

# Chapter 31

## DANGEROUS WASTE MANAGEMENT

### A. References

1. [WAC 173-303 Dangerous Waste Regulations](#)
2. [WAC 296-828 Hazardous Chemicals in Laboratories](#)
3. [WAC 296-901 Hazard Communication](#)
4. [WAC 16-228 General Pesticide Rules](#)
5. [49 CFR Hazardous Materials Shipping](#)

### B. Appendices

- Appendix A: Chemical Collection Request (CCR) Form 16
- Appendix B: Central Waste Accumulation Area (CWAA) Inspection Form 17
- Appendix C: Shipment Checklist 20

### C. Introduction

The following plan provides information on requirements for the management of hazardous waste. The proper management of hazardous waste is necessary to ensure good stewardship of the environment, to protect WSU from unwanted citations and fines from regulatory agencies, reduce liabilities, to ensure safety of employees, students, volunteers, and visitors, and to reduce disposal costs. This plan applies to maintenance activities, laboratories, offices, grounds, and field activities performed by employees, students, volunteers, or visitors.

### D. Hazardous Waste Designation

The Washington State Department of Ecology (Ecology) regulates hazardous wastes for the State of Washington. "Hazardous" wastes are termed "Dangerous" by Ecology. When a waste material is generated, it must be determined if it is a dangerous waste to dispose of it in a proper manner. Waste designation is important, as many chemicals may appear non-hazardous, especially those at low concentrations, which could be regulated as dangerous waste in the State of Washington. Be aware that waste disposal recommendations found in Material Safety Data Sheets, books and researcher's publications that describe waste disposal procedures may not apply in the State of Washington. The following list identifies common materials that often must be collected and managed as dangerous waste.

- Most laboratory chemicals, their mixtures, and solutions. Even very dilute solutions may require management as dangerous waste;
- Expired chemicals that no longer have a use;
- Pesticides, herbicides, paints, automotive and maintenance wastes; and,
- Oils, cleaning wastes, batteries, all fluorescent light bulbs/tubes, aerosol cans, and electronics.

**There are two ways to designate your waste.**

1. Designate the waste yourself, using information provided on the [WSU EHS web site](#).
2. Request an EHS representative designate the waste.

It is very helpful to have the following information available for the designator:

- All chemical and non-chemical (contaminated paper, plastic, etc.) constituents and their estimated or known concentrations, including water;
- If material being disposed has a trade name, the actual chemical names of the ingredients are needed;
- If it is corrosive, the pH is helpful;
- Safety Data Sheet (SDS).

**E. Pollution Prevention**

It is recommended to work with an EHS representative before generating waste. This will allow time for possible substitution of chemicals or procedures to reduce or eliminate waste generation. EHS will advise on ways to containerize the waste to reduce disposal costs.

It is also recommended that WSU units do not accept chemical donations or order chemical products in bulk to keep chemical inventories and wastes to a minimum. Return pesticides, including experimental pesticides, to the vendor when projects are finished.

**F. Labeling Hazardous Waste**

Ecology refers to hazardous waste as *Dangerous Waste*; thus, labels follow the Ecology's regulations using the word *Dangerous Waste*. Dangerous waste labels may be obtained from an EHS representative, hazardous waste coordinator, or the EHS website. An example of a waste label is provided below.

<b>DANGEROUS WASTE</b>	
CCR#: <u>90001</u>	Phone: <u>5-9999</u>
Bldg/Room: <u>EHS / 70</u>	
<b>Major Hazard</b>	
Flammable <input checked="" type="checkbox"/> Corrosive <input type="checkbox"/> Poison <input type="checkbox"/> Other: _____	
<b>Constituents</b>	
<u>Methanol</u>	<u>75</u>
<u>Acetone</u>	<u>15</u>
<u>Water</u>	<u>10</u>
CWA Date	EH&S Use:
_ / _ / _	

**The following information must be on the label:**

- The words *Dangerous Waste*;
- The proper chemical name and known or estimated percentages;
  - Do not use chemical formulae, abbreviations, or trade names.
  - Include water and its percentage if present.
- Primary hazard of the waste e.g., *flammable, corrosive, poison*;
- The date that the waste container is physically moved to the Centralized Waste Accumulation Area (the CWA Date);
- The CCR number (see Section H);
- Building, room number and contact phone number should also be on the label.

The waste container must be labeled when waste is first added to the container. All other labels, such as manufacturer's labels must be defaced or removed.

**G. Hazardous Waste Containers and Accumulation**

**Satellite Accumulations Area (SAA) Procedures**

These procedures are for the accumulation of hazardous waste in the area where they are generated. Each laboratory, program, or department may accumulate hazardous waste under *specific conditions* in a designated area under their control. This area is called the Satellite Accumulation Area (SAA).

