

INSPECTION REPORT

Inspection Entry Date/Time	05/14/2024 09:59 AM (CT)	Announced: No	
Inspection Exit Date/Time	05/16/2024 10:45 AM (CT)	Access: Granted	
Regulatory Program	Resource Conservation and Recovery Act (RCRA)		
Type of Inspection	Compliance Evaluation Inspection (CEI)		
Facility or Site Name	University of Kansas Medical Center		
Facility/Site Identifier	KSD076274737		
Facility/Site Physical Address	3901 Rainbow Blvd		
City, State, Zip Code	Kansas City, KS 66160		
County/Borough	Wyandotte		
Generator Status	Large Quantity Generator (LQG)		
NAICS	541715 and 611310		
Type of Operation	Medical university that conducts research and development.		
Geographic Coordinates	39.05726, -94.61181		
Permit Number (If Applicable)	Not Applicable		
Lead Inspector:			
Mike Martin	[Signature] Martin, Mike	Digitally signed by Martin, Mike Date: 2024.06.18 13:27:02 -05'00'	[Date]
	EPA REGION 7	martin.mike@epa.gov	
Additional EPA Staff Participating in Inspection:			
Name	Name	Name	Name
Koba Butkovich	Koba Butkovich	Koba Butkovich	Koba Butkovich
Supervisor Review:			
Amber Whisnant	[Signature] AMBER WHISNANT	Digitally signed by AMBER WHISNANT Date: 2024.07.25 13:55:48 -05'00'	[Date]
	EPA REGION 7	whisnant.amber@epa.gov	

SECTION I – INTRODUCTION

Site Entry and Purpose of the Inspection

Type of inspection: CEI

At the request of the Enforcement and Compliance Assurance Division, I conducted a RCRA CEI at the University of Kansas Medical Center (KUMC). The CEI was conducted under the authority of Section 3007(a) of RCRA, as amended. During the CEI, I collected the information and data necessary to determine compliance with the applicable regulatory and statutory requirements. The inspection report and attachments present the results of the CEI. Upon arriving unannounced at KUMC at 9:59 a.m., Mr. Butkovich and I met with Mr. Ryan Lickteig, Director of EHS. We presented him with our EPA credentials and explained the purpose and procedures of the inspection.

The CEI consisted of a discussion of facility operations, waste generation, and waste management; a review of waste management records; and a visual inspection of waste generation and management areas (see attachment 1 for the Site Overview).

Mr. Butkovich and I conducted a visual inspection of the following areas at KUMC:

Applegate Energy Center (2nd Floor Tool/Parts Storage Area)

Breidenthal Entrepreneur Research Institute (Rooms 1011, 1016 and 2009)

Building 25 (Hazardous Waste Storage Area)

Delp (Room G076-Key Shop, Universal Waste Storage Area, and Old Paint Storage Area)

Easton (Room G010)

Hemenway (Rooms G010, G024, 1015, 1015A, 1016, 1023, 1036, 1039, 1052, 1058, 2000, 2004, 2005, 2008, 2016, 2022, 2036, 2039, 2056, 3000, 3001, 3004, 3008, 3010, 3030, 3036, 3038, 3051, 3052, 3056, 4008, 4010, 4012, 4022, 4036, 4050, 4052 and Penthouse)

Hixon (Rooms GC01A, G013, 1000, 2000, 3001, 3012 and 4004)

Lied (Rooms B015F, B021, B033, G021, G025, 1003, 1009, 1021, 2003, 2007, 2025, 3003 and 3025)

Shop Services Facility (Landscaping Department)

Smith East (Rooms 1004, 1008, 1016, 2006, 2016, 2019, 3014, 3016, 3017, 4005, 4008, 4010 and 4018)

Smith West (Rooms G015 and G017)

Support Services Dock

Wahl East (Rooms G001B, G002, 1005C, 1005F, 1020C, 1020L, 2005C, 2005F, 2020C, 2020L, 3005C, 3005G, 3005J, 3020L, 3036, 4005F, 4005J, 4040L, 5020A, 5020D, 5040, 5044, 5051, 6001 and 6020)

Wahl West (Rooms G012-G019, G022, 1001, 1002, 1003, 1027, 2027, 3001, 3011, 3018, 3019, 4003, 4006, 4021, 4023, 5007, 5012, 5021 and 5027)

Wesco (Rooms G007, G009, G026 and G026B)

Document photocopies and photographs were collected as inspection documentation (Appendix 1). A total of 49 photographs were collected and a photolog was prepared (Appendix 1). I followed the inspection procedures discussed in the RCRA CEI Standard Operating Procedure (No. 2321.1E), unless noted differently. Any authorized Federal regulatory citations noted in this report are adopted by reference in the authorized Kansas regulations.

