

# Lower Columbia College Hazardous Waste Management Plan

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## 1.0 INTRODUCTION

The following plan provides information on requirements for the management of dangerous wastes at Lower Columbia College. The proper management of dangerous waste is necessary to, reduce disposal costs, ensure good stewardship of the environment and LCC facilities, ensure safety of employees, students, volunteers and visitors, and to comply with current state, federal and local regulations. This plan applies to all activities where dangerous waste is generated and/or stored on campus.

## 2.0 PROGRAM BASICS

**Waste minimization:** It is preferable not to create a waste in the first place. Steps can be taken to reduce or eliminate a waste by planning procedures with less toxic chemicals, using micro-techniques, or recycling unwanted chemicals among other campus users, etc. Contact the Director of EH&S for assistance.

**Storage:** Dangerous waste may be stored in only two designated areas on campus. One area is called the “Central Hazardous Waste Storage” area (PSC 110), and the second is called a “Satellite Accumulation” area. Strict storage quantities, procedures, labeling, record keeping, and storage time limits apply to both of these areas, and are regulated by the State of Washington’s Department of Ecology (173-303-WAC).

**Labeling:** Specific hazardous waste labeling is required for waste containers, storage areas and transport vehicles (see section 4.0).

**Dangerous Waste Coordinator (DWC):** LCC appoints and trains a Dangerous Waste Coordinator (DWC) to properly manage the handling, storage and disposal of dangerous wastes. The DWC appointed for LCC is the Director of Environmental Health and Safety.

**Record keeping:** Strict record keeping requirements for manifests, inspections, storage quantities and limits are required (see section 9.0).

**Inspections:** Periodic inspections of waste storage areas are required (see section 7.0).

**Disposal:** Do not dilute or evaporate dangerous wastes as a disposal method. Dangerous wastes generated at LCC must be disposed of through a State’s licensed dangerous waste contractor, or treated according to specifications in 173-303-WAC with prior DWC approval.

**Shipment:** All dangerous waste disposal, including transport and storage, are arranged by the DWS. The DWS must be present to oversee all waste pick-ups, to sign the contractor shipping papers (including manifests), and ensure proper handling, packing, and labeling of the waste and transport vehicles (see section 8.0).

**Training:** Training is required for dangerous waste generators and those involved with handling, storing and shipping of dangerous wastes (CFR 49) (see section 10.0).

### **3.0 DANGEROUS WASTE STORAGE PROCEDURES**

#### **3.1. Satellite Accumulation Area (SAA)**

These procedures are for the storage of dangerous wastes in the area where they are generated. Each laboratory/program/department may store dangerous waste under specific conditions in one designated area under their control, called and labeled the area’s “Dangerous Waste: Satellite Accumulation Area.”

- Store dangerous wastes in a designated area at the location of generation identified with the sign: “Dangerous Waste Satellite Accumulation Storage Area”. The area must be secured when not occupied.
- When a container is selected to store a dangerous waste, it must be compatible with the waste material, be in good condition, clean inside and outside, and must have a tight fitting cap. Do not use ground glass, cork or rubber stopper containers, Parafilm, or snap cap lids. Keep waste containers closed at all times except when adding or removing waste. Be sure to leave appropriate headspace in the container.
- Label the waste container before storing waste in the container.
- Do not mix wastes in the same container unless directed otherwise by the DWC.
- Do not store incompatible waste containers together. Separate them from each other using a tub or by distance, and store solids above liquids where possible. If the flammable liquids inventory for the lab/area exceeds 10 gallons, store wastes in a flammable storage cabinet.

- Dangerous waste must be stored in secondary containment with a capacity equal to or greater than the largest corresponding container.
- Emergency contact information must be posted at ALL SAAs.

### 3.2 Central Storage Area (CSA)

- Hazardous wastes awaiting vendor disposal are to be stored in the CSA, Physical Science 110 (see appendix A). This area must remain locked when not in use (CFR 49). Wastes need to be stored by hazard classification(s), and properly segregated.
- Waste storage times for the CSA may vary depending on the quantity of waste generated and stored. Waste storage periods allowed by the State for a given year will fall into a category of 60, 90 day, 180 day, or longer under some circumstances. Ask the DWC for clarification of storage periods at LCC.
- The CSA is labeled with the words “Environmental Waste Management Authorized Personnel Only.” The NFPA diamond label on the outside of the area reflects the hazard(s) of the wastes stored in the area. Emergency contacts and phone numbers are posted inside the area. The College’s emergency communication tree is activated if a problem should arise in the area.
- Dangerous waste containers must be properly labeled (see 4.0).
- Before wastes are placed in the CSA, the wastes must be noted a Chemical Substance Report Form (CSRF) and have a “dangerous waste” label attached (see section 5.0).
- Hazardous waste must be moved from the SAA to the CSA when a container of a particular waste is filled. Do not start another container of this same waste until the first container is taken to the CSA. In other words, you may have multiple containers of different wastes in the SAA, but not multiple containers of the same waste.
- A Chemical Substance Report form (CSRF) must be completed and the DWC notified so waste can be transferred to the CSA within 3 working days of:
  - A waste container being filled (do not over-fill container, allow 3-4 inches of head space in container).
  - Determining that a waste will no longer be generated.
  - A container no longer receiving waste material.
  - Determining a usable chemical will no longer be used.
  - Determining a chemical is unusable.
  - An unknown chemical is discovered. Unknowns must not be stored in the SAA. Immediately report unknowns to the DWC.
  - Transfer waste to the CSA before SAA waste quantity limits are exceeded:
    - $\geq 2.2$ lb of an Acutely Hazardous Waste is accumulated
    - $\geq 55$ -gallon container of hazardous waste is accumulated.

