San Diego City College

Hazardous Materials Business Plan

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John Boyce, OEHS Coordinator

Contents

Background:

All facilities subject to the Hazardous Materials Business Plan (HMBP) Program must have a training program and a written employee training plan for hazardous materials safety and emergency response. The training program should be designed for the business size and type.

Training includes:

- Procedures for safe handling of hazardous materials, including hazardous waste;
- Use of emergency response equipment and materials;
- Procedures for coordination with local emergency response organizations; and
- Emergency response procedures for a release or threatened release of hazardous materials.

Initial training is required for new employees (e.g., within 30 days from date of hire) followed by annual refresher training.

This training module has excerpts, on pertinent HMBP topics, from City's Chemical Hygiene Plan, Hazcom Plan, and Emergency Action Plan. It is highly recommend that all employees subject to HMBP training review those plans for additional and more detailed information.

Procedures for safe handling of hazardous materials, including hazardous waste:

The control of the exposure, release, and spread of hazardous materials and waste is accomplished by the integration of mitigation strategies, which include: engineering controls, administrative controls, and personal protective equipment.

Engineering Controls:

These controls focus on the source of the hazard, unlike other types of controls that generally focus on the employee exposed to the hazard. The basic concept behind engineering controls is that, to the extent feasible, the work environment and the job itself should be designed to eliminate hazards or reduce exposure to hazards. Engineering controls should be the first application of safety measures used when evaluating hazard mitigation.

Engineering controls are based on the following broad principles:

- When feasible, design work areas or process to remove the hazard and/or substitute something that is not hazardous or is less hazardous.
- If removal is not feasible, enclose the hazard to prevent exposure in normal operations.

- Where complete enclosure is not feasible, establish barriers or local ventilation to reduce exposure to the hazard in normal operations.

Administrative Controls

Administrative controls are policies and procedures designed to reduce employee and student exposure to hazardous chemicals. The use of standard operating procedures (SOP's), general laboratory guidelines, housekeeping, and chemical handling procedures are administrative controls used by San Diego City College to minimize exposure and contain the release of any hazardous materials.
Administrative controls should be the second application of safety measures used when evaluating hazard mitigation and are used in conjunction with engineering controls.

Mesa's standard operating procedures (SOP's):

- The City College Chemical Hygiene Plan (CHP), combined with training, will act as the Standard Operating Procedures for those processes that involve chemical movement, storage, and waste handling.
- Individual Departments may write supplemental Standard Operating Procedures to delineate site-specific program compliance for their unique programs and hazards, but they must be at least as stringent with the contents of the CHP.

General Chemical Safety Guidelines:

- Personnel should not work with or transfer flammable or toxic hazardous materials alone.
- Employees should wash hands with soap and water prior to leaving the area where hazardous materials are used.
- All work with volatile chemicals shall be conducted in the fume hoods or other well-ventilated areas.
- Areas where hazardous materials or waste are stored shall be secured from unauthorized access.

Housekeeping:

- All doorways, walkways and staircases are to remain clear and free from obstructions, chemicals, or hazardous waste.
- The area around eyewashes and safety showers shall always remain clear of obstructions to a distance of at least twenty-four (24) inches.
- Areas shall be kept clean and neat.
- Small drips or spills of chemicals shall be wiped up immediately using appropriate PPE and proper materials for the chemical.
- Materials used for cleaning spills shall be disposed of as hazardous waste.
- Spilled solid material shall be cleaned up immediately and disposed of as hazardous waste.

Chemical Handling:

Chemical handling is the application of best practices to minimize the risk in using, moving, or transferring chemicals. The basis of safe chemical handling is being aware of what chemicals are present in the workplace and their associated hazards.

- Chemical Inventory
  - The Hazardous Communication Standard requires a current chemical inventory in areas that use or store hazardous materials. Each department will update its Chemical inventory, have a hard copy available in the area the chemicals are stored, and submit a copy to the OEHS Coordinator no later than January 31 of each calendar year.
    - City College's chemical inventory format has been standardized and each department must use the standardized format when creating a chemical inventory. If there are any questions or concerns about the format or process, contact the campus OEHS Coordinator.
  - Every hazardous chemical that is used on the City campus must have a corresponding SDS.
- Receiving Chemicals
  - San Diego City College will not accept "outside" donations of chemicals, either new or partially consumed.
  - All chemicals shall have the date received and person receiving written on the label in permanent ink.
  - Chemicals shall be marked with date and initials when first opened.
  - For chemicals received or opened prior to the implementation of this program, stickers shall be placed on the container reading "Received/opened prior to (date)" and initialed by the individual placing the sticker.
  - As applicable, expiration dates shall be written on the container label.
- Chemical Labeling
  - Chemicals should be kept and stored in the container supplied by the manufacturer. In the event a chemical must be repackaged due to damage, the new container shall be compatible with the material and the label shall include all of the required elements.
  - Every container label must contain the following:
    - Product identifier
    - Signal word
    - Hazard statement(s)
    - Pictogram(s)
    - Precautionary statement(s)

        - Name, address, and telephone number of the manufacturer or importer.
        - Label must be legible, permanently displayed, and written in English.
    - If the manufacturer's label is missing any of the above noted information, the individual who receives the chemical must supplement the label to satisfy all of the requirements.
        - Information can be found on the Safety Data Sheet
    - Secondary Containers

      Secondary containers are containers used to supply smaller amounts of chemicals from bulk containers to more than one location, such as instructional laboratories or custodial closets.
        - Secondary containers must be of similar material and quality to the original.
        - Secondary containers for flammable and volatile chemicals must provide the same level of vapor containment as the original container.
        - Secondary containers must be labeled with
            - The name of the chemical or common name, in English.
            - The concentration of the chemical shall also be noted, if appropriate.
            - Pictogram(s) and/or other applicable hazard warnings.
            - Date chemical was transferred into container.

