1.0 PURPOSE

The purpose of this program is to ensure that Grand Coulee Power Office (GCPO) employees are informed, through means of labels, Safety Data Sheets (SDS) and training, of the physical and health hazards to which they may be exposed. This written program is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) incorporated into the Federal Register, March 26, 2012, and meets the requirements of Occupational Safety and Health Administrations (OSHA's) General Industry standard 1910.1200.

2.0 SCOPE

This policy applies to all Grand Coulee Power Office employees.

3.0 POLICY

It is the policy of GCPO, to provide a safe workplace for its employees who work with chemicals based on the requirements established by OSHA, the United Nations (UN), and the Reclamation Safety and Health Standards (RSHS) section 33.

The GCPO as an employer is engaged in a business where chemicals are either used by employees or employees may be exposed under normal condition of use or in a foreseeable emergency and therefore have the potential for contact with chemicals in their workplace. The GCPO will ensure that the hazards of all chemicals found in the workplace will be evaluated and that information concerning their hazard will be communicated to all affected employees. The communication of this information will be accomplished by means of container labeling, safety data sheets (SDS), employee training, and other forms of warning. This program describes how this criterion will be met.

NOTE: GCPO neither produces nor distributes chemicals.

No deviation from the requirements of this section can be made without the written consent of the GCPO Safety Manager.

4.0 Program Requirements

This program identifies the means used and the individuals responsible for performing the following:

- Maintaining inventory list of all hazardous chemicals known to be present using a product identifier that is referenced on the appropriate safety data sheet.

- Maintaining SDS for each inventoried substance that is available to employees and regulatory officials at the point of use or storage.

- Legibly and prominently label all containers of hazardous substances. The label must identify the material and/or link it to other required information resources (SDS Database), identify the primary hazard(s), and state appropriate precautions such as “Do not use near open flame.”

- Providing and documenting hazard communication training for each employee who uses or stores inventoried substances.

- The method the GCPO will use to provide contractors on-site access to safety data sheets for each hazardous chemical the contracted employees may be exposed to while working. The methods the GCPO will use to inform the other employer(s) of any precautionary measures that need to be taken to protect employees during the workplace’s normal operating conditions and in foreseeable emergencies and the methods the GCPO will use to inform the other employer(s) of the labeling system used in the workplace.

5.0 Responsibilities

5.1 Safety Office

- Safety and Occupational Health Manager is designated as the overall coordinator of the Hazard Communication Program.

- Maintaining inventory of all hazardous substances that are available to employees and regulatory officials.

- Maintaining an SDS for each inventoried substance that is available to employees and regulatory officials and keeping the chemical SDS data base up to date.

- Providing awareness level training.

- Keeping the approved chemical purchase list up to date.

5.2 Managers

Managers are responsible for:

- Providing resources and technical support for the hazard communication program.

5.3 Supervisors

Supervisors are responsible for:

- Ensuring chemical inventory sweeps are current and notifying the Safety Office of any irregularities.

- Contacting the safety office before any non-routine task is undertaken in their respective department or anywhere else in the work place where personnel may have the potential for exposure to hazardous chemical(s).

- Instructing employees on the methods and observations that may be used to detect the presence or release of the hazardous chemical, including air sampling, personal monitoring, visual appearance, odor, etc., the physical and health hazard of the chemical, and the specific measures the employee can take to protect themselves from these hazards which may include the issuance, care and use of Personal Protective Equipment.

- Ensuring employees who work directly with a hazardous chemical are trained on the process involved in reducing those hazards and ensuring that the exposure assessment is clearly communicated to the employee(s) through the Job Hazard Analysis section 5.3 Exposure Assessments in GCPO 2-4.

- Ensuring employees are trained on the hazards of the chemicals in their workplace.

5.4 Employees

Employees are responsible for:

- Following all aspects of this program.

- Notifying their supervisor, as soon as practical and/or immediately, of every work-related accident or near miss involving chemicals;

- Ensuring secondary labels are affixed to all containers containing chemicals.

- Reporting unsafe or unhealthful workplace conditions to their supervisor and/or to the safety and health manager.

- Contacting their supervisor if the employee has questions related to any aspect of the Hazard Communication Program; and,

- Contacting their supervisor if the employee has questions on a chemical they will be working with.

6.0 DEFINITIONS

Article means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

Chemical means any substance, or mixture of substances.

Chemical manufacturer means an employer with a workplace where chemical(s) are produced for use or distribution.

Chemical name means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name that will clearly identify the chemical for the purpose of conducting a hazard classification.

Classification means to identify the relevant data regarding the hazards of a chemical; review those data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this section. In addition, classification for health and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards.

