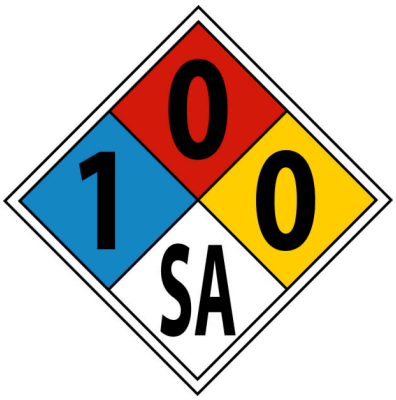
UNIVERSITY of HAWAI'I®

COMMUNITY COLLEGES

University of Hawai'i - Community College



Hazardous Material Management Program (HMMP)

Revised March 2025

Dear Colleagues,

In alignment with the University's commitment to promoting a safe and healthy study and work environment, this Hazardous Materials Management Plan (HMMP) was created as a vital component in ensuring the well-being of students, faculty, staff, and the surrounding community.

Each campus is responsible for maintaining a safe environment through the enforcement of environmental health and safety programs. The HMMP serves as a crucial guide for the management of hazardous materials and waste, ensuring compliance with federal, state, and local regulations. It also outlines procedures that safeguard our campus personnel from the risks associated with hazardous substances, thus reducing the likelihood of accidents, spills, and environmental contamination.

This revised version of the HMMP, which incorporates updates and revisions since its original issuance in September 2000, reflects the ongoing commitment of the University to ensure that all hazardous materials are handled in a safe, efficient, and compliant manner. It serves not only as a regulatory tool but also as a roadmap for emergency preparedness and response, providing clear instructions on how to minimize the impact of hazardous materials incidents.

Hazardous materials are present across our campuses in laboratories, maintenance areas, and various other facilities. From chemicals used in research and classroom settings to cleaning agents and fuels required for campus operations, the potential risks associated with mishandling these substances can have devastating impacts on both human health and the environment. Without an organized and well-executed Hazardous Materials Management Plan, there is an increased risk of spills, accidents, and long-term environmental damage.

A comprehensive HMMP is not just a regulatory requirement; it is an essential framework for maintaining the safety and sustainability of our community college campuses. It helps us meet our environmental stewardship goals while promoting a culture of safety and responsibility within the University community. The importance of this program cannot be overstated, as it directly impacts the health and safety of those who work and study on campus.

By adhering to the guidelines set forth in the plan, we can collectively contribute to a safer, healthier, and more environmentally conscious campus environment.

UHCC Environmental Health & Safety Office

List of Abbreviations

CESQG – Conditionally Exempt Small Quantity Generator

CFR – Code of Federal Regulations

CTAHR – College of Tropical Agriculture and Human Resources

DOH-SHWB – State of Hawaii Department of Health Solid and Hazardous Waste Branch

EHSO – University of Hawaii at Manoa Environmental Health and Safety Office

EPA – Environmental Protection Agency

HMMP – Hazardous Materials and Hazardous Waste Management Plan

Kg – Kilogram

LQG – Large Quantity Generator

MSDS – Material Safety Data Sheets

OSHA – Occupational Safety and Health Administration

PI – Principal Investigator

ppm – Parts per million

RCRA – Resource Conservation and Recovery Act

SQG – Small Quantity Generator

UHCC – University of Hawai‘i Community Colleges

UHCC-EHSS – UHCC Environmental Health and Safety Specialist within the Office of the Vice President for Community Colleges.

UHH-ESS – University of Hawaii at Hilo Environmental Safety Specialist

VCAS – The Vice Chancellor for Administrative Services (Affairs)

Contents

Hazardous material management program

INTRODUCTION

This HMMP outlines requirements for the management of hazardous materials and the disposal of hazardous waste at University of Hawai‘i community college campuses and facilities. These requirements are based on federal, state and county regulations. Adherence to this program will ensure the proper management of hazardous materials and hazardous wastes, reduce overall costs (by reducing disposal cost and minimizing the use of hazardous materials), and avoid potential civil and/or criminal liabilities. This plan is applicable to all University of Hawai‘i community college campuses and facilities . Failure to comply with these requirements may subject University and/or individuals to fines and civil or criminal prosecution.

The Environmental Protection Agency (EPA) is charged with the enforcement of hazardous waste regulations under the Resource Conservation and Recovery Act (RCRA). Locally, the State of Hawaii Department of Health – Solid and Hazardous Waste Branch (DOH-SHWB) enforces RCRA regulations. Under RCRA, facilities that generate hazardous waste are categorized according to the amount and type of waste they generate and/or accumulate. Facilities that generate less than 100 Kg (220 pounds) a month of hazardous waste or 1 Kg of acutely hazardous waste (as defined in 40 CFR 261.33e) are categorized as **Conditionally Exempt Small Quantity Generators (CESQG)**. Facilities that generate between 100 Kg and 1000 Kg/mon. of hazardous waste and less than 1 Kg of acutely hazardous waste are categorized as Small Quantity Generators (SQG). Facilities that generate more than 1000 Kg/ mon. of hazardous waste or accumulate more than 1 Kg of hazardous waste at any time are categorized as Large Quantity Generators (LQG). Regulatory requirements vary according to a facility’s generator status.

It is the intent of the University to operate all community college campuses and related facilities as separate CESQG by campus. This will minimize the requirements and burden upon campus administrators, faculty and staff. As stated above, a CESQG is allowed to generate up to 100 Kg (220 pounds) of hazardous waste or 1 Kg of acutely hazardous waste per calendar month. Additionally, a CESQG is allowed to accumulate up to 1000 Kg of hazardous waste and up to 1 Kg of acutely hazardous waste at any time. The following program outlines the requirements for operating as a CESQG.

APPLICABILITY

This program applies to all personnel that purchase, store, transport, manage, use, and dispose of hazardous materials and/or hazardous wastes. This plan applies to waste generated on the main campus of any community college, as well as any attached facilities and/or properties used or controlled by the individual campus units.

RESPONSIBILITY

All applicable personnel must become familiar with the hazardous materials in their areas of responsibility and with the UHCC Hazardous Materials and Hazardous Waste Management Program. Applicable personnel shall contact the UHCC Environmental Safety Specialist if in doubt about the requirements of this program or about how to properly dispose of waste.

Individual investigators, supervisors, workers, students, laboratory staff, contractors, etc. are considered the actual originators (generators) of these regulated materials. Therefore, it is the responsibility of each generator to identify all hazardous wastes that they might be producing, and to assure the waste is handled in a manner consistent with the requirements listed in this document.