Chemical Storage

All storage locations for hazardous materials or hazardous wastes shall be labeled with warning signs in accordance with NFPA 704 on each door or entrance.
Rooms containing compressed gases shall be marked "COMPRESSED GAS."

- Chemicals shall be stored in the appropriate storage location, separated and segregated from incompatible chemicals.
- Chemicals shall not be stored at elevations more than six (6) feet from the floor.
- Shelves holding chemicals shall have lips or other integral restraining devices to prevent chemicals from sliding off (24 CCR, Part 9, 5003.9.9).
    - Cabinets specially designed for hazardous chemicals do not require lips.
- Shelves holding chemicals and hazardous waste shall be braced and anchored.
- Chemical storage cabinets or refrigerator/freezer must have the appropriate labeling such as: Flammable, Corrosive, Acid, Base, Poison, Compressed Gas, or any other appropriate identifier
- All opaque cabinets and doors to chemical and hazardous waste storage areas shall be clearly marked as chemical storage and have an NFPA 704 hazard identification label affixed.

        - Entries for each category shall represent the highest hazard class present in the storage cabinet, locker, or area.

Transporting Chemicals and Chemical Waste

- Chemical and waste containers shall be securely capped prior to transport.
- A secondary means of containing chemicals and waste should be used when transporting, such as a poly bucket or tub.
- If containers carrying more than 4 liters/1 gallon are to be transported, a cart, dolly, or other means should be used.
    - Carts used to transport chemicals or waste must be capable of containing a complete failure of the largest container being transported (24 CCR, Part 9, 5003.10.3.4).
- Hazardous chemicals and waste should not be moved via stairwells.
- Hazardous chemicals and waste shall be moved between floors by way of elevators.
    - Hazardous chemicals and waste that are moved via elevator shall have a means of secondary containment.
    - The maximum size container allowed to be moved in an elevator is twenty (20) liters (5.28 gallons) (24 CCR, Part 9, 5003.10.4.2).
    - Students and other employees shall be excluded from elevators while they are being used to move hazardous chemicals or waste (24 CCR, Part 9, 5003.10.4.1)
- Incompatible chemicals shall not be transported on the same cart or truck (24CCR, Part 9, 5003.10.3.6.).

Compressed Gas Cylinders

- Storage
    - Areas containing compressed gas cylinders, with the exception of lecture-size bottles, shall be marked “Compressed Gas”
    - When not in use, including when empty, cylinder valves shall be fully closed with protective caps securely in place
    - Cylinders shall not be stored under stairs or near emergency exits.
    - Cylinders shall be stored upright at all times.
    - If not stored in an engineered and secured rack, compressed gas cylinders shall be secured to a fixed object by no fewer than two restraints.
        - One restraint shall be approximately 1/3 from the top.
        - The second restraint shall be approximately 1/3 from the bottom.
        - The restraints shall be of sufficient strength and be adequately tight to prevent the cylinder from falling over.

        - Storage areas for cylinders shall be secured to prevent access by unauthorized individuals.
        - Cylinders stored in exterior locations shall be protected from damage by vehicles using guard posts or other permanent means.
        - Lecture-bottle cylinders can be stored in a fume hood, or other appropriate storage cabinet, and may be laid on their side.
        - Cylinders shall not be stored in direct sunlight or near other sources of heating to prevent over-pressure hazards.
        - Empty cylinders shall be clearly marked "Empty" and stored separately from full or in-use cylinders.
    - Moving
        - Cylinders shall be moved using cylinder carts and shall not be rolled on their edges.
        - Cylinders shall be capped while moving.
        - Regulators shall be removed while moving.
        - Cylinders shall be secured to the cart/dolly while moving.
    - Labeling
        - Cylinder shall be clearly labeled as to its contents.
        - Cylinders shall be labeled "Full," "In Use," or "Empty" as appropriate.
    - Use
        - Tools, such as wrenches, shall not be used to open or close valves unless the valve is designed as such.
        - Valves shall be fully closed before attaching or removing regulators.
        - Only properly fitting regulators rated for the gas and pressure shall be used.
        - Regulators and hoses shall be wrench-tight to prevent leaking.
            - Care should be taken to not overtighten connections which can damage the hoses and unions.
            - Unions should be checked with leak detection solutions prior to use.
        - Lubricating greases shall never be used on valve assemblies or regulators.
    - Cylinder failure
        - If a cylinder or valve assembly begins to leak or the valve cannot be closed:
            - For non-toxic, non-flammable, and non-corrosive gases, the cylinder shall be moved to an exterior location away from buildings or pedestrian walkways and allowed to vent. If the gas could be an asphyxiate, leave where it is at and evacuate immediate surroundings and push the red button to contact emergency dispatch or call campus police dispatch

- For toxic, flammable, and corrosive gases, the incident shall be treated as an uncontrolled release- details for response can be found in the CHP under “Emergency Response Procedures,” or refer to the EAP Guide.

Personal Protective Equipment (PPE)

When exposure to hazards cannot be engineered completely out of normal operations or maintenance work, and when safe work practices and administrative controls cannot provide sufficient additional protection from exposure, personal protective equipment may be required. PPE is the last line of defense against chemical hazards since any failure in the measure will likely result in an exposure. The following are San Diego City College’s guidelines for personal protective equipment while handling chemicals pursuant to California Code of Regulations, Title 8, Section 3380.
Other PPE, which is not mentioned below, may available if a work situation requires it. Please work with your supervisor to obtain any needed items.