#### 4.0. LABELING OF DANGEROUS WASTE

##### 4.1 Dangerous Waste Labeling

Dangerous waste labels for containers may be obtained from the DWC. The Washington State Department of Ecology (DOE) refers to hazardous waste as “Dangerous” waste thus the labels follow the DOE’s regulations using the words “Dangerous Waste” (example below).

<b>DANGEROUS WASTE</b>				
Inv# _____				
Generator		Dept.		Date Filled
		pH= _____		
Circle Hazards				%
FLAMMABLE	TOXIC	CORROSIVE	OTHER _____	
Constituents				

The following information must be on the label:

- The proper chemical name and percentage. Do not use chemical formulas, abbreviations or trade names. Include the percentage of water if present.
- Hazard(s) of waste. Circle the waste’s appropriate hazard on the label.
- Name of the person who generates the waste.
- The words, “Caution, Dangerous Waste”.
- The date the container became filled.
- A unique waste identifying number assigned by the generator (ex. BR102)
- The pH of a potential corrosive material (take with a pH meter per 173-303-WAC).

When the waste bottle becomes full, place the fill date on the waste label. This allows Hazard Communication and DOE labeling requirements to be met.

The DOE designates certain wastes as “Universal Wastes.” Spent batteries (not including lead-acid batteries which are considered dangerous waste), fluorescent, high pressure sodium and metal halide lamps, and mercury containing equipment all fall into the category of Universal Wastes. These wastes can be accumulated up to one year before disposal, and if handled as universal waste do not count towards a facilities generator status. These wastes must be labeled “Universal Waste,” and have the contents, hazards, and accumulation start date listed as shown below.

## UNIVERSAL WASTE

Batteries

Pesticides

Mercury-Containing  
Equipment

Lamps

Accumulation Start Date: \_\_\_\_\_

Generated By: \_\_\_\_\_

### 5.0 CHEMICAL SUBSTANCE REPORT FORM (CSRF)

Waste generators must fill out a CSRF when a waste is ready for pick-up from the SAA and placement into the CSA. The CSRF can be found in Appendix A. When the form is complete, retain a departmental copy, and send a copy of the CSRF to the DWC. Containers not listed on a CSRF or properly labeled will not be transferred to the CSA without corrective action. The CSRF also serves as the CSA waste inventory, so its accuracy is important.

#### **Filling out the CSRF:**

List each separate waste on the form that is ready for collection. Multiple containers of the same waste can be consolidated on one line of the form, if the containers are the same size and type (i.e., all 1-liter glass bottles). Use the descriptions below to properly fill out the CSRF.

- The **generator information** includes: the actual person who generated the waste, their department, and the facility location (this would be the laboratory supervisor in a teaching laboratory).
- **Inventory Number:** Assign a unique inventory number to each waste reported in this column. This number is placed on every container label associated with this line entry. **The container will not be shipped for disposal or treatment unless this number is on the container.**
- **Container Fill Date:** Record the date the container was filled, sealed or no longer intended for any further use in the date format (mm/dd/yy).
- **Constituents, their Percent and Hazards:** List each constituent of the waste and its approximate percentage. Also include inert ingredients and water content. If a trade name is used such as Sinbar, also include the actual chemical name. If the constituent is unknown, provide a best guess estimate. Include the associated hazards of the waste in this space.
- **# of Containers:** Record the number of containers of the same waste type and size in this line entry.
- **Container Size:** Record the container size in liters only (1 quart = 1 liter; 4 liters = 1 gallon).
- **Total Amount:** Record the total amount of the waste. If there were five 1-liter containers all half full the total would be 2.5 liters. Report all liquids in "liters" and all solids in "kilograms".

- **Container Type:** Record the type of material the container is made of by placing either (G) for glass, (M) for metal, (P) for plastic or (F) for fiber/paper in this column.
- **Physical State:** Describe the physical state of the waste as either (S) solid, (L) liquid, (G) gas, (SL) sludge, or (A) aerosol.
- **pH:** If appropriate, indicate the pH of the material.
- **Storage Date:** The DWC will record the date the waste was placed into the CSA.