DESIGNATED PROGRAM COORDINATORS

The University of Hawai'i Community Colleges – Environmental Health and Safety Specialist (UHCC-EHSS) within the Office of the Vice President for Community Colleges shall have responsibility for the oversight and overall coordination of the HMMP for all community college campuses. Their role is to ensure campuses have and maintain a sufficient number of personnel at each campus are trained in the proper handling and disposal of hazardous materials and waste, as well as to provide subject matter expertise to campuses in the identification and safe disposal of hazardous waste. The Chancellor (or their assigned designee) shall be responsible for coordinating the implementation of the HMMP for their campus and related facilities under their control.

The Chancellor (or their assigned designee) shall be responsible for properly identifying, in writing, all faculty and staff in each Division/Department who shall implement the HMMP for their area, a list of which shall be kept current and updated annually (at a minimum). Designated program coordinators shall be responsible for the submission of a monthly hazardous materials report and a cumulative annual inventory report of hazardous waste to their campus Vice Chancellor for Administrative Services.
All hazardous waste generators are required to attend initial and annual hazardous waste generator training and refresher course. The purpose of the training is to familiarize waste generators with EPA requirements for the safe handling, purchase, and disposal of hazardous chemicals and hazardous waste. The EHSS within the Office of Vice President for Community Colleges shall also conduct training on the University's requirements contained in this HMMP for the safe handling, purchase, and disposal of hazard chemicals and hazardous waste.

All designated personnel must:

- Become familiar with the hazardous materials in their area and with this UHCC hazardous material and hazardous waste management program (HMMP).
- Use authorization to purchase form (Attachment 1) to obtain approval for the purchase of hazardous material.
- Submit an authorization to use hazardous material form (Attachment 2) for grant approval
- Provide a beginning of the semester/end of the semester inventory of hazardous materials (Attachment 3) and an annual inventory of hazardous wastes (Attachment 4).
- Store and label waste properly.
- Properly identify and make waste determination according to federal and state regulations.

HAZARDOUS MATERIAL MANAGEMENT

TRAINING CERTIFICATES

Designated program coordinators are required to retain a copy of their training certificates as proof of training and annual refresher completion on how to properly handle, purchase or dispose of hazardous chemicals/waste. Designated program coordinators shall submit copies of their training certificates to their campus Vice Chancellor for Administrative Services (VCAS) prior to being allowed to purchase or dispose of hazardous chemicals, materials, and/or waste. The VCAS shall maintain an updated record of all designated program coordinators authorized to purchase and dispose of hazard chemicals and waste for their campus.

AUTHORIZATION TO PURCHASE HAZARDOUS MATERIALS

VCAS approval is required for the purchase or requisition of all hazardous materials. The Authorization to Purchase Hazardous Materials Form (Attachment 1), must be complete and submitted to VCAS at the time any purchase order for hazardous materials is initiated. If approved, a copy of the form will be provided to you for attachment to your purchase order or requisition. The purpose of the VCAS approval is to ensure campus oversight of the safe storage, handling and eventual disposal of the material while minimizing the cost to UHCC. All requests should be submitted for approval for purchase at least two weeks prior to initiating any purchase of chemicals.

APPROVAL TO USE EXTREMELY HAZARDOUS MATERIALS

As part of the grant approval process (ORS Form 5, item 4 under PI certification) a specific form for the use of certain hazardous materials has been developed (Attachment 2). This form is similar to those already in place for the use of radioactive and biohazard materials. Principal Investigators (PI) are required to complete Attachment 2 prior submitting their grant proposals for approval.

INVENTORY CONTROL PROCEDURES

SEMESTER INVENTORY OF HAZARDOUS MATERIALS

Programs that use and store hazardous materials are required to submit an inventory of all hazardous materials to the VCAS at the beginning and ending of each school semester. Attachment 3 shall be utilized to help manage existing hazardous materials, monitor on-going usage, and prevent unnecessary accumulation. Inventories are due prior to the beginning of each semester or Summer school term, and at the end of each semester or Summer school term. As part of the inventory process, programs are required to inspect the condition of all hazardous material containers to ensure that hazardous materials are stored in containers which are in good condition and properly labeled.

MONTHLY INVENTORY OF HAZARDOUS WASTES

UHCC programs that generate hazardous wastes are required to submit monthly waste inventories to their VCAS. Waste inventory forms (Attachment 4) shall be submitted to the VCAS on or before the first Friday of every month. The waste inventories help your campus administration to ensure that it does not exceed its accumulation limits that could possibly subject your campus to more stringent regulations. As part of the inventory procedure, designated program coordinators are required to inspect the condition of all hazardous waste material containers to ensure that hazardous wastes are stored in containers which are in good condition and which are properly labeled.

HAZARDOUS WASTE DISPOSAL

The VCAS shall coordinate with campus programs to consolidate hazardous waste inventories to prepare a Request for Quotation (RFQ) from a licensed EPA vendor for the packaging, transportation, and disposal of the hazardous waste. This may need to be done on an annual basis or more frequently depending on the amount of hazardous waste accumulated to maintain EPA status as a **Conditionally Exempt Small Quantity Generator (CESQG)**. VCAS is encouraged to contact the UHCC Environmental Safety Specialist for technical advice and assistance in developing the RFQ and preparing the campus generated hazardous waste for removal.

INVENTORY OF SPECIAL WASTES

While certain wastes are not hazardous, they also cannot be disposed of in a sanitary landfill or down the sewer drain and may necessitate special disposal procedures. These non-hazardous wastes should be included in Waste Inventory Form for proper disposal.

AUDIT PROGRAM

The audit program will assist in maintaining a safe working and academic environment. The UHCC Environmental Health and Safety Specialist will conduct periodic audits of each community college campus to review the safe handling, inventory, and storage of all hazardous materials and hazardous waste. The EHSS shall review the following:

- Hazardous material storage
- Personal protective equipment is being adequately used
- Emergency eyewash and showers are operational/present
- Laboratory chemical hoods are operating properly
- Hazardous and acutely hazardous waste accumulation containment
- Safety Data Sheet availability

- Hazardous waste accumulation areas and related emergency plans

A report indicating any corrective actions that are necessary and recommendations for safe handling and storage improvement will be provided to the campus Chancellor.

STORAGE OF SAFETY DATA SHEETS

All chemical manufacturers and suppliers of hazardous chemicals must furnish an SDS with each initial shipment and furnish new SDS information upon request. SDSs generally contain information such as the following:

- Chemical composition
- Physical characteristics and chemical properties
- Fire, explosion and reactivity hazards
- Health hazard information and symptoms of overexposure
- Protective equipment recommendations
- Handling and storage precautions
- Cleanup and disposal procedures
- Emergency first aid procedures

Federal and state law requires that written SDSs must be kept in proximity to the area where products are stored and must be **readily available** to all employees at any time. SDSs must also be available for emergency personnel or any state or federal agency that requests them. It is the responsibility of the designated program coordinator in each area to ensure that all SDSs are kept in an accessible storage area and are updated. If an SDS is missing or incomplete, it is likely that you can obtain a copy from the Internet or from the manufacturer. Requests for missing SDSs should be made in writing and a copy of the request should be kept in your file.