Attendees

Title/Organization	Name	Opening Conf.	Closing Conf.
Lead Inspector/EPA	Mike Martin (913) 551-7149 martin.mike@epa.gov	Yes	Yes
Physical Scientist/EPA	Koba Butkovich (913) 551-7674 butkovich.koba@epa.gov	Yes	Yes
Director of Environment Health & Safety/KUMC	Ryan Lickteig (913) 588-5163 rlickteig@kumc.edu	Yes	Yes
Hazardous Materials Coordinator/KUMC	Emily Mattwaoshshe (913) 588-5194 emattwaoshshe@kumc.edu	No	Yes
Biohazard Technician/KUMC	Jerry Spring	No	Yes
Assistant Radiation Safety Officer/KUMC	Genevieve Ojala	No	Yes
Biosafety Officer /KUMC	Alexander Dekonenko	No	Yes

Occupational Safety Coordinator/KUMC	David Shaw	No	Yes
Radiation Safety Officer/KUMC	Rick Sundell	No	Yes
Director of Facility Operations/KUMC	Ian Saxton	No	Yes
Director of Maintenance/KUMC	James Hawthorne	No	Yes
Associate Vice Chancellor of Integrity/KUMC	Natalie Holick	No	Yes
Executive Director of R.A.B.S/KUMC	Nathan Culley	No	Yes
General Counsel/KUMC	Kimberly Gibbens	No	Yes
Director of Engineering & Infrastructure/KUMC	Jeff Gilliland	No	Yes
Associate Director of Applegate/KUMC	Dennis Lyons	No	Yes
Program Coordinator/KUMC	Monique Imair	No	Yes
Industrial Hygienist/KUMC	Andrea Mulvenon	No	Yes
Post Doc/KUMC	Raul Neri	No	Yes

Opening Conference

I presented Mr. Lickteig with my EPA credentials and explained the purpose and procedures of the inspection. I next presented him with a copy of RCRA Section 3007(a), which provides inspection authority. I explained my need to collect accurate information and presented them with a copy of Title 18 U.S. Code, Sections 1001 and 1002. He was made aware of their confidentiality rights and was informed that a Confidentiality Notice would be provided at the end of the inspection to make or not to make any confidentiality claims. The CEI focused on RCRA compliance at KUMC and not at the University of Kansas Hospital Authority (EPA ID #KSR000018440, 3901 Rainbow Boulevard - Campus B, Kansas City, Kansas 66160).

KUMC had been last inspected for RCRA compliance on July 19-21, 2011, by the EPA.

During the July 2011 EPA inspection, KUMC was cited for:

1. Failure to conduct a hazardous waste determination.
2. Hazardous waste accumulation container not marked with the accumulation start date.
3. Hazardous waste accumulation container not labeled with the words "Hazardous Waste."
4. Hazardous waste satellite containers not labeled with the words "Hazardous Waste."
5. Hazardous waste satellite container not closed.
6. Weekly hazardous waste inspections not conducted.
7. Used oil storage container not labeled with the words "Used Oil."

According to the Hazardous Waste Site Info Verification Report (Attachment 2), KUMC operates as a LQG of D001-D009, D010, D022, F002, F003, F005, F0027, P005, P012, P105, P106, U002, U003, U028, U031, U044, U080, U112, U117, U122, U123, U154, U174, U188, U201, U211, U219, U236, U239 and U404 hazardous waste. No changes were noted for the Hazardous Waste Site Info Verification Report. From my review of the 2020-2024 uniform hazardous waste manifests, it appears that KUMC oscillates between a LQG and a Small Quantity

Generator (SQG). See attachment 3 for the E-Manifest Spreadsheet. KUMC routinely generates non-acute hazardous waste at the SQG level (220 pounds to 2,200 pounds per calendar month). KUMC generates acute hazardous waste at the LQG level on an infrequent basis (varies based on lab cleanouts). KUMC generated 412 pounds of acute hazardous waste in 2020, 12 pounds in 2021, 340 pounds in 2022, none in 2023 and none so far in 2024. Mr. Lickteig stated that KUMC chose to operate as a LQG due to the generation of greater than 2.2 pounds of acute hazardous waste generated during any given calendar month. KUMC was inspected as a LQG, a small quantity handler, and a used oil generator.

Facility/Site Information

Number of employees	4,000
Length of Facility at Location	1920'S
Operating Hours	8:00 a.m. to 4:30 p.m., Monday thru Friday - some R&D studies can have extended hours
Safety Training Provided to Inspector(s)?	N/A
Size of Facility	80 acres
What type of generator facility notified and verified as?	LQG
Weather Conditions	Days 1 - Sunny, Day 2 - Partially Cloudy and Day 3 Sunny

Process Description

KUMC generates numerous hazardous waste streams (flammables, corrosives, reactives, spent solvents, lab pack, etc.) from their research activities. Their lab waste is stored in 500 ml to 4-liter hazardous waste satellite accumulation containers (located inside fume hoods and inside cabinets under fume hoods) at each individual research lab. Full hazardous waste satellite accumulation containers of lab waste are transferred to Building 25 (Hazardous Waste Storage Area) within three days. The hazardous waste remains in Building 25 prior to off-site disposal. The lab waste is disposed by Hertiage Environmental Services (Kansas City, Missouri, Indianapolis, Indiana, and East Liverpool, Ohio) and Veolia ES Technical Solutions (Beaumont, Texas and Menomonee Falls, Wisconsin). See attachment 4 for Lab Listing by Building and see attachment 5 for the Building 25 Inventory. At the time of the CEI, the less than 90-day hazardous waste accumulation containers in Building 25 were in good condition, labeled with the words "Hazardous waste," marked with the date of accumulation and inspected weekly ([IMG-20240514114723472365756.jpg](#), [IMG-20240514114728472875484.jpg](#), [IMG-20240514114942494273160.jpg](#), [IMG-20240514115130513069738.jpg](#), [IMG-20240514115255525567038.jpg](#), and [IMG-20240514115323532374912.jpg](#)). Mixed waste (waste flammable liquids and radioactive materials) is generated from research activities on-site and is managed under the 40 CFR 266 Subpart N requirements. See attachment 6 for the KDHE Mixed Waste Exemption Letter. The mixed waste is stored in Lied B033 (Mixed Waste Storage Area) until it is decayed, then it is transferred to Building 25 and disposed by Perma-Fix (Gainesville, Florida) ([IMG-2024051509494649461290301.jpg](#)). See attachment 7 for the Mixed Waste Inventory. Radioactive waste generated from research activities is stored in Lied B033 and disposed by Bionomics (Oak Ridge, Tennessee).

