Hazard Communication Program

Environmental Health & Safety/Risk Management

Updated: 7/10/2024

1.0 PURPOSE

Palomar Community College District (PCCD) has developed a Hazard Communication Program to enhance employees' health and safety. As an institution, PCCD intends to provide information about chemical hazards and other hazardous substances, and the control of those hazards via this comprehensive Hazard Communication Program which includes container labeling, Safety Data Sheets (SDS), and training.

The following program outlines how PCCD will accomplish this objective.

2.0 STORAGE & HANDLING

The objective of a safe storage program is to prevent a sudden or continuous release of materials that may have a negative impact on the health and safety of students, staff, the community, or environment.

Materials may be accidentally released due to human error, equipment error, or environmentally induced damage from wind, floods or earthquakes. Site specific (department specific) factors must be incorporated into each department's storage plan. Hazardous materials should not be stored in highly congested areas or those areas where there is high student traffic. Materials should be obtained in quantities that will be used in a reasonable amount of time.

2.1 Storage

- All materials must be stored in primary containment (storage containers) with which the material is compatible (the material should not react with its container). When transferring materials to a new container, it is important to make sure that the material is compatible with the new container.
- Secondary containment should be employed wherever possible. The purpose of secondary containment is to capture any accidental release from ruptures of leaks in the primary storage container. Secondary containment prevents leaks from entering storm drains or sewer systems. Secondary containment can be as simple as a lipped tray underneath the container to berms surrounding an entire storage area.
- All materials must be stored in a manner to minimize hazards during an earthquake. All chemical storage shelves must be anchored, and shelves must have earthquake restraints. Bungee cords are an inexpensive earthquake restraint that affords a high degree of flexibility.
- Up to 10 gallons of flammable materials may be stored outside of a flammable storage cabinet. Ten or more gallons must be stored in an approved flammable storage container.

2.2 Handling

- Materials should be segregated and grouped according to their compatibility. Incompatible chemicals should be stored on different shelves laterally separated from one another or placed in different flammable storage cabinets as necessary. They should not be stored one above the other within the same shelf system because of possible breakage and mixing during earthquakes etc.
- Safe handling and usage of chemicals or any hazardous materials should be conducted in such a manner as to reduce, as completely as possible, the risk of personal exposure to the substances. Persons working with chemicals must be informed about the hazards of working with each material. This training is the responsibility of the department using the substance.

- All staff, faculty, and student workers should receive training. Training must be well documented with a copy sent to the Environmental Health & Safety/Risk Management (EHS/RM) office. Training should include techniques of usage, individual chemical hazards, procedures to protect personnel or employees' safety. At no time will exposure be above the Permissible Exposure Limit (PEL).
- Safe work procedures should be developed before starting any work with hazardous materials. Procedures should be developed which will mitigate employee exposure to contamination and reduce worksurface areas from being contaminated. Plans must be developed to deal with spills and accidents which may occur.
- Before using any hazardous materials, each user must be familiar with the characteristics associated with the chemical including:
  - Quantity of chemicals which are hazardous
  - Route of exposure (inhalation, ingestion, absorption)
  - Type of hazard (corrosive, flammable etc.)
  - Symptoms of overexposure
  - Physical characteristics
  - Chemical compatibility
  - Safety Data Sheets (SDS) must be on file in the department for every material in use. Copies can also be downloaded from the online Materials Safety Data Sheet system.

3.0 LABELS

Labels are the primary source of information to the user of the material. All labels must contain the following information: chemical name, trade name, manufacturer, warning hazards, and expiration date. All containers must be properly labeled with waterproof labels.