Common name means any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

Container means any bag, barrel, bottle, box can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this program, pipes or piping systems, and engines, fuel tanks, or other operation systems in a vehicle, are not considered to be containers.

Designated representative means any individual or organization to whom an employee gives written authorization to exercise such employee's rights under this program. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

Employee means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

Employer means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

Exposure or exposed means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g. accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption.)

Foreseeable emergency means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

Hazard category means the division of criteria within each hazard class, e.g., oral acute

toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard class means the nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

Hazard not otherwise classified (HNOC) means an adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this program. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this program, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

Hazard statement means a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous chemical means any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Health hazard means a chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation' serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A to 1910.100-Health Hazard Criteria.

Immediate use means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Label means an appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Label elements means the specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Mixture means a combination or a solution composed of two or more substances in which they do not react.

Physical hazard means a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-reacting; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. See

Appendix B to 1910.1200-Physical Hazard Criteria.

Pictogram means a composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category. Note the environmental pictogram is non-mandatory the addition of which would make 9 total pictograms under GHS.

Precautionary statement means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Produce means to manufacture, process, formulate, blend, extract, generate, emit, or repackage.

Product identifier means the name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in this program, the label and the SDS.

Pyrophoric gas means a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

Responsible party means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

Safety data sheet (SDS) means written or printed material concerning a hazardous chemical that is prepared in accordance with 1910.1200. March 26, 2012.

Signal word means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used are “danger” and “warning.” “Danger” is used for the more severe hazards, while “Warning” is used for the less severe.

Simple asphyxiant means a substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

Specific chemical identity means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

Substance means chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Trade secret means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix E to 1910.1200-Definition of Trade Secret, sets out the criteria to be used in evaluating trade secrets.

Use means to package, handle, react, emit, extract, generate as a byproduct, or transfer.

Work area means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

Workplace means an establishment, job site, or project, at one geographical location containing one or more work areas.

7.0 Training and Employee Information

7.1 Employee information and training.

The GCPO shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new chemical hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

7.2 Information.

Employees shall be informed of:

- The requirements of 1910.1200(h)
- Any operations in their work area where hazardous chemicals are present; and,
- The location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and safety data sheets required by 1910.1200.

7.3 Training.

Employee training shall include at least:

- Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the GCPO, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
- The physical, health, simple asphyxiation, combustible dust and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area;

- The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and,

- The details of the hazard communication program developed by the Grand Coulee Power Office (GCPO), including an explanation of the labels received on shipped containers and the workplace labeling system used by the GCPO (NFPA 704); the safety data sheet, including the order of information and how employees can obtain and use the appropriate hazard information.

7.4 Documentation of Training.

Training will be documented in accordance with the Facilities Instructions, Standards, and Techniques (FIST) Volume 6-1 section 8.

8.0 Purchase of Chemicals

All chemicals used on project must be procured through the GCPO warehouse inventory.

If a chemical is not in the inventory (stock or Direct D), the formal purchase request process shall be used. To obtain chemicals not already in the GCPO warehouse inventory (stock or Direct D), follow GCPO Project Policy Memorandum 9, Chemical Purchase Policy.

Requesters may not purchase chemicals using government credit cards or Blanket Purchase Agreements (BPA) with local establishments.

Steps to be taken are:

- Obtain supervisor's approval

- Complete a Chemical Request Form (see the Grand Coulee Power Office Policy Memorandum NO. 9 Chemical Purchase Policy found @ http://intranet.pn.usbr.gov/area/gcp/policy.shtml

- Print the Form

- Forward to the Safety Office, code 1600

NOTE: The Power Manager or Deputy Power Manager may approve emergency purchases.

9.0 Hazard Determination

9.1 Sources

The GCPO Safety office, in evaluating chemicals, shall treat the following sources as establishing that the chemicals listed in them are hazardous:

- 29 CFR part 1910.1200, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA); or,

- Threshold Limit Values for Chemical Substances and Physical Agents in the "Work Environment," American Conference of Governmental Industrial Hygienists (ACGIH)

NOTE: The chemical manufacturer, importer, or employer is still responsible for evaluating the hazards associated with the chemicals in these source list in accordance with the requirements of 29 CFR 1910.1200. Chemicals listed by ACGIH in Threshold Limit Values for Chemical Substances in the Work Environment.

These lists provide a base of over 600 regulated substances. The GCPO safety Office is responsible for determining the hazards associated with each of these chemicals, when they are used in the work place. In addition, OSHA has decided what will constitute a carcinogen under the Hazard Communication Standard, and that is, any chemical listed as a confirmed or suspected carcinogen by the following:

- The National Toxicology Program's Annual Report on Carcinogens;"

- International Agency for Research on Cancer's Monographs; and

- OSHA's 29 CFR 1910.1200, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration.