General Guidelines and Minimum Standards

- Shorts, pants that expose any skin, and skirts or dresses that come above the ankle may not be worn in laboratory areas or when handling chemicals. The area of skin between the pants and the shoe should not be exposed.
- Tank tops, sleeveless shirts, or shirts that expose the chest shall not be worn when working with chemicals unless covered by a laboratory coat or other protective apparel.

<u>Gloves</u>

- Each Department is responsible for providing employees with gloves.
  - The Safety Data Sheet (SDS) or glove manufacturer websites can be consulted for the appropriate chemical protective glove for many chemicals.
  - At a minimum, employees should be provided with nitrile gloves which are good protection against corrosives, but poor protection against petrochemicals and oxygen-containing compounds.
  - Latex gloves will not be provided due to the potential for latex allergy and the material’s lack of chemical protection.
- Gloves are required to be worn by any employee who opens, handles, transfers, pours, or otherwise uses hazardous chemicals of any amount, including toxic, corrosive, and refrigerant gases.
  - This includes taking inventory or moving previously stored chemicals.
- Gloves should be inspected for defects prior to donning, if a defect is found, the glove is to be discarded and replaced.
- Disposable gloves should be discarded:
  - After they have become visibly contaminated,

        - After they have become discolored,
        - After use, or
        - Before the employee or student leaves the laboratory, storage or work area.

Laboratory coats

- Laboratory coats shall be at least knee length.
- While working in a laboratory, lab coats shall be worn by employees whenever they are working with hazardous chemicals or hazardous waste.
    - The use of smocks in lieu of laboratory coats may be appropriate in some Departments.
- Laboratory coats shall be inspected prior to each use for defects.
    - Damaged or defective laboratory coats shall not be worn near chemicals and will need to be replaced or repaired immediately.
- When working with chemicals, laboratory coats shall be worn with the sleeves long enough to protect exposed skin and under clothing. Lab coats should be properly buttoned.
- Laboratory coats shall not be worn outside the laboratory or areas where chemicals are not present unless chemicals are being transported.
- Laboratory coats shall be laundered on a regular basis.
- Chemical resistant aprons should be worn over laboratory coats for specific tasks that have a high probability for splashing.

Shoes

- All employees, students, and visitors shall wear close-toed and close-heeled shoes whenever they are handling or transferring chemicals or waste.
    - Flip flops, clogs, or other sandal-type shoes shall not be worn when working with chemicals.
- Shoes shall cover the entire foot and not be made of woven or perforated materials.

Eye Protection

- Chemical safety splash-resistant goggles shall be worn at all times by faculty, employees, and students when hazardous chemicals are being used or when handling hazardous waste and there is a possible risk of a chemical splash.
- Safety glasses can be worn by employees in lieu of splash goggles when no splash hazards exist. **Prescription glasses are not considered safety glasses and cannot be worn without supplemental protection. For example, safety glasses may be worn in the following situations: (However, splash goggles are highly recommended as they will provide greater protection from chemical exposure)
    - An individual is walking through a chemical use area, but is not using or directly standing next to someone using hazardous chemicals.
    - Working with solid materials (and not making solutions)

        - Conducting flame tests.
        - Using impregnated chemicals.
        - Using small dropping bottles (30ml or less) and dispensing the chemical with a dropper.
        - Doing animal dissections.
    - All goggles shall be ANSI Z87.1 certified and be clear, not tinted.
    - Damaged or severely scratched goggles should be replaced immediately.

Hazardous Chemical Waste

San Diego City College generates both liquid and solid hazardous waste. The waste must be removed from the site before the 90th day from the listed start date on the individual container. The waste is then transported by a hazardous waste contractor for treatment or disposal at an appropriately licensed facility.

Chemical Waste

- The waste in the storage area shall be segregated and separated by hazard class and placed into containers that are no larger than 5 Gallons.
    - Waste shall be separated into at least the following hazard classes in separate containers:
        - Ignitable (22 CCR 66261.21)
        - Corrosive (22 CCR 66261.22)
        - Reactive (22 CCR 66261.23)
        - Toxic (22 CCR 66261.24)
        - Other waste categories may be designated by the Departments as appropriate.
- Separate containers shall be used for solid waste, each liquid waste category, and containerized waste for each hazard class (22 CCR 66262).
    - 'Containerized' waste refers to waste in small containers that are placed in a larger container.
        - Both container and chemical are waste.
- Waste of similar hazard classification may be consolidated into larger containers.
    - 'Consolidation' refers to the practice of emptying smaller containers into a larger container to combine liquid or solid wastes into a single container.
        - Only the chemical is waste, container is retained for reuse.
- Only compatible wastes can be placed in the same container.
- Waste from different Departments shall not be consolidated.
- Aqueous and organic wastes of the same hazard class shall be placed in separate waste containers.

Special Waste Classes

There are specific classes or types of hazardous waste that have additional labeling, packaging, handling, or storage requirements. See Appendix A in the CHP for additional details

- Liquid paint.
- Dry paint
- Used oil
- Used oil filters
- Empty chemical or hazardous waste containers
- Aerosol cans
- Pesticides

Chemical Waste Containers

Waste shall be collected in containers that contain the waste and any vapors generated to prevent any exposure of the environment or employees to the contents. The following requirements apply to all waste containers.

- Containers shall be compatible with the material they are designated to contain (22 CCR 66265.172).
  - Containers that are to be disposed of with the waste ('lab packed') must be (49 CFR 173.12(b)(2)(i)):
    - One (1) gallon or smaller for glass containers
    - Less than 5.3 gallons for plastic (20 L)
    - Have secure, tight-fitting lids, preferably threaded, that do not react or degrade with the waste class within.
- Containers shall prevent the leakage of liquid or solid materials.
  - If containers show visible signs of degradation or begin to leak,
    - The contents shall be completely transferred to another container.
    - The 'new' container shall inherit the accumulation start date of the waste.
    - The compromised container shall be disposed of properly.
- All containers shall have appropriate lids that close securely.
  - Lids are to remain in place unless waste is actively being added or removed from the container.
  - Lids shall be secure enough to prevent spillage of contents if the container is knocked over.
- Funnels can be used to facilitate adding waste to the containers.
  - Funnels shall either have self-closing lids or be removed when waste is not being added. Container must be closed when funnel is removed.
  - Funnels may be reused until they show signs of deterioration and are used with compatible wastes only.