## 6.0 DANGEROUS WASTE COORDINATOR'S RESPONSIBILITIES

The DWC will:

- Upon receipt of a "Chemical Substance Report Form" (CSRF) from a waste generator, review the entries for completeness, and specific chemical hazards. Ensure transport of the waste materials to the CSA within three days of the generator's notification.
- When collecting/handling waste, at the minimum, use the following personal protective equipment (PPE): Safety eye wear, disposable nitrile gloves and a lab coat. Depending on specific conditions other PPE may be required.
- Before transport of containers to the CSA, assess each container for: integrity, compatibility with the waste, proper labeling, tightly secured lids, contamination on the outside of the container, and reasonable head space (3-4") for the container.
- For transport, place the waste containers in secondary containment trays or other transfer device and segregate incompatibles from each other. Secondary containers may be partially filled with a compatible absorbent material. If transporting liquids, have some absorbent on the cart as well in case a spill occurs. Record the collection date in the "Storage Date" column on the CSRF.
- When using the elevator, do not allow passengers. Ask them to wait until you have exited from the elevator.
- Carry a Security radio during waste transport and storage placement in case of an emergency.
- Make mental note of all emergency equipment, such as wash stations and fire extinguishers, along the route from SAA to CSA.
- At the CSA, place each container in a cabinet and/or shelf labeled for its hazard classification. Place solids on the upper shelves and liquids below where possible.
- Maintain a CSA waste inventory by placing completed CSRFs for waste in a file folder on the wall of the CSA. The CSRFs in the file folder will comprise the storage area's waste inventory.
- Maintain a copy of the CSRF and disposal paperwork in the DWC, HSB 324.
- Perform weekly inspection of the CSA and maintain the inspection records.
- Hazardous waste storage has regulatory limits on storage time so it is important to track waste storage times by using the "Storage Limit Compliance" sign (see example in appendix A). Locate the sign in a conspicuous location in the storage cabinet/ area. The storage limit clock starts after a disposal event

when the first waste is placed in the CSA. Find the earliest container fill date among the first arrivals, and record that date on the form.

## 7.0 CSA AREA INSPECTIONS

- The DWC, or designee must **maintain a weekly inspection schedule** for the CSA when dangerous wastes are present using the “Storage Inspection” form found in Appendix A. When an item is satisfactory, mark that item with a check or “x” under the date of inspection. If a discrepancy is found mark a “D” for that item and explain the discrepancy in the section at the bottom and reverse side of the inspection form. Date and sign the inspection form.
- When a discrepancy is noted during an inspection, the DWC Coordinator contacts whomever is responsible for correcting the situation and notifies them of the need. When corrected, note the date, the 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.
- After a waste pick-up has been completed, note the shipment date on the Inspection form. Note any waste not shipped in the discrepancy section.
- Retain inspection sheets for 3 years.

## 8.0 HAZARDOUS WASTE DISPOSAL SHIPMENT PROCEDURE

Approximately three weeks prior to a waste shipment date the DWC contacts departments and the dangerous waste contractor, and schedules a waste pick up. Then:

- The DWC also notifies dangerous waste generators of the upcoming hazardous waste shipment date, and requests submittal of CSRFs for any wastes needing disposal not already in the CSA. Request forms must be submitted to the DWC two weeks prior to shipment date.
- Approximately one week before the pickup, the DWC will submit any remaining CSRFs to the contractor. As a courtesy to the contractor, any waste material collected during the week prior to the disposal event should be kept separate and the CSRFs provided to the contractor upon arrival.
- When the waste contractor arrives, the DWC will provide access to the CSA, and familiarize the contractor with the location of the nearest phone, emergency shower and eye wash unit, fire extinguisher and first aid kit.
- The DWC needs to ensure that the **contractor**:
  - Reviews the waste ready for disposal with the DWC.
  - Only packages containers that have a waste ID number on them. If no ID number is present, brings this to the attention of the DWC who will obtain an ID number for the contractor.
  - Writes the waste ID number on the contractor’s drum inventory sheets.
  - When bulking, lists or notes the waste ID number of the wastes being bulked on the CSRF as to which drum number they were bulked into or a separate list for the bulk drum only.
  - Writes the State of Washington and EPA hazardous waste codes for the wastes packaged on the drum inventory sheets.
  - Write the estimated weight of each container on the drum inventory sheet.
- The DWC will inspect the waste storage cabinets and area to make sure all wastes have been packaged and no spills took place. Then using the “Shipment Checklist,” inspect drums, labeling of containers and truck, review manifesting paperwork for accuracy, and sign the paperwork. Ensure each checklist task or item is completed before the contractor leaves and the paperwork is distributed.
- Note: The DWC is the only person authorized by the Department of Transportation to sign the manifest, other shipping papers and the time and materials sheet.

- The waste shipment's original copies of manifesting paperwork, Shipment Checklist, contractor's Time and Materials sheet, and CSRFs should be placed in a file dated for the shipment and placed in the current year's Dangerous Waste Notebook.
- After the shipment is completed, remove the CSRFs associated with the containers shipped from the waste inventory book. File the CSRFs with the manifest documents in the Dangerous Waste Notebook.
- Within 45 days, an original copy of the manifest, signed by the receiving facility, must be received and placed into the shipment file. If it has not been received within 45 days, the DWC must contact the contractor to get a copy ASAP.