SAFETY IN USE

Certain hazardous materials require Standard Operating Procedures (SOPs) to ensure their safe use and storage. The UHCC Chemical Hygiene Plan (CHP) provides SOP requirements and describes the specific types of materials covered.

INVENTORY OF HAZARDOUS MATERIALS

The requirement for a total chemical inventory has been incorporated into the UHCC Chemical Hygiene Plan (CHP). A copy of the inventory must be available at the laboratory/facility for review at all times.

HAZARDOUS WASTE MANAGEMENT

WASTE IDENTIFICATION AND CLASSIFICATION

All waste must be identified and then classified as a hazardous or non-hazardous waste according to specific federal and state definitions summarized in Attachment 5. The UHCC EHSS is available to assist you in deciding whether a waste is hazardous or not. A waste determination must be done as soon as waste is collected into a waste container. The waste determination will be documented on the Hazardous Waste Tag. Most facilities produce wastes consistent in character. Therefore, what is often the most confusing aspect of the regulations – characterization and classification – becomes a periodic verification function.

What is a waste? A waste is:

- A useless by-product of an operation
- A material which is to be disposed
- Any material which can no longer be used
- A manufacturing or process by-product

How do I determine if a waste is hazardous?

Review the Safety Data Sheets:
SDSs may provide information that will assist you and the EHSO Office in making a proper hazardous waste determination.
Contact the Environmental Health and Safety Specialist:
The Environmental Health and Safety Specialist for the Community Colleges (808-956-XXXX) will assist you in making the determination of whether a waste is hazardous or is non-hazardous.

ACCUMULATION OF WASTE

LIMITS ON WASTE GENERATION

To maintain the status of a Conditionally Exempt Small Quantity Generator, each campus **may not** generate more than 100 kilograms (approximately one half of a 55-gallon drum, 27 gallons, or 220 pounds) of hazardous waste per month. Each campus also may not generate more than 1 kilogram (2.2 pounds) of acute hazardous waste in one month.

LIMITS ON WASTE ACCUMULATION

To maintain the status of Conditionally Exempt Small Quantity Generator, each campus **may not** have more than 1000 kilograms (approximately five 55-gallon drums, or 275 gallons, or 2200 pounds) of total accumulated hazardous waste and no more than 1 kilogram (2.2 pounds) of accumulated acute hazardous waste at any time.

DESIGNATION OF WASTE MANAGEMENT AREA

Campus programs generating hazardous waste should establish a safe area near the point of generation for the temporary storage of that waste before disposal by a licensed contractor. The area should be neat and orderly, containers should not be stacked upon one another, and containers of liquid should not be stored on their side. **The VCAS will hire a licensed hazardous waste contractor to transport the waste to an EPA permitted hazardous waste treatment, storage and disposal facility.**

STORAGE OF HAZARDOUS WASTE

LABELING WASTE CONTAINERS

All hazardous waste containers must be labeled with the following:

- The words “WASTE_____.” (example: WASTE Methanol, WASTE Hydrochloric Acid, etc.)
- An accurate description of the contents of the container. The manufacturer’s label or a label giving the chemical name and specific hazards (e.g., flammable, corrosive or poison) is acceptable.
- Generic names can be used if a separate list is maintained to indicate the chemical names and the approximate amounts (e.g., “WASTE chlorinated solvent bottle no.1” with a separate list “Bottle no. 1 Chloroform 50%, Methyl Chloroform 40%, Methylene Chloride 10%).
- The accumulation start date.
- Provide pH for all liquids.

CLOSED WASTE CONTAINERS

All hazardous waste containers must remain closed except when waste is being added to them.

WASTE CONTAINERS KEPT IN GOOD CONDITION

Containers used for wastes must be in good condition (i.e., no rusting, cracks or structural defects). If a container is broken or begins to leak, the materials must be transferred to a container in good condition. The material composition must be compatible with the material to be stored, and incompatible materials must not be stored in proximity to one another. Package materials in sturdy cardboard boxes or plastic waste containers. Cushion the material in the containers to prevent breakage. If cardboard boxes, which originally held other chemicals are used, the of the chemical and any inappropriate hazard markings must be covered over or defaced. Failure to do so constitutes improper marking as to content and is an EPA and OSHA violation.

CONTAINMENT

SECONDARY CONTAINMENT

Secondary containment is not mandatory for containers of liquid waste that is less than 55 gallons. However, a plan for handling spills must be in place. Consult with the UHCC EHSS regarding appropriate containment when a 55-gallon drum is used to collect waste.

SEPARATE INCOMPATIBLE MATERIALS/WASTES

Incompatible materials shall be segregated by HAZARD CLASS, i.e., Toxic-Reactive-Ignitable-Corrosive-Oxidizers. Examples of incompatible materials are acids/bases, organics/oxidizers, and flammable liquids/oxidizers. Unknowns and high hazard materials such as cyanides, organic peroxides, pyrophoric, water reactive and explosives shall be packaged separately regardless of quantity. Training will be provided to assist in segregation of incompatible materials. If there are any questions, please contact the UHCC Environmental Health Safety Specialist (808-956-XXXX) for assistance.

HAZARDOUS WASTE DISPOSAL

The disposal of hazardous waste requires that a licensed hazardous waste contractor be hired to dispose of the waste.

DRAIN DISPOSAL PROHIBITED

- **No hazardous materials/waste may be disposed of down the drain.** All liquid prior to drain disposal (except known clean water) shall be reviewed prior to any drain disposal. In addition, City and County Ordinances prohibit disposal of the following additional items down the drain:
- Fats and greases, if their concentration and physical dispersion results in separation and adherence to sewer structures.
- Storm water, surface water, groundwater, roof runoff, subsurface drainage, cooling water, swimming pool water or other unpolluted drainage.
- Liquid or vapor having a temperature of >150 degrees Fahrenheit.
- Any water or waste containing >100 ppm, by weight, of fat, oil or grease.
- Gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas.
- Garbage that has not been properly shredded. Garbage from commercial food establishments is prohibited.
- Ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure or any other solid or viscous substance capable of causing obstruction to the flower in sewers.
- Water or wastes having a pH lower than 5.5 or higher than 9.5 having any other corrosive property capable of causing damage to the sewage works or its personnel.
- Water or wastes containing a toxic or poisonous substance of sufficient quantity to injure or interfere with any sewage treatment process or cause a hazard to humans or animals.
- Noxious or malodorous gas or explosive liquids or substance capable of endangering public property and safety or creating a public nuisance.

EMERGENCY SPILL PROCEDURES

You must have a specific spill emergency plan and provide information and training to individuals working in your area regarding the plan. It is a good idea to post the emergency procedures and emergency phone numbers in the work area. Personnel working with hazardous chemicals should be able to answer the question: "What would I do if this material spilled?"