        - Funnels may be cleaned by rinsing with an appropriate solvent into the waste container while the container is in an appropriately ventilated area.
    - Containers shall be clearly, visibly, and legibly labeled “Hazardous Waste.”
        - All waste containers shall have yellow hazardous waste stickers with red lettering.
        - Labels shall be at least four inches in dimension on all sides.
        - Labels shall be durably affixed to the container.
        - The following information shall be clearly and legibly entered on the label in blue or black ink:
            - List of chemical(s) being placed in container.
            - EPA ID number
                - San Diego City College HAS a unique EPA identification number obtained from the State.
                - San Diego City College HAS only one (1) EPA identification number to be used for tracking all waste.
            - Street address of City College: 1313 Park Blvd. San Diego CA. 92101
            - Contact phone number: This phone number should be from the area/Department generating the waste.
            - Hazard class of waste.
            - Physical form of waste
            - Date the first waste was placed into the container
        - Information on the labels shall be protected from chemical exposure.
            - Labels can be placed in plastic protective covers that are permanently affixed to the container.
            - Labels can be covered with clear tape after the information has been written on the label.
    - Unused portions of chemicals can be disposed of in their original containers as long as the container is properly labeled as hazardous waste.

Chemical Waste Storage Facilities (8 CCR 5534, 22 CCR 66261, 22 CCR 66262, 40 CFR 262.34)

- Point of Generation Accumulation Areas
    - Accumulation areas shall
        - Be locked to prevent unauthorized access.
        - Be labeled on the exterior as containing hazardous waste.
        - Be marked with an NFPA 704 hazard warning label.
        - Have adequate ventilation or be equipped with chemical fume hoods.

        - Have adequate and appropriate storage for hazardous waste containers.
        - Have containers placed in or on a means of secondary containment in the event of spills or leaks.
    - Waste of similar hazard classification may be consolidated into larger containers only if the exact composition is known and compatibility has been assessed by a competent person.
        - In this instance, a competent person is a person with knowledge of the chemical and physical properties of all substances to be combined as well as any potential reactions that may occur or products that may be formed during mixing including, but not limited to, the generation of heat, the production of toxic by-products, oxidative reactions, and auto-ignition.
        - Chemicals with the following properties will not be consolidated or combined with any other chemicals; however, residual amounts of the same chemical can be combined into a single container
            - Pyrophoric
            - Water reactive
            - Organic peroxides
            - Self-reactive
            - Flammable solids.
        - The accumulation start date is the date the waste was originally placed into its first container, not when it was consolidated.
        - Consolidation is only allowed in areas that are properly ventilated or in chemical fume hoods.
    - Wastes shall not be treated, neutralized, or intentionally mixed in an attempt to render the waste less- or non-hazardous.
    - Waste containers shall be removed from the classrooms when the containers are approximately ¾ full.
    - Waste container within individual laboratories shall not exceed 5.28 gallons (20 L) in size
    - Instructional laboratories that contain waste shall be locked or otherwise have access restricted when class is not in session; otherwise, the waste containers shall be removed.

Hazardous Waste Profiles

Hazardous waste profiles are records that delineate the content and associated hazard characteristics of a particular waste stream.

- Each Department, that generates hazardous waste, will create and maintain their departments waste profiles with the contracted hauler. If needed the Campus Chemical Hygiene Officer can assist department personnel with their profiles.
    - San Diego City College determines profiles by way of knowledge of hazardous chemical inputs into the waste streams.
- Hazardous waste profiles must accurately reflect the waste in any particular container.
- Profiles may be reviewed by the hazardous waste contractor.
- Profiles must be updated annually or whenever there is a change before the waste can be removed from the College.
- Profiles must be kept by the College indefinitely.

Hazardous Waste Manifest

A manifest is a tracking document that is used to identify the owner of hazardous wastes throughout the transportation and disposal process (49 CFR 172.204).

- For City College the Hazardous Waste Manifest is filled out by the waste hauler Clean Harbors.
    - The Manifest should be signed by a San Diego City College representative, preferably the appointed department hazardous waste lead, or by the OEHS Coordinator or the Campus Chemical Hygiene Officer
        - The campus representative must receive US Department of Transportation or Title 22 training before they can sign a manifest (49 CFR 172.704).
            - Refresher training must be completed every three (3) years.
    - The campus representative will be presented or left a copy by the hauler.
        - This copy must be retained for at least three (3) years.
        - A copy of this manifest must be sent, by the appointed department hazardous waste lead, within thirty (30) days of shipment to:
            - Department of Toxic Substances Control, P.O. Box 400, Sacramento, CA 95812-0400.
        - An additional copy must be forwarded to the Campus OEHS Coordinator.
    - A final copy will be sent or available to San Diego City College upon receipt at the final waste handling destination.
        - The Campus OEHS Coordinator must obtain a copy of the final manifest, signed by the destination facility, within thirty-five (35) days of shipping the waste.
    - The manifests signed by the TSDF must be kept for three (3) years.
        - The Campus OEHS Coordinator or their designee is responsible for retaining all copies of the signed manifests.