NOTE: The "Registry of Toxic Effects of Chemical Substances" published by the National Institute for Occupational Safety and Health indicates whether a chemical has been found by NTP or IARC to be a potential carcinogen.

9.2 Hazard Assessment based on review of SDS's

No products or materials will be purchased, requisitioned or used unless there is a current SDS approved through the GCPO Safety Office. The person requisitioning or end user of the product is responsible for obtaining an approved and current SDS (Within 5 years) prior to purchase of any product.

- The SDS will be submitted to the GCPO Safety Office for inclusion in the SDS database. A project number will be assigned to the SDS and only then will procurement take action on the order. The SDS must be submitted a minimum of 14 days before the product is needed to assure ample time for Hazard assessment.

- Whenever practical, purchasers should specify the least hazardous substance available to meet the needs of the project. Items listed as carcinogens or suspected carcinogens will not be used unless there is no substitute. In cases where carcinogenic materials are required a written approval is required from the superintendent and the GCPO Safety and Occupational Health Manager.

9.3 Hazardous Chemical Inventory SDS's

The safety office maintains the complete library of SDS's for every substance used on the GCPO project. Supervisors must maintain a copy of the SDS for every material used by their crews. SDS's must be readily available and periodically reviewed by employees. The supervisors must assure that their employees read, understand and follow pertinent information on the SDS.

10.0 Exemptions

There are two types of exemptions from this program; those items that are exempt from the Standard and those items that are exempt from the labeling requirements of the Standard.

10.1 The following materials or operations are exempt from the provisions of Standard:

- Any hazardous waste as such term is defined by the Solid Waste Disposal Act, as amended by the Resource conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.), when subject to regulations issued under that act. By the Environmental Protection Agency;

- Any hazardous substance as such term is defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9601 et seq.) when the hazardous substance is the focus of remedial or removal action being conducted under CERCLA in accordance with Environmental Protection Agency regulations.

- Tobacco or tobacco products;

- Wood or wood products, including lumber which will not be processed, where the chemical manufacturer or importer can establish that the only hazard they pose to employees is the potential for flammability or combustibility (wood or wood products which have been treated with a hazardous chemical covered by this standard, and wood which may be subsequently sawed or cut, generating dust, are not exempted);

- Articles (as defined in section 6 of this program)

- Food or alcoholic beverages which are sold, used, or prepared in a retail establishment, and foods intended for personal consumption by employees while in the workplace;

- Any drug, as that term is defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.), when it is in solid, final form for direct administration to the patient (e.g., tablets or pills); drugs which are packaged by the chemical manufacturer for sale to consumers in a retail establishment (e.g., over-the-counter drugs); and drugs intended for personal consumption by employees while in the workplace (e.g., first aid consumption by employees while in the workplace (e.g., first aid supplies);

- Cosmetics which are packaged for sale to consumers in a retail establishment, and cosmetics intended for personal consumption by employees while in the workplace;

- Any consumer product or hazardous substance, as those terms are defined in the Consumer

Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, where the employer can show that it is used in the workplace for the purpose intended by the chemical manufacturer or importer of the product, and the use results in a duration and frequency of exposure which is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended;

- Nuisance particulates where the chemical manufacturer or importer can establish that they do not pose any physical or health hazard covered under this section;

- Ionizing and nonionizing radiation; and,

- Biological hazards.

10.2 When labeled in accordance with federal requirements, the following substances shall be exempt only from the labeling provisions of the Standard:

- Any pesticide as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

- Any chemical substance or mixture as such terms are defined in the Toxic Substances Control Act (15 U.S.C. 2601 et seq.), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

- Any food, food additive, color additive, drug, cosmetic, or medical or veterinary device or product, including materials intended for use as ingredients in such products (e.g. flavors and fragrances), as such terms are defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 151 et seq.), and regulations issued under those Acts, when they are subject to the labeling requirements under those Acts by either the Food and Drug Administration or the Department of Agriculture;

- Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act (27 U.S.C. 201 et seq.) and regulations issued under that Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Bureau of Alcohol, Tobacco, Firearms and Explosives;

- Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission; and,

- Agricultural or vegetable seed treated with pesticides and labeled in accordance with

the Federal Seed Act (7 U.S.C. 1551 et seq.) and the labeling regulations issued under that Act by the Department of Agriculture.