The following are the specific conditions:

1. Waste containers may be accumulated in a designated area at the location of generation. The area must be secured when not occupied.
2. Select a waste container that is compatible with the waste material.

3. The container must be in good condition, clean outside, and must have a tight fighting cap. Do not use ground glass, cork, or rubber stoppers, parafilm, or snap cap lids.
4. Label the waste container before the first waste is added (see Section F).
5. Waste containers must be closed at all times except when adding waste or removing waste.
6. Do not overfill containers, leave 2-3 inches of head space to allow for expansion.
7. Do not mix wastes in the same container unless directed by an EHS representative.
8. Do not store incompatible waste containers together. Separate them using secondary containment (plastic tubs) or by distance, and store solids above liquids where possible.

Hazardous waste must be removed from the SAA to the Central Waste Accumulation Area (CWAA) within 3 days when any of the following occurs:

1. A waste container is full.
2. A waste will no longer be generated.
3. A chemical will not be used again.
4. An unknown chemical is discovered.
5. More than 2.2 pounds of an Acutely Hazardous Waste (see EHS website for list, [www.ehs.wsu.edu](http://www.ehs.wsu.edu) ) or 55 gallons of waste has accumulated in the SAA.

After any of the above scenarios, a fill date should be written on the label and the generator shall complete an online Chemical Collection Request (CCR) Form. The form can be found at <http://www.ehs.wsu.edu/ccr/ccr.html>. This link provides step by step instructions. Once the submit button has been selected electronic copies will be sent to the EHS representative. Print a copy of the CCR (see Section H) and arrange a time with the Hazardous Waste Coordinator (HWC) to transfer the waste container to the CWAA.

#### **H. Chemical Collection Request (CCR) Form**

When a container is ready to be transferred (see Section G) from the Satellite Accumulation Area (SAA) to the Central Waste Accumulation Area (CWAA), a CCR must be completed. Listed below are the step-by-step instructions for filling out a CCR. The form can be found at <http://www.ehs.wsu.edu/ccr/ccr.html>. A sample CCR is provided in Appendix A.

1. *Generator Information includes:*
  - a. Name of generator, contact phone number, mail stop, building, room number, email, and waste location (pull down menu of the different WSU locations).

2. *Constituents and Percentages:*
  - a. List all chemical constituents and their estimated or known concentrations, including water. If material being disposed has a trade name, the actual chemical names of the ingredients are needed. Click on the “Add This Constituent/ Percentage” button after each constituent and percentage/estimated percentage are entered. This section should match the information listed on the Dangerous Waste label and add up to 100%.
3. *Physical State:*
  - a. Check the appropriate box; solid, liquid or gas.
4. *Number of containers:*
  - a. List the number of containers that have the same constituents.
5. *Weight/Volume:*
  - a. Type the container’s size and use the pull-down menu to select appropriate units.
6. *Major Hazard:*
  - a. Check the appropriate box e.g., flammable, corrosive, or poison. This should match the information listed on the Dangerous Waste label.
7. *Secondary Hazard:*
  - a. Check appropriate box or boxes. It is not required to have any secondary hazards, but you can have more than one.
8. *Additional information:*
  - a. Please type in any information that could affect how a container is managed or handled.

Once all the fields have been filled, either select “Proceed to Data Verification” or “Clear Form”. “Proceed to Data Verification” allows the generator to verify information before electronically submitting to the EHS representative. After reviewing information the generator can either “submit”, “submit and enter another”, or “edit form”.

Once submitted, the generator will receive an electronic verification that EHS has received the CCR. A unique CCR number will automatically be produced for the form. This number should be written on the corresponding space on the Dangerous Waste label. Alternatively, print out a copy of the CCR generated label and affix it to the waste container(s). Print out a copy of the CCR generated label for the HWC’s records.

#### **I. Central Waste Accumulation Area (CWAA) procedures**

The cabinets inside the CWAA storage room are labeled with hazards: flammable, corrosive acid, corrosive base, toxic, and reactive that will match provided segregation information. The HWC and generator will arrange a time

when they can deliver the container to the CWAA. The generator will transport the properly labeled (see Section E) waste container to the CWAA. For transport, place the waste containers in secondary containment trays/buckets and segregate incompatible materials. The HWC will verify that the label matches the corresponding CCR submission.

Waste storage times for the CWAA may vary depending on the quantity and type of waste generated and stored at the WSU unit. Waste storage periods allowed by the Ecology will fall into a category of 90 day, 180 day, or longer under some circumstances. An EHS representative will help make this determination and arrange disposal through an approved hazardous waste vendor accordingly.

