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1112-1 – Safety and Health Management (Chapter 16)

Hazard Communication

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with Illustrations

Signed by  
James G. Kenna  
Associate State Director

Authenticated by  
Mary O'Leary  
Management Assistant

Attachment 1-1

**H-1112-1 SAFETY AND HEALTH MANAGEMENT**

**Safety and Health Program  
Hazard Communication Program**

**United States Department of the Interior  
BUREAU OF LAND MANAGEMENT  
OREGON STATE OFFICE**

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**SAFETY AND HEALTH PROGRAM  
HAZARD COMMUNICATION PROGRAM**

OR/WA Supplement to BLM Manual Handbook H-1112-1  
Safety and Health Management

**JANUARY 2003  
Oregon State Office**

## H-1112-1 SAFETY AND HEALTH MANAGEMENT

### 16.5.1 Policy Statement

The Oregon/Washington Bureau of Land Management (BLM) is committed to providing a safe and healthful workplace for all employees, visitors, and contractors through the proper identification and handling of hazardous chemicals.

### 16.5.2 Purpose and General Information

Chemicals pose a wide range of health hazards (such as irritation, sensitization, and carcinogenicity) and physical hazards (such as flammability, corrosion, and reactivity). The OSHA Hazard Communication Standard (HCS) is designed to ensure that information about these hazards and associated protective measures is disseminated to workers and employers. All workplaces where employees are exposed to hazardous chemicals must have a written plan which describes how the standard will be implemented in that facility.

The purpose of this program is to ensure that BLM employees are aware of the physical and health hazards associated with the chemicals present and used within their workplace. This program is in compliance with the *OSHA Hazard Communication Standard (Employee Right-to-Know)*, 29 CFR 1910.1020 as described above.

OSHA has recently created two draft documents designed to improve hazard communication by assisting manufacturers and importers of hazardous chemicals to properly evaluate and communicate the hazards of chemicals and thus increase the viability of hazard communication programs in the workplace. [March 2004] The updated website is available at <http://www.osha.gov/sltc/hazardcommunications/index.html>.

In addition to the hazard communication standard, the site provides OSHA compliance assistance, other technical resources, and information on the Globally Harmonized System (GHS). The GHS, an international mandate adopted in 1992, intends to create a globally harmonized hazard classification and compatible labeling system, including materials safety data sheets (MSDSs) and easily understandable symbols, by the year 2000. The United States was an early and active supporter of a globally harmonized approach to hazard communication. A PowerPoint® presentation that provides an overview of the GHS is available on the BLM Intranet Safety web page at <http://web.or.blm.gov/safety/training/training.htm>. Scroll to the Oregon State Office PowerPoint® training presentations under “Hazard Communication Training.”

### 16.5.3 Scope

All OSO employees<sup>1</sup> who use any chemical containing products in their workplaces will be provided with

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<sup>1</sup> By definition, an individual is considered to be a BLM employee whether in a permanent, temporary, part-time, seasonal, or voluntary position. The term - all OSO employees - refers to all individuals hired out of the Oregon State Office, including those employees assigned to various field locations.

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information and training prior to initial assignment to work with a hazardous chemical. Employees will be offered refresher training whenever the identified hazard changes (e.g., a new product is purchased for use). OR/WA districts may use this policy as a template to create a Hazard Communication Program specific to site needs. Policies must meet the minimum requirements of the OSHA General Industry Standard 29 CFR 1910.1200 – Hazard Communication.

### 16.5.4 Responsibilities

The Safety and Occupational Health Manager for each district is the overall coordinator of this program, acting as representative for the District Manager/State Director, who has overall responsibility for the health and safety of all employees. The Hazard Communication Program is managed in coordination with the Hazardous Materials Management Coordinator (Environmental Protection Specialist) for each district who is responsible for waste minimization, spills, releases, and disposal; and, with supervisors who are directly responsible for the safety and health of assigned employees.

Each Branch Chief/Supervisor is responsible for an Annual Inventory of all chemicals used in the workplace. This inventory (and any updates) is completed on Form OR-1112-20 (Reference Illustration 1) by **April 1st** [or other date specified by individual districts) of each year. The inventory should be available for employee review at all times. This form is available on the BLM Intranet site under 'Forms.'

