

Policy Subject: <i>Rags and Absorbents Disposal</i>	Effective: 3/1/09
Affected Area: Any areas on campus that generate absorbents and rags from cleaning up spills and leaks	Reviewed/Revised: 7/1/11

## 1.0 Purpose, Applicability, and Scope

- 1.1 Purpose-The purpose of this procedure is to ensure that various absorbent materials are properly managed and disposed on campus.
- 1.2 Applicability-This shall apply to all places of employment on the UT-K campus where students, staff and faculty are generating waste rags and absorbents for disposal.
- 1.3 Scope- This shall apply to any absorbent materials, such as kitty litter or vermiculite, pigs, rags, towels, etc. to clean up spills and leaks of oils, grease, solvents, etc.

## 2.0 Abbreviations, Acronyms, and Definitions

- 2.1
  - CFR-Code of Federal Regulations
  - DOT-Department of Transportation
  - EHS-Environmental Health and Safety
  - EPA-Environmental Protection Agency
  - MSDS-Material Safety Data Sheets
  - TDEC-Tennessee Department of Environment and Conservation

### 2.2 Definitions

**Hazardous substance** – Any substance that is capable of causing an acute or chronic health condition in humans or adversely impacting the environment. Substances that are considered physical hazards (flammable substances, explosives, shock sensitive, etc.) are included in the definition of a hazardous substance.

**Material safety data sheet (MSDS)**- Detailed information bulletin prepared by the manufacturer or importer of a chemical that describes the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first aid procedures, and control measures.

## 3.0 Roles and Responsibilities

- a. Employees shall :
  - i. Ensure that oily rags and absorbents are being handled properly according to all applicable federal, state and local regulations.

- ii. Ensure they are properly trained to manage absorbent waste.
  - iii. Confer with their supervisor and/or EHS if they have any questions about how to manage their absorbent waste.
  - iv. Minimize the volumes of waste absorbents that are generated during processes.
- b. Managers and Supervisors who have employees who use hazardous chemicals under their control shall:
  - i. Ensure their employees are trained in how to properly manage waste rags and absorbents.
  - ii. Review waste minimization efforts to decrease the volume of waste absorbents generated by their employees.
- c. EHS shall:
  - i. Serve as a technical resource to help make determinations whether rags and absorbents being generated are hazardous or non-hazardous waste, and how to manage and minimize the volumes of absorbents generated.
  - ii. Dispose of hazardous rags and absorbents through a waste contractor.
  - iii. Provide training to employees on managing waste absorbents upon request.
  - iv. Revise absorbent policy on an annual basis, or as needed.

#### **4.0 Procedure**

This policy covers absorbent materials, such as kitty litter or vermiculite, pigs, rags, towels, etc. to clean up oils, grease, solvents, etc.

Some areas on campus (i.e. Motor Pool, Lawnmower Shop) use shop towels, rags and wipes to clean up spills. If the shop towels are reused and laundered, then the towels do not need to be managed as hazardous waste and disposed. If a laundry service is used, please make sure that the shop towels are free of liquids before laundering. However, if the shop towels containing oil, solvents, or other potentially hazardous substances are disposable, then steps need to be taken to ensure this waste is properly being managed. The first step is identifying if the absorbents are hazardous or non-hazardous waste.

#### **Rags, Shop, Towels and Absorbents contaminated with oil and grease (including cooking oil):**

Rags, towels and absorbents contaminated with oil and grease are not considered hazardous waste, unless they are contaminated with a listed solvent (see Table 1 below). If small quantities of oily shop towels or absorbents are generated, then these can be discarded in the municipal trash. However, if waste oily rags and absorbents are generated on a regular basis, then a waste collection container needs to be set up in the work area. The container should be lined with a compatible liner (such as a clear plastic bag), properly labeled as oily rags, and closed when not in use. Even though absorbents contaminated with oil are not classified as hazardous waste, they still need to be managed properly, according to EPA's used oil regulations found in 40 CFR Part 279. EHS can be contacted to help set up a collection container and advise on properly managing and disposing this waste. There are several

options for waste disposal. EHS can be contacted for guidance and questions. This policy covers both maintenance shops, as well as kitchens on campus which could generate absorbent waste from cooking oil and grease. If an oil spill is large, or enters a storm drain, please contact EHS at 974-5084 and/or the fire department and evacuate the area. The spill should be contained as soon as possible. There are various locations on campus where spill kits are stored for use in the event of a spill.

**Absorbents contaminated with Listed and Characteristic Solvents:**

Absorbents contaminated with the following f-listed solvents listed in Table 1 are classified as hazardous waste and must be managed according to all RCRA regulations. These must be stored in a closed container when not in use and properly labeled as hazardous waste with a UT hazardous waste label. Once the container is filled, EHS should be contacted to dispose of the hazardous absorbent waste. If you are unsure if the solvent being used contains an F-listed solvent, then start by reviewing the MSDS sheet. If you are still unsure, please contact EHS for guidance.