11.0 Labels and other forms of warning.

11.1 Labels on shipped containers.

The chemical manufacturer, importer, or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged or marked. Hazards not otherwise classified do not have to be addressed on the container. Where the chemical manufacturer or importer is required to label, tag or mark the following information shall be provided:

- Product identifier;
- Signal word;
- Hazard statement(s);
- Pictogram(s)
- Precautionary statement(s); and,
- Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

The chemical manufacturer, importer, or distributor shall ensure that the information provided under paragraphs 1910.1200(f)(1)(i) through (v) is in accordance with Appendix C to 1910.1200, for each hazard class and associated hazard category for the hazardous chemical, prominently displayed, and in English (other languages may also be included if appropriate).

The chemical manufacturer, importer, or distributor shall ensure that the information provided under paragraphs (f)(1)(ii) through (iv) of 1910.1200 is located together on the tag, label or mark.

11.2 Solid Materials

For solid metal (such as a steel beam or a metal casting), solid wood, or plastic items that are not exempted as articles due to their downstream use, or shipments of whole grain, the required label may be transmitted to the customer at the time of the initial shipment, and need not be included with subsequent shipments to the same employer unless the information on the label changes;

- The label may be transmitted with the initial shipment itself, or with the SDS that is to be provided prior to or at the time of the first shipment; and,
- This exception to require labels on every container of hazardous chemicals is only for the solid material itself, and does not apply to hazardous chemicals used in conjunction with, or known to be present with, the material and to which employees handling the

items in transit may be exposed (for example, cutting fluids or pesticides in grains).

11.3 Chemical manufacturers, importers, or distributors shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked in accordance with 1910.1200 (f) in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (49 U.S.C. 1801 et seq.) and regulations issued under that Act by the Department of Transportation.

11.4 Work place labeling.
Except as provided in section 11.5 and 11.6 of this section, the GCPO shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with either:

- The information specified in section 11.1 labels on shipped containers; or,

- Product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

11.4.1 GCPO Secondary Labeling System
The GCPO will use the NFPA 704 standard maintained by the US-based National Fire Protection Association (NFPA). NFPA 704 is a graphic system used to quickly identify the risks posed by the presence of hazardous materials in a certain area or container. This system is also known as the NFPA “fire diamond,” the four section multicolor diamond shape indicates the health, flammability, instability and related hazards that are presented by short-term, acute exposure to a material during a fire, spill or other related condition. This is also necessary to help emergency personnel on project determine what, if any, special equipment should be used, procedures followed, or precautions taken during the first moments of an emergency response.

The objectives of the system are:

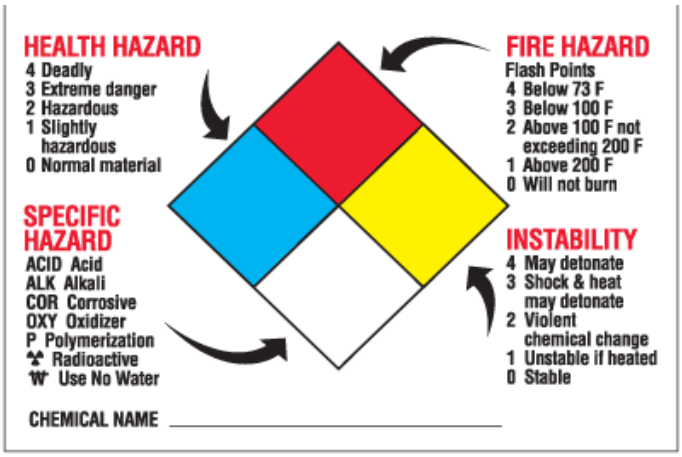
- To provide an appropriate signal or alert for the protection of both public and private emergency response personnel.

- To assist in planning for effective fire and emergency control operations, including clean-up.

- To assist all designated personnel, engineers, plant, and safety personnel in evaluating hazards.

The 704 rating system is applicable to industrial facilities that use and store hazardous materials. It is important to note that the standard is not applicable to transportation as the Department of Transportation (DOT) has its own unique placarding requirements contained in 49 CFR.

Design of NFPA 704 Signs:



- The NFPA "diamond" displays the material hazard information by category and severity, with the information arranged in a consistent format on the diamond.

- HAZARD CATEGORY: The hazard categories appear on the sign as follows:

  - HEALTH: At 9 o'clock position the diamond on the blue background.
  - FLAMMABILITY: At the 12 o'clock position on the red background.
  - INSTABILITY: At the 3 o'clock position on a yellow background.
  - SPECIAL: At the 6 o'clock position on a white background.

- HAZARD SEVERITY LEVEL: The severity level of the Health, Flammability, and Instability hazards are indicated by a number from 0 (minimal hazard) to 4 (severe hazard). Detailed descriptions of the particular hazard levels for each category may be found in the standard. (704.5-7)

- THE SPECIAL HAZARD CATEGORY: is reserved for three hazard symbols.

