



Hazard Communication Program

Public Works Operations

January 2018

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1.0 PURPOSE

As an organization dedicated to the health and safety of its employees, City of Burlingame Corporation Yard has developed this Hazard Communication Program. The purpose of this Hazard Communication Plan is to encourage safe work practices by employers and employees by making hazard information available from suppliers to users in a condensed and easily understood format. The goal of this program is to ensure that workers understand chemical hazards and how chemicals can be handled safely.

2.0 SCOPE

California's Hazard Communication Regulation (Right-to-Know) applies to all employers whose employees may be exposed to hazardous substances. All chemicals known to be present in the workplace under normal conditions of use, or reasonable foreseeable emergency conditions (e.g. spill or release of a chemical), are included. All employees at the Burlingame Corporation Yard are affected by this program.

Training mandated by the program will cover topics including Safety Data Sheets (SDSs), container labeling, Personal Protective Equipment (PPE), exposure limits, detection methods and safe handling procedures. This written policy, including applicable SDSs, is available to personnel in the workplace throughout their shifts. Burlingame Corporation Yard does not discriminate in any manner against employees exercising their rights under this policy.

3.0 REFERENCES

The Hazard Communication Program is written to the standards of: Title 8 California Code of Regulation Section 5194 (Title 8 CCR 5194), California's Proposition 65, the "Safe Drinking Water and Toxic Enforcement Act" of 1986, and Title 29 of the Code of Federal Regulations (CFR) sections 1910 and 1926.

4.0 DEFINITIONS

- a) "Absorption" means the movement of a hazardous chemical through the skin and into the bloodstream.
- b) "Acute" means short-term effect, usually of temporary high-level exposure.
- c) "CAS Number" is a unique identification number assigned by the Chemical Abstracts Service to specific chemical substances.
- d) "Ceiling Value (C)" means a maximum level. No exposure should ever exceed this level.
- e) "Chemical Name" is the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry or the chemical Abstracts Service rules, or a name which clearly identifies the chemical for purpose of conducting a hazard evaluation.

- f) "Chronic" mean long-term effect. Low-level exposure over long periods gives rise to symptoms that develop over time.
- g) "Combustible Liquid" is a liquid that becomes flammable when heated above 100 degrees Fahrenheit (100) or having a flashpoint at or above 100 F (37.8 C), but below 200 (93.3 C), except any mixture having components with flash points of 200 F (93.3 C) or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.
- h) "Compressed Gas" is: a) a gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 F (21.1 C); or b) a gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 (54.4) regardless of the pressure at 70 F (21.1 C); or c)a liquid having a vapor pressure exceeding 40 psi at 100 F (37.8 C) as determined by the American Society for Testing and Materials (ASTM) D-323-72.
- i) "Concentration-PPM" parts per million is a volume-per-volume relation concentration.
- j) "Containers" include, but are not limited to, any bag, barrel, box, can, cylinder drum, vessel, storage tank, etc., that contains a hazardous substance.
- k) "Exposure or Exposed" is when an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact, absorption, etc.); this includes potential (i.e. accidental or possible) exposure.
- l) "Flammable (Explosive) Limits (LEL & UEL)" A flammable material will burn in air when ignited. Cal/OSHA refers to these materials as flammable, combustible or explosive. The range of concentration in which these materials burn is limited by the Lower Explosive Limit (LEL) and the Upper Explosive Limit (UEL). When the gas or vapor is below this LEL, the mixture is said to be too "lean" to burn. When the gas or vapor concentration is above the UEL, the mixture is too "rich" to burn.
- m) "Flammable" NFPA, Cal/OSHA and DOT define a "flammable liquid" as a liquid with a flashpoint below 100 F (37.8 C). DOT and Cal/OSHA classify solids that will ignite readily or are liable to cause fires under ordinary condition of transportation through friction or retained heat from manufacturing or processing, and which burn so vigorously and persistently as to create a serious transportation hazard, as "flammable solids."
- n) "Flash Point" is the temperature where a flammable liquid produces enough vapor to burn. The test method for determining the flashpoint will also be indicated on the SDS.
- o) "Health Hazard" A chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. "Health hazard" includes chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs skin, eyes or mucous membranes.