#### **J. Hazardous Waste Coordinator's Responsibilities**

The WSU unit must appoint an EHS liaison and must train a Hazardous Waste Coordinator (HWC) to properly manage the handling and storage of hazardous waste. The Washington State Department of Ecology requires initial training as well as annual refreshers. The HWC must be trained on the following duties:

1. Upon receipt of a Chemical Collection Request (CCR) form and segregation information from the generator, the Hazardous Waste Coordinator (HWC) will arrange a time for the waste generator to transfer the containers to the CWAA.
2. When transferring the waste the HWC and the generator will, at the minimum, wear the following personal protection equipment (PPE): safety eye wear and disposable nitrile gloves. Depending on specific conditions other PPE may be required.
3. Before accepting the container from the generator the HWC should assess each container for integrity, compatibility with waste, proper labeling, container transfer date (the CWAA date), tightly secured lids, contamination on the outside of the container, and reasonable head space.
4. Carry a cell phone or radio during waste transfer if there isn't a phone or fire pull station in the CWAA, in case of an emergency.
5. Place each container in proper CWAA cabinet/shelf labeled for its hazard classification. Place solids on the upper shelves and liquids on lower shelves when possible.
6. The 90-day or 180-day clock (if applicable) begins once the first container of hazardous waste is placed in the CWAA. EHS will determine storage restrictions and schedule waste shipments accordingly.
7. Maintain a CWAA Hazardous Waste inventory notebook by placing completed CCRs into the notebook.

8. Perform a weekly inspection of the CWAA (see Section K) when there is waste in the CWAA, and maintain the inspection records.

**K. Central Waste Accumulation Area (CWAA) Inspections**

The HWC must maintain a weekly inspection schedule for the CWAA when hazardous wastes are present using the “CWAA Inspection” form and detailed instructions found in Appendix B. If a discrepancy is found mark a “D” for that item and explain the discrepancy in the section at the bottom of the inspection form. The date, time, and name of inspector printed and signed must be on the form.

When a discrepancy is noted during an inspection, the HWC contacts whoever is responsible for correcting the situation and notifies them of the problem. When corrected, note the date, corrective action and initial next to the original discrepancy note. If during an inspection, there is an outstanding discrepancy noted, follow up on the status and note, if appropriate, on the inspection form.

The inspection forms must be retained for three years.

**L. Hazardous Waste Disposal Shipment Procedure**

The EHS representative will arrange all shipments with contractors and be the main point of contact for the HWC and the contractor. The following steps should be taken by the EHS representative.

1. The EHS representative should schedule a hazardous waste shipment with an approved disposal contractor. The scheduled shipment date should be at least one week prior to the 90-day or 180-day storage limit (if applicable) to allow for emergencies.
2. Approximately 1 month prior to a waste shipment an EHS representative should contact the site HWC and notify them of the shipment date.
3. The HWC will notify the sites waste generators of the upcoming hazardous waste shipment date and request submittals of CCR's for all wastes needing disposal not already in the CWAA. Half full containers should be submitted for disposal. CCR's should be submitted two weeks prior to the shipment date.
4. One week prior to shipment the EHS representative should submit a rough inventory to the waste contractor.
5. Prior to the shipment the HWC should meet with the EHS representative showing location of all hazardous waste to be disposed.
6. The EHS representative needs to provide the contractor with access to the CWAA. The representative should also familiarize the contractor with the

location of the nearest phone, emergency shower and eye wash unit, and fire extinguisher.

7. The EHS representative needs to ensure that the contractor:
  - a. Knows which waste containers are being disposed.
  - b. Only package containers that have a CCR number on them. If no ID number is present, bring this to the attention of the HWC who can locate the generator to complete a CCR for the container.
  - c. Writes the CCR number on the contractor's drum inventory sheet.
  - d. Write the estimated weight of each container on the drum inventory sheet.
  - e. Write the Washington State and EPA hazardous waste codes on the drum inventory sheets.
8. EHS representative should inspect the waste storage cabinets and area to make sure all wastes have been packaged and no waste spilled.
9. Use the Shipment Checklist (Appendix C) to: inspect drums, labeling of containers and truck, review manifesting paperwork for accuracy, and sign the paperwork. The EHS representative is the only person authorized to sign the manifest and other shipping paperwork. Ensure each checklist task or item is completed before the contractor leaves.
10. The waste shipment's original copies of manifesting paperwork, shipment checklist, contractor's time and materials sheet, and CCRs should be placed in a file dated for the shipment and placed in the WSU location's central hazardous waste file. The EHS representative should retain a copy of all shipment paperwork.
11. The EHS representative will ensure that the HWC receives within 45 days an original copy of the manifest signed by the receiving facility. The HWC should place the original manifest with the other shipment paperwork that is stored in the central hazardous waste file.

