 2050-0039) on EPA Form 8700-22, and, if necessary, EPA Form 8700-22A. According to the Hazardous Waste Manifest Instructions, generators must enter the Generator's Mailing Address and the Generator's Site Address (if different than the mailing address) in Item 5. In addition, generators must enter the Transporter or Transporters used in Item 6 and 7.

Closing Conference

The inspection team conducted an exit meeting at the end of the walk-through inspection and review of the facility's hazardous waste records with Cathy Brennan, and Douglas Benjamin of UNC. During this meeting, the inspectors discussed their preliminary findings made during the inspection.

11) Signed

DARYL HIMES Digitally signed by DARYL HIMES
Date: 2023.04.12 09:59:43 -04'00'

Daryl R. Himes
Inspector

Date

12) Concurrence

ARACELI CHAVEZ Digitally signed by ARACELI
CHAVEZ
Date: 2023.04.12 12:15:58 -04'00'

Araceli B. Chavez
Chief
RCRA Enforcement Section

Date

Attachment A

Manifest Number	Gen Date Signed
011727409	10/05/2022
011727411	10/06/2022
011727417	10/11/2022
011727419	10/12/2022
011727420	10/13/2022
011727422	10/18/2022
011727424	10/19/2022
011727428	10/24/2022
011727437	10/31/2022
011727438	11/01/2022
011727444	11/08/2022
011727450	11/15/2022
011727452	11/16/2022
011727454	11/17/2022
011727457	11/22/2022
011727459	11/28/2022
011727460	11/29/2022
011727463	11/30/2022
011727465	12/01/2022
011727467	12/02/2022
011727468	12/05/2022
011727469	12/06/2022
011727470	12/07/2022
011727473	12/08/2022
011727476	12/14/2022
011727478	12/16/2022
011727481	12/20/2022
011727483	12/21/2022
011727488	01/04/2023
011727489	01/05/2023
011727493	01/10/2023
011727497	01/12/2023
011727499	01/13/2023
017873501	01/18/2023
017873503	01/19/2023
017873508	01/24/2023
017873511	01/30/2023
017873512	01/31/2023
017873516	02/03/2023