

## Environmental Compliance Committee 2023 Annual Report

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The Environmental Compliance Committee (ECC) membership is composed of staff from Facilities Services (FS), Environmental Health and Safety (EHS), University of Tennessee Institute for Agriculture (UTIA), and the Office of Emergency Management (OEM). Listed below are the members for calendar year 2023.

- **Michael S. Barnhart, Chair – Program Leader, Environmental Programs (EHS)**
- **Garrett Ferry, Co-Chair – Coordinator III/Stormwater Coordinator (FS)**
- Steve Crouch – Safety Officer (UTIA)
- Rebecca Alcorn – Facilities Services Training Coordinator (FS)
- Jay Price – Sustainability Manager (FS)
- Brian Gard – Director, Emergency Management Administration (OEM)
- Charlie Howard – Environmental Compliance Coordinator (EHS)
- Randy Hamilton – Assist. Dir of Operations, Sanitation Safety & Rapid Response (FS)
- Terry Ledford – Director, Energy Management (FS)
- Michael Rotella – Supervisor, Hazardous Waste Management (EHS)
- Brian Payne – Assistant Director, Environmental Health & Safety (EHS)
- Jason Cottrell – Director, Landscape Services & Facilities Operations (FS)
- Melanie Reese – Facilities Services Safety Coordinator (FS)

The ECC (formerly the ECT) was successfully restarted in October of 2022 after almost five years of being dormant. A formal Charter & Bylaws document was drafted and voted on by the ECC members in early 2023. This document dictates the committee now directly reports to the Campus Safety Committee. Membership was also expanded to include more members from FS, EHS, and now the OEM.

The ECC met quarterly a total of four times during the 2023 calendar year. The ECC met on January 17, 2023, April 18, 2023, July 18, 2023, and October 17, 2023, respectively. Meeting minutes from these four meetings are made available to all members, prior to each meeting, for the previous meeting. All meeting minutes were posted to the EHS website and made available to the Campus Safety Committee Chair, Sandra Prior.

The quarterly meetings, while 90 days apart, provide a forum to better communicate environmental issues, concerns, and potential risks to the group at-large. Throughout 2023, the ECC hosted several guest speakers that have spoken on safety-related issues, satellite campus compliance (UTSI, etc.), and emergency response.

# 2023 Accomplishments and Activities

## Stormwater Management

The Stormwater Program achieved the following during the 2023 calendar year.

- Completed the first-round assessment of 64,081 feet of shoreline. 12,601 feet of shoreline need some level of stabilization.
- Conducted dry weather screening on all 74 Outfalls.
- Completed a full MS4 program audit with TDEC.
- Conducted 68 Stormwater Compliance Inspections on active construction projects.
- Hosted 12 Adopt-A-Stream cleanups.
- Hosted “Paddle-Off” event with the Water Quality Forum that raised funds and awareness for water quality in Knoxville.
- Hosted a rain barrel auction at UT gardens with the Water Quality Forum that raised funds and awareness for water quality in Knoxville.
- Converted approximately 30,000 square feet of impervious surface to drain to green infrastructure.
- Completed rehabilitation of a segment of 2<sup>nd</sup> Creek following a significant slope failure into the stream channel.

## Recycling

Recycling achieved the following during the 2023 calendar year.

- No data or updates were submitted by this group.

## Sustainability

The Sustainability Group achieved the following during the 2023 calendar year.

- No data or updates were submitted by this group.

## Institute of Agriculture

The UTIA team achieved the following during the 2023 calendar year.

- Properly disposed of 17,132 pounds of hazardous waste and 7,011 pounds of non-regulated chemical waste.
- Began a focused hazardous waste inspection program to identify and inspect satellite accumulation areas every calendar quarter.

## Spill Prevention and Control

The Spill Prevention Control and Countermeasures (SPCC) Plan for UTK Main Campus was reviewed, revised, and updated by EnSafe in October of 2022. All facilities must review their Plan every five years to include any changes in oil storage, spill prevention procedures, or

equipment on site. Annual SPCC training was conducted in-person at Fleet Management in March of 2023 by EHS personnel. Annual SPCC training was conducted digitally for Facilities Services personnel throughout the year by Facilities Services training personnel.