Spill kits with instructions, absorbents, reactants, and protective equipment should be available to clean up minor spills. A **minor spill** is one that does not spread rapidly, does not endanger people or property except by direct contact, does not endanger the environment, and the workers in the area are capable of handling safely without the assistance of safety and emergency personnel. **All other chemical spills are considered major.**

The following are general procedures for the handling of spills.

1. In the event of a spill, attend to anyone who may have been contaminated or hurt, if it can be done without endangering yourself.
2. Turn on the fume hood(s) and open windows where this can be done without endangering yourself.
3. If flammable materials are spilled, de-energize electrical devices if it can be done without endangering yourself.

MINOR SPILLS

- If you have any questions regarding spill clean-up requirements, please contact your campus Vice Chancellor of Administrative Service or UHCC Environmental Health Safety Specialist (808-956-XXXX).
- Ensure protective apparel is resistant to the spilled material. Neutralize acids and bases, if possible, using neutralizing agents such as sodium carbonate or sodium bisulfate.
- Control the spread of liquids by containing the spill. Absorb liquids by adding appropriate absorbent materials, such as vermiculite or sand, from the spill's outer edges toward the center. Paper towels and sponges may also be used as absorbent material, but this should be done cautiously considering the character of the spilled material.
- Collect and contain the cleanup residue and any materials used to clean up the spill by scooping them into a plastic bucket or other appropriate container and properly disposing of the waste as hazardous waste.
- Decontaminate the area and affected equipment. Ventilating the spill area may be necessary.
- Document what happened, why, what was done, and what was learned. Such documentation can be used to avoid similar instances in the future. Major incidents are almost always preceded by numerous near misses.

MAJOR SPILLS

- If the spill is major, evacuate and secure the area from all personnel.
- If flammable liquid is spilled, secure all ignition sources.
- If the spill is major contact the Fire Department (911) and Campus Public Safety for immediate assist. You should also contact your campus Vice Chancellor of Administrative Service and the UHCC Environmental Health Safety Specialist (808-956-XXXX) for assistance in containing the spill and to determine other precautions that need to be taken depending on the type and size of the spill.

SPILL REPORTING REQUIREMENTS

After the initial spill response, contact the Vice Chancellor of Administrative Service and UHCC Environmental Health Safety Specialist (808-956-XXXX) to determine whether there are any federal or state reporting requirements. Some reporting obligations are immediate and must be made within 24 hours.

HOW TO DISPOSE OF VARIOUS MATERIALS/WASTE

The individual possessing or generating the material/waste retains the primary responsibility for the material/waste. The Vice Chancellor of Administrative Service, UHCC Environmental Health and Safety Specialist at (808-956-XXXX) provides information on requirements and assistance in handling the materials. Specific information on various types of materials is given below.

BATTERIES

Lithium, nickel/cadmium or mercury batteries shall be stored at the hazardous waste accumulation site for contract disposal. Vehicle batteries are recyclable and arrangements with local vendors can be made. Operations and Maintenance handle disposal of batteries from State vehicles.

BIOLOGICAL MATERIALS

For biohazardous wastes, refer to the published University biohazardous waste disposal guidelines or contact the UHCC Environmental Health and Safety Specialist (808-956- XXXX) for information concerning the handling and disposal of biological materials. Remains from dissections shall be properly disposed of.

COMPRESSED GASES

Compressed gas cylinders should be returned to the vendor. A return agreement with the vendor should be included in the contract. Without such an agreement the return or disposal of the cylinders is difficult and very costly, contact the UHCC Environmental Health Safety Specialist (808-956-XXXX) for assistance.

CONTROLLED SUBSTANCES

The handling and disposal of controlled substances (i.e., drugs and other substances listed in 21 CFR 1308) are the responsibility of the permit holder.

FLUORESCENT LIGHT BALLASTS

Your campus facilities and maintenance department removes non-leaking ballast and removes/disposes of fluorescent light tubes.

HAZARDOUS CHEMICALS AND HAZARDOUS WASTE

The “College” will hire a contractor to dispose of hazardous wastes. Efforts should be made to determine if other campus departments could use excess hazardous chemicals prior to submitting for contract disposal. Chemicals considered non-hazardous waste (see "Non-hazardous Waste" below) could be disposed of in the municipal sanitary landfill or sanitary sewer.

MERCURY

Items containing functional mercury (e.g., light switches, barometers and thermometers) shall be stored at a hazardous waste accumulation site for contract disposal.

MIXED WASTE

Mixed waste is defined as materials that possess a radioactive or biological hazard as well as an unrelated chemical hazard (e.g., potassium dichromate solution contaminated with Carbon-14). Contact the UHCC Environmental Health and Safety Specialist for assistance in coordinating with the Environmental Health and Safety Office at the UH Manoa campus Radiation Safety Office for assistance in the proper disposal of these materials.

NON-HAZARDOUS WASTE

Listed below in Table 1 are typical laboratory chemicals that are not considered hazardous wastes by the U.S. Environmental Protection Agency. Chemicals with an LD(50) (oral rat) greater than 500mg/kg are considered non-hazardous unless they are suspect carcinogens, mutagens, or teratogens (the LD (50) can be found in the MSDS). Non-hazardous waste can be disposed of in the municipal sanitary landfill if solid and down the drain if liquid, provided it is allowed by the local regulations or policies, if the requirements of the applicable county ordinances or the facility industrial wastewater discharge permit are met. Alternatively, the

materials can be collected for disposal as non-hazardous waste in the periodic waste disposal shipments. Contact the UHCC Environmental Health Safety Specialist if you are unsure and need assistance.

TABLE 1: NON HAZARDOUS WASTE

Sugars (e.g., sucrose, glucose, mannose)	Silica Gel
Starch	Alumina (aluminum oxide)
Naturally occurring Amino Acids	Calcium Fluoride
Citric Acid and its Sodium, Potassium, Magnesium, Calcium and Ammonium Salts.	Lactic Acid and its Sodium, Potassium, Magnesium, Calcium and Ammonium, Salts
Sodium, Potassium, Calcium, Strontium, and Ammonium Sulfates	Sodium, Potassium, Calcium, Magnesium, Strontium and Ammonium Phosphates
Sodium, Potassium, Magnesium and Ammonium Chlorides	Sodium, Potassium, Magnesium, and Calcium Borates
Silicon Dioxide	Sodium, Potassium, Ammonium Acetates
Boron, Magnesium, Copper Oxides	Sodium, Potassium, Magnesium, Calcium, and Ammonium Carbonates

OILS AND TRANSFORMER FLUID

The VCAS may assist programs with disposal of used pump oil. Used motor oil is recyclable through local vendors and campus departments should consolidate their disposal of used motor oil to reduce costs.