**M. Hazardous Waste Recordkeeping**

A central hazardous waste file must be established at each WSU location. This file should contain the following:

1. Manifest paperwork for each waste shipment, including the signed returned manifest and certificate of disposal (CD)
2. Annual Dangerous Waste reports
3. Exception reports
4. Analytical data/testing for any waste
5. Chemical Collection Request (CCR) forms for wastes shipped for disposal
6. CWAA inspection records
7. Training records for HWC



Hazardous waste manifest and shipment records must, by WSU policy, be retained on site indefinitely.

Recycled materials such as, waste oil, Universal Waste shipment records, and pesticide redistribution records also need to be kept on file indefinitely.

An EHS representative will audit the files annually to ensure completeness.

## **N. Training**

Hazardous waste management requires varying levels and forms of training depending on the individual's tasks and responsibilities.

1. Waste Generator: Trained in the proper waste handling procedures. This would include: container selection and labeling, satellite accumulation procedure, emergency procedures, waste reporting and record keeping. Individuals should also be familiar with all components of their Lab Safety Manual and/or Hazard Communication Program.
2. Hazardous Waste Coordinator (HWC): Trained in the proper waste handling procedures and HWC duties. These would include: waste collection procedures, container labeling, CWAA procedures, CWAA inspections, emergency procedures, and record keeping. Individuals should also be familiar with all components of their Lab Safety Manual and/or Hazard Communication Program.
3. EHS Representative: Trained in the proper waste handling procedures and EHS representative duties. These would include: waste designation, container selection and labeling, satellite accumulation storage procedures, waste reporting and record keeping, CWAA procedures, emergency response procedures, pertinent State of Washington Department of Ecology regulations and pertinent U.S. Department of Transportation regulations. Must also maintain US DOT Hazmat Employee training.

## **O. Universal Waste (Light Bulbs/Tubes, Batteries, Used Oil, Computer Waste)**

Ecology regulates specific wastes as Universal Waste. If a facility chooses to manage waste under the Universal Waste regulations that material must be recycled with an approved vendor. Materials that WSU handles as Universal Waste are listed below, along with the specific waste management procedures.

### **1. Light Bulbs/Tubes**

Compact fluorescent lamps (CFL), high intensity discharge (HID) and high pressure sodium (HPS) bulbs and fluorescent light tubes (FLT) must be collected for proper recycling. The CFL should be collected in separate boxes than the

HID and HPS if possible. The FLT should also be collected in separate boxes from the other bulbs.

Burnt out CFL, HID, and HPS should be placed into the individual package the replacement bulb is supplied in. If this is not available, they should be placed in packaging (e.g. put it a small box, placed in bubble wrap, placed in a re-sealable bag) to prevent breakage. FLT should be placed in the boxes the new replacement bulbs come in or in boxes provided by Ecolights Northwest (WA State contract) or EHS. Typically, the tines are bent slightly to distinguish old tubes from new tubes.

Packaged CFL, HID, HPS and FLT should be placed into appropriately labeled collection boxes. Collection boxes must be labeled with the words "Used Lamps", "Universal Waste Lamps", or "Waste Lamps", and the date the first lamp is placed into the box. For CFL, HID and HPS, plastic liners should be used in the boxes to help contain the contents should the bulbs break. Collection boxes must be kept taped shut except when adding or removing waste. Any box that can be taped shut and has integrity may be used for the collection of CFL, HID, HPS and FLT.

In the case a CFL, HID, HPS or FLT is broken, staff must be trained to use appropriate personal protective equipment when cleaning up the tube. Staff must also be trained on how to properly clean up, contain and dispose of broken CFL, HID, and HPS.

- a. Protective equipment: Normal work attire with disposable gloves
- b. Sweep broken glass, lamp components, and lamp phosphor (the white powder inside) up and place into a plastic bag. A damp towel may be used to clean up remaining phosphor. Place any damp towels and used gloves into the plastic bag. Do not vacuum up the debris.
- c. The properly filled out Dangerous Waste label should be attached to the bag and a CCR submitted.
- d. The properly labeled bag should be taken to the CWAA where it can be sent out for proper disposal

Collection boxes must be kept in areas under the control of trained staff (i.e. mechanical rooms, storage rooms, janitorial closets, etc.) that are locked. The public should not have access to collection boxes unless a trained staff member is present.

Staff who will place CFL, HID, HPS or FLT into collection boxes must be trained to observe the above procedures. This is all the training that is required.

Once collection boxes are removed from the original building, they need to be stored in a weather-protected, locked enclosure until they are shipped off-site for recycling.