The Spill Prevention Control and Countermeasures (SPCC) Plan for UTIA was reviewed, revised, and updated by EnSafe in November of 2020.

In addition, an RFQ was submitted for a local (within a 30-minute radius of campus) spill response and cleanup contractor to be on call in the event of a release. HEPACO and Environmental Remediation Consultants (ERC) received agreements to service Main Campus and UTIA in late 2022.

## Lead-Based Paint & Asbestos Management

Facilities Services and EHS achieved the following during the 2023 calendar year.

- Two semi-annual inspection audits of lead-based paint hazards and asbestos-containing materials were conducted in all child-occupied facilities on campus. These semi-annual inspections occurred on June 23, 2023, and December 21, 2023, respectively. These inspections involved only one location – The Early Learning Center for Research and Practice, located at 1206 White Avenue, Knoxville, TN 37996.
- Shannon Loyd (TNLBP2023-3605) & Charlie Howard (TNLBP2023-3604) became State of Tennessee Certified Inspectors for Lead Based Paint in May and April of 2023, respectively. Charlie and Shannon, in addition to Ryan Setzer, attended a Lead Based Paint Risk Assessor Training Course in December 2023 in Nashville to prepare for the State exam.
- Facilities Services (FS) has two Supervisors, two Inspectors, a Monitor, and a Designer for ACM Management. Randy Hamilton is in the process of re-bidding our asbestos contract, a three-year agreement with two annual extension options. Delivery of manifests from Waste Management for ACM disposal were modified in 2023 for email delivery to FS as .pdf files. Waste Management disposes of the non-friable ACM and HEPACO disposes of the friable ACM.
- Approximately 61 ACM abatement projects were completed in 2023 on the UTK Main Campus.

## Outdoor Air Quality (Title V)

The Air Quality Group achieved the following during the 2023 calendar year.

- FS paid major source annual emission fees, based on Mixed or Actual emissions, to the Division of Air Pollution Control in Q1 of 2023.
- FS filed semi-annual reports to TDEC and the EPA on July 25 and 26, 2023.

- On August 22, 2023, FS submitted a Technical Contact Change Notification to TDEC designating Candis Sheehan as the Principal Contact for Permit 566694, V-0018.
- On November 6, 2023, TDEC completed a bi-annual on-site inspection of Facility No. 47-0018 for Title V compliance.
- Filed GHG annual report with the EPA and all emissions inventory(s) with TDEC.
- FS filed a renewal application package for the Title V Permit with TDEC in October 2022, in advance of the 180-day expiration deadline, and is awaiting final approval.

## Hazardous & Biological Waste Management

EHS achieved the following for waste disposal during the 2023 calendar year.

### Disposal Quantities

- The Main Campus (UT Knoxville) disposed of 51,661 pounds of hazardous waste by way of Veolia. Main Campus disposed of 25,435 pounds of non-hazardous waste by way of Veolia.
- The Main Campus disposed of 57,101 pounds (\$48,535.85) of biowaste by way of Advantra.
- The Graduate School of Medicine (GSM) disposed of 1,041 pounds of hazardous waste and 366 pounds of non-hazardous waste.
- IAMM disposed of 5,981 pounds of hazardous waste and 1,093 pounds of non-hazardous waste.
- EHS continues to package non-hazardous lab pack waste separately from hazardous waste, which saves money.
- EHS bulked solvent wastes in SERF 207B on multiple occasions, including April and August of 2023. Organic Chemistry and General Chemistry wastes in Strong Hall were bulked in October and December of 2023, prior to laboratory shutdown for the semester. EHS personnel completed over ten waste bulking operations in 2023. Waste bulking reduces disposal costs as it reduces the need to lab pack small containers/bottles of solvents, etc.
- EHS completed ninety-eight (98) service requests (out of 99) for waste removal with a closure rate greater than 99%.

### 90-Day Central Accumulation Areas (CAAs)

- EHS currently has four CAAs on campus that are available for drop-off of waste by students and staff. These locations are: Strong Hall 119, SERF 207B, Mossman 223, & IAMM G015. These locations have a set schedule for drop-offs that is posted quarterly on the EHS website. Zeanah G113A is scheduled to be available sometime in 2024.
- GSM 2045 (soon to be R226) and SERF 423 are CAAs as well, but neither are on a set schedule for waste drop-offs currently.
- EHS has set a schedule to pick up waste from the Art & Architecture Building every other Friday throughout 2023. The waste includes rags contaminated with paint thinner

and paint thinners, as well as aerosol cans and paint waste. Waste is picked up from the 1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup> floors of the building.