  - " ₩ "indicates the material reacts violently or explosively with water and serves as a caution about the use of water in either firefighting or spill control response. A severity level "2" or "3" may also follow the symbol, but is not required.
  - "OX" indicates the material has oxidizing properties that present a combustion hazard.
  - "SA" denotes gases which are simple asphyxiant(s); (limited to nitrogen, helium, neon, argon, krypton, and xenon).

- NON-STANDARD SYMBOLS: There are also non-standard symbols that are not part of the NFPA 704 standard but may be displayed in the Special Hazard diamond as permitted by the GCPOs local fire jurisdiction. These are symbols designating acid, alkaline, corrosive, radioactive, poison, etc.

- DETERMINING HAZARD RATINGS: While the system is basically simple in application,

the hazard evaluation should be performed by persons who are technically competent and experienced in the interpretation of the hazard criteria as set forth in the 704 standard. If a chemical's rating is unknown it can be determined by consulting the Fire Protection Guide to Hazardous Materials, which contains NFPA 325 and 49, which provide chemical ratings. If the chemicals are not found there, the ratings can be determined by using the Safety Data Sheet with the guidelines found in NFPA 704. (Appendix B, C, and D).

NOTE: The GHS system uses a category 1 as being the most hazardous this is the exact opposite of the NFPA and HMIS rating systems which use a 0-4 rating system 4 being the highest.

11.5 The GCPO may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and conveys the information required by 1910.1200 (f)(6) of this section to be on a label. The GCPO shall ensure the written materials are readily accessible to the employees in their work area throughout each work shift.

11.6 The GCPO is not required to label portable containers into which hazardous chemicals are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer. For purposes of this section, drugs which are dispensed by a pharmacy to a health care provider for direct administration to a patient are exempted from labeling.

11.7 The GCPO shall not remove or deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

11.8 The GCPO shall ensure that workplace labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift.

11.9 Chemical manufacturers, importers, distributors, or employers who become newly aware of any significant information regarding the hazards of a chemical shall revise the labels for the chemical within six months of becoming aware of the new information, and shall ensure that labels on containers of hazardous chemicals shipped after that time contain the new information. If the chemical is not currently produced or imported, the chemical manufacturer, importer, distributor, or employer shall add the information to the label before the chemical is shipped or introduced into the workplace again.

11.10 Unlabeled Pipes

The Administrator is responsible for ensuring that all piping systems within the work places of the GCPO facilities are identified as to their contents, and recording their location, contents and hazards should they contain hazardous chemicals. This information must be entered on an inventory sheet and become part of the Master SDS Database. Following this inventory, all unlabeled pipes which contain hazardous chemicals must be labeled with the appropriate label at intervals of no more than fifteen feet, so as to communicate the necessary hazard warning

information to all employees and contractors working in the area where such pipes are located.

11.11 Pictograms and Hazards

Health Hazard

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Flame

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

Exclamation Mark

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to ozone Layer (Non-Mandatory)

Gas Cylinder

- Gases Under Pressure

Corrosion

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

Exploding Bomb

- Explosives
- Self-Reactives
- Organic Peroxides

Flame over Circle

- Oxidizers

Environment (Non-Mandatory)

- Aquatic Toxicity

Skull and Crossbones

- Acute Toxicity (fatal or toxic)

12.0 Safety data sheets

The GCPO will have a SDS available in each workplace for each hazardous chemical which is used. Safety data sheets are prepared by the chemical manufacturer, are in English, and include at least the following section numbers and headings, and associated information under each heading, in specific order.

The Sections are as follows:

1. Identification;
2. Hazard(s) identification;
3. Composition/information on ingredients;
4. First-aid measures;
5. Fire-fighting measures;
6. Accidental release measures;
7. Handling and storage;
8. Exposure controls/personal protection;
9. Physical and chemical properties;
10. Stability and reactivity;
11. Toxicological information;
12. Ecological information;
13. Disposal considerations;
14. Transport information;
15. Regulatory information; and
16. Other information, including date of preparation or last revision.

NOTE: OSHA will not be enforcing information requirements in sections 12 through 15, as these areas are not under its jurisdiction.