Facility Waste Streams and Management

Waste Description and Generation Process	Waste Type	Generation Rate	If HW, list all codes	Waste Determination Method	Waste Amount Presently in Storage	Oldest Accumulation Start Date	Waste Disposal Location
Lab Waste	HW	Varies (700 to 1,400 pounds per month)	D001-D009, D010, D022, F002, F003, F005, F0027, P005, P012, P105, P106, U002, U003, U028, U031, U044, U080, U112, U117, U122, U123, U154, U174, U188, U201, U211, U219, U236, U239, U404	Process Knowledge	19 containers (ml, kg, liters, gallon units)	05/10/2024	Heritage (Kansas City, Missouri, Indianapolis, Indiana, and East Liverpool, Ohio) and Veolia ES Technical Solutions (Beaumont, Texas and Menomonee Falls, Wisconsin)
Mixed Waste	HW	Varies	Varies	Process Knowledge	Five 4-liter containers and one 500 ml container	NA	Perma-Fix (Gainesville, Florida)
Radioactive Waste	NH	Varies	NA	Process Knowledge		NA	Bionomics (Oak Ridge, Tennessee)
Animal Waste	NH	Varies	NA	Process Knowledge	NA	NA	Stericycle (Kansas City, Kansas)
Universal Waste-Lamps	UW	Varies	NA	Process Knowledge	12 boxes	NA	Heritage
Universal Waste-Batteries	UW	Varies	NA	Process Knowledge	48 batteries and four 5-gallons pails	NA	Heritage
Waste Latex Paint	SW	Varies	NA	Process Knowledge	4 wooden pallets	NA	Allied Waste (Kansas City, Kansas)
Unknown Paint and Aerosol Cans	ND	Varies	NA	NA	13 1-gallon pails and 2 aerosol spray cans	NA	NA
Lead Acid Batteries	ND	Varies	NA	NA	3 batteries	NA	NA

Waste Description and Generation Process	Waste Type	Generation Rate	If HW, list all codes	Waste Determination Method	Waste Amount Presently in Storage	Oldest Accumulation Start Date	Waste Disposal Location
Used Oil	UO	Varies	NA	NA	One 15-gallon container	NA	NA
Scrap Metal	EX	Varies	NA	NA	NA	NA	Twelfth Street Recycling (Kansas City, Missouri)
General Trash	SW	NA	NA	NA	NA	NA	Allied Waste (Kansas City, Kansas)
AD = Analytical Data ND = Not Determined UO = Used Oil EX = Exempt SW = Solid Waste HW = Hazardous Waste UW = Universal Waste							

Buildings – Area of Concern

Building/Area/Sub-area	Process Description	Area of Concern (AOC)
Delp - Basement	Universal Waste (UW) Storage Area and Old Paint Storage Area	Yes
Breidenthal Entrepreneur Research Institute - Room 1016	R&D Labs	Yes
Hemenway - Rooms 1039, 1058, 2016, 2056, 3036, 4008 and 4036	R&D Labs	Yes
Support Services Facility	Landscaping and Maintenance	Yes
Wahl East - Rooms 2005C, 2020C and 6001	R&D Labs	Yes

SECTION II – OBSERVATIONS

Building: Delp/Basement - UW Storage Area			
Observation #: MM1-OB-004	Date: 05/14/2024	Contains AOC: Yes	Contains CBI: No
Person Interviewed: James Hawthorne		Title: Director of Maintenance Services	
Mr. Butkovich and I observed 11 cardboard boxes of UW-lamps. Ten of the 11 boxes of UW-lamps (storing an estimate of 151 total lamps) were open and unlabeled. One box of UW-lamps was closed and labeled with the words “Universal Waste-Lamps.” Mr. Hawthorne stated that the universal waste-lamps had been accumulating since March 20, 2024, and staff are provided with UW training.			
UW-lamps not stored in a closed container – 40 CFR 273.13(d)(1) (Notice of Preliminary Finding - NOPF 8). UW-lamps not labeled with words “Universal Waste - Lamps,” or “Waste Lamps” or “Used Lamps” – 40 CFR 273.14(e) (NOPF 10).			