**Table 1: F-Listed Solvents:**

acetone	2-ethoxyethanol	2-nitropropane
benzene	ethyl acetate	pyridine
n-butyl alcohol	ethyl benzene	tetrachloroethylene
carbon disulfide	ethyl ether	toluene
carbon tetrachloride	isobutanol	1,1,1-trichloroethane
chlorinated fluorocarbons	methanol	1,1,2-trichloroethane
chlorobenzene	methyl ethyl ketone	trichloroethylene
cresols and cresylic acid	methyl isobutyl ketone	trichlorofluoromethane
cyclohexanone	methylene chloride	1,1,2-trichloro-1,2,2-trifluoroethane
o-dichlorobenzene	nitrobenzene	xylene

Absorbents that have been used to clean up spills of “characteristic” hazardous waste (flammable solvents such as gasoline; corrosive liquids) are not classified as hazardous waste if they are not contaminated with listed solvents (see list above). Characteristic waste includes four major categories: corrosives, flammables, reactive and toxic waste. Also, if a *de minimus* spill of hazardous waste occurs (meaning an insignificant non-routine release), the absorbents used to clean up the spill may not be considered hazardous waste, unless the release involves an acute compound (40 CFR 261.33(e)), which is found in the list of acutely toxic compounds found at <http://web.utk.edu/~ehss/pdf/ahs.pdf>. However, absorbents used to clean up characteristic hazardous waste must be treated as hazardous if they are saturated (which means liquid can be squeezed from the rags), or if there are any free liquids at the bottom of the waste container. If you are not sure, please contact EHS to make sure the waste absorbents are being properly managed. When storing absorbents, make sure you do not pour any excess liquids (i.e. oil) into the collection container and do not allow absorbents containing hazardous waste to air-dry. Any free liquids generated should be managed as a separate hazardous waste stream. Make sure they are stored in a closed, properly labeled container. If the absorbents contain flammable solvents, the containers should be sufficiently separated from all external sources of ignition and “No Smoking” signs must be legible and placed in all accumulation areas.

### **Cutting Oil and Fluids:**

There is a possibility that absorbents used to clean up cutting oils and fluids contain halogenated compounds, or other solvents, such as acetone and toluene, that are classified as listed waste. Also, it is important to review the processes the cutting oil is involved in, because there might be some other factors, such as metal shavings, that could cause the absorbents to become hazardous waste. For example, there could be metal shavings present containing lead, chromium, etc that are managed as hazardous waste by RCRA. In those cases, those absorbents should be managed as hazardous waste. If unsure of what types of compounds are present in the cutting oil review the MSDS sheet to make a determination. If still unsure, please contact EHS for assistance.

### **Absorbents Contaminated with PCB oil:**

Rags used to clean up spills involving PCB Liquids (>50 ppm) are not defined as hazardous waste under RCRA. However, they should be managed according to TSCA regulations. They should be placed in a container and labeled with a PCB marking. The out-of service date (which is the date the spill was cleaned up), should be written on the outside of the container. If a PCB liquid spill is cleaned up, please contact EHS as soon as possible to provide assistance in properly managing this waste.

### **Manifesting Paperwork:**

If hazardous waste absorbents must be shipped for disposal, the manifest must be signed by a person who has received DOT 16 hour training. There are people in EHS who have received this training and who are qualified to sign the paperwork. Please contact EHS to sign the paperwork and to assist in the disposal process.

### **Best Management Practices for Managing Absorbents:**

1. Make sure to keep lids closed on containers with absorbents to prevent spills or evaporation.
2. Substitute non-hazardous chemicals whenever possible, instead of using hazardous solvents.
3. Repair leaks as soon as possible, and use drip pans and draining pans to prevent spills.
4. Explore other methods of cleaning up spills, including brushing, vacuuming and dry wiping.
5. Use funnels when pouring used oil or solvents into waste drums to reduce the chance of spills.
6. Use a reusable absorbent pad to clean out sumps and oil/water separators, and carefully wring it out completely before reusing it.
7. Do not mix absorbents used for hazardous spill cleanup to clean up non-hazardous spills. Mixing of the two could result in the entire mixture becoming hazardous.
8. Make sure that absorbents containing incompatible materials are stored separately (i.e. acids and bases, flammables and oxidizers).

## **5.0 Recordkeeping**

Material safety data sheets must be kept indefinitely.

An individual training record shall be maintained for each employee and kept for period of employment + 5 years.

All manifests, bills of lading, LDRs, or any other paperwork dealing with hazardous waste shipment and disposal must be kept a minimum of three years from the shipment date.

## **6.0 Associated Standards**

EPA: 40 CFR 260, 261, 262, 268, 279

TDEC: 1200-01-11

TSCA: 40 CFR 700-766