If a SDS is not provided with a shipment that has been labeled as a hazardous chemical, the GCPO shall obtain one from the chemical manufacturer or importer as soon as possible. The chemical manufacturer or importer will provide the GCPO with an SDS upon request and will ensure updated information is provided to the GCPO with the initial shipment and the first shipment after a SDS is updated. Retail distributors selling hazardous chemicals to the GCPO will provide a SDS upon request. Wholesale distributors selling hazardous chemicals to the GCPO over-the-counter may provide an SDS upon request of the GCPO at the time of the purchase, and will inform the GCPO by sign or otherwise inform the GCPO that a SDS is available. If the GCPO without a commercial account purchases a hazardous chemical from a retail distributor not required to have a SDS on file (i.e., the retail distributor does not have commercial accounts and does not use the materials), the retail distributor shall provide the GCPO, upon request, with the name, address, and telephone number of the chemical manufacturer, importer, or distributor from which a SDS can be obtained. Wholesale distributors shall provide a SDS to the GCPO upon request. Chemical manufacturers, importers, and distributors need not provide a SDS to retail distributors that have informed them that the retail distributor does not sell the product to commercial accounts or open the sealed container to use it in their own workplaces.

The GCPO shall maintain in the workplace copies of the required SDS(s) for each hazardous

chemical, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s). The GCPO will accomplish this by using the SDS database, available online @ http://intranet.pn.usbr.gov/area/gcp/index.shtml ,as allowed by 1910.1200 (g)(8) as long as no barriers to immediate employee access in each workplace are created by such options.

Where employees must travel between workplaces during a work shift, i.e., their work is carried out at more than one geographical location, the SDS may be kept at the primary workplace facility. The GCPO shall ensure that employees can immediately obtain the required information in an emergency.

SDS(s) may be kept in any form, including operating procedures, and may be designed to cover groups of hazardous chemicals in a work area where it may be more appropriate to address the hazards of a process rather than individual hazardous chemicals. However, the GCPO shall ensure that in all cases the required information is provided for each hazardous chemical and is readily accessible during each work shift to employees when they are in their work area(s).

SDS(s) shall also be made readily available, upon request, to designated representatives, the Assistant Secretary, and the Director, in accordance with the requirements of 29 CFR 1910.1020(e).

13.0 Contractor Notification

In accordance with the OSHA Standard and RSHS, all contractual agreements with on-site contractors will contain a notification advising the contactor of the GCPO Hazard Communication Program and requiring the contractor to make themselves, and those employees that will be working at one of GCPO's facilities or work sites, to become familiar with the provisions of the GCPO Hazard Communication Program.

In the event the contractor will be performing their work in an area where GCPO employees are working with or storing hazardous chemicals, the contractor must be given a verbal orientation of the GCPO program by the designated supervisor and the location of the nearest Field SDS Binder, including a copy of the GCPO Hazard Communication Program and the Hazardous Chemical Inventory for that area.

14.0 Program Availability.

The written hazard communication program is available, upon request, to employees, contractors, their designated representatives, the Assistant Secretary, and the Director, in accordance with the requirements of 29 CFR 1910.1200 (e).

Purpose of the Hazardous Waste Management Plan

Normal operations and maintenance generate a variety of wastes ranging from oily rags and paint-related waste to batteries and fluorescent light tubes. This plan was developed to provide guidance on the safe handling and storage of hazardous waste.

The Written Hazardous Waste Handling & Storage Program will emphasize the following:

A. Definition of Hazardous Waste
B. Universal Waste
C. Waste Streams
D. Satellite Accumulation Areas
E. Containment
F. Accumulation Time
G. Generator Storage Bldg / Housekeeping
H. Personal Protective Equipment (PPE)
I. Spill Control
J. Training

DEFINITION OF HAZARDOUS WASTE

40 CFR 261

A **solid waste** is any discarded material. A discarded material is any material (solid, liquid, or contained gas) which is abandoned (disposed, burned, or incinerated), recycled, considered inherently waste-like, or a military munitions.

A **hazardous waste** is a solid waste that can present a serious hazard if not handled and disposed of carefully. Such wastes may have the potential to: 1) cause injury or death; or 2) damage or pollute land, air, or water. For example, waste paint and solvents generated on the dredge are considered hazardous because they are flammable and toxic. Federal and Oregon State public health and environmental safety laws strictly regulate hazardous wastes.

UNIVERSAL WASTE

What is Universal Waste?

A universal waste (UW) is a hazardous waste that is produced by a variety of businesses and institutions, not just in traditional industrial settings. Many of these wastes have been improperly managed in the past by being sent to solid waste landfill. Some types of waste considered to be universal wastes:

- Batteries (this does not include lead/acid batteries, which are considered non-hazardous waste if they are recycled/reclaimed)
- Mercury-containing lamps (fluorescent light tubes and high intensity discharge (HID) lamps)

- Mercury-containing thermostats
- Fluorescent light bulbs

REQUIREMENTS FOR UNIVERSAL WASTE HANDLERS

Universal waste handlers must **label or mark** their waste to identify the type of universal waste they are managing:

Universal Waste Batteries Universal waste batteries or the container in which the batteries are accumulated must be labeled or marked clearly with any one of the following phrases: "Universal Waste-Batteries," "Waste Batteries" or "Used Batteries."