Photo(s)

1. [IMG-202405141323062361674854.jpg](#)
2. [IMG-2024051413231523151733788.jpg](#)
3. [IMG-2024051413211521151809242.jpg](#)
4. [IMG-2024051413264926491705785.jpg](#)
5. [IMG-2024051413285828581639483.jpg](#)
6. [IMG-202405141329062961869462.jpg](#)

Building: Delp/Basement - UW Storage Area**Observation #:** MM1-OB-005 **Date:** 05/14/2024**Contains AOC:** Yes**Contains CBI:** No**Person Interviewed:** James Hawthorne**Title:** Director of Maintenance Services

Mr. Butkovich and I observed 48 unlabeled UW-batteries stored on a plastic rolling cart. Mr. Hawthorne stated that at the UW-batteries had been accumulating since March 20, 2024.

UW-lamps not labeled with words “Universal Waste - Batteries,” or “Waste Batteries” or “Used Batteries” – 40 CFR 273.14(a) (NOPF 9).

Photo(s)

1. [IMG-2024051413384238421573431.jpg](#)

Building: Delp/Basement - Old Paint Storage Area**Observation #:** MM1-OB-006 **Date:** 05/14/2024**Contains AOC:** Yes**Contains CBI:** No**Person Interviewed:** James Hawthorne**Title:** Director of Maintenance Services

Mr. Butkovich and I observed four wooden pallets storing 47 1-gallon pails of waste paint and 50 5-gallon pails of waste paint. Mr. Hawthorne stated that the waste paint is latex, non-hazardous waste (based on process and product knowledge) and was generated from the cleanout of the Paint Shop. Mr. Hawthorne was not aware of the length of time of accumulation of the waste paint. Thirteen of the 47 1-gallon pails of waste paint were unlabeled and had a rust-like/corroded exterior (including a 4-inch hole on the side of one pail). Mr. Butkovich and I also observed two aerosol spray cans labeled with the word “Bad.” I asked Mr. Hawthorne if the 13 unlabeled 1-gallon pails of waste paint and the two aerosol spray cans were hazardous waste. Mr. Hawthorne stated that he did not know. I asked Mr. Hawthorne if he had conducted a hazardous waste determination on the 13 unlabeled 1-gallon pails of waste paint and the two aerosol spray cans. Mr. Hawthorne stated “No.”

Failure to conduct a HW determination – 40 CFR 262.11(a) (NOPF 1B).

Photo(s)

1. [IMG-2024051413574057401833853.jpg](#)
2. [IMG-2024051413564256421918197.jpg](#)
3. [IMG-2024051413564756471798860.jpg](#)
4. [IMG-202405141400370371909226.jpg](#)

Building: Wahl East/Rooms 2005C, 2020C, 6001**Observation #s:****Date:** 05/14/2024**Contains AOC:** Yes**Contains CBI:** No

MM1-OB-008

MM1-OB-010

MM1-OB-011

Persons Interviewed and Title:

Rishi Man – Senior Scientist (Room 2020C)

Morgan Cosgrove – Research Assistant (Room 6001)

Stephen Parnell – Principal Investigator (Room 6001)

The following HW satellite accumulation containers (SACs) were not labeled with the words “Hazardous Waste”:

- Wahl East/Room 2005C – One 4-liter SAC of waste formalin ([IMG-202405150921052151256246.jpg](#) and [IMG-2024051509211721171297510.jpg](#)). Prior to the conclusion of the visual inspection, the SAC was labeled with the words “Hazardous Waste” ([IMG-2024051509215121511266061.jpg](#)). **NOPF 5B-1**
- Wahl East/Room 2020C – One 4-liter SAC of waste xylene ([IMG-2024051509162816281224355.jpg](#)). Prior to the conclusion of the visual inspection, the SAC was labeled with the words “Hazardous Waste” ([IMG-2024051509174817481293752.jpg](#)). **NOPF 5B-2**
- Wahl East/Room 6001 – One 4-liter SAC of waste xylene and one open 4-liter SAC of waste formaldehyde ([IMG-2024051415401240121575286.jpg](#)). Prior to the conclusion of the visual inspection, both SACs were labeled with the words “Hazardous Waste” and the 4-liter SAC of waste formaldehyde was closed ([IMG-2024051415405740571592060.jpg](#)). **NOPF 5B-3 and NOPF 6.**

HW SACs not labeled with the words “Hazardous Waste” – K.A.R. 28-31-262(c)(7) (NOPFs 5B-1, 5B-2, and 5B-3).

HW SAC not closed – 40 CFR 265.173(a) (NOPF 6).

Photo(s)

1. [IMG-202405150921052151256246.jpg](#)
2. [IMG-2024051509211721171297510.jpg](#)
3. [IMG-2024051509215121511266061.jpg](#)
4. [IMG-2024051509162816281224355.jpg](#)
5. [IMG-2024051509174817481293752.jpg](#)
6. [IMG-2024051415401240121575286.jpg](#)
7. [IMG-2024051415405740571592060.jpg](#)

Building: Breidenthal Entrepreneur Research Institute/Room 1016**Observation #:** MM1-OB-014**Date:** 05/15/2024**Contains AOC:** Yes**Contains CBI:** No**Person Interviewed:** Raul Neri**Title:** PhD Post Doc/Lab Manager

The following HW SACs were not labeled with the words “Hazardous Waste”:

- Breidenthal Entrepreneur Research Institute/Room 1016 – One ¼ full 4-liter SAC of waste solvent ([IMG-202405151101311311698571.jpg](#)) and one ¼ full 4-liter SAC of waste solvent ([IMG-202405151101461461725460.jpg](#)). Prior to the conclusion of the visual inspection, the SACs were labeled with the words “Hazardous Waste” ([IMG-20240515110405451698258.jpg](#) and [IMG-202405151104134131791415.jpg](#)).