Universal Waste

Universal wastes (UW) are hazardous wastes of specific categories that are exempt from hazardous waste management requirements; however, as they do pose some hazard to health and the environment, they must be disposed of properly. Universal Wastes

The following are classes of universal waste (22 CCR 66261.9):

- Batteries, used and discarded (excluding lead acid vehicle batteries)
- Electronic devices, used and discarded, such as computers, A/V equipment, cell phones, and monitors (excluding devices to be recycled)
- Mercury-containing equipment such as thermostats, mercury-containing switches, pressure gauges, mercury thermometers, and gas flow regulators
- Light bulbs, including but not limited to fluorescent, high-intensity discharge, neon, mercury vapor, sodium, and metal halide
- Cathode ray tubes and tube glass from older monitors or televisions
- Non-empty aerosol cans.

- General Requirements
  - San Diego City College will not accept UW from households or other businesses.
  - Containers for UW shall:
    - Be constructed of materials to prevent the breakage or damage to the UW contained within.
    - Have lids that:
      - Are appropriate for the container
      - Remain in place unless waste is actively being added or removed
      - Protect the contents from rainwater or other contaminating material.
    - Be clearly and legibly marked “Universal Waste” and identify the waste they are to contain (e.g, ‘fluorescent bulbs,’ ‘batteries,’ ‘Ballasts,’ etc.).
    - Have labels of a different color than hazardous waste labels used at the Facility or College.
    - Be clearly and legibly marked with the accumulation start date.
  - UW must be removed from San Diego Dity College within one (1) year of the accumulation start date.
    - Waste may be removed by
      - A licensed Universal Waste Hauler/Handler
      - A recycling facility
      - District personnel transporting UW to an appropriate recycle or disposal facility
      - A hazardous waste contractor.

- Records
  - Records of UW may be in the form of a Manifest, a Bill of Lading, an invoice, or a receipt.
  - UW records must be retained by the OEHS Coordinator or Chemical Hygiene Officer for at least three (3) years.
- Departments or buildings may have separate waste containers as long as they meet the above requirements and are removed or emptied in a timely manner.
  - Every container must be marked with an accumulation start date to facilitate timely removal.

- Specific Universal Waste Requirements
  - Batteries
    - Batteries must be removed from electronic devices as they are separate waste streams.
    - Alkaline batteries larger than 9 V (in terms of voltage), Nickel-Cadmium (Ni-Cd), and rechargeable batteries must have masking or other heavy-duty tape applied over the positive pole prior to placing in the container.
    - Containers holding used batteries shall be clearly and legibly labeled "Batteries."
      - If San Diego City College is disposing of rechargeable batteries and alkaline batteries, two separate waste containers must be used:
        - "Used batteries- alkaline"
        - "Used batteries- rechargeable"
  - Light Bulbs
    - Containers for used light bulbs must provide adequate protection to prevent damage to the bulbs.
    - Containers holding used light bulbs shall be clearly and legibly labeled "Waste Bulbs."
    - Particularly for fluorescent bulbs, containers must be sized appropriately to ensure the lid can be affixed properly to protect the used bulbs.
    - To dispose of light bulbs contact the OEHS Coordinator or the facilities department.
  - Aerosol Cans
    - Aerosol cans are handled as Universal Waste when:
      - The can is partially full but cannot be used due to defective spray mechanisms
      - The propellant has been spent, but product still remains

        - The product is no longer needed.
    - San Diego City College will not process (puncture, drain, or crush) aerosol cans (Health and Safety Code 25201.16(2)).
    - Empty aerosol cans, devoid of product and propellant, can be recycled.
        - Intentionally discharging an aerosol can solely for the purposes of rendering it non-hazardous is considered a hazardous materials release and is strictly forbidden.
        - Piercing or otherwise compromising the can in an effort to release residual product or propellant is strictly forbidden.
    - Containers holding used or waste aerosol cans shall be clearly and legibly labeled "Waste Aerosol Cans."
    - If not covered after cans are added, the lid must be secured at the end of each workday.
    - The container must be stored in an area with adequate ventilation.
    - The container must be stored away from any heat sources, including direct sunlight.
    - To dispose of aerosol cans contact the OEHS Coordinator or the facilities department.
- Electronic Devices
    - Electronic devices to be disposed of do not need to be placed in a container.
        - Waste devices can be disposed of by contacting the stockroom.
    - Each device must be marked with the date it was determined to be a waste.
    - Devices must be removed from San Diego City College no more than one (1) year after the date marked on the device.

Use of emergency response equipment and materials

Eyewashes and Safety Showers (ANSI 2358.1.2014, 8 CCR 5162).

Emergency eyewashes and safety showers are required in areas where employees routinely use corrosive, irritant, or skin absorbing chemicals. Such areas include, but are not limited to, instructional laboratories and preparation rooms and hazardous waste storage areas.

- Eyewashes and safety showers shall be clearly identified with signage visible from at least twenty (20) feet away.

- Eyewashes and showers must be accessible within ten (10) seconds or one hundred (100) feet of any area where hazardous chemicals or waste are used or stored.
    - The use of chemicals by employees or students is forbidden in instructional laboratories or any area if nearby safety showers and eyewashes are non-functional.
- Eyewashes must have protective caps over the spouts to prevent contamination.
    - The caps must remain in place except during testing and use.
    - Water pressure should be sufficient to remove caps during actuation.
- The areas around eyewashes and safety showers must be clear of objects and obstructions in a radius of at least twenty-four (24) inches from the center of the shower head.
- Eyewash and safety shower stations shall be tested monthly and flushed for at least ten (10) seconds to clear the line of any debris.
    - If there are any issues notify the Dean or supervisor and the Facilities Department immediately.
    - Tests may be performed by any employee; but it is the responsibility of the Department which the unit services to ensure the check is performed.
- Records of this test (initial and date) shall be durably attached to the shower or eyewash.
    - When a tag has become completely filled out, a new tag shall be attached.
    - In order to demonstrate program continuity, the old tag shall be retained on the unit for no less than six (6) months.
    - Tags that break or fall off of the units must be durably attached to the unit by some means.
- Eyewash and safety showers shall be tested annually for proper flow rates.
    - Flow may be determined by installing in-line flow meters and actuating for one (1) minute or by actuating the system and measuring the volume of water discharged.
        - Safety showers must be capable of emitting twenty (20) gallons per minute.
        - Eyewashes must be capable of emitting 0.4 gallons per minute.
        - Facewashes must be capable of emitting three (3) gallons per minute.
    - Water must be colorless and odorless.
    - Water temperature must be between 60 and 100 F.
    - Results of annual testing must be kept by the Department which is responsible for the area the unit is located in.
        - Records shall be kept for at least three (3) years.