- p) "Lethal Dose 50 (LD50)" is the median amount, usually expressed in milligrams per kilogram of body weight that causes a "50 percent death rate" in test animals.
- q) "Safety Data Sheet (SDS)" is written or printed material concerning a hazardous chemical (sometimes available electronically).
- r) "mg/m³" Milligrams-per-meter cubed is a weight-per-volume measurement usually applied to dusts, mists and fumes. A cubic meter is a cube, 39.4 inches on a side.
- s) "NFPA" means National Fire Protection Association.
- t) "Permissible Exposure Limit (PEL)" A PEL is similar to the TLV, but set by Cal/OSHA regulation. Both signify the day-to-day employee exposure level that does not cause adverse effects. In the majority of cases, the TLV and PEL will be the same value.
- u) "Reactive or Unstable" A chemical that is in the pure state, or as reproduced or transported, will vigorously polymerize, decompose, condense or will become self-reactive under conditions of shocks, pressure or temperature. Water-reactive is a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.
- v) "Threshold Limit Value (TLV)" The TLV is a safe exposure level set by the American Conference of Governmental Industrial Hygienists (ACGIH). As such, it has no regulatory impact until and unless incorporated into law by reference.
- w) "Trade Secret" something such as a chemical formula which has economic value to a business because it is not generally known or easily observed and for which efforts have been made to maintain secrecy.

5.0 **RESPONSIBILITIES**

The success of this Hazard Communication Program depends to a great extent upon the cooperation and commitment of every employee. Each person should be alert to the potential hazards of chemicals in the workplace and shall follow the appropriate work practices that have been established to protect their health and safety. Specific responsibilities of personal are described in this section.

5.1 **HAZARD COMMUNICATION PROGRAM MANAGER**

The **Deputy Director of Public Works Operations** is the Hazardous Communication Program Manager and is responsible for ensuring the implementation of this program, updating this policy as needed, making it available to all employees. The Hazard Communication Program Manager may delegate responsibilities of this program to Hazard Communication Coordinators.

5.2 **HAZARD COMMUNICATION COORDINATORS**

The **Divisions Managers** and **Management Analyst** are the Hazard Communication Coordinators. The Hazard Communication Coordinators or their designated representative are responsible for evaluating chemicals for potential exposures, handling, emergency response, reporting and disposal requirements. Evaluations shall be completed prior to acquiring the chemicals or permitting them onsite. Required

equipment and supplies, permits and documentation associated with a new chemical are to be in place before using the chemical. The Hazard Communication Coordinator(s) or their designated representative must maintain a copy of the most up to date SDS and maintain the chemical inventory for their site. Further discussion of these responsibilities is included in Section 7.0.

5.3 DIRECT SUPERVISOR

The Direct Supervisor or designated representative is responsible for reviewing the necessary safety precautions with each employee prior to the employee's initial use of the chemical. The Direct Supervisor must verify the employee's understanding. The Direct Supervisor shall maintain a list of employees trained, in order to facilitate ongoing and successive training. Training requirements are further discussed in Section 8.0.

5.4 EMPLOYEES

Employees should be alert to the potential hazards of chemicals in the workplace and shall follow the appropriate work practices that have been established to protect their health and safety. Whenever there is a question regarding the handling, use, disposal or emergency procedures involved with a specific chemical, the label and/or SDS should be consulted. If additional information is desired, the Direct Supervisor, Hazard Communication Coordinator or the Designated Representative should be contacted. Additional Employee requirements are described in Section 6 and Section 7.

6.0 EQUIPMENT

6.1 PERSONAL PROTECTIVE EQUIPMENT

Employees are required to wear Personal Protective Equipment (PPE) when engineering controls are not feasible, are not sufficient to reduce an employee's exposure to a hazard, or when required by the SDS. Safety goggles and impervious gloves are examples of personal protective equipment that reduce a worker's personal exposure to hazardous substances, but that do not improve the overall workplace environment. Use of personal protective equipment is covered by regulation in many cases to ensure that effective protection is afforded.

6.2 SAFE WORK PRACTICES

Certain practices over which workers have personal control, for example, how fast a machine operates or how ingredients are added to a mixing vessel, can significantly affect exposure. Employees are to review safe work practices and/or operating instructions prior to operating equipment. Burlingame Corporation Yard has a complete inventory of Codes of Safe Practices (COSP/SOP) that can be referenced for specific tasks.

6.3 PERSONAL HYGIENE

Employees are instructed to practice good hygiene. Measures as simple as washing hands after handling hazardous materials will significantly reduce the overall exposure to hazardous substances.

7.0 PROCEDURES

7.1 HAZARD DETERMINATION

Manufacturers and importers are required to assess the physical and health hazards associated with the substances they produce or repack. This information is provided to employers using a system of labels and SDS.