Transformer fluid will be handled on a case-by-case basis, contact the UHCC Environmental Health and Safety Specialist for assistance. The following requirements apply to used oil:

- Used oil may only be stored in containers that are in good condition and not leaking.
- Containers, aboveground storage tanks, and fill pipes must be labeled or marked clearly with the words **“Used Oil.”**
- Upon detection of a release of used oil, a generator must stop the release, contain the used oil, clean up and manage properly the used oil and other materials, and if necessary, repair or replace any leaking used oil storage containers. If a release of used oil occurs, contact your campus VCAS immediately. Contact the UHCC Environmental Health Safety Specialist (808-956-XXXX) for information regarding cleanup, and special regulatory reporting requirements which may apply.

PAINT WASTE (AUTO BODY)

Excess paint or waste paint containing cadmium, chromium, lead or mercury will not be recycled but will be disposed of as hazardous waste. Other paint waste generated by an auto body program will be stored in a marked container labeled, “Paint Waste for Recycling”. On a regular basis, the paint waste will be processed through the paint solvent recycler. After recycling, the remaining sludge should be checked for ignitibility. If the sludge is ignitable, it will be disposed of as hazardous waste. If it is not ignitable, it will be disposed in the municipal sanitary landfill. Thinner solvent extract can be used as product.

PHOTOGRAPHIC CHEMICALS

Photographic fixer will must be stored in capped container and labeled, “Fixer for Recycling”. Photographic fixer solution may contain silver salts after use. Silver is an EPA toxic characteristic waste and must be recycled or disposed of as a hazardous waste. If your facility has a silver recovery unit, it should be used to process the used fixer in accordance with the manufacturing instructions. This would include ensuring that the effluent from the unit meets the requirements for safe drain disposal and that the unit filter, when full, is

sent for recycling. If your facility does not have a silver recovery unit, there are contractors who will furnish one for a fee or for the value of the silver recovered. Alternatively, the used fixer solution can be handled and disposed of as a hazardous waste.

RADIOACTIVE MATERIALS

Contact the UHCC Environmental Health and Safety Specialist (808-956-XXXX) for assistance. Refer to the University Radiation Safety Manual or contact the UH Manoa campus (808-956-8660) for information concerning the proper handling and disposal of radioactive material.

SHARPS AND GLASSWARE

Glassware not contaminated with radiological, biological or hazardous chemical material shall be placed in a puncture resistant container labeled "glass" or "broken glass" and disposed of safely by your campus operations and maintenance staff utilizing appropriate PPE. Refer to published biohazardous waste disposal guidelines or contact the Environmental Health and Safety Specialist (808-956-XXXX) for information on the handling and disposal of sharps or glassware contaminated with biological or infectious material. Glassware or sharps contaminated with hazardous chemicals should be rinsed to decontaminate them and then disposed of as non-contaminated glassware or sharps (i.e., placed in a sharps container). Broken glassware contaminated with hazardous chemicals should be placed in a puncture resistant container (e.g., bottle, plastic container or can over-pack), labeled with the name of the chemical and disposed of as hazardous chemical waste.

HAZARDOUS WASTE MINIMIZATION

BUYING CHEMICALS IN SMALLER AMOUNTS

The "large economy size" may cost less to buy, but disposal costs, in most cases, are several times the initial cost of the material. Many of the bottles of excess or waste chemicals sent for disposal are full or 3/4 full. Everyone needs to try to accurately estimate the amount of a chemical they expect to use.

RECYCLING AND REDISTRIBUTION

Efforts should be made to find someone in the laboratory or department who can use the hazardous material before it is submitted to the VCAS as waste for contract disposal.

USE OF LESS HAZARDOUS OR NON-HAZARDOUS MATERIALS

The following provides some examples of the use of less hazardous or non-hazardous materials; everyone is encouraged to think of some others that may be applicable to their research or instructional materials.

CLEANING SOLUTIONS

Chromerge, chromic acid and dichromate cleaning solutions are not desirable from a waste disposal prospective, as they cannot be made non-hazardous and are expensive to dispose of. There are many non-toxic biodegradable cleaning solutions that can be used instead of chromic acid. For extremely dirty glassware a product called Nochromix, which uses sulfuric acid and an organic oxidizer in place of chromium can be used. While this requires neutralization of the acid for ordinary disposal, it is far less costly to dispose of than chromium solutions. A number of alternative cleaning solutions are listed below. These are all available from Fisher Scientific, who has the University contract for laboratory supplies. NoChromix, Alconox, Liquinox liquid detergent, Citranox, Fisherbrand sparkleen, and FL-70 Concentrate.

DRYING AGENTS

The safest common drying agents are calcium chloride, silica gel, molecular sieves and calcium sulfate (Drierite). These are recommended because of their low toxicity and stability. Drying agents that pose varying degrees of hazard and disposal problems include:

- Phosphorus pentoxide which generates highly corrosive phosphoric acid and heat on contact with water. This material also has to be disposed of as a hazardous.
- Magnesium perchlorate (Dehydrite) which is a strong oxidizer and may cause fires or explosions on contact with organic materials. This material has to be disposed of as a hazardous waste.

THERMOMETERS

Mercury thermometers should be replaced with non-mercury thermometers whenever possible. Broken mercury thermometers create spills that are a potential health hazard, time consuming to clean up, and are one of the most expensive hazardous wastes to dispose of. Non-mercury thermometers with equivalent accuracy are available for temperature ranges of –20 to 250 degrees Centigrade. Check your laboratory supply catalog for more information. If mercury containing equipment is used, then mercury spill kit and personnel knowledgeable in its use is required in the laboratory or facility.

ATTACHMENT 1 – UNIVERSITY OF HAWAII COMMUNITY COLLEGE PROCUREMENT AUTHORIZATION FOR HAZARDOUS MATERIALS

UNIVERSITY OF HAWAII COMMUNITY COLLEGE PROCUREMENT AUTHORIZATION FOR HAZARDOUS MATERIALS

An approved (signed) copy of this form must accompany any *request*, purchase order or requisition for the procurement of all hazardous materials.

NAME _____
(Instructor/Program Coordinator)

DEPARTMENT: _____ PHONE NO., EXT.: _____ LOCATION: _____ PO NO.: _____

Chemical Name	Solid/Liquid/Gas	Amount (Gallon, lbs)	Usage Plan	Estimated Usage Period

Instructor/Program Coordinator _____DATE:
(Signature)

Dean/Vice Chancellor _____ DATE:
(Signature)

SEND COMPLETED FORM TO: Vice Chancellor for Administrative Services (VCAS).