Fire Extinguishers (8 CCR 5543, 8 CCR 6151, NFPA 10)

- Locations
  - Fire extinguishers must be located within thirty (30) feet of each instructional laboratory.
  - Chemical storage locations that contain flammable liquids must have a fire extinguisher located outside of the door but within ten (10) feet of the storage location.
- Areas within buildings that contain flammable liquids, such as storage cabinets, must have a fire extinguisher 10-25 feet from the storage area.
- At least twenty-four (24) inches of space must remain clear around each fire extinguisher.
- Fire extinguishers must be stored in cabinets or on hangars to prevent damage.
  - Extinguishers may not be stored on the floor.
- Fire extinguishers for the appropriate class of fire (A, B, C, or D) for the hazards present shall be immediately available.
- Fire extinguishers shall be checked monthly.
  - Inspections may be performed by any employee; but it is the responsibility of the Department where the extinguisher is installed to ensure the check is performed.
  - The gauge on the extinguisher must read ‘full’ and be in the green portion of the gauge.
  - The pull pin must be in place in the handle assembly.
  - A tamper seal must be in place indicating the extinguisher has not been discharged.
  - The extinguisher must be physically lifted to determine if extinguishing agent is present in the unit.
  - A tag recording the inspection must be attached to the extinguisher or the mounting assembly.
  - If any of the above conditions are deficient, the individual conducting the check shall immediately remove the extinguisher from the hanger and notify the Facilities Services Department to address the extinguisher.
- Fire extinguishers are inspected and serviced annually by an external contractor.
  - The Facilities Services Department is responsible for coordinating the annual service.
  - Tags are marked with the month and year of the annual inspection.
    - The inspection will expire one year after the date marked on the tag.
  - During annual testing, replacement or temporary fire extinguishers must be made available.

        - Instruction may not take place and employees may not work in any area containing flammable or combustible materials that does not have appropriately located and fully-functional fire extinguishers.
    - Records of monthly and annual inspections are attached to the fire extinguisher.

First Aid Kits (8 CCR 3400)

- A first aid kit should be located in each area where hazardous chemicals or waste are used or stored.
- The kit shall be inspected monthly by any employee; but it is the responsibility of the Department where the kit is installed to ensure the inspection is performed.
    - A record of this inspection shall be maintained with the first aid kit.
    - The kit shall be restocked as necessary or during the monthly inspection.

Spill Response Kits

- Spill response kits shall be located near areas where chemicals are handled, stored, used, or transferred.
- The kits will be inspected monthly by any employee; but it is the responsibility of the Department where the kit is installed to ensure the inspection is performed.
    - Any missing, outdated, obsolete, or degraded supplies shall be replaced during the monthly inspection.
- Materials within the spill kit will be appropriate for the chemicals used in the immediate vicinity.
- Spill kits shall be restocked whenever any portion is used for any purpose.

Chemical Spill Cleanup and Emergency Response Procedures

Incidental Spills

An incidental spill is the release of a hazardous substance which does not pose a significant safety or health hazard to employees in the immediate vicinity or to the employee cleaning it up, nor does it have the potential to become an emergency within a short time frame.

- Incidental spills are limited in quantity, exposure potential, or toxicity and present minor safety or health hazards to employees in the immediate work area or those assigned to clean them up.
- The properties of hazardous substances, such as toxicity, volatility, flammability, explosiveness, corrosiveness, etc., as well as the particular circumstances of the release itself, such as quantity, confined space considerations, ventilation, etc., will have an impact on what employees can handle safely and what procedures should be followed

- Remember that each chemical presents different types of hazards as well as each spill location and such conditions will need to be evaluated prior to responding to a spill. Consult the SDS for guidelines on proper spill clean-up.
  A guideline for Incidental spills quantity:
  - would be less than 2 L of low hazard materials, including volatiles and irritants (depending on the chemical)
  - less than 50 mL of highly hazardous materials.
- Take the following actions for proper spill cleanup:
  - If the spill is of a volatile material, the evacuation of the immediate area is at the discretion of the supervisor and will be based on the nature of the material.
  - If the spill is moderate in size but is not large enough to trigger an emergency response action, the immediate area should be evacuated of all employees and students until the spill is properly cleaned up.
  - The area of the spill shall be cordoned off by way of caution tape or closing laboratory doors.
  - These spills can be handled by the employee responsible using the nearest spill kit ONLY if appropriately trained and equipped. .
  - Protective equipment must be worn (goggles, gloves, shoe covers).
  - Any sorbent material (pillows, pads, absorbent solids) or other disposable material used shall be packaged in a plastic bag, sealed, and disposed of as hazardous waste.
  - Any reusable items used during spill cleanup, such as dustpans and hand brooms, shall be decontaminated after use.
  - Any liquid used, such as soap and water, to clean reusable spill cleanup items must be collected and disposed of as hazardous waste.
  - If chemicals are migrating towards drains, sanitary sewer accesses, or surface waters, the nearest spill kit shall be accessed.
    - Pillows, pads, or berms shall be placed around the spill to prevent migration of the liquid.
    - If dirt is used to berm the flow of chemical, the dirt shall be collected and disposed of as hazardous waste to a depth of at least six (6) inches.
  - If the chemical touches bare earth, surface water, or enters a public sewer, the Chemical Hygiene Officer in consultation with Risk Management will properly notify the San Diego County Hazardous Materials Division of the release for proper reporting and further required actions.