SDS are to be reviewed by the Safety Committee and Hazard Communication Coordinator(s) prior to products being introduced into the workplace to determine if the substance will present a new or unique hazard. When the potential for a new or unique hazard is determined to be present, the Direct Supervisor will ensure a safety tailgate meeting is held to inform employees of the potential new hazard and the necessary precautions.

7.1.1 Exposure Evaluation

Cal/OSHA has set permissible exposure levels (PELs) for selected chemicals. An exposure to a hazardous substance may not exceed the PEL. These standards are included on SDSs and are used to evaluate workplace exposure monitoring results.

7.1.1.1. *Routes of Entry*

The four common routes of entry for hazardous substances to enter the body are inhalation, absorption, ingestion, and injection. Each route will be discussed in detail below.

- a) Inhalation hazards exist when gases, vapors, mists, dusts and fumes have the potential to be breathed and can either harm the lungs directly or be absorbed into the bloodstream and affect other body organs. PELs have been set to limit airborne concentration of toxic substances in the workplace to a level that will not result in overexposure. PELs for specific chemicals are listed on the SDSs.
- b) Absorption hazards exist when substances that come into contact with the skin or eyes can either injure directly (i.e. an acid burn), or are absorbed into the bloodstream through the intact skin. The SDS should indicate if skin absorption or direct injury might occur with the substance in question.
- c) Ingestion is a less common route of entry for occupation exposure, except for cases where highly toxic materials are ingested due to improper personal hygiene practices, such as eating or smoking without first washing highly toxic substance from hands, or when unprotected workers are splashed with a hazardous liquid.
- d) Injection occurs either concurrent with the penetration of the skin, as in a needle-stick or a cut with broken, contaminated glass, or when the hazardous material comes in contact with a pre-existing skin penetration, such as an open wound.

7.1.1.2. *Toxic Effects*

The two types of toxic health effect associated with chemical exposure include acute and chronic health effects.

- a) Acute effects are observed when the exposure is sufficiently large to have an immediate and usually short-term effect (e.g. chemical skin burns, asphyxiation and

sudden poisonings). The known acute health effects for individual chemicals are listed on the SDSs.

- b) Chronic effects occur after repeated exposure over a longer period of time and may be associated with relatively low-level exposures. The injury may be slight skin irritation or may involve more severe damage to organs and systems such as lung disease, cancer or impaired reproductive function. The known chronic health effects for individual chemicals are listed on the SDSs.

7.2 MEASURES TO PREVENT OR LIMIT EXPOSURE

Effective measures exist to prevent or reduce worker exposures so that no effects are seen from the proper use of hazardous substances.

7.2.1 Engineering controls

Engineering controls are implemented to reduce/eliminate an employee's exposure to a chemical hazard when feasible. Ventilation systems and physical isolation of the chemical from the worker are examples of engineering controls that control exposures to hazardous substances.

7.2.2 Administrative controls

Administrative controls are implemented when engineering controls are not sufficient in reducing an employee's exposure to a hazard, or in conjunction with engineering controls to reduce an employee's exposure to a hazard. Providing rest periods and rotating employees where appropriate, are examples of reducing exposures through administrative controls. Management should use information provided in SDSs to determine whether administrative controls can be used to further protect employees from hazardous substances.

7.3 LABELS AND OTHER FORMS OF WARNING

7.3.1 Container Labeling

The Hazard Communication Coordinators, Direct Supervisors, and individual employees must ensure that there are no improperly labeled products in the work area. If a label is missing or illegible, the Hazard Communication Coordinator or the individual employee shall make sure a new label is made and affixed to the container. If an employee discovers a missing or illegible label, he/she must notify the Direct Supervisor or Hazard Communication Coordinator if they are unable to remedy the issue. Under no circumstances shall an employee leave unlabeled chemical containers or waste materials containing chemicals at any facility.

7.3.1.1. *Primary Containers*

It is the responsibility of the manufacturer, importer or distributor to ensure that each primary (supplier provided) chemical container leaving their workplace is properly labeled, tagged or otherwise marked. Therefore, these containers should be received by Burlingame Corporation Yard with proper labels in place. Should any required labels become detached or otherwise rendered unreadable, they are to be replaced prior to issuance of the container into the workplace. Alternately, any container that is received

without proper labeling should be returned to the supplier. The label on each primary container must include the following:

- Identity of the hazardous substance.
- The appropriate hazard warning regarding potential physical, safety and health hazards.
- Name and address of the manufacturer, importer or other responsible party.

Should a label on any primary container become detached or unreadable after issue of the container and/or during its use, the label is to be replaced.