## **9.0 DANGEROUS WASTE RECORDKEEPING**

The dangerous waste files are located in the Health and Science Building room 324. The central files should contain the following:

- The Form 2 "Notification of Dangerous Waste Activity."
- Manifest paperwork for each waste shipment, including the signed returned manifest and certificate of disposal (CD).
- Annual Dangerous Waste reports.
- Exception reports.
- Analytical data/testing for any waste.
- Chemical Substance Report forms for wastes shipped for disposal.
- CSA inspection records

Hazardous waste manifest and shipment records must, by law, be retained on site for 5 years minimum. EH&S highly recommends keeping these files on site indefinitely. The DWC needs to audit the central files annually for completeness.

Recycled materials such as, waste oil, universal waste shipment records, and pesticide redistribution records also need to be kept on file with facility waste records.

## 10.0 TRAINING

Performing different tasks/responsibilities related to dangerous waste management requires varying types of training.

**Waste Generator:** Trained in the proper waste handling duties relevant to their duties. These would include: waste designation, container selection and labeling, satellite accumulation storage procedure, personal protective equipment, hazard communications, emergency procedures, waste reporting, and record keeping.

**Emergency Coordinator (EC):** Trained in the proper waste handling duties relevant to their duties. These would include: Hazard procedures, storage area procedures, and emergency procedures in the event of a fire, explosion, spill or other release. LCC currently has the Emergency Coordinator attend a 40 hour HAZWOPER course.

**Hazardous Waste Coordinator (DWC):** Trained in the proper waste handling duties relevant to their duties. These would include: waste collection procedures, chemical hazards and incompatibilities, container labeling, hazard communications, storage area procedures, storage area inspections, personal protective equipment, pertinent U.S. DOT hazardous materials transportation regulations, emergency procedures, and record keeping.

## 11.0 FACILITIES OPERATIONS/MAINTENANCE/TEACHING SHOP WASTES

Maintenance activities such as vehicle and equipment repair, painting, pesticide applications, construction projects may create wastes, several which may be considered dangerous waste by the State of Washington. Dangerous wastes created by maintenance activities need to be handled as stated in this procedure. Never dispose of shop fluids in storm drain, septic tank, dry well, dumpster or sewer.

Specific handling procedures apply to spent materials for them to qualify as recyclable materials. Recyclable materials must be stored separately from hazardous wastes. Label the area: "Used Shop Materials for Recycle;" do not use the word "waste" in the labeling of recyclable materials. As with hazardous waste, recycle shop fluid areas need to be inside the shop and in control of the generator. Keep waste streams separated when recycling. Fluids that become contaminated with chlorinated products, solvents, and metal working fluids must be treated as hazardous waste. Only trained and authorized staff should place fluids into recycle/waste containers. Recycling records need to be kept with dangerous waste files (file all bills of lading).

*Facilities Operations/Maintenance/Teaching Shop Wastes [cont.]*

The following materials need to be collected for recycle, special handling, or dangerous waste disposal. When feasible, recycling, in lieu of disposal, is a more cost effective and environmental friendly option for handling spent materials. Refer to the DOE "Guide for Automotive Shops" which is posted on the DOE website, for more information.

<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"	Recycle or hazardous waste if can't recycle
Batteries other than lead acid	Recycled through hazardous waste vendor	Use Universal Waste label	Universal waste
Oil filters	Hot drain filters for 24 hours & recycle	"Used Oil Filters for Recycle"	Recycle or local landfill (approval needed)
Transmission filters	Drain filters for 24 hours & recycle	"Used Transmission Filters for Recycle"	Recycle or local landfill (approval needed)
Fuel filters	Manage as hazardous waste	Use hazardous waste label	Hazardous waste
Vehicle oil	Recycle with approved local vendor if no synthetic or chlorinated products, or solvents	"Used Oil for Recycle Caution Combustible"	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	See used oil	See used oil
Brake & Power Steering Fluid	Dispose of through hazardous waste vendor	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	Research alternative cleaners to solvent-no waste <u>OR</u> 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	Dispose of via hazardous waste vendor	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.
Evaporators and hot tanks	Not recommended -contact EH&S for options	NA	Hazardous waste
Shop Towels/Wipers	Dependent on generator treatment of towels-read DOE literature concerning shop towels in appendix B	Dispose of in UL flammable can in shop/Label: "Contaminated Shop Towels Combustible"	Laundry, landfill or hazardous waste-designation depends on generator procedures
Solvents/Paint Thinners	Dispose of through hazardous waste vendor	Use hazardous waste label	Hazardous waste
Aerosol cans ( <u>empty or containing paint</u> )	Dispose of through hazardous waste vendor	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	NA	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
Floor Sweep (spill clean-up)	Dependent on product & spill	Dependent on spill	Hazardous waste
Freon and Asbestos Brake Pads	Take older vehicles to authorized shop for service, if your shop doesn't have proper capture equipment	NA	Hazardous waste
Fluorescent lights & other mercury containing equipment	Recycle through hazardous waste vendor or local recycler or check with local landfill	Use Universal waste label	Universal waste
PCB containing equipment including transformers	Dispose of through hazardous waste vendor or vendor designated by EH&S	"Caution PCB Containing Equipment Toxic"	Hazardous waste (TSCA rules apply)
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