- Materials purchased in California have labels that meet the above requirements. For out-of-state purchases, verify the correct labelling before purchase. ALL PURCHASES MUST BE ACCOMPANIED BY AN SDS.
- Labels on original containers must be maintained in a legible condition.
- Materials transferred out of original containers must be labeled with the following information:
  - Chemical name, manufacturer name, trade name, hazard warning, and the expiration date.
- In laboratory situations, the minimum labeling must include the chemical or material name, a hazard warning and the expiration date.
- The date of receipt and the date the material was opened must be recorded on the label.
- Material must **not** be stored in food containers. If you make use of discarded jars any reference to the original product must be removed and the container must be marked: **"NOT FOR FOOD USE"** clearly and legible.

3.1 Hazardous Substances in Unlabeled Pipes

- To ensure that our employees who work on unlabeled pipes have been informed as to the hazardous substances contained within, the following procedure has been established.
- Prior to starting work on unlabeled pipes employees are to contact the Director of Facilities or Manager of Facilities Maintenance, for the following information:
  - The hazardous substance in the pipe
  - Potential hazards
  - Safety precautions which should be taken.

4.0 SAFETY DATA SHEET (SDS)

- Copies of SDS for all hazardous substances to which employees of PCCD may be exposed are kept in the department, and the department supervisor will be responsible for obtaining and maintaining the SDS for their department. SDS's can also be found on Materials Safety Data Sheet system. The SDS's used by the individual department should be kept within the department for quick reference.
- Department supervisors will review incoming SDS's for new and significant health/safety information. The supervisor will see that any new information is passed on to the affected employees.
- SDS's will be reviewed for completeness by the department supervisors. If an SDS is missing or obviously incomplete, a new SDS will be requested from the manufacturer.
- All campus custodial rooms should have copies of relevant SDS's for materials stored in them.
- SDS's should be available to all employees in their work area for review during each work shift. If SDS's are not available for new hazardous substances in use, the employee should first contact their immediate supervisor.

5.0 EMPLOYEE INFORMATION AND TRAINING

Employees should be given a health and safety orientation by their immediate supervisor, prior to starting work for information and training on the following:

- An overview of the requirements contained in the Hazard Communication Regulation, including their rights under the regulation.
- Information of any operations in their work area where hazardous substances are present.
- Location and availability of the written Hazard Communication Program can be found on the EHS/RM Hazardous Waste Management webpage.
- Physical and health effects of hazardous substances.
- Methods and observation techniques that are used to determine the presence or release of hazardous substances in the work area.
- How to lessen or prevent exposure to these hazardous substances through usage of engineering controls, work practices, and/or the use of personal protective equipment.
- Steps the company has taken to lessen or prevent exposure to these substances.
- Emergency and first aid procedures to follow if employees are exposed to hazardous substances.
- How to read labels and review SDS to obtain appropriate hazard information.

When new hazardous substances are introduced, the department supervisor should conduct a safety briefing with employees to review safety, material handling, and health hazards of the substances.

6.0 HAZARDOUS NON-ROUTINE TASKS

Periodically, employees are required to perform hazardous, non-routine tasks. Prior to starting work on such projects, supervisors should provide information and PPE to each affected employee.

This information will include:

- Specific hazards.
- Protective/safety measures which must be utilized.
- Measures PCCD should take to lessen the hazards including ventilation, respirators, use of a

buddy-system, and emergency procedures.

7.0 HAZARDOUS MATERIALS INVENTORY

All hazardous substances used at PCCD should be identified. An inventory will be maintained listing each substance by chemical name and/or commercial name of the substance on the MSD online database system. The name used will be the one most prominently displayed on the container and/or the SDS.

- The following is a partial list of the label warnings which will require listing on the inventory:

Flammable	Combustible	Poison Causes Burns
Toxic	Avoid Contact with Skin	Vapors Harmful
Provide Adequate Ventilation	Keep out of the Reach of Children	

- The department supervisor should ensure that an SDS for each listed substance is obtained and made available in accordance with this procedure.
- The inventory list should be compiled by the worksite and maintained on the MSD online database system.
- Use of hazardous substances not listed on the Preapproved Substance Inventory is prohibited. The District Safety Officer will approve the use of unlisted materials and will ensure that all provisions of the Hazard Communication Program are compiled prior to authorizing the use of new materials.