7.3.1.2. Secondary Containers

When a chemical is transferred from the primary container into a secondary container, this secondary container must also be labeled. In this situation, however, the label need only contain the identity of the hazardous chemical therein and the appropriate hazard warning. Further, if the hazardous chemical transferred to a secondary container is intended only for the immediate use of the employee who transferred it, the container need not be labeled so long as it is emptied and cleaned prior to the end of that employee's work turn.

Should a label on any secondary container become detached or unreadable after issue of the container and/or during its use, the label is to be replaced.

7.3.2 Other Forms of Warning

Signs, or placards may be used with or instead of the labels if they meet the criteria and are readily accessible to employees in their work area throughout the shift. Hazardous chemicals leaving the work place must comply with the Hazardous Materials Transportation Act (use of placards, etc.) in addition to the hazard communication requirements.

7.4 EMERGENCY PROCEDURES

The Hazard Communication Program Manager or Coordinator will determine appropriate emergency procedures based on the SDS, Hazardous Materials Business Plan (HMBP), Emergency Response Plan (ERP) and other documents identifying steps to take in emergencies. This section describes general emergency response procedures that are related to chemicals used in the workplace.

7.4.1 First Aid

Each SDS includes first aid information specific to the product and is to be reviewed to determine response procedures. Hazard Communication Coordinator or designated representative shall inspect all first aid kits, eye wash stations and other first aid equipment on a regular basis or as required by the manufacturer to ensure its readiness in an emergency. General first aid responses for overexposure to hazardous chemicals in the workplace include:

- a) Eye Contact: Flush with large amounts of water for at least 15 minutes. Occasionally lift both upper and lower eyelids. Obtain medical help if irritation persists.

- b) Skin Contact: Thoroughly wash affected areas with water, remove contaminated clothing. Obtain medical help if irritation persists, or if large body areas are affected.
- c) Inhalation: If overcome or affected by vapors, move to fresh air, provide oxygen if possible and obtain medical help.
- d) Ingestion: Call emergency medical aid immediately. Consult SDS to determine if vomiting should be induced or if individual should be provided other first aid measures.

7.4.2 Emergency Spill Procedures

All employees must be familiar with the Emergency Response Plan (ERP) in the event of an incident involving a hazardous material. Those employees who, due to job function or location, could be involved in exposure to hazardous material spills, releases or required clean-up functions, must be familiar with emergency response procedures at the appropriate level of response.

- All releases of materials, hazardous or non-hazardous will be reported to the Direct Supervisor and Hazard Communication Coordinator(s).
- Employees should initiate emergency and evacuation procedures and/or follow other specific direction given by emergency personnel. See the ERP for further details.

8.0 TRAINING

Providing employees with information and training is a critical part of the hazard communication program. Through effective training, workers will learn to read and understand the information contained in SDSs and labels, determine how such information can be obtained and used in their own workplaces, and understand the risks of exposure to the chemicals in their workplaces as well as the ways to protect themselves. Workers who handle hazardous substances are trained before their initial assignment to work with a hazard chemical and when a new hazard is introduced into the workplace. Notices may also be posted to emphasize potential hazards and use of exposure prevention measures in specific work areas.

8.1 NORMAL OPERATIONS

Employees with potential exposure to hazardous chemicals are to receive information and training on hazardous chemicals in their work area. New employees are to receive this training prior to their initial work assignment. The Direct Supervisor, Hazard Communication Coordinator(s) or the designated representative, will provide this training. Components of this training include:

- The location and availability of this Hazard Communication Program.
- The operations in their work areas in which hazardous materials are present.
- A list of hazardous materials used in the workplace and the location and availability of related SDS.

- Details of the Hazard Communication Program, including the labeling system, SDS information and how employees obtain other pertinent information.
- Physical and health hazards of chemicals in the work area.
- Measures employees can take to protect themselves from hazards.
- Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area.
- Emergency and general first aid procedures to be followed in case of overexposure.

8.2 HAZARDOUS NON-ROUTINE TASKS:

Periodically employees may be required to perform hazardous, non-routine tasks. Prior to commencing work on such projects, any employee involved is to be given information by their supervisor about additional chemical hazards to which he or she may be exposed during such an assignment. This information will include:

- Potentially hazardous chemicals encountered.
- Proper safety measures to follow.
- Measures to lessen the hazards such as ventilation, respirators, presence of another employee, emergency procedures, etc.

8.3 INFORMING CONTRACTORS

Burlingame Corporation Yard wants to ensure that outside contractors work safely at the facility. Each contractor shall be provided with the following information prior to beginning work in an area of the facility where he/she or their employees could be exposed to hazardous chemicals.