- EHS reloaded and/or replaced all spill/PPE kit contents in each <90-day storage area, and at the Chemistry storage room that includes all supplies needed to clean up most small spills on campus. All the items fit into a 30-gallon poly drum, which can also be used as an overpack drum if needed. Supplies include (but not limited to): half-face respirators with replacement cartridges; Tyvek and other personal protective equipment; first aid kit; caution tape; spill containment supplies (pigs, spill pads, absorbent, acid, and base absorbent).
- One-gallon sharps containers were put into each 90-day CAA in December 2023. All first aid kits for the CAAs were replaced or restocked in December 2023.
- All CAAs are checked visually every week and logs signed every week, including holidays and campus closures.

### **Laboratory Closures/Waste Cleanouts**

- EHS cleaned out waste from several labs due to PI (Principal Investigator) retirement on campus in 2023, including: Barnes, Larese, and Schweitzer. The Barnes laboratory cleanout consisted of multiple lab packs, reactives, and compressed gas cylinders. These three laboratory cleanouts were major cleanouts that extended over multiple months within 2023 until they were completed.
- EHS continues to collect aerosol cans and paint that is dropped off at Recycling (Stephenson Drive). Aerosol cans are disposed of as hazardous waste at UTK. The drop-off point is checked on a weekly basis by EHS.
- Facilities Services – On April 27, 2023, Veolia disposed of a biocide drum as regulated material at a weight of 114 pounds.
- Neyland Stadium – On August 22, 2023, Veolia disposed of eight hundred pounds of organic waste solvent, two hundred pounds of broken lead-acid batteries, 218 pounds of oil, 7,000 pounds of latex paint, and 1,827 pounds of degreaser.
- Carrick Hall – On October 20, 2023, EHS was notified about some older drums of solvent and other stored chemicals that need to be removed from the building for disposal. On October 25, 2023, Veolia transported 326 pounds of combined waste offsite.
- Student Aquatic Center – On November 28, 2023, 2,327 pounds of regulated material (hazardous) were removed from the center at the request of personnel onsite. EHS managed the cleanup operation with Veolia, completing the removal of all material off-site.

## **IATA, DOT, RCRA, HAZWOPER, MISC Training**

- Charlie Howard, Shannon Loyd, and Peyton Martz all completed refresher courses or renewed their IATA (Air Shipping), Annual RCRA HZW Management (HZW), 40-Hr HAZWOPER (OSHA), Hazardous Material Ground Shipping-DOT (Ground Shipping).
- Peyton Martz also completed the Erosion Prevention Sediment Control EPSC Level 1 (Water Quality) and a RCRA 101 Course (TDEC) in 2023 to expand knowledge. Shannon Loyd and Charlie Howard also completed the RCRA 101 Course in March 2023.
- On October 9, 2023, Shannon Loyd conducted an in-person training in Room 212 of Zeanah Engineering Complex with staff from Dr. Chapel's laboratory. This training covered proper hazardous waste labeling, time-limit threshold, volume limits, and other regulatory requirements for Satellite Accumulation Areas (SAAs).

## **Hazardous Waste Audits (SAAs)**

- Completed eight Building-specific walkthrough inspections (with FS) for environmental compliance and hazardous waste from November 2022 to March 2023: Hodges Library, Haslam College of Business, Taylor Law Building, Art & Architecture, Hesler Biology, Reese Hall, N/S Carrick Hall, and Clement Hall.
- Completed twenty-five inspections of laboratories on Main Campus for HZW Management. These were completed in response to the NOV's, and fines received from TDEC in 2021 and 2022.
- Completed multiple lab inspections at GSM for HZW Management in wake of the Warning Letter issued by TDEC. The remaining lab inspections at GSM are to be completed in 2024.