Emergency Response Spills

An emergency spill would constitute that a clean-up response effort would be needed by employees from outside the immediate release area or by other designated responders -

(i.e. Hazardous waste hauler, mutual-aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result in an uncontrolled release of a hazardous substance.

The release or situation must pose an emergency. Examples are:

- it may cause high levels of exposures to toxic substances
- it is life or injury threatening,
- it poses IDLH conditions,
- it poses a fire and explosion hazard (exceeds or has potential to exceed 25% of the LEL),
- it requires immediate attention because of danger, or presents an oxygen deficient condition.

**Nuisance spills, minor releases, etc., which do not require immediate attention (due to danger to employees) are not considered emergencies.

- A guideline for emergency spill response would be:
  - liquid spills of more than two liters (2 L), depending on type of chemical
  - more than fifty milliliters (50 mL) of highly hazardous materials,
  - uncontrolled off-gassing of chemical reactions
  - Leaking cylinders
- Staff and Faculty will not use respirators during clean-up, if respirators are needed then the procedures below need to be followed:
  - Contact College Police Dispatch (6405 or 619-388-6405) to request assistance from the hazardous waste contractor or local Hazardous Materials Response team.
  - The Dean or supervisor shall be notified.
  - The Vice President of Administrative Services, College Events and Operations Administrator, and the OEHS Coordinator shall be notified of the spill as soon as possible.
    - The Regional Facilities Officer (RFO) shall be contacted if assistance is needed.
  - Depending on the amount, areas impacted, and the type of chemical, the Emergency Action Plan may be initiated
    - The Supervisor or Dean will determine if the Emergency Action Plan needs to be initiated.
  - Injured persons shall be assisted and addressed as applicable and contaminated persons, even if injured, shall be isolated.
  - The area around the spill/release shall be cordoned off at a safe distance, determined by the amount, scope, and chemical involved.

        - For flammable chemical spills or gas releases, all sources of ignition need to be immediately extinguished, including open flames, heating mantles, vacuum pump motors, and powered equipment.
        - The Chemical Hygiene Officer or any staff member shall provide the SDS to first responders.

Procedures for coordination with local emergency response organizations

- In the event of an emergency involving hazardous materials and/or hazardous waste, all facilities must IMMEDIATELY:
    - Notify facility personnel and evacuate if necessary in accordance with the Emergency Action Plan (Title 8 California Code of Regulations §3220);
    - Notify local emergency responders by calling 9-1-1;
    - Notify the local Unified Program Agency (UPA) at the phone number below; and
    - Notify the State Warning Center at (800) 852-7550.
- Facilities that generate, treat, store or dispose of hazardous waste have additional responsibilities to notify and coordinate with other response agencies. Whenever there is an imminent or actual emergency situation such as an explosion, fire, or release, the Emergency Coordinator must follow the appropriate requirements for the category of facility and type of release involved:
    - Title 22 California Code of Regulations §66265.56. Emergency Procedures for generators of 1,000 kilograms or more of hazardous waste in any calendar month.
    - Title 22 California Code of Regulations §66265.196. Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems.
    - Title 40 Code of Federal Regulations §302.6. Notification requirements for a release of a hazardous substance equal to or greater than the reportable quantity.
    - Title 22 California Code of Regulations §66262.34(d)(2) and Title 40 Code of Federal Regulations §262.34(d)(5)(ii) for generators of less than 1000 kilograms of hazardous waste in any calendar month.
- Following notification and before facility operations are resumed in areas of the facility affected by the incident, the Emergency Coordinator shall notify the local UPA and the local fire department's hazardous materials program, if necessary, that the facility is in compliance with requirements to:
    - Provide for proper storage and disposal of recovered waste, contaminated soil or surface water, or any other material that results from an explosion, fire, or release at the facility; and

- Ensure that no material that is incompatible with the released material is transferred, stored, or disposed of in areas of the facility affected by the incident until cleanup procedures are completed.

- EMERGENCY RESPONSE PHONE NUMBERS:
  - Ambulance, Fire, Police and CHP 9-1-1
  - California State Warning Center (CSWC)/CAL OES . . . . . (800) 852-7550
  - National Response Center (NRC) . . . . . (800) 424-8802
  - Poison Control Center . . . . . (800) 222-1222
  - Local Unified Program Agency (UPA) . . . . . (858) 505-6657
  - Nearest Medical Facility/Hospital Name: Sharp Memorial Hospital (858)939-3400

- AGENCY NOTIFICATION PHONE NUMBERS:
  - California Dept. of Toxic Substances Control (DTSC) . . . . . (916)255-3545
  - Regional Water Quality Control Board (RWQCB). . . . . (619)516-1990
  - U.S. Environmental Protection Agency (US EPA) . . . . . (800)300-2193
  - California Dept. of Fish and Wildlife (CDFW) . . . . . (916)358-2900
  - U.S. Coast Guard (USCG) . . . . . (202)267-2180
  - CAL OSHA . . . . . (916)263-2800
  - CAL Fire Office of the State Fire Marshal (OSFM) . . . . . (916)323-7390

Emergency response procedures for a release or threatened release of hazardous materials.