Collection boxes must be completely emptied or removed at least once each year. This should occur in time to allow the CFL, HID, HPS and FLT to be shipped off-site (to the recycler) prior to one year from the date the first CFL, HID, HPS and FLT was placed in the box. Environmental Health and Safety (EHS) coordinates all shipments with WSU approved recycling contractors.

## 2. Batteries

All types of used batteries must be collected and recycled. Different types of batteries that are collected include:

Alkaline	Nickel Iron
Carbon Zinc	Nickel Metal Hydride
Lead Acid	Nickel Zinc
Lithium and Lithium Ion	Silver Oxide
Mercury	Sodium Chloride
Nickel Cadmium	

In order to comply with state and federal environmental regulations the batteries must be managed as Universal Waste. They must be collected in properly labeled containers in designated areas. The container shall remain closed unless a battery is being added. The attached label must say one of the following: Universal Waste - Batteries, Waste Batteries, or Used Batteries and have the accumulation start date (date the first battery was placed in the container). A trained employee periodically checks containers to verify container labeling and ensure guidelines are followed. When the containers are full or prior to one year from the accumulation start date, the batteries must be prepared for shipment.

Prior to shipment batteries must be sorted by type and placed separately into properly labeled, sealed containers. Terminals for all batteries, except alkaline and carbon zinc, must be taped. The containers are recycled using Washington State University approved recyclers. EHS coordinates all shipments.

## 3. Used Oil

Used oil not contaminated with other chemicals is eligible for recycling and management under the Universal Waste guidelines. Used oil is collected in 55

gallon steel and poly drums or larger totes. The containers must meet the following requirements:

- a. Have the words "Used Oil" written on the container
- b. Container closed, except when adding or removing used oil
- c. Container stored inside or under cover
- d. If contaminated, manage the oil mixture as Dangerous Waste

An approved oil contractor periodically collects the used oil for recycling. A WSU employee must be present during transfer, sign the bill of lading, and ensure safe oil transfer practices are followed. Place the Bill of Lading in the hazardous waste shipment records file cabinet.

#### 4. Electronic Components

Unwanted computers, computer components and other electronic equipment (printers, faxes, etc.), known as "e-waste", are collected for surplus or recycling. While items are waiting to be surplus or recycled, follow the labeling and storage procedures below.

1. Older computer monitors (e.g. not flat screen) must be labeled with an accumulation start date, and the words "used cathode ray tubes – contains leaded glass" and "do not mix with other glass materials".
2. Additional computer components and electronic equipment must be labeled with an accumulation start date, and the words "do not mix with other glass material" and "used electronic products-contains circuit boards".
3. Computer monitors, computer components and other electronic equipment must be stored inside or under cover from weather/precipitation.
4. If an electronic component is broken during collection or storage, WSU personnel should clean up the debris using a broom and dustpan. The solids are placed in a bag and the sealed bag is treated as Dangerous Waste (see Section F).

Departments wanting to surplus or recycle e-waste start by submitting a request to WSU-Pullman Surplus Stores. Instructions and the on-line surplus request form are located at:

[http://facops.wsu.edu/Surplus/sur\\_disposal.htm#Computer\\_Hard\\_Drive\\_Destruction](http://facops.wsu.edu/Surplus/sur_disposal.htm#Computer_Hard_Drive_Destruction) . After completing and submitting the on-line surplus form, WSU-Pullman Surplus Stores staff will arrange for picking up the e-waste (Pullman and Whitman County) or evaluate whether there is enough value to warrant shipping the e-waste to Pullman from outside Whitman County. For WSU facilities outside of Whitman county (and particularly west of the Cascade Mountains) there is

typically not enough value so WSU-Pullman Surplus Stores will do the paperwork to transfer the e-waste to the State of Washington Surplus. WA Surplus will then contact the WSU representative (the person who originally completed the on-line WSU surplus form) to make arrangements to pick up the e-waste and take it to their main surplus facility for processing. There is no fee for this procedure. If you have any questions regarding e-waste surplus/recycling contact WSU-Pullman waste management at [finchr@wsu.edu](mailto:finchr@wsu.edu) or 509-335-4630.

For e-waste with hard drives that are being transported to WSU-Pullman Surplus Stores there is no need to swipe (permanently erase) hard drives. WSU-Pullman Surplus Stores erases hard drives as part of their surplus service. For hard drives going to WA Surplus each department is responsible for swiping/erasing their hard drives (or rendering them unreadable by physically damaging them) to ensure that no sensitive information is released. If the department doesn't have the ability to swipe hard drives, the hard drives can be removed and mailed to WSU-Pullman Surplus Stores who will provide the service at no charge.

