

STANDARD OPERATING PROCEDURE

Management of Regulated Construction Waste

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Hazardous materials in construction and demolition waste must be responsibly managed to avoid fines or environmental liability. Incorrect documentation, transportation, tracking, and disposal of hazardous waste can result in costly violations. Examples of construction related waste that are regulated and require special handling include:

<ul style="list-style-type: none"> • Asbestos Containing Materials • Aerosol Cans • Batteries • Chemicals • Contaminated Soil • Contaminated Piping • Electronics • Hydraulic Oil • Lamp Ballasts • Lamp and HID Light Bulbs 	<ul style="list-style-type: none"> • Lead Paint • Mercury Containing Equipment • Motor Oil • Oil-Filled Equipment, Electrical Devices and Transformers. • Paint Related Materials • PCB Caulking • Radioactive Tritium Exit Signs • Ionizing Smoke Detectors
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Proper management includes an appropriate waste determination, accumulation, and disposal. Determination and accumulation prior to disposal are the responsibility of the contractor, department and/or project manager performing the work, however the liability for not doing this is shared by the University. Therefore, all project managers must be thoroughly aware of the following requirements. All disposals must be through, coordinated or approved by Environmental Health and Radiation Safety (EHRS).

I. PROCEDURES

1. When a construction project will generate regulated waste, the project manager must contact EHRS and provide the following information:
 - Start date of construction and estimated timeframe.
 - Regulated Waste-A list of the type of regulated waste and the amount that will be disposed.
 - If contractor will directly manage the waste
 - Transporters Qualifications
 - Hazardous Waste Hauler's license and permit
 - Insurance Requirements
 - Comprehensive or Commercial Form of General Liability Insurance
 - Business Automobile Liability Insurance for owned, scheduled, non-owned, or hired vehicles.
2. EHRS will verify with the University Project Manager the estimated volumes and types of regulated waste and provide technical guidance and support throughout the duration of the project.
3. All waste must be appropriately labeled and secured in a locked area not accessible to the public. EHRS must be notified of this location and be granted access for periodic visits to ensure compliance.
4. All waste must be sent to a university approved treatment, storage, and disposal facility (TSDF). Environmental Health and Radiation Safety will identify the TSDF based on the type and volume of waste. Contact the Office of the Fire Marshal for asbestos containing waste materials.
5. All regulated waste must be properly packaged, labeled, and manifested prior to shipment off-site. EHRS will provide the correct EPA ID number and manifest site information for all regulated waste (except for Asbestos) sent off-site.
6. The Project Manager and/or the transporter must contact EHRS when the regulated waste is ready for shipment. A 48-hour advance notice to EHRS is required. EHRS will provide a qualified person to inspect the shipment for compliance and sign the waste manifest.
7. All transportation drivers must carry employee identification, driver's license with HazMat endorsement, proof of vehicle registration and the most recent copy of the Department of Transportation's Emergency Response Guidebook.

I. CONTAINERS & LABELS

EHRS will provide the proper collection containers and labels for all regulated waste directly managed by EHRS.

II. TRAINING

All contractors who will manage or accumulate hazardous materials must be able to document that their staff has had appropriate training to identify, manage, and safely manage the hazardous materials.

III. TYPICAL WASTE STREAMS MANAGEMENT

WASTE STREAM	MANAGEMENT GUIDANCE
Aerosol Cans	Aerosol Cans which are empty of all contents can be disposed of as “regular” trash by placing in any waste receptacle. If there are contents still in the can, the aerosol product must be placed in an appropriate outer container (e.g., fiberboard drum) with a completed “Universal Waste” label affixed to it. All cans must be managed by EHRS.
Asbestos Containing Materials	Contact the Office of the Fire Marshal at 215-204-8687
Batteries	Storage batteries and other batteries which contain hazardous metals such as mercury, lead, silver, lithium, or cadmium must be managed by EHRS. All used batteries should be placed in an appropriate outer container with a completed “Universal Waste” label affixed to it.
Chemicals	Disposal of hazardous chemicals must be coordinated with EHRS. Never dispose of chemicals onto the ground, into water bodies, or the stormwater system.
Contaminated Soil/Piping	Contact EHRS at 215-707-2520 for technical guidance.
Electronics	Disposal of electronic waste should be coordinated with Computer Recycling Center at 215-204-4749.
Hydraulic Oil	All waste oil must be stored in an appropriate closed container labeled as “Waste Oil.” Oil containers must have secondary containment.
Lamp Ballast	All ballasts (PCB and non-PCB) must be collected for disposal and managed by EHRS. Drums must be labeled and closed during accumulation. Fifty-five-gallon drums should not be filled more than two-thirds of the way due to the weight. PCB ballast must be segregated from non-PCB ballast.
Lamp and HID Light Bulbs	Fluorescent and high-intensity discharge (HID) bulbs must be managed by EHRS. Other specialty bulbs which also may contain mercury must be

	managed by EHRS as well. All spent lamps must be placed in an appropriate outer container (e.g., Lam box) with a completed "Universal Waste" label affixed to it.
Lead Paint	A lead paint survey must be provided for any building constructed prior to 1980 and for any exterior structure (i.e., painted handrails) that may be affected by a construction project, regardless of age. Materials identified as having lead paint must be further characterized to determine if they are subject to hazardous waste disposal restrictions. Lead survey information must be provided to the contractor and the contractor must comply with applicable training requirements as required by OSHA and the EPA.
Mercury Containing Equipment	There are many types of equipment that contain elemental mercury. You must verify that equipment does not contain mercury prior disposing in the regular trash. Mercury containing devices (switches, thermostats, control devices, etc.) must be managed with caution to prevent spillage. Devices must be managed intact, sealed, and packaged to prevent breakage. All used mercury containing equipment must be placed in an appropriate outer container with a completed "Universal Waste" label affixed to it.
Motor Oil	All waste oil must be stored in an appropriate closed container labeled as "Waste Oil." Oil containers must have secondary containment.
Oil-Filled Equipment, Electrical Devices and Transformers.	Contact EHRS at 215-707-2520. An assessment of potential PCBs must be conducted and documented. PCBs require special disposal.
Paint Related Materials	All paint and paint related materials must be managed by EHRS. Contact EHRS at 215-707-2520.
PCB Caulking	Samples of caulking in buildings constructed prior to 1978 must be analyzed for the presence of polychlorinated biphenyl's (PCB) if the material will be impacted by renovation or demolition activities. Caulking containing concentration of PCBs equal to or greater than 50 ppm must be managed and disposed as hazardous waste.
Ionizing Smoke Detectors	Ionizing smoke detectors contain an ionizing source. These must be collected and disposed of through EHRS. It is critical that the entire smoke detector unit is collected as some designed use multiple radioactive sources located in various parts of the unit. Ionizing smoke detectors are marked with the isotope and the amount of activity present.
Radioactive Tritium Exit Signs	These must be collected and disposed of through EHRS.