## 12.0 DANGEROUS WASTE DESIGNATION

The Department of Ecology regulates dangerous wastes for the State of Washington. "Hazardous" wastes are termed "dangerous" wastes by the State. When a chemical waste is generated, it must be determined if it is a dangerous waste in order to dispose of it in a proper manner. This procedure helps to determine when a chemical waste is classified as a dangerous waste in the state of Washington. Waste designation is important, as many chemicals may seem non-hazardous, especially those at low concentrations, but in fact, may in the state of Washington, be a dangerous waste. 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.

Contact the DWC for help with designating the waste. It is necessary to maintain the documentation of the waste designation on file. It is very helpful to have the following information for the designator:

- All chemical and non-chemical constituents and their estimated or known concentrations, including water. If a trade name such as Wonderclean or Solgest is being disposed, the actual chemical names of the ingredients are needed.
- The volumes of waste and the container size and type they will be stored in.
- Waste generation rate and if it is constant, periodic, batch or continuous.
- If it is corrosive, the pH is required.
- Material Safety Data Sheet for the chemical(s).

## 13.0 POLLUTION PREVENTION

It is recommended to work with the DWC before generating the waste as disposal options and costs can be explored; possible substitution of chemicals or procedures to reduce or eliminate waste generation can be considered; generator treatment to eliminate the dangerous waste may be a possibility; and ways to containerize the waste to reduce disposal costs can be determined. Also, it is recommended:

- Not to accept chemical donations
- Not to order chemical products in bulk to keep chemical inventories and wastes to a minimum.
- Do return pesticides, including experimental pesticides, to the vendor when projects are finished.

The DWC will write up the alternative method/action each time a waste saving measure is implemented and put in waste file under pollution prevention heading, and include in pollution prevention plan reporting when necessary.

## 14.0 COMPUTER WASTE

Lead and precious metal content of computers prohibit discarding computers/monitors in the landfill. This equipment needs go into surplus via Campus Services so it is properly disposed of through a licensed waste/recycle vendor.

## 15.0 PESTICIDES

Unused pesticides, provided to LCC by manufacturers, distributors, or field representatives need to be returned to the supplier when projects are finished. This practice saves the college dollars and storage room, and prevents unnecessary waste generation. Have a verbal or 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. Work out return logistics before accepting the pesticide. If a company representative wants to leave a sample, ensure the rep will take back any excess sample before accepting the sample.

Of course, the best way to control pesticide inventory is to only receive the pesticide amount needed for the season. Calculate closely how much material is needed for the season and request suppliers repackage pesticide to provide only that amount. Arrange for suppliers to send additional small amounts of product, if the initial estimates prove inadequate.

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 there are large monetary fines possible when hazardous materials are not packaged per DOT shipping regulations.

## **16.0 DANGEROUS WASTE SECURITY**

### **16.1 CSA Security**

The DWC is responsible for monitoring the CSA located in the Physical Science Building, room 110. The CSA is kept locked at all times. Keys are issued only to authorized personnel.

Only authorized personnel are allowed entry to the CSA. Custodians clean the room upon request of the DWC which is traditionally after vendor pick-ups and not while dangerous wastes are present. Trash is emptied by the DWC or their designee.

### **16.2 Dangerous Waste Shipment Security**

The College contracts with the State of Washington's Hazardous Waste Vendor for hazardous waste disposal. This vendor is selected by the State after a rigorous investigation and selection process. By law the vendor is required to develop a security plan to help ensure safe shipment of its various clients' waste.

To help ensure safe shipments of College waste the DWC inspects container and lid integrity, oversees packing of waste prior to shipment, confirms identity of contractor personnel, monitors loading of waste into contractor vehicles and DOT signage on the vehicle. The DWC obtains written certification of disposal certificates on all hazardous waste shipments. The majority of wastes are incinerated.

## **17.0 EMERGENCY PROCEDURES**

### **17.1 Summon Help**

Calling 2911 from campus phones for security and emergency services. Campus security can in turn report to the scene, access the situation, and activate the campus emergency communication tree, and get the proper personnel to the scene of an emergency.

### **17.2 Fire**

Fire extinguishers are located in the main hallway of PSC 110, along with fire pulls. The CSA has a phone for easy access to dial 9-911 and 911.