**P. Facilities Operations/Maintenance Wastes**

Maintenance activities such as vehicle and equipment repair, painting, pesticide applications, construction projects may generate wastes, several of which may be regulated as dangerous waste. Dangerous wastes created by maintenance activities must be managed as stated in this procedure. Never dispose of shop fluids via storm drain, septic tank, dry well, dumpster, or sewer.

Specific handling procedures apply to spent materials for them to qualify as recyclable materials, see Section O for guidance. Keep waste streams separated when collecting for disposal or recycling. Fluids that become contaminated with chlorinated products, solvents, and metal working fluids must be treated as dangerous waste. Do not pour these wastes into the Used Oil containers. Only trained and authorized staff should place fluids into recycle/waste containers.

Some material does not designate as Universal Waste or Dangerous Waste, but still should be recycled. Following is a list of common materials used in maintenance and how they should be handled. When feasible, recycling, in lieu of disposal, is a more cost effective and environmentally friendly option for handling spent materials. Recycling records must be maintained with hazardous waste files (file all bills of lading).

<b>SPENT MATERIAL</b>	<b>ACTION</b>	<b>LABEL</b>	<b>WASTE DESIGNATION</b>
Lead-acid batteries	Recycle with vendor or Battery X-change twice yearly or is hazardous waste	"Spent Battery for Recycle Caution Corrosive" and accumulation start date	Recycle or hazardous waste if can't recycle
Batteries other than lead acid	Recycled through approved vendor	"Universal Waste-Batteries" and accumulation start date	Universal waste
Oil filters	Drain filters for 24 hours & recycle metal with local metal recycler	"Used Oil Filters for Recycle"	Recycle or local landfill approval needed for drained filter disposal
Transmission filters	Drain filters for 24 hours & recycle metal with local metal recycler	"Used Transmission Filters for Recycle"	Recycle or local landfill approval needed for drained filter disposal
Fuel filters	Manage as hazardous waste	Use hazardous waste label	Hazardous waste
Vehicle oil	Recycle with approved recycler if no synthetic or chlorinated products, or solvents	"Used Oil"	Recycle or hazardous waste-designation depends on generator procedures
Transmission oil, gear oil, hydraulic fluid, differential fluid	Recycle with used oil if no synthetic or chlorinated products or solvents	"Used Oil"	Recycle or hazardous waste-designation depends on generator procedures
Brake & Power Steering Fluid	Manage as hazardous waste	Use hazardous waste label	Hazardous waste
Antifreeze	Recycle through approved local vendor	"Spent Antifreeze for Recycle Caution Toxic"	Recycle or hazardous waste-designation depends on generator procedures
Parts cleaner	Dispose of through hazardous waste vendor or recycle through supplier	Depends on product	Non-hazardous waste, reduced hazardous waste or hazardous waste depending on product selected & generator procedures
Carb cleaner	Manage as hazardous waste	Use hazardous waste label	Hazardous Waste
Spray Cabinet Washers	Testing of discharge required. Local sewer authority needs to approve discharge. May need to be closed system.	NA	Non-hazardous or hazardous waste designation depends on generator procedures. Testing required.

<b>SPENT MATERIAL</b>	<b>ACTION</b>	<b>LABEL</b>	<b>WASTE DESIGNATION</b>
Evaporators and hot tanks	Not recommended - contact EHS for options	NA	Hazardous waste
Shop Towels/Wipers	Contact EHS for guidance	Contact EHS for guidance	Laundry, landfill or hazardous waste-designation depends on generator procedures
Solvents/Paint Thinners	Manage as hazardous waste	Use hazardous waste label	Hazardous waste
Aerosol cans ( <u>empty or containing paint</u> )	Manage as hazardous waste	Use hazardous waste label	Hazardous waste
Bead blast residue from parts stripper	Hazardous waste designation needed (lab test) esp. if cleaning painted parts	"Used Bead Blast Caution Silica Dust" Or use hazardous waste label	Non-hazardous or hazardous waste-designation depends on generator procedures
Metals	Local vendor	Store under cover/Label area "Metals for Recycle"	Recycle
Spent tires	Landfill or find local recycler	Store under cover	Recycle or Landfill
Oil Water Separator sludge	Pump sludge via local approved vendor or ship via hazardous waste vendor	If stored for shipping use hazardous waste label	Non-hazardous or hazardous waste designation depends on generator procedures
Shop floor wash water	Seek permission from local sewer authority to put down drain	NA	Non-hazardous or hazardous waste designation depends on generator procedures
Freon and Asbestos Brake Pads	Take older vehicles to authorized shop for service, if shop doesn't have proper capture equipment	NA	Hazardous waste
Fluorescent lights & other mercury containing equipment	Recycle through State contract recycler	"Universal Waste Lamps" and accumulation start date	Universal waste
PCB containing equipment including transformers	Dispose of through hazardous waste vendor or vendor designated by EHS	Use hazardous waste label and TSCA signage	Hazardous waste (TSCA rules not RCRA apply)