Employees must comply with all chemical safety requirements as detailed in this program. Employees should use only those chemicals for which they have been trained; and, use every chemical in the proper manner and only for the specific task assigned. Employees are encouraged to report any issues or concerns regarding the storage or the use of chemicals or chemical-containing products to their supervisor. Immediate reporting of spills is encouraged.

### 16.5.5 Hazard Determination

Employees should assume that all chemicals are hazardous. A hazard determination must be made of each chemical used by BLM employees. This process will be completed prior to the actual use of any product. Determination of the hazards posed by certain products or chemicals is made by the manufacturer or supplier and is provided to the user via the Material Safety Data Sheet (MSDS). The hazard determination provides hazard information associated with various products and chemicals.

### 16.5.6 Task Evaluation

Each task requiring the use of chemicals will be evaluated to determine the potential hazards associated with the work. This evaluation must include the chemical or combination of chemicals that will be used as well as other materials that may be used near the work. All operations must be planned to minimize the generation of hazardous wastes. Safe operating procedures should be prepared and followed each time chemicals are used.

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### 16.5.7 Material Safety Data Sheets (MSDSs)

Chemical manufacturers and importers are required to obtain or develop an MSDS for each hazardous chemical they produce or import. Distributors are responsible for ensuring that each customer is provided with a copy of these MSDS forms.

MSDS forms are obtained when a product is purchased. Requisitions submitted for purchase should include a statement addressing the need for an MSDS to be supplied by the manufacturer of the product ordered. Upon receipt, all MSDS forms should be reviewed and information shared with employees who will be using the product. These forms should be accessible to employees at all times during the workday.

MSDS forms generally contain the following information:

- Common name/chemical name of the product
- Name, address and phone number of the manufacturer
- Emergency phone numbers for immediate hazard information
- Date when MSDS was produced
- A listing of all hazardous ingredients in the product
- Any chemical hazards of the product
- A list of chemical and physical properties of the product.
- A listing of health hazards
- Information regarding fire and/or explosive hazards of the product
- The stability of the product
- Safe storage requirements and guidelines
- Safe handling procedures

Employees should know the location of any MSDSs in the workplace and have a basic understanding of the safety practices and information provided on this form. All MSDS forms should be routinely updated.

MSDS forms should not be discarded. OSHA considers these forms as part of employee medical records and requires retention by the employing agency for thirty (30) years. MSDS forms that are outdated or no longer used (e.g., as when the product associated with the form is not in use) may be *archived* by routing them to the Safety Manager with general information regarding branch number, use of product, and the signature of the supervisor.

If a specific MSDS form is found to be missing when a hazardous chemical product is purchased (or at any other time), the supervisor (or designated employee) will immediately contact the manufacturer of the product and request the form prior to use of the chemical. [Most manufacturers post MSDS forms on their websites for convenient access.] The district Safety office can assist supervisors in obtaining MSDS forms.

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The University of Vermont (<http://www.hazard.com/msds/index.htm>) and Cornell University (<http://msds.pdc.cornell.edu/msdssrch.asp>) both have web sites where MSDS forms can be obtained if the product manufacturer cannot provide same. Additional web sites listing MSDS information can be found on the safety intranet site at <http://web.or.blm.gov/safety/resources.htm>.

### 16.5.8 Product Warning Labels

All containers of hazardous chemicals are required to be *consistently* labeled, tagged or marked; correctly identifying<sup>2</sup> the materials and illustrating the appropriate hazard warning.<sup>3</sup>

These labels will be securely placed on all containers in such a way as not to create an additional hazard. Supervisors are responsible for ensuring that all chemicals/products in the workplace are properly labeled and stored. Labels must include the following information:

- Identity of all hazardous chemicals
- Appropriate hazard warnings
- Name and Address of manufacturer, importer or vendor

Portable secondary containers are not required to be labeled if the employee transferring the chemical from the labeled container retains immediate possession of the secondary container and uses the entire contents of this container within one work day.

Existing labels should not be removed or defaced on any hazardous chemical containers. New labels with the required information will be attached to containers if the original label is no longer legible due to use, wear, weather or discoloration.

### 16.5.9 Employee Training

All employees who work with chemicals or chemical containing products are required to receive training on the safe use of those products. Training will be provided by the supervisor at the time the employee is assigned and any time a new product is introduced into the workplace.