Failure to label HW SACs with the words “Hazardous Waste” – K.A.R. 28-31-262(c)(7) (NOPF 5A).

Photo(s)

1. [IMG-202405151101311311698571.jpg](#)
2. [IMG-202405151101461461725460.jpg](#)
3. [IMG-20240515110405451698258.jpg](#)
4. [IMG-202405151104134131791415.jpg](#)

Building: Support Services Facility/Shop Services Facility (Landscaping)

Observation #: MM1-OB-015 **Date:** 05/15/2024

Contains AOC: Yes

Contains CBI: No

Person Interviewed: Ian Saxton

Title: Director of Facility Operations/KUMC

Mr. Butkovich and I observed one unlabeled 15-gallon used oil collection container of used oil (the funnel at the top of the container was open and half-full) ([IMG-2024051512285428541399348.jpg](#) and [IMG-2024051512315131511123269.jpg](#)).

Used oil storage container not labeled with the words “Used Oil” – 40 CFR 279.22(c) (NOPF 11).

At the Upper Level Miscellaneous Parts Area, Mr. Butkovich and I observed one open cardboard box storing eleven fluorescent lamps (covered with dust) ([IMG-2024051512393739371336748.jpg](#) and [IMG-2024051512395039501247345.jpg](#)). I asked Mr. Saxon if the fluorescent lamps were waste. Mr. Saxon stated that he did not know. I asked Mr. Saxon if he had conducted a hazardous waste determination on the fluorescent lamps. Mr. Saxon stated “No.”

Failure to conduct a HW determination – 40 CFR 262.11(a) (NOPF 1A).

Mr. Butkovich and I observed three lead-acid batteries covered with sawdust on the concrete floor ([IMG-2024051512425142511461594.jpg](#)). I asked Mr. Saxon if the lead-acid batteries were waste. Mr. Saxon stated that he did not know. I asked Mr. Saxon if he had conducted a hazardous waste determination on the lead-acid batteries. Mr. Saxon stated “No.”

Failure to conduct a HW determination – 40 CFR 262.11(a) (NOPF 1C).

Photo(s)

1. [IMG-2024051512285428541399348.jpg](#)
2. [IMG-2024051512315131511123269.jpg](#)
3. [IMG-2024051512393739371336748.jpg](#)
4. [IMG-2024051512395039501247345.jpg](#)
5. [IMG-2024051512425142511461594.jpg](#)

Building: Hemenway/Rooms 1039, 1058, 2016, 2056, 3036, 4008, 4036

Observation #s:

Date: 05/15/2024

Contains AOC: Yes

Contains CBI: No

MM1-OB-017
MM1-OB-018
MM1-OB-019
MM1-OB-020
MM1-OB-021
MM1-OB-022
MM1-OB-023

Persons Interviewed and Titles:

Tara McQuillan – Graduate Research Assistant (Room 2016)
Xiamon Hong – Senior Research Associate (Room 3036)
Sireesha Yerrathota – Research Assistant (Room 4008)
Andrew Lutkewitte – Principal Investigator (Room 4008)

The following less than 90-day hazardous waste accumulation containers (HW storage containers) were not marked with the words “Hazardous Waste,” not marked with the accumulation start date and not inspected weekly:

- Hemenway/Room 2016 - Nine full/unlabeled 500 ml HW storage containers of waste paraformaldehyde ([IMG-2024051514275927591209396.jpg](#)). Ms. McQuillian was not aware of the length of time of accumulation of the HW storage containers. Prior to the conclusion of the visual inspection, the HW storage containers were labeled with the words “Hazardous Waste” ([IMG-202405151433013311198897.jpg](#)). I asked Ms. McQuillian if she conducts inspections on the HW storage containers. Ms. McQuillian stated “No.”

HW storage containers not labeled with the words “Hazardous Waste” – 40 CFR 262.34(a)(2) (NOPF 2).

HW storage containers not marked with the accumulation start date – 40 CFR 262.34(a)(3) (NOPF 3).

Weekly HW inspections not conducted – 40 CFR 265.174(a)(3) (NOPF 7B).