### **17.3 Chemical Exposures**

There is an emergency eyewash and shower located adjacent to the CSA. Flush eyes and/or body for a minimum of 15 minutes. The nationwide poison control number is 800-222-1222 and is posted in several places in the CSA. The CSA computer can access SDS's online from the manufacturer or consult departmental SDS records for more chemical emergency information while help is on the way.

### **17.4 Chemical Spills**

- In the event of a spill

**Notify coworkers and evacuate the immediate area.**

**Keep personnel from re-entering the affected area.**

**Seek assistance if any of the following conditions exist.**

- Personnel qualified to clean up the release are not available in the work area (WAC 296-62, Part R), or
- Protective equipment or supplies necessary for cleanup (e.g. respirators, absorbents) are not available, or
- Released chemical material cannot be identified, or
- Volume of the released chemical material exceeds one liter of undiluted material, or four liters of diluted material, or
- Released chemical material is potentially explosive or highly flammable, or
- Released chemical material is highly toxic, or
- Released chemical material is outside the employee's immediate work area.

**Seek assistance by calling:**

- ✓ Call 911 to report large hazardous spills.
- ✓ Call Campus Security-442-2270 to report small spills.  
(After hours Security Cell -431-8839)
- ✓ Chemical spill- LCC Environmental Health & Safety
  - Janel Skreen 360-442-2273  
Cell # 360-270-6976
  - \*radioactive material spill** – contact Campus Security at 442-2911,
  - \*mercury material spill**– contact campus Security directly at 442-2911

**18.0 HAZARDOUS WASTE SPILL RELATED FORMS**

**SPILL CONTINGENCY PLAN**

THIS PLAN IS TO BE ACTIVATED IN THE EVENT OF A SPILL OF A HAZARDOUS CHEMICAL

Facility: \_\_\_\_\_ Dept: \_\_\_\_\_ Area: \_\_\_\_\_

**Report spill to:**

**Fire department in the event of:** \_\_\_\_\_

Phone: \_\_\_\_\_ Police: \_\_\_\_\_ Hospital: \_\_\_\_\_

**Facility emergency coordinators: All spills**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Name: \_\_\_\_\_ Phone: \_\_\_\_\_

**Environmental Health & Safety: All spills**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ After hours: Security (360) 442-2911

**Supervisor: All spills** Name: \_\_\_\_\_ Phone: \_\_\_\_\_

**Regulatory agency: EH&S will assist in determining reporting requirements and will report spill**

**In the event of an accident or illness call 911 for medical assistance**

**Spill response/cleanup:**

Chemical spilled: \_\_\_\_\_

**The spill is to be cleaned up by personnel in this work area if the following criteria are met:**

- The spill is located within the work area covered by this plan
- Personnel are trained to handle the specific chemical spilled in their normal work duties
- The spill is considered a small spill (refer to guidelines)
- Personnel are trained in small spill cleanup activities, and the work area emergency plan
- Proper personal protective equipment and cleanup supplies must be available and used
- Other: \_\_\_\_\_

**Authorized personnel for cleanup:**

Name: \_\_\_\_\_ Position: \_\_\_\_\_  
Name: \_\_\_\_\_ Position: \_\_\_\_\_

**If the spill is not to be cleaned up by area personnel, contact LCC - EHS Manager (360-442-2273)**

**Location of emergency equipment:**

**Fire extinguishers:** \_\_\_\_\_ **Fire blanket:** \_\_\_\_\_  
**Fire alarm pulls:** \_\_\_\_\_ **First aid kit:** \_\_\_\_\_  
**Emergency eye wash:** \_\_\_\_\_ **Emergency shower:** \_\_\_\_\_

**Location of personal protective equipment:** \_\_\_\_\_

**Location of spill response supplies:** \_\_\_\_\_

**Spill response supplies to be used:** \_\_\_\_\_

**Disposal of spill cleanup waste:** Dispose per local, state and federal requirements. Contact EH&S for assistance

**Spill cleanup procedures to be used:** \_\_\_\_\_

**Spill cleanup procedures to be used (continued):** \_\_\_\_\_

**Personal protective equipment to be used:** \_\_\_\_\_

**Guidelines for determining if a spill is considered a small spill: (Can you clean it up?)**

The spilled chemical can be identified. (unknowns require outside assistance)

The hazards associated with the spilled material and the spill environment must be identified (MSDS available)

No protective equipment is required other than what is normal for use of the material spilled.

a.) If a respirator is required, must have current successful fit test, medical surveillance (respiratory), and annual training.

Fire not present or explosion hasn't occurred

There is no presence of a highly toxic substance where there is risk of exposure

No more than 10 minutes is required to perform the actual cleanup & containerization of the release.

The spill is in your work area.

You are trained to use the spilled material in your daily work.

Your work area must have a specific, written emergency plan in place for handling spills.

You must be trained in small spill cleanup, and work area emergency plan

## **EMERGENCY CONTACT NUMBERS**

**Call 911 for emergency help (2911 from a campus phone)**

This call will be routed to appropriate emergency services and LCC's Campus Security who in turn will contact the appropriate LCC personnel.