Initial Orientation All new employees shall receive safety orientation training from the supervisor reviewing the elements of the hazard communication program.

Job Specific Employees will also receive on the job training from their supervisor as required. This training will cover the proper use, inspection and storage of necessary personal protective equipment and chemical safety training for the specific chemicals used.

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<sup>2</sup> Note that all marking must be identical to the name of the chemical as displayed on the MSDS form.

<sup>3</sup> Example – Health Hazard Data: Inhalation/Swallowing (ingestion)/Absorption (through the skin): Result of exposure could be *acute or chronic*. Symptoms of exposure may also be listed [such as headache or skin rash].

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Annual refresher training This training will be provided to ensure all employees are aware of any hazards associated with products used in the workplace. At a minimum, this training will consist of the following information:

- A review of the written Hazard Communication Program
- Review of the annual chemical inventory [list of chemicals] used in the workplace [to include proper use of all chemicals]
- The specific physical and health hazards of all chemicals listed on the inventory
- Specific control measures for employee protection from identified physical or health hazards of chemicals [use of personal protective equipment, such as gloves, face shields, etc.]
- Basic first aid procedures for accidental exposure
- General information of the chemical labeling system
- Location, content and use of MSDS forms

The assist supervisors with this required training, a PowerPoint® presentation has been created and is available on the BLM Intranet Safety Web page at the following site.

<http://web.or.blm.gov/safety/training/training.htm>.

This site also contains additional training aids including preparation notes for supervisors, an informal hazard communication quiz (also part of the PowerPoint® program), and a certificate of training completion.

### 16.5.10 Non-Routine Tasks

Non-routine tasks are defined as working on, near, or with unlabeled piping, unlabeled containers of an unknown substance, confined space entry where a hazardous substance may be present and/or a one-time task using a hazardous substance differently than intended. An example of a non-routine task would be using a solvent to remove stains from a floor.

Supervisors assigning any non-routine tasks will ensure that a *Risk Assessment (RA)* is completed and that employees are informed of the hazards associated with the use of the chemical and which type of personal protective equipment should be used.

### 16.5.11 Procurement, Use, Disposal and Hazardous Waste Minimization

Employees, supervisor and managers must follow waste minimization practices to reduce the volume and toxicity of waste generated in the workplace, to lower hazardous waste disposal costs, and to promote recycling. The following lists suggested practices to accomplish waste minimization:

- Substitute less hazardous products
- Reduce to a minimum the number of different products used
- Purchase only the amount of the product needed
- Maintain and store chemicals to protect against damage and spillage

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- Separate incompatible chemicals; store as required
- Create work plans to reduce leftover chemicals/materials

Waste minimization practices are under the direction of the District Hazardous Materials Management Coordinator (Environmental Protection Specialist). Assistance in implementing any waste minimization practices will be provided by the coordinator.

### 16.5.12 Chemical Storage

The separation of chemicals (solids or liquids) during storage is necessary to reduce the possibility of unwanted chemical reactions caused by accidental mixing. Explosives should be stored separately outdoors. Use either distance or barriers (trays) to isolate chemicals into the following groups:

- Flammable liquids: store in approved flammable storage lockers
- Acids: treat as flammable liquids
- Bases: Do not store bases with acids or any other materials
- Other liquids: ensure other liquids are not incompatible with any other chemical in the same storage location
- Lips, strips, or bars are to be installed across the width of storage shelves to restrain the chemicals in case of earthquake

No chemicals are to be stored in the same refrigerator used for food storage. Any refrigerator used specifically for storing chemicals must be appropriately identified by a label on the door.

### 16.5.13 Off-Site Use or Transportation

An MSDS will be provided to employees for each chemical and each occurrence of use or transport away from BLM office facilities. All State and Federal Department of Transportation (DOT) Regulations will be followed, including the use of secured, certified containers, proper labeling and marking. Appropriate training must be provided to employees. The Hazardous Materials Management Coordinator will assist supervisors in compliance efforts.

Field employees (as well as all District office employees) receive required MSDS information for hazardous chemical use through their immediate supervisor prior to assignment of any work tasks which will include the use of such chemicals. Required personal protective equipment is identified and supplied to each employee who will use these hazardous chemical in their work efforts. A *Risk Assessment*<sup>4</sup> (RA) is prepared to document the work task and chemicals used as well as determine the associated hazards.