More than one waste stream per container was being accumulated in the following satellite accumulation areas:

- Hemenway/Room 3036 - One $\frac{3}{4}$ full 1-liter SAC of waste xylene ([IMG-2024051513561156112034839.jpg](#)). This SAC was accumulating the same waste stream (waste xylene) in the same satellite accumulation area with one $\frac{3}{4}$ full 700 ml SAC of waste xylene (labeled with the words “Used Xylene”). Ms. Hong that that both SACs had been accumulating for greater than two weeks. **NOPF 4A**
- Hemenway/Room 4008 - One unlabeled full 150 ml SAC of paraformaldehyde (PFA) waste ([IMG-202405151314081481331046.jpg](#) and [IMG-202405151318091891517264.jpg](#)). This SAC was accumulating the same waste stream (PFA waste) in the same satellite accumulation area with one $\frac{1}{4}$ full 250 ml SAC of PFA waste. Ms. Hong was not aware of the length of time of accumulation of the SACs of PFA waste. **NOPF 4B**

More than one waste stream per container being accumulated in the same satellite accumulation area – K.A.R. 28-31-262(c)(3) (NOPFs 4A and 4B). **NOPFs 4A and 4B were inadvertently cited as 40 CFR 262.34(c)(2) (containers not managed as HW storage containers within three days of no longer meeting the definition of hazardous waste satellite accumulation containers).*

The following HW SACs were not labeled with the words “Hazardous Waste”:

- Hemenway/Room 1039 - One unlabeled $\frac{3}{8}$ full 4-liter SAC of waste acetone ([IMG-20240515151727172757382.jpg](#)). Prior to the conclusion of the visual inspection, the SAC was labeled with the words “Hazardous Waste” ([IMG-20240515151828182859817.jpg](#)). **NOPF 5C-1**

- Hemenway/Room 1058 - One unlabeled 4-liter SAC of waste acetone ([IMG-2024051515072772760155.jpg](#)). Prior to the conclusion of the visual inspection, the SAC was labeled with the words "Hazardous Waste" ([IMG-20240515151021102147642.jpg](#)). **NOPF 5C-2**
- Hemenway/Room 2056 - One unlabeled 4-liter SAC of waste xylene and one unlabeled 4-liter SAC of waste formaldehyde ([IMG-2024051514423242321209751.jpg](#)). Prior to the conclusion of the visual inspection, the SACs were labeled with the words "Hazardous Waste" ([IMG-202405151444074471178237.jpg](#)). **NOPF 5C-3**
- Hemenway/Room 3036 - One $\frac{3}{4}$ full 700 ml SAC of waste xylene (labeled with the words "Used Xylene") and one $\frac{3}{4}$ full 1-liter SAC of waste xylene ([IMG-2024051513561156112034839.jpg](#)). Prior to the conclusion of the visual inspection, the SACs were labeled with the words "Hazardous Waste" ([IMG-20240515140102121171769.jpg](#)). **NOPF 5C-4a and 5C-4b** *NOPF 5C-4b (one $\frac{3}{4}$ full 1-liter SAC of waste xylene) was inadvertently left off the NOPF form.
- Hemenway/Room 4008 - One unlabeled $\frac{3}{4}$ full 150 ml SAC of Oil Red O (07/07/24 accumulation date), one $\frac{1}{2}$ full 150 ml SAC of decalcification waste (04/01/2024 accumulation date), one full 150 ml SAC of PFA waste (02/07/24 accumulation date) and one $\frac{1}{4}$ full 250 ml SAC of PFA waste (03/28/24 accumulation date) ([IMG-202405151314081481331046.jpg](#) and [IMG-202405151318091891517264.jpg](#)). Prior to the conclusion of the visual inspection, the SACs were labeled with the words "Hazardous Waste" ([IMG-2024051513243224321187221.jpg](#)). **NOPF 5C-5** *The $\frac{1}{4}$ full 250 ml SAC of PFA waste was inadvertently left off the NOPF form.
- Hemenway/Room 4036 - One unlabeled $\frac{1}{4}$ full 150 ml SAC of hematoxylin waste ([IMG-2024051513344434441145855.jpg](#)). Prior to the conclusion of the visual inspection, the SAC was labeled with the words "Hazardous Waste" ([IMG-2024051513352735271163181.jpg](#)). **NOPF 5C-6**

HW SACs not labeled with the words "Hazardous Waste" – K.A.R. 28-31-262(c)(7) (NOPFs 5C-1, 5C-2, 5C-3, 5C-4a, 5C4b, 5C-5 and 5C-6).

Photo(s)

1. [IMG-202405151314081481331046.jpg](#)
2. [IMG-202405151318091891517264.jpg](#)
3. [IMG-2024051513243224321187221.jpg](#)
4. [IMG-2024051513344434441145855.jpg](#)
5. [IMG-2024051513352735271163181.jpg](#)
6. [IMG-2024051513561156112034839.jpg](#)
7. [IMG-20240515140102121171769.jpg](#)
8. [IMG-2024051514275927591209396.jpg](#)
9. [IMG-202405151433013311198897.jpg](#)
10. [IMG-2024051514423242321209751.jpg](#)
11. [IMG-202405151444074471178237.jpg](#)
12. [IMG-2024051515072772760155.jpg](#)
13. [IMG-20240515151021102147642.jpg](#)
14. [IMG-20240515151727172757382.jpg](#)
15. [IMG-20240515151828182859817.jpg](#)