√ Campus Security Phone- 360-442-2911

√ Janel Skreen, Director of EH&S- 360-442-2270

360-270-6976

√ Campus Services- 360-442-2260

### CHEMICAL SPILL CHECKLIST

<input type="checkbox"/> Injuries	<input type="checkbox"/> Chemical exposure	<input type="checkbox"/> Fire	<input type="checkbox"/> Location to meet emergency personnel
<input type="checkbox"/> Notify emergency personnel	<input type="checkbox"/> Fire: _____	<input type="checkbox"/> Police: _____	<input type="checkbox"/> Hospital: _____
<input type="checkbox"/> Notify LCC personnel	<input type="checkbox"/> Emergency coordinator: _____ Name: _____	<input type="checkbox"/> EH&S: _____ Name: _____	

Nature of injuries/exposure: \_\_\_\_\_  
Chemical exposure:  Flush for minimum of 15 minutes  
Hazardous material involved: \_\_\_\_\_ solid    Liquid    gas  
Amount spilled: \_\_\_\_\_ Area contaminated (ft<sup>2</sup>): \_\_\_\_\_

Hazards present:  Flammable     Explosive     Oxygen deficient     Reactive (air/water)  
 Toxic     Corrosive     Electrical     Slip/trip/fall     Heat/cold

Evacuation of area:  Room     Floor     Building     General area     Wind direction: \_\_\_\_\_

Minimize spread:  Surround w/ absorbent     Stop spill/leak     Dike     Cover drains  
 Fume hood on     Shut off building air     Site control (prevent tracking)

Information:  MSDS     Label     Cleanup procedure  
 Spill location: \_\_\_\_\_  Date/time of spill: \_\_\_\_\_  Area contact: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Who to respond/cleanup:

Work area personnel (if answer to all of the following are no)  
 Outside assistance (EH&S, contractor, hazmat team) (If you checked any of the following)

Fire/explosion/reactive or toxic volatiles hazards present     Injury involved     Unknown chemical involved  
 Respiratory protection required     Personnel NOT trained     Proper PPE NOT available  
 Necessary spill supplies NOT available     Spill volume greater than a quart (guideline)

Personal protective equipment (PPE) required: \_\_\_\_\_

Spill cleanup entry:  Ventilation     Setup zones (hot, decontamination, support)

Don PPE

Spill cleanup supplies

Personnel doing cleanup: \_\_\_\_\_

Cleanup procedure: \_\_\_\_\_

Post cleanup:

Area clean

Waste disposal

Spill report

Damage: \_\_\_\_\_

Description of incident (how and why spill occurred): \_\_\_\_\_

Who was notified of spill: \_\_\_\_\_

Location of spill cleanup materials

Location 1: \_\_\_\_\_

Location 2: \_\_\_\_\_

Location 3: \_\_\_\_\_

Location 4: \_\_\_\_\_

**ABSORBENTS**

Consult MSDS in Spill Response Section first

Guidelines:

Flammable solvents

Activated charcoal (2 lbs charcoal/ 0.5 liter of liquid solvent)

Inert absorbent - cat litter, spill pillows

Non flammable organics

Inert absorbents - cat litter, spill pillows

Acids

Avoid water

Inert absorbents - cat litter, spill pillows, vermiculite

Oxidizing acids-Do not use paper towels, shredded paper, sawdust, products containing any organic matter

Bases/caustics

Avoid water

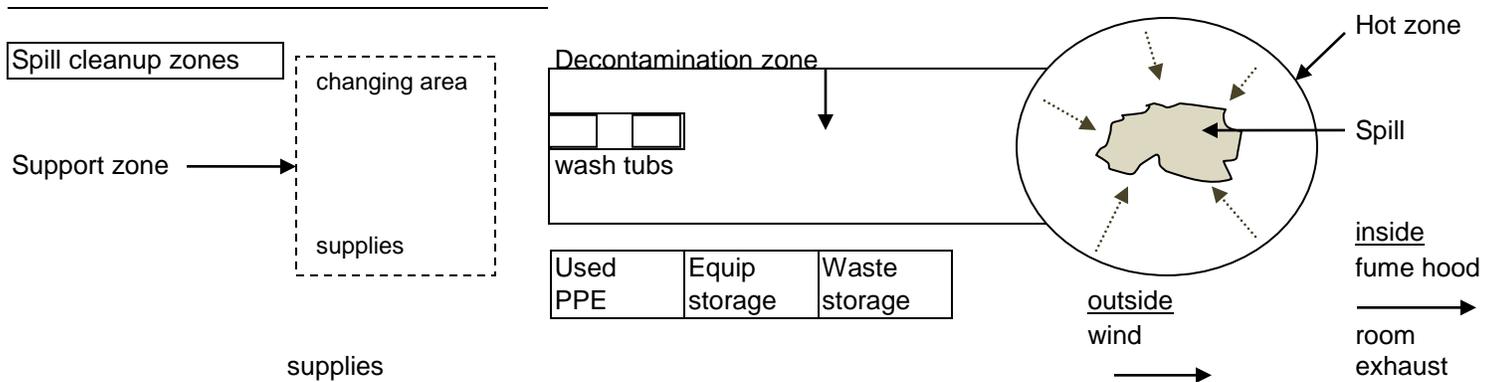
Inert absorbents - cat litter, spill pillows, vermiculite

Oxidizers

Inert absorbents-Do not use paper towels, shredded paper, sawdust, products containing any organic matter

Cat litter, spill pillows

- Pesticides
  - Inert absorbents - cat litter, spill pillows, vermiculite
- Mercury
  - Use mercury spill kit ingredients.