SPENT MATERIAL	ACTION	LABEL	WASTE DESIGNATION
Paint	Recycle or dispose of via hazardous waste vendor	"Paint for Recycle" or use hazardous waste label	Recycle or hazardous waste
Pesticides	Dispose of through vendor who sold product, WSDA event, or hazardous waste vendor	Use hazardous waste label	Hazardous waste

**Q. Pesticides**

Pesticides, research, experimental or otherwise, provided to WSU by manufacturers, distributors, or field representatives need to be returned to the supplier when projects are finished. This practice saves the university money and storage room, and prevents unnecessary waste generation. Suggestions for carrying this out are as follows:

1. Have a written agreement with the supplier, before receiving the material that commits the supplier to take back the unused material at the end of the spray season or research project. Work out return logistics before accepting the pesticide.
  - a. A suggestion to help encourage company representatives to pick up the surplus materials is to dedicate a set of shelves in the pesticide storage building where returns are placed. Label shelves by company. When company representatives come to visit, they learn over time to check these shelves for return pesticides. This then becomes a service that representatives can provide.
  - b. Mailing Pesticides: Mail back pesticides in the same shipping containers they were sent in (requires the containers be saved). If pesticide is mailed, have the company confirm and/or provide the necessary shipping labels, hazard labels, bill of lading, and packaging. **DO NOT** mail improperly packaged or labeled pesticides as *large monetary fines* may be issued when hazardous materials are not packaged per DOT shipping regulations. For assistance with shipping hazardous materials contact the WSU Office of Research Assurances at 509-335-7183.
2. Only receive/accept the pesticide quantities needed for the season. Calculate closely how much material is needed and request suppliers repackage pesticides to provide only that amount. Arrange for suppliers to send additional small amounts of product, if the initial estimates prove inadequate.
3. Coordinate with EHS to dispose unwanted/outdated pesticides through the Washington State Department of Agriculture pesticide disposal program.



4. Donate registered pesticides (not experimental). Unused pesticides that are registered can sometimes be used by local growers. In order for this to happen:
  - a. Use WSU extension agents familiar with various growers and grower commodity groups as the go-between in locating growers able to take WSU's unused pesticides.
  - b. Only distribute pesticide(s) to a person who is a licensed pesticide applicator that will use the pesticide only on crops delineated on the label.
  - c. The WSU employee donating a pesticide must validate and record in writing the name of the person the pesticide was donated to, their applicator's license number, and the intended pesticide use. Record and maintain this information in a pesticide redistribution file. Store this file with the location's other waste records.
  - d. The unused pesticide must be redistributed in a timely manner so it can be applied by the grower while the pesticide is not expired. For example, some pesticides, if over-wintered, can freeze causing them to be unusable and a disposal problem for the grower.

I have read and understand this training material:

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# APPENDIX A

## Chemical Collection Request

Name:  Mail Stop:   
Phone:  Building:   
Email:  Room:   
Location:

### Constituent Percentage

Complete names ONLY. Do not use a % symbol  
No formulas, abbreviations  
Constituent:  Percentage:  %

[Add This Constituent/Percentage](#)

### Current Constituents:

Methanol	- 50 %	<a href="#">Remove</a>
Chloroform	- 25 %	<a href="#">Remove</a>
Ethyl acetate	- 15 %	<a href="#">Remove</a>
Water	- 10 %	<a href="#">Remove</a>
<b>Total Percent: 100 %</b>		

Total must add up to 100%

### Physical State:

Solid  Liquid  Gas

Number of Containers:

Weight/Volume:

### Major Hazard:



Flammable



Poison



Oxidizer



Explosive



Air/Water Reactive



Corrosive

### Secondary Hazard(s):



Flammable



Poison



Oxidizer



Explosive



Air/Water Reactive



Corrosive

### Additional Information:

need replace 5 gallon containers

[Proceed to Data Verification](#)

[Clear This Form](#)

**APPENDIX B**  
**Central Waste Accumulation Area Inspection Form**

<b>Time and Date Inspected</b>				
<b>Inspector (print)</b>				
<b>Inspector (signature)</b>				
<b>Containers</b>				
Proper Labeling				
Proper Waste Segregation				
Secondary Containment				
Spills/Leaks				
Aisle Space				
<b>Storage Facility</b>				
Secure: Area Locked				
Signage Present				
Eyewash/Shower Operational				
Fire Extinguisher Charged				
First Aid Kit Present				
Spill Supplies Present				
Communication Devices				
<b>Record Keeping</b>				
Chemical Collection Request Forms Complete				

Indicate any discrepancy with a "D" and a note in the section below.