8.0 INFORMING CONTRACTORS

To ensure that contractors, work safely at PCCD, the Facilities Construction Project Manager will be responsible for providing contractors with the following information:

- A Hazardous Communication Program in place.
- A preapproved inventory list of all hazardous substances readily available.

At the end of the construction project, the contractor will remove and dispose of all materials used in the project.

9.0 EMPLOYEE TRAINING PROGRAM

The EHS/RM Department will work with all departments to create a training curriculum based on specific groups or types of hazardous substances as per the Cal OSHA guidelines. For specific hazard information on each material the SDS must be reviewed.

9.1 Training Program Summary

9.1.1 **Overview**:
The Hazard Communication Regulation is intended to ensure that both employers and employees are aware of the dangers associated with hazardous substances in their workplaces. The following information is a review of the specific requirements of a hazard communication program, including container labeling, SDS and training.

9.1.2 **Written Program**:
Palomar College has a written Chemical Hygiene Plan that outlines how employees can control exposure to hazardous substances. This plan is available for your review during training and on the ESH/RM website.

9.1.3 **Labels & SDS**:

A product label on the original and secondary containers should be reviewed before working with the material. Each label will have important information you should be familiar with:

- The identity of the Hazardous Substance
- Hazard Warnings
- The label on the original container will also state the name and the address of the manufacturer.
- The label should act as a visual reminder of the information we have presented in this training session and of the information found in more detail on the SDS.
- It is essential for your safety that you read the Hazard Warning and only use the Hazardous Substance within the guidelines prescribed on the label. Questions concerning the label should be directed to your supervisor.
- The SDS is the primary means used to convey the necessary information about the hazards of the substances we use. The manufacturers and importers are responsible for providing the SDS's. The manufacturer must provide adequate information on how to use the substance safely.

10.0 CHEMICAL HAZARDS

This section contains descriptions, precautions and hazards associated with general categories (types) of chemicals (hazardous substances). The section does not contain advice for handling specific chemicals or materials. Anyone planning to use a material must acquire a SDS for each substance.

- The following categories provide a structure for thinking about and planning protection against common chemical hazards. In actual practice, such hazards do not present themselves in neat categories, but usually in combination and/or sequence. The categories and concepts are presented as an aid to awareness and as encouragement for consistent, safe planning and practice.
- There is no absolute protection against all contingencies, but it is helpful to wear and use the appropriate PPE, maintain equipment in a safe manner, be aware of surroundings, and be completely familiar with emergency procedures.

10.1 Flammable Liquids

- Examples: alcohol, ether, acetone, gasoline
- Flammability is one of the most common chemical hazards. The exact degree of hazard depends on the specific substance and the conditions you expect to use it in.
- Before using any hazardous substance, familiarize yourself with the steps to take in case of an emergency or spill.

10.1.1 **Emergency Supplies to Have on Hand**:
- Type B (CO2 or dry chemical) fire extinguisher.
- Absorbent material in case of spill.

10.1.2 **Personal Protective Equipment**:
- Safety goggles (glasses are ineffective against splashes)
- Chemical resistant gloves.

10.1.3 **Plan Ahead**
- Control all ignition sources, including electrical appliances and static sparks.
- Know all exit locations.
- Know the location of the nearest phone.
- Do not store more than 10 gallons of flammable materials in any area (a flammable cabinet is required for larger amounts).

10.1.4 **Physical Properties**

- Flammable liquids can vaporize at room temperatures and can form concentrations in the air that can ignite rapidly or explode. When heated, the vaporization rate increases, creating an even more hazardous situation. Since the vapor of the liquid, not the liquid itself that burns, vapor generation becomes the primary factor in determining the fire hazard.
- Most solvents are extremely flammable, and many are toxic if inhaled. All solvents are rapidly absorbed through the skin or eyes and will carry contaminants along with them into the body.