FOR VCAS USE ONLY

VCAS APPROVAL: _____ DATE: _____

APPROVAL NO.: _____

ATTACHMENT 2

University of Hawaii at Manoa Environmental Health And Safety Office Hazardous Material Management Program Approval For The Use of Hazardous Waste

For Research Grants

1. Principal Investigator:____
2. Project Title:_____
3. If your project will involve any of the types of hazardous materials listed below, please provide a list of the chemical name(s) and approximate amounts of the materials to be used, information on how the material will be used and stored, also information on any special safety measures that will be taken. The information is needed to ensure the materials are stored, used and disposed of in accordance with the applicable Federal and State regulations.

a) Explosive materials (e.g., ammonium perchlorate, picric acid or picrates, azides, acetylides or fulminates of heavy metals, aromatic di or tri nitro compounds such as dinitrophenol or trinitrotoluene, nitroglycerine, RDX and tetrazene).

b) Water reactive chemicals (e.g., alkali metals such as sodium, potassium or lithium; metal hydrides such as lithium aluminum hydride, sodium borohydride or lithium hydride; calcium carbide, ethyldichlorosilane and phosphides).

c) Flammable or poison gases (e.g., methane, ethylene, chlorine, phosgene and hydrogen sulfide).

d) Organic peroxides (e.g., methyl ethyl ketone peroxide or peracetic acid).

e) Highly toxic materials (e.g., cyanides, osmium tetroxide, phosphorus, strychnine, pentaborane, or any material with a LD50 [oral rat] of 50mg/kg or less).

f) Flammable liquids (i.e., materials with a flash point of 140 degrees Fahrenheit or less) in quantities of 60 gallons or more at any one time.

If your project will involve the use of controlled substances (i.e., materials listed in 21 CFR 1308 by the U.S. Drug Enforcement Agency such as cocaine, chloral hydrate, morphine, and sodium barbital), provide the number of the required Federal or State permit for possession and use of these materials.

4. I agree to: (1) comply with the University of Hawaii at Manoa Hazardous Material Management Program (HMMP) requirements and any additional requirements provided by the Environmental Health and Safety Office that are necessary to ensure compliance with Federal and State regulations, (2) inform the Environmental Health and Safety Office if there are any amendments to the project which affect the types of hazardous material listed above, and (3) transfer or properly dispose of all my hazardous material as specified in the HMMP prior to leaving the University or transferring to a different laboratory. I believe the above information is accurate and complete.

_____ _____

PRINCIPAL INVESTIGATOR DATE

_____ _____

DEAN/VICE CHANCELLOR DATE

SEND COMPLETED FORM TO: HSO 2040 East-West Road Attention: Hazardous Material Management Officer. The Hazardous Material Management Officer may be contacted at 956-3198 or Fax 956-3205, if you have questions.

The use of the hazardous materials listed above is approved subject to the special requirements listed below.

HAZARDOUS MATERIAL MANAGEMENT OFFICER DATE

SPECIAL REQUIREMENTS:

ATTACHMENT 3

UNIVERSITY OF HAWAI'I COMMUNITY COLLEGE

HAZARDOUS CHEMICAL INVENTORY FORM (SEMESTER)

CAMPUS:

This form assists University of Hawaii with proper management of our hazardous material and hazardous waste and to ensure that materials are safely stored and handled. You should provide a complete inventory of all stored hazardous materials. If additional space is needed, you may use an attached sheet using the same format. If at a later date you obtain materials not previously listed, please submit an amended form.

I.PRODUCT NAME	II. CHEMICAL NAME	Primary Hazard Warning	Physical State (solid, liquid or solution)	Container Size	Amount (Gal, lb)s	Qty

INSTRUCTOR/PROGRAM COORDINATOR:

_____ PHONE NO.:__ LOCATION: ___

(Printed Name)

_____ DATE: _____

(Signature)

SEND COMPLETED FORM TO: Vice Chancellor for Administrative Services.

ATTACHMENT 3 (CONT.) SAMPLE

This form assists University of Hawaii with proper management of our hazardous material and hazardous waste and to ensure that materials are safely stored and handled. You should provide a complete inventory of all stored hazardous materials. If additional space is needed, you may use an attached sheet using the same format. If at a later date you obtain materials not previously listed, please submit an amended form.

III. PRODUCT NAME	IV. CHEMICAL NAME	Primary Hazard Warning	Physical State (solid, liquid or solution)	Container Size	Amount (Gal, lbs	Qty
Acetic Acid, Glacial		Flammable	Liquid	1 gal	1 gal	5
Enamel Paint	Naphtha ether, mineral spirit	Flammable	Liquid	1 gal	1 gal	10
Carter's Rubber Cement	Naphtha, Hexane, Propyl alcohol	Flammable	Liquid	4 oz	4 oz	48

INSTRUCTOR/PROGRAM COORDINATOR:

Dr. George Bush PHONE NO.: x7777 LOCATION: Science Bldg, Rm 205
(Printed Name)

(Signature) DATE:

SEND COMPLETED FORM TO: Vice Chancellor for Administrative Services.

ATTACHMENT 4

UNIVERSITY OF HAWAI'I COMMUNITY COLLEGE
HAZARDOUS WASTE INVENTORY FORM (MONTHLY)

CAMPUS:

This form assists University of Hawaii of Hawaii Community College with proper management of our hazardous waste. If you have any hazardous or non-hazardous waste being stored for disposal, please provide the information requested. If additional space is needed, you may use an attached sheet using the same format. If at a later date you generate wastes not previously listed, please submit an amended form.

EHSO will complete columns 8 and 9, DOT Class and EPA Waste Code.

Chemical Name/Product (Chemical constituents)	Physical State (solid, liquid or solution)	Amount (Gal, lbs)	Container Size	Container Type	Hazard Category	pH)	DOT Class (EHSO only)	EPA Waste Code (EHSO only)

INSTRUCTOR/PROGRAM COORDINATOR:

_____ PHONE NO.: _ LOCATION: __

(Printed Name)

_____ DATE: _____

(Signature)

SEND COMPLETED FORM TO: Vice Chancellor for Administrative Services.

ATTACHMENT 4 (CONT.) SAMPLE

This form assists University of Hawaii of Hawaii Community College with proper management of our hazardous waste. If you have any hazardous or non-hazardous waste being stored for disposal, please provide the information requested. If additional space is needed, you may use an attached sheet using the same format. If at a later date you generate wastes not previously listed, please submit an amended form. EHSO will complete columns 8 and 9, DOT Class and EPA Waste Code.

Chemical Name/Product (Chemical constituents)	Physical State (solid, liquid or solution)	Amount (Gal, lbs)	Container Size	Container Type	Hazard Category	pH)	DOT Class (EHSO only)	EPA Waste Code (EHSO only)
Solvent waste—Acetone 5%, methanol 20%, mineral spirits50%, water 20%	Liquid	55 gal	55 gal	Drum metal	flam	N/A		
Spray paint—mineral spirit	Liquid under pressure	8 oz	16 oz	Metal	Flam	N/A		
Acid solution—hydrochloric acid 45%, sulfuric acid	Liquid	4 liters	4 liters	Glass	corr	1		

INSTUCTOR/PROGRAM COORDINATOR:

Dr. George Bush (Printed Name) PHONE NO.: x7555 LOCATION: Science bldg rm 205

(Signature) DATE: _____

SEND THE COMPLETED FORM TO: Vice Chancellor for Administrative Services.