**Discrepancy  
Initials**

**Date**

**Corrective Action**

## Centralized Waste Accumulation Area Inspection Instructions

The Centralized Waste Accumulation Area (CWAA) inspection log meets all the requirements set forth in WAC-173-303. Inspections need to be completed weekly when Dangerous Waste is present in the CWAA. Inspection logs need to be kept on site for a minimum of three years.

Items on the inspection log should only be marked with a “D” if a deficiency is noted. If there are no deficiencies or a particular item is not applicable, the item should be left blank.

### Containers

*Proper labeling:* This section is to verify that all waste containers are properly labeled with the words “Dangerous Waste”, major hazard, and list of all constituents. Each container should have an accumulation start date. The accumulation start date is when the container was moved to the Centralized Waste Accumulation Area (CWAA).

*Proper Waste Segregation:* Verify that incompatible waste materials are not being stored next to each other. Separation of incompatible materials can be accomplished through techniques such as use of storage cabinets or plastic tubs.

*Secondary Containment:* Visually verify that the secondary containment is in working condition and is not contaminated because of leaking containers.

*Spills/Leaks:* Verify the integrity of all containers by checking for visible leakage.

*Aisle Space:* If drums are stored in the CWAA there must be a minimum 30 inch aisle space between rows to allow for visual inspection of containers.

### Storage Facility

*Secure, Area Locked:* Doors should be checked to verify they are operable and locked.

*Signage Present:* Verify that the warning signs are present and information is decipherable. The sign should include 24-hour emergency phone numbers and contact names.

*Eyewash/Shower Operational:* Make sure location of emergency eyewash/shower is known and accessible by all personnel working in the CWAA. Verify that emergency eyewash/shower has been tested according to WAC standards. A tag indicating date of last test should be visibly attached to equipment. The test should have been completed within the last 12 months.

*Fire Extinguishers Charged:* Make sure fire extinguishers have been tested according to Uniform Fire Code. A tag indicating date of last test should be visibly attached to fire extinguisher. The test should have been completed within the last 12 months. Personnel who are expected to use fire extinguishers must receive annual fire extinguisher training.

*First Aid Kit Present:* A first aid kit should be accessible to personnel working in the CWAA. If a first aid kit is not located in the CWAA, all personnel should know the location of nearest kit.

*Spill Supplies Present:* Spill control materials should be available to personnel working in the CWAA. Personnel must receive spill control training. Additionally, personnel should be familiar with the use and limitations of the spill control materials.

*Communication Devices:* Ensure that the communication devices (telephone, 2-way radio, cell phone, etc.) are working. The type of communication devices should be known and accessible to all personnel who work in the CWAA.

## **Record Keeping**

*Chemical Collection Request Forms Complete:* Ensure every waste container has a corresponding Chemical Collection Request form that has been submitted.

## **Discrepancy/Date/Corrective Action/Initials**

If any item is marked with a "D", the deficiency should be noted here with a brief description of the problem. Once the corrective action has taken place briefly describe the actions taken along with the date and your initials.

At the top of the CWAA inspection log please print and sign your name and mark the time and date of the weekly inspection.

**APPENDIX C  
WASHINGTON STATE UNIVERSITY  
WASTE SHIPMENT CHECKLIST**

WSU SITE \_\_\_\_\_ SHIPMENT DATE \_\_\_\_\_ CONTRACTOR \_\_\_\_\_

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1. Following shipping documents completed, and original copy retained:

- Manifests  Land Ban  Waste Profiles  Drum Inventory Sheets
  - Contractor Time & Materials Report  WSU Chemical Collection Request Forms  Other
- 

2. Manifest and Document Review

- Manifests signed/dated  WSU (by) \_\_\_\_\_ &  Transporter
- Drum Inventory Sheets:  Inventory # \_\_\_\_\_ Container Count \_\_\_\_\_ Drum Count \_\_\_\_\_
- Waste Profiles reviewed & signed  Land Ban signed  CD requested
- Contractor Time & Materials Sheet Correct & Signed  Drum count confirmed
- 24 hour Emergency phone# listed on manifest
  
- Correct generator & attention information

3. Shipment Check

- Inspect drums (labeling, drum count)  Inspect truck (proper placarding)

4. Shipment Follow-up

- Original shipping documents to site file
- Copy of shipping documents to: EHS, P.O. Box 641172, Pullman, WA 99164
- Receipt of returned manifests  Copy to EHS
- Receipt of Certificate of Disposal (CD)  Copy to EHS \*