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<sup>4</sup> The Risk Management process is used for all workplace and operational hazard assessment requirements and generally includes justification for the authorization, purchase and use of protective clothing and equipment. All assessments are documented on the BLM Risk Management Worksheet (BLM Form 1112-5).

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### 16.5.14 Housekeeping

Proper housekeeping is very important when working with chemicals in the workplace. Only the smallest possible inventory of chemicals needed should be in the inventory. The stock of chemicals should be periodically reviewed. Storage areas, or equipment containing large quantities of chemicals, should be secured from accidental spills. Empty chemical bottles that contained acids or chemicals solvents and which are scheduled for disposal should be thoroughly rinsed. *Do not* place hazardous chemicals in salvage or garbage receptacles, do not pour chemicals on the ground or dispose of chemicals through the storm drain system, and do not dispose of highly toxic chemicals in sinks or sewers.

### 16.5.15 Spills (Chemical) and Emergency Procedures

Employees should never engage in chemical spill containment, clean up or disposal. Only personnel specifically trained in chemical emergency response are permitted to participate in emergency procedures beyond those required to evacuate the area. Upon encountering a hazardous chemical spill, the site must be secured and all employees must evacuate the area immediately. Report the incident as soon as possible to the Hazardous Materials Management Coordinator and the Safety Office.

### 16.5.16 Multi-Employer Worksites/Contractors

All contractors working with Bureau employees or within Bureau facilities are required to follow the requirements of this Hazard Communication Program. Each office, through the contracting officer representative [COR], will provide all contractors, prior to authorization to start work, with information regarding the use of any hazardous chemical which may be encountered during the course of the contract work. Applicable MSDSs will be provided to all contract employees. The pre-work discussion will be documented and a copy kept in the contract file. In turn, contractors intending to use any hazardous materials during fulfillment of contract work must notify the COR.

Employee notification regarding scheduled maintenance procedures<sup>5</sup> is accomplished promptly and in advance of starting work. Any hazardous chemicals used by contractors during the work effort will be identified and precautions taken to prevent employee exposure.

Example Notification Process (OSO): The building manager notifies the State Director's office (and other agency directors) who in turn notify (via email) Branch/Staff chiefs to ensure that all employees are aware

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<sup>5</sup> For the Oregon State Office, the Melvin Mark® building maintenance department or other contracted services perform all identified maintenance requirements.

of the type of maintenance work to be performed and the intended date for such work. Required precautionary steps to eliminate any associated hazards to employees are outlined and initiated. Employees are encouraged to contact their supervisors regarding any additional concerns or concerns. A similar notification process may be developed at each district to meet requirements.

## H-1112-1 SAFETY AND HEALTH MANAGEMENT DEFINITIONS

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**Absorption** – The passage of one substance into or through another

**Acute health hazard** – An adverse effect on the human body where symptoms usually develop after brief exposure

**Asphyxiation** – Death resulting from lack of adequate oxygen, presence of noxious agents, or other obstruction to normal breathing

**Carcinogen** – substance that causes cancer

**Chemical Inventory** – A list of hazardous chemicals known to be present in a facility or work area

**Chemical** (OSHA) “...any element, chemical compound or mixture of elements and/or compounds.”

**Chronic** – An adverse effect on the human body, with symptoms that develop slowly over a long time, usually after long-term exposure

**Common Name** – Any designation or identification other than the chemical name used to identify a chemical (e.g., code name, code number, trade name, brand name, generic name)

**Corrosive** – A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact

**Density** – A number that relates a substance’s weight to its volume. Densities of solids and liquids are compared with that of water, which is 1; substances with densities greater than 1 sink in water; those less than 1 float.

**Dermatitis** – Inflammation of the skin

**Exposure** (OSHA) “...subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption), including accidental or possible exposure

**Flash Point** (OSHA) “...the minimum temperature at which a liquid gives off vapor in sufficient concentration to ignite.”

**Hazardous Chemical** – Any chemical that is a physical hazard or a health hazard

**Hazard Warning** (OSHA) “...any words pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning that conveys the hazards of the chemical(s) in the container(s).”