Universal Waste Thermostats Universal waste thermostat containers must be labeled or clearly marked with any one of the following phrases: "Universal Waste-Mercury Thermostats," "Waste Mercury Thermostats" or "Used Mercury Thermostats."

Mercury-Containing Lamps Universal waste mercury-containing lamps or containers that contain waste lamps must be labeled or clearly marked with one of the following phrases: "Universal Waste-Mercury-Containing Lamps," "Waste Mercury-Containing Lamps" or "Used Mercury-Containing Lamps."

Fluorescent Light Bulbs Universal waste must be managed in a way that prevents releases to the environment. They must be labeled or marked to identify the universal waste such as "*waste lamps, used lamps".* Universal waste can only be accumulated for up to one year. A start date must be marked on the receiving container as to show the first storage date for disposal of universal waste. WAC 173-303-573

Universal waste handlers may accumulate universal waste on-site **for up to one year from the date it is generated.** A handler of universal waste who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste. The handler may make this demonstration by:

- Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste;
- Marking or labeling the individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;
- Maintaining an inventory system on-site that identifies the date each item (e.g., battery, thermostat, lamp) became a waste or was received;
- Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;
- Placing the universal waste in a specific accumulation area and identifying the earliest date that the any of the waste in the area became a waste; or
- Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it became a waste or was received.

WASTE STREAMS

Many daily work generate waste including spent paints, grease, used oil from hydraulic systems, engine oil changes and overhauls of machinery, lead acid batteries, and fluorescent mercury light tubes. Some waste is considered hazardous and their handling and disposal is strictly regulated under RCRA and OSHA

The following are typical waste streams:

- Used oil, oil/water mixtures and grease (non-hazardous)
- Oil absorbents (non-hazardous)
- Paint waste/solvents (hazardous)
- Off-spec. chemical products (hazardous & non-hazardous)
- Unknown liquids and solids (hazardous until proven otherwise)
- Oil & fuel filters (non-hazardous)
- Paint chips (hazardous and non-hazardous depending on toxic substance concentrations)
- Batteries - Nickel cadmium and zinc/alkaline (universal waste)
- Batteries - Lead acid (non-hazardous)
- Fluorescent light tubes (universal waste)
- Light Ballast's (may contain Polychlorinated Biphenyl's, coordinate with ECC for analysis)
- Asbestos (TSCA)
- Lead paint chips, particles and dust (hazardous and non-hazardous depending on toxic substance concentrations)
- Empty drums (non-hazardous)
- Used antifreeze (non-hazardous)
- Off-spec. epoxy products (hazardous)
- Personal protective equipment (PPE) - solid waste
- Herbicides/pesticides (household quantities, universal waste)

Satellite Accumulation Areas (SAA) -

The Operator of each satellite accumulation area shall comply with the following regulations and policies.

1. The Operator will keep the accumulation area neat and orderly. Do not stack or store items on top of drums. Containers must be kept in good condition and must be compatible with the stored waste.

2. All wastes will be stored in containers compatible for the wastes being stowed.

3. All containers will be properly, legibly marked with the exact chemical contents.

4. All containers will be kept sealed except when wastes are being added or removed.

5. Grounding and bonding techniques and devices sufficient to prevent static electrical charges are required where flammable liquids are poured into drums or transferred from container to container.

6. You may only accumulate a maximum of 55 gallons of hazardous. If you accumulate more than this amount, have the removal of the waste within three days of exceeding the limit. Once drum is full , have the drum brought to the generator storage bldg. (hazmat bldg)

7. Do not fill any container with greater than 80% capacity. This equates to approximately 2 inches of head-space below the container cover. Overfilled containers cannot be shipped off-site and may create a safety hazard. For example, if a drum of spent paint thinner is exposed to the sun for a prolonged period of time, the vapor pressures could rise and cause the drum to leak material into the environment.

8. Emergency spill and control equipment will be readily available. Such equipment will include, but not limited too, alarms or emergency signals, telephones, radios, fire extinguishers, personal protective equipment, absorbents, and eyewash stations.

Generator Storage Bldg / HazMat Bldg

40 CFR 262.34, 265.35, 265.174

The Generator storage area will be in the **Hazardous Material Storage Facility**. All waste from satellite accumulation areas will be transported to this facility.

To maintain compliance with safety and environmental regulations, housekeeping will be the responsibility of all employees who place containers at the Hazardous Material Storage Facility. The level of cleanliness and orderliness accepted by management sends a strong signal to both employees and regulatory agencies to the importance management attaches to proper handling, storage, and disposal of all types of materials, including hazardous wastes.