ATTACHMENT 5 PROCEDURE FOR MAKING HAZARDOUS WASTE DETERMINATION

All wastes must be screened to determine whether they are hazardous, whether it is a RCRA regulated or a non-RCRA regulated hazardous waste. A hazardous waste is one which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. The EPA has determined that the following meet the definition of a hazardous waste:

a) A waste which is listed as hazardous in the regulations (40 CFR 261)*
b) A mixture that includes a listed hazardous waste; or
c) A waste which exhibits any of the four following characteristics; ignitability, corrosivity, reactivity, or toxicity.

*Note: The complete text of the hazardous waste regulations is available online at www.epa.gov/epahome/cfr40.htm.

The following procedures must be used to determine if a waste is hazardous. If it is, the procedures will identify the appropriate EPA hazardous waste number for each waste, which will in turn determine disposal requirements:

1) Determine the proper name of the waste and its specific source.
2) Check the EPA's hazardous waste lists in the following order:
   a) "U" list of toxic wastes (40 CFR 261.33f).
   b) "P" List of acutely hazardous waste (40 CFR 261.33e). See Attachment 6.
   c) "K" List of hazardous wastes from specific sources (40 CFR 261.32).
   d) "F" List (40 CFR 261.31) for a non-specific source of waste.
3) If the waste is not one the "U" List, the "P" List, the "K" List or the "F" List, you must determine whether the waste exhibits any of following four characteristics:
   a) Ignitability. A waste that exhibits the characteristic of ignitability has the EPA hazardous waste number of D001. See 40 CFR §261.20.
   b) Corrosivity. A waste that exhibits the characteristic of corrosivity has the EPA hazardous waste number of D002. See 40 CFR §261.22.
   c) Reactivity. A waste that exhibits the characteristic of reactivity has the EPA hazardous waste number of D003. See 40 CFR §261.23.
   d) Toxicity. A waste that exhibits the characteristic of reactivity will have and the EPA hazardous waste number of D004 through D043. See 40 CFR §261.24.

ATTACHMENT 6 LIST OF ACUTELY HAZARDOUS WASTE (P-CODED WASTE)

The following materials are hazardous wastes if and when they are intended to be discarded (40 CFR 261.33):

1. Any commercial chemical products or manufacturing chemical intermediate having the generic name listed below.
2. Any specification commercial chemical or product or chemical intermediate having the generic name listed below.
3. Any residue remaining in a container that is not empty. P-coded containers must have their contents removed and be triple rinsed with an appropriate solvent before they are legally empty and no longer regulated.
4. Any residue resulting from the clean-up of a spill of a P-coded waste.
5. The phrase “commercial chemical product or manufacturing chemical intermediate having a generic name listed below” refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient.

Hazardous Waste No.	Chemical Abstracts No.	Chemical Name
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb
P203	1646-88-4	Aldicarb sulfone
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium Picrate
P119	7803-55-6	Ammonium Vanadate
P099	506-61-6	Argintate (1-), bis(cyano-C-), potassium
P010	7778-39-4	Arsenic acid (H3AsO4)
P012	1327-53-3	Arsenic oxide (As2O3)
P011	1303-28-2	Arsenic oxide (As2O5)
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-8	Arsenous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-

P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro
P028	100-44-7	Benzene (chloromethyl)-
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-
P014	108-98-5	Benzenethiol
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2-2-dimethyl-, methylcarbamate
P188	57-64-7	Benzoic acid, 2-hydroxy, compd, with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3-b]indol-5-yl methylcarbamate ester (1:1)
P001	81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%.
P028	100-44-7	Benzyl chloride
P015	7740-47-7	Beryllium powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, o-[methylamino, carbonyl] oxime
P021	592-01-8	Calcium cyanide
P189	55285-14-8	Carbamic acid, [(dibutylamino)-thio] methyl-,2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester
P191	644-64-4	Carbamic acid, dimethyl-, 1-[(diemthylamino) carbonyl]-5-methyl-1H-pyrazol-3-yl ester
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester
P127	1563-66-2	Carbofuran
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P189	55285-14-8	Carbosulfan
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl) thiourea
P027	542-76-7	3-Chloropropionitrile
P029	544-92-3	Copper cyanide (202CuCN)
P202	64-00-6	m-Cumenyl methylcarbamate
P030	----------	Cyanides (soluble cyanide salts) not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride (CNCl)
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol

	P016	542-88-1	Dichloromethyl ether
	P036	696-28-6	Dichlorophenylarsine
	P037	60-57-1	Dieldrin
	P038	692-42-2	Diethylarsine
	P041	311-45-5	Diethyl-p-nitrophenyl phosphate
	P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
	P043	55-91-4	Diisopropylfluorophosphate (DFP)
	P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-(1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-
	P060	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-
	P037	60-57-1	2,7:3,6-Dimethanonaphth [2,3-b] oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-(1aalpha,2beta,2aalpha,3beta,6beta,6aalpha, 7beta,7aalpha)-
	P051	72-20-8	2,7:3,6-Dimethanonaphth [2,3,-b] oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-,(1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-, & metabolites
	P044	60-51-5	Dimethoate
	P046	122-09-8	alpha,alpha-Dimethylphenethylamine
	P191	644-64-4	Dimetilan
	P047	534-52-1	4,6,Dinitro-o-cresol, & salts
	P048	51-28-5	2,4,-Dinitrophenol
	P020	88-85-7	Dinoseb
	P085	152-16-9	Diphosphoramide, octamethyl-
	P111	107-49-3	Diphosphoric acid, tetraethyl ester
	P039	298-0404	Disulfoton
	P049	541-53-7	Dithiobiuret
	P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-,O-[(methylamino)-carbonyl] oxime
	P050	115-29-7	Endosulfan
	P088	145-73-3	Endothall
	P051	72-20-8	Endrin, & metabolites
	P042	51-43-4	Epinephrine
	P031	460-19-5	Ethanedinitrile
	P194	23135-22-0	Ethanimidothioc acid, 2-(dimethylamino)-N-{[(methylamino) carbonyl] oxy}-2-oxo-, methyl ester
	P066	16752-77-5	Ethanimidothioic acid, N-{[(methylamino) carbonyl]oxy}-, methyl ester
	P101	107-12-0	Ethyl cyanide