In the event of a hazardous material release or threatened release the campus will not employees and take the following actions to protect life and the environment.

Notification

- Internal facility emergency communications or alarm notification will occur by:
  - verbal warnings;
  - public address or intercom system;
  - telephone;
  - alarm system;
  - portable radio
- Notifications to neighboring facilities that may be affected by an off-site release will occur by:
  - verbal warnings;
  - public address or intercom system;
  - telephone;
  - alarm system

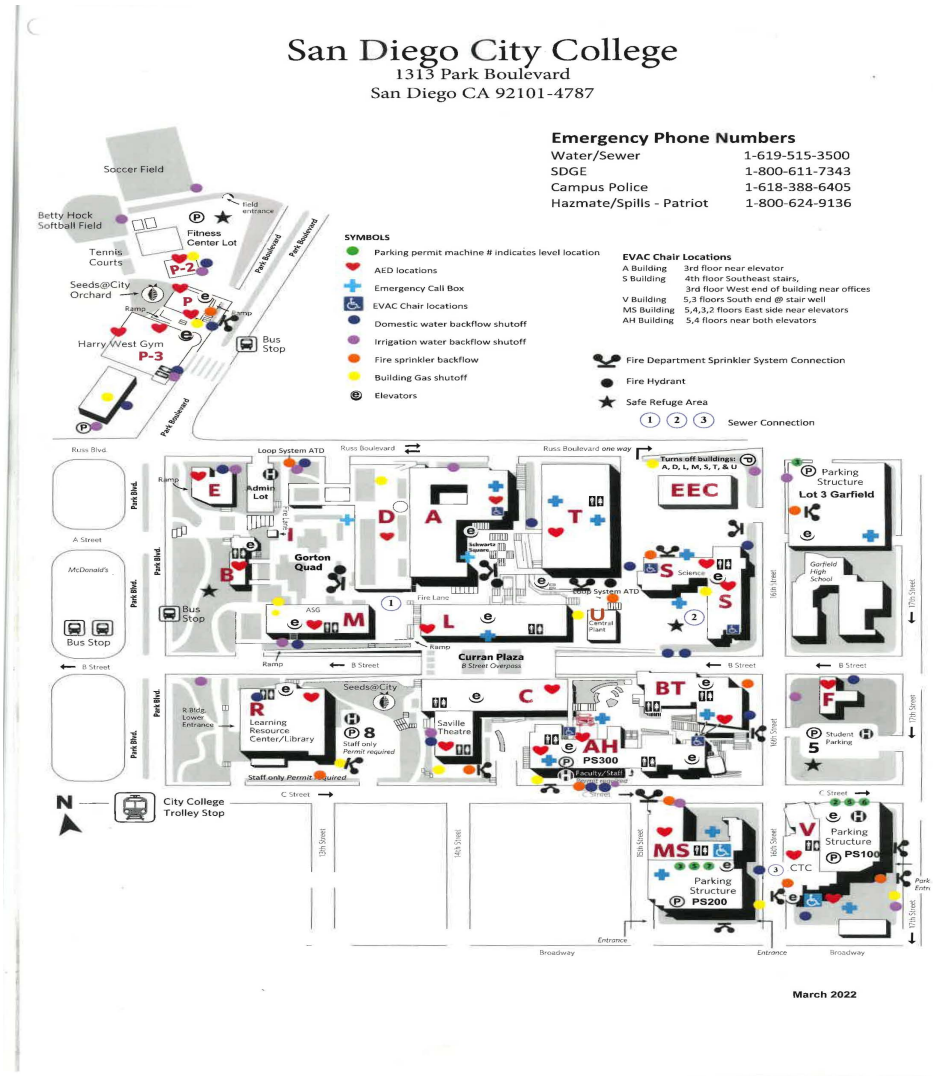
Emergency Containment and Cleanup Procedures

Our facility's procedures for containing spills and preventing and mitigating releases, fires and/or explosions are the following:

- monitor for leaks, ruptures, pressure build-up, etc.;
- provide absorbent physical barriers (e.g., pads, spill pigs, spill pillows);
- cover or block floor and/or storm drains;
- automatic fire suppression system;
- eliminate sources of ignition for flammable hazards;
- stop processes and/or operations;
- automatic / electronic equipment shut-off system;
- shut off water, gas, electrical utilities;
- call 9-1-1 for public emergency responder assistance and/or medical aid;
- notify and evacuate persons in all threatened and/or impacted areas;
- account for evacuated persons immediately after evacuation;
- provide protective equipment for on-site emergency response team;
- remove containers and/or isolate areas;
- hire licensed hazardous waste contractor;
- use absorbent material for spill containment;
- provide safe temporary storage of hazardous waste generated during emergency actions

Facility Evacuations

- The following alarm signal(s) will be used to begin evacuation of the facility:
  - Bells
  - Horns/Sirens
  - Verbal (i.e., Shouting)
- The following locations will be used for emergency assembly areas: Also see the City College Emergency Plan for more details on evacuations and ICS



Emergency Equipment (located in various place around campus)

- Safety and first aid
  - chemical protective suits, aprons, and/or vests
  - chemical protective gloves
  - safety glasses, goggles, and face shields
  - hard hats
  - air-purifying respirators
  - first aid kits
  - plumbed eyewash fountain and/or shower
  - portable eyewash kits and/or station
- Fire fighting
  - Portable fire extinguishers
  - Fixed fire systems/sprinklers/fire hoses
  - Fire alarm boxes or stations
- Spill control and cleanup
  - All in one spill kit
  - Absorbent material
  - Container for used absorbent
  - Broom

        - Shovel
        - Shop vac
        - Exhaust hood
        - Chemical neutralizers
    - Communication and alarm system
        - Telephones
        - Intercom/PA system
        - Portable radios