Housekeeping issues may include opened containers, missing labels (both chemical and waste containers), discolored soils and chemical residues in and around storage areas, garbage, trash pallets, scrap metal, and equipment.

To ensure compliance with safety and environmental regulations pertaining to handling and storing hazardous waste, whether in the **Satellite Accumulation** areas or **Hazardous Material Storage Facility**, employees will observe the following federal regulations and policies:

1. All waste placed at Project accumulation areas shall be in new, DOT approved drums (which previously *have not* held chemical products or wastes). New drums may be obtained from the HazMat Facility or contact the Environmental Section.
2. Containers will be sealed at all times unless waste is added or removed.
3. Do not smoke or conduct operations that create potential ignition sources, such as cutting or welding, within 50 feet of any hazardous waste storage area.
4. Know what personal protective equipment (gloves, goggles, Tyvek etc.) is required when handling any waste.
5. Have proper absorbent material accessible should a spill or leak occur during transport.

6. All drums shall be properly marked and/or labeled.
7. Immediately notify the Environmental Section if containers are damaged, leaking or when there is a visible oil sheen in the storage area.
8. Store containers in rows with three feet of aisle space between rows. Aisle space is necessary for inspection of containers and emergency response purposes.

The Environmental Section will inspect containers at the Hazardous Waste Storage Facility weekly for proper labeling, leaks or corrosion, and adequate aisle space between containers and monthly at all SAA.

Spill kits are located at the Hazardous Waste Storage Facility and in all SAA. They may be used to clean up minor spills. However, employees will not attempt to clean up any spill unless they have successfully completed Hazard Communication/Awareness Training. If items from the spill kit are used, replace them.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

29 CFR 1910. 132, 133(a), 95, 134, 135, 136

This section is not intended to provide specific information on what personal protective equipment (PPE) is appropriate for your job, but is intended to provide a generic overview of PPE set forth in OSHA standards. Refer to the MSDS to obtain PPE information.

All employees must be trained in the proper use of personal protective equipment for their specific job duties. If you are not sure what types of protective equipment are required for working with hazardous wastes, immediately contact your Foreman or Supervisor.

Before performing any work requiring personal protective equipment, employees must be trained to know when personal protective equipment is necessary, what type is necessary, how it is to be worn, its limitations, as well as its proper care, maintenance, useful life, and disposal (JHA). **Remember to check the MSDS to find the appropriate protective equipment for the chemical you are using.** Protective clothing and equipment that might be required include:

- Safety glasses, goggles, or face shield
- Gloves
- Rubber boots or special shoes
- Protective suits (Tyvek)
- Respirators

SPILL CONTROL

29 CFR 1910 & 40 CFR 112

Spills may occur during container handling or as a result of leakage from damaged drums or other containers. These spills have the potential to cause health impacts to the employee, damage to the environment, and damage to Ship and Moorings property.

The Bureau follows specific procedures for spill cleanups as outlined in **the Spill Prevention Control and Counter Measure Plan** (Oil Spill Response Plan). It is important to review the Spill Plan for details on spill response procedures.

Employees will only attempt to control and contain incidental Hazardous spills as outlined below in this section

Identification of the spilled substance and its characteristics is a critical factor in determining the most effective cleanup procedure and whether additional support is necessary. It is important that employees whose jobs require the handling or storage of hazardous substances understand the appropriate health and safety regulatory programs for spill response and cleanup.

***Non-Emergency Response*:** A non-emergency response is an incidental release of a hazardous substance *(Oils)* where the substance can be absorbed, neutralized, or otherwise controlled at the time of the release by employees in the immediate release area, or by maintenance personnel. Responses to incidental releases of hazardous substances where there is no potential safety or health hazard (i.e., explosion, fire, or chemical exposure) are not considered "emergency responses" and are handled under the *Hazard Communication Standard, 29 CFR 1910.1200.*

***Emergency Response*:** An emergency spill response means a response effort by employees from outside the immediate release area or by other designated responders (local fire departments, contracted spill teams, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance (Paints/Solvents/Chemicals…). In these situations, the employee shall only attempt to contain the release from a safe distance, keep it from spreading and prevent exposures.

Emergency Spill Kits: Emergency spill kits are located at various locations at or near SAA. The kits are designed to cleanup minor oil spills. If spill kits are moved, transport them back to their original staging area as soon as possible. Replace any items used. Spill kits are located in the following areas:

TRAINING

49 CFR 172 Subpart H, 29 CFR 1910.120, 29 CFR 1910.1200

To ensure a safe work environment for employees who frequently handle hazardous materials and wastes, it is essential to be familiar with training requirements needed for your project. See your Department Head, Team Leader or Supervisor for questions concerning training.