	P054	151-56-4	Ethyleneimine
	P097	52-85-7	Famphur
	P056	7782-41-4	Fluorine
	P057	640-19-7	Fluoroacetamide
	P058	62-74-8	Fluoroacetic acid, sodium salt
	P198	23422-53-9	Formetanate hydrochloride
	P197	17702-57-7	Formparanate
	P065	628-86-4	Fulminic acid, mercuric salt
	P059	76-44-8	Heptachlor
	P062	757-58-4	Hexaethyl tetraphosphate
	P116	79-19-6	Hydrazinecarbothioamide
	P068	60-34-4	Hydrazine, methyl-
	P063	74-90-8	Hydrocyanic acid
	P063	74-90-8	Hydrogen cyanide
	P096	7803-51-2	Hydrogen phosphide
	P060	465-73-6	Isodrin
	P192	119-38-0	Isolan
	P202	64-00-6	3-Isopropylphenyl N-methylcarbamate
	P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
	P196	15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S')-
	P196	15339-36-3	Manganese dimethyldithiocarbamate
	P092	62-38-4	Mercury, (acetato-O) phenyl-
	P065	628-86-4	Mercury fulminate
	P082	62-75-9	Methanamine, N-methyl-N-nitroso-
	P064	624-83-9	Methane, isocyanato-
	P016	542-88-1	Methane, oxybis(chloro-
	P112	509-14-8	Methane, tetranitro-
	P118	75-70-7	Methanethiol, trichloro-
	P198	23422-53-9	Methanimidamide, N,N-diemthyl-N'-{3-[[(methylamino)-carbonyl]oxy]-phenyl}-, monohydrochloride
	P197	17702-57-7	Methanimidamide, N,N-dimethyl-N'-{2-methyl-4-[[(methylamino) carbonyl]oxy]phenyl}-
	P050	115-29-7	6,9,-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
	P059	76-44-8	4,7,-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
	P199	2032-65-7	Methiocarb
	P066	16752-77-5	Methomyl
	P068	60-34-4	Methyl hydrazine
	P064	624-83-9	Methyl isocyanate
	P069	75-86-5	2-Methyllactonitrile
	P071	298-00-0	Methyl parathion

	P190	1129-41-5	Metolcarb
	P128	315-08-4	Mexacarbate
	P072	86-88-4	alpha-Naphthylthiourea
	P073	13463-39-3	Nickel carbonyl (NiCO)
	P074	557-19-7	Nickel cyanide (NiCN)
	P075	54-11-5	Nicotine & salts
	P076	10102-43-9	Nitric oxide
	P077	100-01-6	p-Nitroaniline
	P078	10102-44-0	Nitrogen dioxide
	P076	10102-43-9	Nitrogen oxide (NO)
	P078	10102-44-0	Nitrogen oxide (NO2)
	P081	55-63-0	Nitroglycerine
	P082	62-75-9	N-Nitrosodimethylamine
	P084	4549-40-0	N-Nitrosomethylvinylamine
	P085	152-16-9	Octamethylpyrophosphoramide
	P087	20816-12-0	Osmium Tetroxide (OsO4)
	P088	145-73-3	7-Oxabicyclo (2.2.1) heptane-2,3-dicarboxylic acid
	P194	23135-22-0	Oxamyl
	P089	56-38-2	Parathion
	P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
	P048	51-28-5	Phenol, 2,4-dinitro
	P047	534-52-1	Phenol, 2-methyl-4,6-dinitro- & salts
	P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
	P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt
	P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)
	P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
	P202	64-00-6	Phenol, 3-(1-methylethyl)-, methylcarbamate
	P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methylcarbamate
	P092	62-38-4	Phenylmercury acetate
	P093	103-85-5	Phenylthiourea
	P094	298-02-2	Phorate
	P095	75-44-5	Phosgene
	P096	7803-51-2	Phosphine
	P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester
	P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
	P094	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
	P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
	P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester

	P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
	P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
	P097	52-85-7	Phosphorothioic acid, O-{4-[(dimethylamino)sulfonyl] phenyl} O,O-dimethyl ester
	P071	298-00-0	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester
	P204	57-47-6	Physostigmine
	P188	57-64-7	Physostigmine salicylate
	P110	78-00-2	Plumbane, tetraethyl-
	P098	151-50-8	Potassium cyanide (KCN)
	P099	506-61-6	Potassium silver cyanide
	P201	2631-37-0	Promecarb
	P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, O- [(methylamino)carbonyl] oxime
	P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-, O- [(methylamino) carbonyl] oxime
	P101	107-12-0	Propanenitrile
	P027	542-76-7	Propanenitrile, 3-chloro-
	P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
	P081	55-63-0	1,2,3,-Propanetriol, trinitrate
	P017	598-31-2	2-Propanone, 1-bromo-
	P102	107-19-7	Propargyl alcohol
	P003	107-02-8	2-Propenal
	P005	107-18-6	2-Propen-1-ol
	P067	75-55-8	1,2-Propylenimine
	P102	107-19-7	2-Propyn-1-ol
	P008	504-24-5	4-Pyridinamine
	P075	54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts
	P204	57-47-6	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester, (3aS-cis)-
	P114	12039-52-0	Selenious acid, dithallium (thallous) salt
	P103	630-10-4	Selenourea
	P104	506-64-9	Silver cyanide (AgCN)
	P105	26628-22-8	Sodium azide
	P106	143-33-9	Sodium cyanide (NaCN)
	P108	57-24-9	Strychnidin-10-one, & salts
	P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
	P108	57-24-5	Strychnine & salts
	P115	7446-18-6	Sulfuric acid, dithallium (thallous) salt
	P109	3689-24-5	Tetraethyldithiopyrophosphate
	P110	78-00-2	Tetraethyl lead
	P111	107-49-3	Tetraethyl pyrophosphate

	P112	509-14-8	Tetranitromethane
	P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
	P113	1314-32-5	Thallic oxide
	P113	1314-32-5	Thallium oxide (Tl2O3)
	P114	12039-52-0	Thallium (I) selenite (thallous selenite)
	P115	7446-18-6	Thallium (I) sulfate (thallous sulfate)
	P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
	P045	39196-18-4	Thiofanox
	P049	541-53-7	Thioimidodicarbonic diamide (H2NCS)2NH
	P014	108-98-5	Thiophenol
	P116	79-19-6	Thiosemicarbazide
	P026	5344-82-1	Thiourea, (2-chlorophenyl)-
	P072	86-88-4	Thiourea, 1-naphthalenyl-
	P093	103-85-5	Thiourea, phenyl-
	P185	26419-73-8	Tirpate
	P123	8001-35-2	Toxaphene
	P118	75-70-7	Trichloromethanethiol
	P119	7803-55-6	Vanadic acid, ammonium salt
	P120	1314-62-1	Vanadium Oxide (V2O5) vanadium pentoxide
	P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
	P001	81-81-2	Warfarin, & salts, when present at concentrations greater than 0.3%
	P205	137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S')-,
	P121	557-21-1	Zinc cyanide [Zn (CN)2]
	P122	1314-84-7	Zinc phosphide (Zn3P2) when in concentrations greater than 10%
	P205	137-30-4	Ziram