SECTION III – RECORDS REVIEW

Record: Contingency Plan		AOC: No
Ref #: MM1-RR-001	Reviewed By: Mike Martin	Reviewed Date: 05/14/2024
KUMC maintains a contingency plan and it was up to date. See attachment 8 for the Contingency Plan.		
Record: Inspections		AOC: Yes
Ref #: MM1-RR-002	Reviewed By: Mike Martin	Reviewed Date: 05/14/2024
Weekly HW inspections are conducted on HW storage containers in Building 25. From my review of the 2020-2024 weekly HW inspection logs, it appears that KUMC had greater than seven days between weekly inspections in December 2020, 2021, 2022 and 2023. See attachment 9 for the Hazardous Waste Inspection Logs. HW inspections were not conducted during the weeks of 12/20/2020, 12/26/2021, 12/25/2022 and 12/24/2023. I asked Ms. Mattwaoshshe if hazardous waste had been stored in Building 25 during the weeks of 12/20/2020, 12/26/2021, 12/25/2022 and 12/24/2023. She stated 'Yes.' Ms. Mattwaoshshe stated that the campus was closed during Christmas break 2020-2023 and hazardous waste inspections were conducted during the week prior to and after the Christmas break.		
Weekly hazardous waste inspections not conducted – 40 CFR 265.174(a)(3) (NOPF 7A).		
Record: Personnel Training		AOC: No
Ref #: MM1-RR-003	Reviewed By: Mike Martin	Reviewed Date: 05/14/2024
Required staff had received appropriate training on hazardous waste management and the training records appeared to be satisfactory.		
Record: Manifests and Annual Reports		AOC: No
Ref #: MM1-RR-004	Reviewed By: Mike Martin	Reviewed Date: 05/15/2024
The past three years uniform hazardous waste manifests and annual monitoring reports were on file and appeared to be satisfactory.		

SECTION IV – AREAS OF CONCERN

The presentation of Areas of Concern does not constitute a formal compliance determination or violation.

Building: Support Services Facility/Shop Services Facility (Landscaping)
MM1-OB-015
Failure to conduct a HW determination on one open cardboard box storing eleven fluorescent lamps – 40 CFR 262.11(a) (NOPF 1A).
Building: Delp Basement - Old Paint Storage
MM1-OB-006
Failure to conduct a HW determination on 13 unlabeled 1-gallon pails of waste paint and the two aerosol spray cans – 40 CFR 262.11(a) (NOPF 1B).
Building: Support Services Facility/Shop Services Facility (Landscaping)
MM1-OB-015
Failure to conduct a HW determination on three lead-acid batteries – 40 CFR 262.11(a) (NOPF 1C).

Building: Hemenway/Room 2016

[MM1-OB-020](#)

Nine 500 ml HW storage containers of waste paraformaldehyde not marked with the words “Hazardous Waste” – 40 CFR 262.34(a)(2) (**NOPF 2**).

Building: Hemenway/Room 2016

[MM1-OB-020](#)

Nine 500 ml HW storage containers of waste paraformaldehyde not marked with the accumulation start date – 40 CFR 262.34(a)(3) (**NOPF 3**).

Building: Hemenway/Rooms 3036 and 4008

[MM1-OB-017](#) and [MM1-OB-019](#)

More than one waste stream per container being accumulated in the same satellite accumulation area – K.A.R. 28-31-262(c)(3) (**NOPFs 4A and 4B**):

- Hemenway/Room 3036 - One $\frac{3}{4}$ full 1-liter container of waste xylene (**NOPF 4A**).
- Hemenway/Room 4008 - One unlabeled full 150 ml container of PFA waste (**NOPF 4B**).

**NOPFs 4A and 4B were inadvertently cited as 40 CFR 262.34(c)(2) (containers not managed as HW storage containers within three days of no longer meeting the definition of hazardous waste satellite accumulation containers).*

Building: Wahl East/Rooms 2005C, 2020C, and Room 6001
Hemenway/Rooms 1039, 1058, 2056, 3034, 4008, and 4036

[MM1-OB-008](#), [MM1-OB-010](#), [MM1-OB-011](#), [MM1-OB-014](#), [MM1-OB-017](#), [MM1-OB-018](#), [MM1-OB-019](#), [MM1-OB-021](#), [MM1-OB-022](#), and [MM1-OB-023](#)

HW SACs not labeled with the words “Hazardous Waste” – K.A.R. 28-31-262(c)(7) (**NOPFs 5A, 5B-1, 5B-2, 5B-3, 5C-1, 5C-2, 5C-3, 5C-4a, 5C-4b, 5C-5 and 5C-6**):