Vapor pressure: How readily a material will give off vapor. High VP high volatility.

Evaporation rate: Rate of evaporation relative to ether (which is very fast) or to butyl acetate (which is very slow)

If rate is  $> 1.0$ , evaporation is greater than the reference, if  $< 1.0$  it is slower.

Vapor density: Vapor density relative to air.  $VD < 1.0$  vapors will rise to ceiling, caught between rafters.

$VD > 1.0$  vapors will sink to low spots such as down stairwells, vaults, floors, bottom of ditches, sumps

Specific gravity: Relative weight to water. If SG is  $> 1.0$  the spill will sink in water,  $< 1.0$  it will float on surface.

Water solubility: (cleanup with water?) If moderate 1-10% soluble; appreciable  $> 10\%$ , complete all proportions

**18.1 Waste Shipment Checklist**

**LOWER COLUMBIA COLLEGE  
WASTE SHIPMENT CHECKLIST**

SHIPMENT DATE \_\_\_\_\_ CONTRACTOR \_\_\_\_\_

1. Following shipping documents completed, and original copy retained:
  - Manifests  Land Ban  Waste Profiles  Drum Inventory Sheets
  - Contractor Time & Materials Report  LCC Chemical Substance Report Forms
  - Other \_\_\_\_\_
  
2. Manifest and Document Review
  - Manifests signed/dated  LCC (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: (360-270-6976)
  - 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
  - Receipt of returned manifests
  - Receipt of Certificate of Disposal (CD)

\*\*\*\*\*  
**LCC EH&S USE ONLY**

MANIFEST #	DATE MANIFEST RETURNED	DATE CD RETURNED

TRANSPORTER	EPA ID#	LOCATION

DESIGNATED FACILITY		

- Invoice approved / Date invoice sent for payment \_\_\_\_\_
- Number of Containers \_\_\_\_  Annual report entered
- Data Entry Worksheet completed Date \_\_\_\_\_ by: \_\_\_\_\_
- Data Entry completed Date: \_\_\_\_\_ by \_\_\_\_\_
- Revised CSRF to Generator Date \_\_\_\_\_

18.2 Waste Storage Compliance Sign

**LCC Hazardous Waste Central Storage  
DANGEROUS WASTE STORAGE COMPLIANCE DATES**

**FIRST CONTAINER STORAGE DATE:** \_\_\_\_\_

**NEXT DISPOSAL DATE ON OR BEFORE:** \_\_\_\_\_

18.3 Chemical Substance Report Form

Generator \_\_\_\_\_

LCC CHEMICAL SUBSTANCE REPORT

Facility \_\_\_\_\_ Department \_\_\_\_\_

Inv #	Container Fill Date	Constituents & Percent (must = 100% / include water) List Hazard(s) of Waste (flammable, corrosive, toxic, reactive, etc.)	# of Cont	Cont Size (Liters)	Total Amount (Kg or L)	Cont Type (G;M;P;F)	Physical State (S;L;G;SL)	pH	Storage Date

COMMENTS

18.4 Hazardous Waste Storage Inspection Form

**LCC HAZARDOUS WASTE STORAGE INSPECTION RECORD**

FOR LCC LOCATION: \_\_\_\_\_

<b>DATE INSPECTED</b>								
<b>SIGNATURE</b>								
<b>INSPECTOR (Print)</b>								
<b>CONTAINERS</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>
PROPER LABELING								
PROPER SEGREGATION								
CAPS/LIDS SEALED								
INTACT: NO LEAKAGE								
<b>STORAGE FACILITY</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>
SECURE: DOORS LOCKED								
SIGNS IN PLACE								
NO SPILL/LEAK/STAIN FOUND								
FIRE EXTINGUISHER/CHARGED								
EYEWASH/SHOWER OPERATIONAL								
FIRST AID KIT PRESENT								
SPILL SUPPLIES PRESENT								
<b>RECORDS</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>	<b>INSPECTED</b>
CSRFs (a.k.a. Inventory) CURRENT								
STORAGE COMPLAINT FORM CURRENT								
<i>Check box above, if item is okay. Indicate any discrepancy with a "D" and a note in the section below.</i>								
<b>DISCREPANCY</b>	<b>DATE</b>	<b>CORRECTIVE ACTION</b>						<b>INITIALS</b>