## **Dangerous Goods Shipping**

- EHS shipped a total of eight dangerous goods shipments in 2023. Seven of the eight were to locations in the United States. The following locations were shipped dangerous goods shipments from UTK in the United States: (1) Oak Ridge, TN (2) Nashville, TN (3) Bozeman, MT (4) Watertown, MA (5) Memphis, TN (6) St. Paul, MN and (7) New Freedom, PA. One shipment was sent to an international recipient in Puerto, Columbia.

## **Annual Reporting – Hazardous Chemicals (Emerg) & Hazardous Waste**

- 2022 Tier 2 Report for UTK – submitted on February 14, 2023
- 2022 Annual TDEC Reporting (Biennial) for all EPA ID Numbers – all submitted on February 20, 2023

## TDEC Inspections

TDEC was on campus three times in 2023 for hazardous waste inspections/audits.

- On June 21, 2023, the Division of Solid Waste Management (DSWM) conducted a Hazardous Waste Compliance Evaluation Inspection (CEI) at the UT Main Campus (Austin Peay). Seven NOVs were recorded and subsequently corrected the same month. On August 4, 2023, UTK EHS received a Follow-up Inspection Letter from TDEC stating all June violations had been corrected.
- On August 2, 2023, the Division of Solid Waste Management (DSWM) conducted a Hazardous Waste Compliance Evaluation Inspection (CEI) at the Graduate School of Medicine (GSM). Three NOVs were recorded and subsequently corrected the same month. On August 29, 2023, UTK EHS received a Follow-up Inspection Letter from TDEC stating all August violations had been corrected with two resolved immediately.
- On November 8, 2023, TDEC issued the GSM a Warning Letter regarding the management of hazardous waste at the facility. However, due to the prompt return to compliance, and upon the recommendation of the Knoxville Environmental Field Office, the Division decided that further enforcement action will not be pursued at this time. The issuance of the Warning Letter closed this file. Additional Corrective Actions, including a new training program and additional internal inspections, have been implemented to hopefully resolve future issues in the labs and CAA at GSM.
- On December 12, 2023, Pamela Rudd with TDEC came to campus to review R226 in GSM to review it as the new potential internal CAA location.

## Third-Party Audits

Third-party auditing of all environmental programs at UTK was successfully restarted in late 2022. Per Environmental Inspections and Audits Procedure (EC-060), EnSafe was contracted to begin auditing specific environmental and regulatory programs at UTK. This will be an annual event, occurring year-round, with the 2022-2023 period being the first year of a four-year cycle. Plans and Guides updated in 2023 include Universal Waste, Lead Management, and Asbestos-Containing Materials (ACM). The Hazardous Waste Program audit also began partially in late 2023, also conducted by EnSafe. This audit from a programmatic and field level will not be completed until sometime in 2024.

## Policies and Document Revisions

- EHS updated the Quick Reference Guide (QRG) for UTK Main Campus
- EHS updated the Hazardous Waste Contingency Plan (EC-002)
- Waste Bulking Procedure (EC-061)
- Contractor Safety Program (AD-160)

- Universal Waste Management (EC-022), Lead Management (EC-041), and Asbestos Management Plan (EC-040)

## Miscellaneous Projects/Incidents

- UTIA Diesel Spill Accident – On April 25, 2023, a tow truck working on the UTIA campus rolled uncontrolled across Joe Johnson Drive (from the EESRB Project) and impacted a stone structure spilling diesel fuel. Micro-Blaze was applied by HEPACO for two days to capture/remove the spilled fuel. The response was fast, and the site was monitored post-incident.
- SERF Waste Bulking Incident – On August 4, 2023, during waste solvent bulking operations (EHS) in SERF 207B, an unlabeled nuisance odor chemical was bulked (unlabeled), causing building occupants to pull a fire alarm. Two Facilities Services individuals were sent to the hospital via ambulance for treatment because of the odor exposure. As a result, a Waste Bulking Procedure Guide was created, along with building notifications requirements (Listserves, etc.), additional PPE requirements, and multiple personnel accompanying any CAA bulking activity on campus now and in the future.
- On November 21, 2023, EHS was notified of a leaking fuel tank that was pulled from the Tennessee River by UT Rowing personnel and placed in the parking lot. EHS picked up the fuel tank and removed it from public access. All remnant gasoline was disposed of by Veolia and the tank will be recycled by way of Noble Metals.