**Impervious** – Chemically resistant to specific chemicals

**Incompatible** – Materials that should be kept apart due to hazards that may result if they come into direct contact

**Inflammation** – Tissue reaction to injury

**Instability** – Explains how likely a substance is to change under normal conditions

**Particulates** – Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog found in air or emissions

**Physical Hazard** (OSHA) “...a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, organic peroxide, oxidizer, pyrophoric unstable (reactive), or water reactive.”

## H-1112-1 SAFETY AND HEALTH MANAGEMENT Overview of Office Chemicals and Suggestions for Use

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Hazardous chemicals can exist in all offices. Even seemingly safe offices have some chemicals which, if handled incorrectly can be hazardous to employee health. For instance, certain cleaning products which use an organic-based solvent could cause serious irritation if splashed into the eyes. But more importantly, if the vapors from some solvents or other chemicals are inhaled in high concentrations they can lead to respiratory irregularity (breathing difficulties), dizziness, and possibly unconsciousness and cardiac arrest.

Chemicals can be absorbed into the body in three ways:

- ◆ Inhaled through the mouth and nose as vapors;
- ◆ Ingested through the mouth with food, drink or smoking materials;
- ◆ Absorbed through the skin into the bloodstream

Handled properly, ordinary office products should not be a safety hazard. As a safety check-up, each employee should ask the following questions:

- ? Am I using the correct chemical for the task?
- ? Am I using the safest product available?  
{For instance, don't use solvents to wash photocopier inks from the hands. Instead, use lots of soap and water and a nail brush.}
- ? Am I authorized and qualified to be using these chemicals?  
{Mixing incompatible chemicals can have disastrous results. For example, ordinary household bleach and ammonia [usually found in dish detergents] create a poisonous gas when mixed together.}
- ? What are the hazards associated with any of these chemicals?
- ? Do the vapors cause respiratory problems?
- ? If ingested is this product poisonous?
- ? Is this chemical flammable if exposed to heat sources?
- ? Will this liquid cause burns to my skin or irritate my eyes?  
Read printed information and warning labels on the products carefully. Also take the time to read any available Material Safety Data Sheet [MSDS] before using any chemical. If the MSDS is not available in the work place, report this to the supervisor.}
- ? Do I know how to protect myself from the effects of this chemical?  
{Consider the use of thin rubber or plastic gloves when changing photocopier and printer ink cartridges. For some products, the directions may recommend the use of respiratory and eye protection. At the very least, always work in well ventilated areas because even a small concentration of some types of vapors or particles can be harmful. Wash hands thoroughly with soap and water after using any chemical product and especially before eating, drinking or smoking. Never smoke when handling chemicals.}
- ? Do I know what to do in an emergency?  
{If you or someone else is suffering from the side-effects of a chemical, follow the emergency plan. Know how to call for medical assistance. Learn the basic first aid treatment for the chemical BEFORE use. Sometimes something as simple as getting yourself or another victim to a fresh air supply is all that is needed to counter the side-effects.}
- ? If the chemical starts a fire, do I know where the nearest fire alarm is and how to use it?
- ? Do I know how to correctly use a fire extinguisher?
- ? Do I know how to get to the emergency exits from my work area?  
[Planning ahead can make a big difference during an emergency.]

**H-1112-1 SAFETY AND HEALTH MANAGEMENT  
Annual Chemical (Hazardous Materials) Inventory Sheet\***

\*(Official form may be referenced on the Safety Website and the BLM Forms Link on the Intranet.)

**For Illustration Only**

<b>US Department of the interior Bureau of Land Management Annual Chemical (Hazardous Materials) Inventory Sheet</b>								Page # _____  Inventory Completed By _____  <hr/> Date _____	
State _____  Building Name _____				District/SO/Branch _____  Work Area _____					
Company Name Address - Phone	Product Name	Product Number	Form Number	Cont. Size	No. of Cont. On Hand	National Stock Number NSN	User(s)	Remarks	MSDS on Hand (Yes/No)

OR-1112-20 (January 2004)

**FORM Numbers**

- 1 – Liquid
- 2 – Aerosol
- 3 – Solid
- 4 – Gel
- 5 – Paste
- 6 – Powder
- 7 - Gas