- Hazardous chemicals that the contractor and their subcontractors and employees may be exposed to while on the job site.
- Precautions the contractor and their subcontractors and employees may take to lessen exposure to these chemicals, including the use of appropriate work practices and protective measures.

The contractor shall also be required to provide information on the hazardous chemicals they intend to use during their work. This information shall be provided to the Hazard Communication Program Manager or designated representative and should include a review of appropriate precautions that Burlingame Corporation Yard employees should take to lessen their exposure to these chemicals.

8.4 CERTIFICATE AND DOCUMENTATION OF TRAINING

Training materials may include videotapes, pamphlets, computer-based education, PowerPoint presentation and this Hazard Communication Program. Training will be documented by the Direct Supervisor or designated representative. The Direct Supervisor or designated representative shall maintain a list of employees trained, in order to facilitate ongoing and successor training.

9.0 RECORDKEEPING

9.1 CHEMICAL INVENTORY

A listing of all known hazardous chemicals present at Burlingame Corporation Yard is prepared and updated as new chemicals are introduced to the workplace. The inventory includes each identified hazardous chemical and the primary work area where it is used or stored. This listing will be reviewed and updated by the Hazard Communication Coordinator(s) or designated person as new hazardous chemicals are introduced to the facility. See Appendix B of this document for the most recent list of chemicals.

The list will be maintained at the front of each binder where the SDS's are located.

9.2 SAFETY DATA SHEET (SDS)

An SDS is a 16-part form prepared by the manufacturer or importer of a hazardous chemical that specifies the, physical and chemical properties of the hazardous chemical, the hazards posed by the chemical and preventative measures and remedial steps that should be taken in the event of a chemical spill or exposure. While the manufacturer or importer is obligated to provide the business purchasing the hazardous chemical with an SDS, it is the responsibility of Burlingame Corporation Yard to ensure that an SDS is readily available for every hazardous chemical maintained onsite to which employees are exposed or potentially exposed to. At Burlingame Corporation Yard, SDSs are collected via (*four*) methods:

- Enclosed with the initial shipment of the hazardous chemical.
- Mailed directly to the organization along with the invoice.
- Provided by vendor at time of purchase by employees
- Through research on the internet.

If the SDS is enclosed with the initial shipment of the hazardous chemical, then the employee is responsible for delivering the SDS to the Hazard Communication Coordinator(s) or designated representative for proper filing.

If the Burlingame Corporation Yard does not initially receive an SDS, it is the responsibility of the Hazard Communication Coordinator(s) or designated representative to ensure the supplier is contacted and an SDS requested. If the supplier fails to produce an SDS or an appropriately completed SDS, then the Hazard Communication Coordinator or designated representative may contact Cal/OSHA for assistance in this matter.

Copies of each SDS are to be kept in the SDS binder and are available to employees at anytime during work hours. SDS binder locations are identified in Appendix A of this document.

If there is an emergency where an employee needs information about a chemical and the SDS is missing or unclear, the direct supervisor or designated representative is to take one or more of the following steps in order to obtain the SDS or to clarify questions on it:

- Call the manufacturer of the chemical. The emergency number is listed on the SDS for each of its products.

- Contact Poison Control or call 9-1-1 to receive medical attention.

If use of a chemical product is discontinued, the applicable SDS shall be retained for a minimum of 30 years. If the applicable SDS is destroyed; a record of the identity of the product or agent, including the chemical name or trade name (if known), where it was used, and when it was used, shall be retained for a minimum of 30 years.

10.0 REVISION AND UPDATING PROCEDURE

The Hazard Communication Manager or their designated representative reviews this program periodically, when an incident occurs involving a chemical exposure, or when conditions change, or annually. The purpose of the review is to ensure that the applicability of each part of this program is accurate with current workplace conditions and that the program is effective. Updates or changes to the plan will be documented in the revision log at the front of this program.

Safety Data Sheet Binder Locations

- Administration – Building A – Master Binder on bookshelf in Safety Library (Copy/Mail room).
- Fleet - Building B - Binder sitting on bookshelf in front office next to Fleet Manager.
- Water – Building A – Binder sitting on bookshelf in Copy/Mail room.
- Sewer – Building A – Binder sitting on bookshelf in Copy/Mail room.
- Facilities – Building C – Binder – sitting/hanging/on bookshelf in Facilities lunchroom.
- Streets – Building A – Binder on shelf outside of tool room door.
 - Archive Binder – located in the Copy/Mail Room.

Chemical Inventory Spreadsheet (as of January 2018)

[2018 chemical inventory.xlsx](#)