10.1.5 **Hazards**

- Fire – Flammable liquids produce extremely high heat and spread rapidly.
- Rapid Absorption – Flammable liquids are absorbed rapidly through body tissues (skin & eyes) and will transport any dissolved toxic substances into the body.
- Inhalation – Flammable liquids can also produce harmful vapors.

10.1.6 **Additional Precautions**

- Use in a well-ventilated area, or in a fume hood if necessary.
- Avoid ignition sources (electrical equipment, open flames, static electricity, hot surfaces).
- Use a drip pan or secondary containment to contain any spilled solvent.
- Do not heat directly over a burner or spark source.

10.2 Acids and Bases (Corrosives)

- Corrosiveness is a form of acute toxicity unique and hazardous. Corrosive chemicals include strong acids and bases, as well as oxidizing and dehydrating agents. When they are in contact with the skin, eyes, or respiratory tract, they react with those tissues and cause local injury.
- A liquid corrosive will act on the skin either rapidly or slowly depending on the concentration and length of contact. These chemicals react directly to the skin.

10.2.1 **Emergency Supplies to Have on Hand**

- Absorbent
- Neutralizer (acid spills)
- Eyewash/safety shower

10.2.2 **Personal Protective Equipment**

- Eye protection
- Apron or other chemical resistant clothing
- Gloves
- Closed toe shoes or boots

10.2.3 **Physical Properties**

- Base – Most bases are solids. Pain does not occur immediately when contact is made with strong bases, but the hazard is identical to that of acids. The corrosive action of strong bases can often do more damage than acids because it may go unnoticed until serious damage has been done to tissues.
- Acids – Most acids are liquids and are easily splashed on skin or in eyes. The strength of the acids and the length of time that it is in contact with body tissues are the controlling factors in limiting the injury. The speed at which the acid is flushed from the exposed area with water can reduce the trauma.

10.2.4 **Hazards**

- Contact with skin or eyes – Liquids, mists, vapors or dust are equally destructive to body tissues.
- Inhalation – Vapors, mists or dust can irritate the entire respiratory tract as well as provide a path for absorption into the bloodstream.
- Ingestion – Severe burns and destruction of tissue on the mouth, throat and gastro-intestinal tract can result from the ingestion of acids or bases.
- Chemical Reaction – Fire or explosion can occur when contact is made between acids

and bases or acids and metal combustible materials, other chemicals or organic materials.

10.2.5 **Additional Precautions**

- Do not add water to an acid solution, instead gradually add the acid to the water.
- Never combine acid waste with other waste chemicals.
- Never combine strong bases with other waste chemicals.
- Never pour any amount of strong acid or base down the sink or drain. Follow accidental disposal of even a trace amount by allowing water to run for several minutes to flush the drain and dilute the chemical.

10.3 Poisons

10.3.1 **Emergency Supplies to Have on Hand**

- Absorbent material

10.3.2 **Personal Protective Equipment**

- Safety glasses
- Gloves
- Lab coat/Tyvek suit

10.3.3 **Special Circumstances May Require**

- Respirator
- Full protective suit

10.3.4 **Plan Ahead**

- Know exit locations
- Know location of nearest phone in another room

10.3.5 **Hazardous Properties**

- Poisons have a variety of properties and forms, capable of being absorbed through the skin. When heated, the vaporization rate increases, creating an even more hazardous situation. Be particularly wary of poison gases or volatile liquid poisons.
- Poisons can cause increased hazard in any fire due to inhalation.
- Inhalation - toxic vapors are present for many poisons.
- Absorption - direct contact and/or contact with the vapor of some poisons can cause serious effects and even death.
- Ingestion is obviously a problem for poisons.

10.3.6 **Additional Precautions**

- Use in a well-ventilated area, or fume hood, if necessary.
- Have the antidote nearby, if appropriate.