- Breidenthal Entrepreneur Research Institute/Room 1016 – One $\frac{1}{4}$ full 4-liter SAC of waste solvent and one $\frac{1}{4}$ full 4-liter SAC of waste solvent (**NOPF 5A**).
- Wahl East/Room 2005C - One 1-liter SAC of waste formalin (**NOPF 5B-1**).
- Wahl East/Room 2020C - One 4-liter SAC of waste xylene (**NOPF 5B-2**).
- Wahl East/Room 6001 - One 4-liter SAC of waste xylene and one open 4-liter SAC of waste formaldehyde (**NOPF 5B-3**).
- Hemenway/Room 1039 - One unlabeled $\frac{2}{3}$ full 4-liter SAC of waste acetone (**NOPF 5C-1**).
- Hemenway/Room 1058 - One unlabeled 4-liter SAC of waste acetone (**NOPF 5C-2**).
- Hemenway/Room 2056 - One unlabeled 4-liter SAC of waste xylene and one unlabeled 4-liter SAC of waste formaldehyde (**NOPF 5C-3**).
- Hemenway/Room 3036 - One $\frac{3}{4}$ full 700 ml SAC of waste xylene (labeled with the words “Used Xylene”) (**NOPF 5C-4a**) and one $\frac{3}{4}$ full 1-liter SAC of waste xylene (**NOPF 5C-4b**). **NOPF 5C-4b was inadvertently left off the NOPF form.*
- Hemenway/Room 4008 - One unlabeled $\frac{3}{4}$ full 150 ml SAC of Oil Red O, one $\frac{1}{2}$ full 150 ml SAC of deocalcification waste, one full 150 ml SAC of PFA waste and one $\frac{1}{4}$ full 250 ml SAC of PFA waste (**NOPF 5C-5**). **The $\frac{1}{4}$ full 250 ml SAC of PFA waste was inadvertently left off the NOPF form.*
- Hemenway/Room 4036 - One unlabeled $\frac{1}{4}$ full 150 ml SAC of hematoxylin waste (**NOPF 5C-6**).

Building: Wahl East/Room 6001

[MM1-OB-008](#)

One 1-liter HW SAC of waste formalin not closed – 40 CFR 265.173(a) (**NOPF 6**).

Records: Weekly HW Inspections
MM1-RR-002 and MM1-OB-020
Weekly HW inspections not conducted during the weeks of 12/20/2020, 12/26/2021, 12/25/2022 and 12/24/2023 (Building 25) and on nine 500 ml HW storage containers of waste paraformaldehyde (Hemenway 2016) – 40 CFR 265.174 (NOPFs 7a and 7b).
Building: Delp Basement - UW Storage Area
MM1-OB-004
Ten cardboard boxes of UW-lamps (storing an estimate of 151 total lamps) not stored in closed containers – 40 CFR 273.13(d)(1) (NOPF 8).
Building: Delp Basement - UW Storage Area
MM1-OB-005
Forty-eight unlabeled UW-batteries not labeled with words Universal Waste - Batteries,” or “Waste Batteries” or “Used Batteries” – 40 CFR 273.14(a) (NOPF 9).
Building: Delp Basement - UW Storage Area
MM1-OB-004
Ten cardboard boxes of UW-lamps (storing an estimate of 151 total lamps) not labeled with words “Universal Waste - Lamps,” or “Waste Lamps” or “Used Lamps” – 40 CFR 273.14(e) (NOPF 10).
Building: Support Services Facility/Shop Services Facility (Landscaping)
MM1-OB-015
One unlabeled 15-gallon used oil collection container of used oil (the funnel at the top of the container was open and half-full) not labeled with the words “Used Oil” – 40 CFR 279.22(c) (NOPF 11).

Closing Conference

At the conclusion of the CEI, I summarized my findings and recommendations to Mr. Lickteig, Ms. Mattwaoshshe and other KUMC personnel (see Attachment 10 for the Exit Briefing Attendees List). I provided Mr. Lickteig with a *Confidentiality Notice* (Attachment 10), a *Receipt for Documents and Samples* (Attachment 11), and a *Notice of Preliminary Findings* (Attachment 12), which he signed as acknowledgement of receipt. No confidentiality claims were made by KUMC.

The following inspection documents and compliance assistance handouts were left with KUMC:

Notice Regarding Proprietary/Confidential Business Information (EPA Handout)
 Confidentiality Notice (Top page of the completed carbonless transfer set)
 Receipt for Documents and Samples (Top page of the completed carbonless transfer set)
 NOPF (Top page of the completed carbonless transfer set)
 Instructions for Responding to an NOPF (EPA Handout)
 U.S. EPA Small Business Resources (EPA Handout)
 Hazardous Waste Determinations and Documentation (Kansas Department of Health and Environment -KDHE Technical Guidance Document)
 Characteristic and Listed Hazardous Wastes (KDHE Technical Guidance Document)
 Container Management for Hazardous Waste Generators (KDHE Technical Guidance Document)
 Solvent-Contaminated Wipes (KDHE Technical Guidance Document)
 Recycling and Disposal of Aerosol Cans (KDHE Technical Guidance Document)
 Spent Fluorescent Lamps Containing Mercury (KDHE Technical Guidance Document)
 Used Oil Generators (KDHE Technical Guidance Document)

Follow Up

No follow-up at the time of the CEI.

Communication Log

The following information was received by REGION 7 on/after exiting the Facility on 05/16/2024.

Type	Point of Contact	Job Title/Organization	Description	Contains PII	Date
Email	Ryan Lickteig	Director EHS/KUMC	Email to Inspector about NOPF corrective actions.	No	05/28/2024 12:56 AM (CT)
Email	Ryan Lickteig	Director of EHS/KUMC	NOPF response transmittal to Inspector.	No	05/30/2024 11:17 AM (CT)
Phone Call	Emily Mattwaoshshe	Hazardous Materials Coordinator/KUMC	Inspector’s phone call to Emily regarding confirmation of waste venders.	No	06/12/2024 9:50 AM (CT)

SECTION VI – SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

No sampling was conducted.

SECTION VII – LIST OF APPENDICES

- 1. Photo Log
- 2. Report Attachments