

Revision No. 4	04 / 2007	Page 1 of 6
<b>Kennecott Utah Copper Corporation Safety and Health Standards</b>		<b>Standard No. 10.1 Hazard Communication</b>

10.1.1 **INTRODUCTION**

10.1.1.1 This Standard addresses the issue of evaluating and communicating information on “Hazardous Substances”. A hazardous substance applies to chemicals, dangerous goods, and hazardous materials, including process and non-process materials. It covers hazard evaluation, control program design, and control program evaluation, to ensure that employees, contractors and third parties will not suffer adverse health effects from hazardous substances either used or generated by the company.

10.1.1.2 The Standard also addresses hazardous substance procedures, actions and plans to ensure that:

- o Labels and / or appropriate warnings are in place.
- o Material Safety Data Sheets (MSDS) are obtained and distributed such that they are readily available to employees.
- o Employees are appropriately informed and trained by their supervisors.
- o Employees are informed concerning non-routine tasks.
- o Contractors are informed when their employees may be exposed while working in plant areas.

10.1.2 **REQUIREMENTS**

10.1.2.1 The KUCC Hazard Communication Program, Hazard Communication regulations, and access to appropriate MSDS will be available to employees, contractors and other affected parties on the KUCC Intranet. Each facility shall designate central locations where interested parties can access the information.

10.1.2.2 Hazardous substances must be prioritized and controlled in a manner consistent with KUCC Safety and Health Standard 5.4 Risk Management, to ensure employee exposure to these substances is minimized.

10.1.2.3 A hazardous substance inventory system must be available and be used to control the purchase, use, storage and disposal of new materials to operations, including those brought in by contractors. The master list of hazardous substances used throughout KUCC will be maintained by the HSE Department. The master list will be sub-divided into plant lists and will be available on the KUCC Intranet. The lists will be reviewed annually by the HSE Department

<b>References:</b> UOSH Hazard Communication Standard Chapter Z, part 1200 MSHA Hazard Communication Standard 30 CFR Part 47 KUCC Safety and Health Standard 14.2 Purchasing Procedures KUCC Safety and Health Standard 16.1 Hot Work Permit KUCC Safety and Health Standard 16.2 Confined Space Entry Requirements KUCC Safety and Health Standard 5.4 Risk Management NFPA – 704 Standard System for the Identification of the Hazards of Materials Rio Tinto Occupational Health Standard B4 Hazardous Substances					
<b>Signatures</b>					
Original signed by: Frank Klobchar	5/11/07	Original signed by: R. McGowan Jackson	5/23/07	Original signed by: Bill Champion	5/24/07
_____ Standards Committee Chairman	_____ Date	_____ General Manager HSEQ	_____ Date	_____ President, KUCC	_____ Date

and designated supervisory personnel.

10.1.2.4A coordinator must be assigned the accountability for maintaining the hazardous substance inventory at the plant level. The coordinator will ensure a MSDS is obtained and forwarded to the HSE Department for review and approval prior to adding any new item to the list.

- Safer alternatives and / or means to limit worker access to hazardous chemicals / substances must be included in the review process.

#### **LABELING, WARNINGS and CONTROLS**

10.1.2.5 Containers of hazardous substances must be properly labeled by the manufacturer, importer or distributor, as required by the regulatory Hazard Communication Standards. If any container of a hazardous substance is received that is not properly labeled, receipt of the container will be refused and the manufacturer, importer, or distributor will be required to reclaim or promptly label the container as required.

10.1.2.6 All container labels must indicate identity, precautionary requirements and date of expiration, where relevant. Container labels shall also indicate the target organ affected by exposure to that substance. Employees shall be instructed to consult the MSDS for target organ effects of a specific substance.

- Appropriate PPE for skin and eye protection must be selected with regard to the potential hazards likely, permeability, penetration, resistance to damage and compatibility with the work tasks.

10.1.2.7 All original product labels should be kept on the containers. If original labels or warning tags on containers of a hazardous substance become obliterated or accidentally removed during handling and use, the supervisor responsible for the work area using the hazardous substance will promptly ensure that the container(s) is re-labeled or an appropriate warning tag is attached. Labels can be obtained from the Facility Environmental Engineer.

- If the supervisor is uncertain of the contents in a container, the Facility Environmental Engineer shall be contacted and the contents shall be sampled. All sampling must be conducted by the Facility Environmental Engineer or other designated (qualified) person.
- Prior to disposal, empty containers / equipment must be properly decontaminated.

10.1.2.8 Willful destruction or removal of warning tags from containers of a hazardous substance is prohibited. To do so may result in disciplinary action.

10.1.2.9 Where it is not feasible to label permanently installed containers such as stationary storage or process vessels, warning signs, placards or other appropriate warning media will be posted in the immediate area.

10.1.2.10 The National Fire Protection Association (NFPA) 704 Hazard Identification system will be used for all hazard-warning postings. If the Hazard Materials Identification System (HMIS) is currently in place, it will be considered acceptable until sign replacement is required because of damage or deterioration.

10.1.2.11 Storage facilities must be secure and protected from damage. They must also be designed for easy access for fire fighting. Where applicable, the storage facility must protect chemical containers from physical damage due to temperature extremes, moisture, corrosive mists or vapors and vehicles.

10.1.2.12 Stored hazardous substances must be adequately segregated based on:

- Quantity of materials stored;
- Physical state of the chemicals (solid, liquid or gas);
- Degree of incompatibility; and
- Known behavior of the materials.

10.1.2.13 Emergency showers and eye-wash stations must be available where required by law, or where their need is indicated by risk assessment, and then appropriately located and sign posted. Workers must be trained as to their location and use.

#### **MATERIAL SAFETY DATA SHEETS**

10.1.2.14 The properties of materials brought to site, site products, intermediates, by-products and wastes must be adequately understood and documented with regard to their ability to impact on health. A MSDS must be obtained where applicable and when required by law prior to using hazardous substance.

10.1.2.15 MSDS must comply with the more comprehensive of the 'Globally Harmonized System' for MSDS or local regulatory requirements and provide the following minimum information:

- Manufacturing or supplying company contact details and date of issue.
- Identification section – substance name, its use, major ingredients, UN number or Dangerous Goods Class designation and specific properties (e.g. odor, appearance, flash point, etc).
- Health hazard information and first aid (when inhaled, swallowed or contacted).
- Precautions for use, including exposure limits, engineering controls, PPE and flammability.
- Safe handling information for storage, transport and disposal.
- Emergency procedures for spills, and fire and explosion hazards.
- Environmental hazard information, and
- Revision date; and revised, as necessary, every 5 years.

10.1.2.16 MSDS, or a computer database containing MSDS, must be readily available to employees, contractors and other affected parties (eg. local community, emergency services), and be in the language(s) commonly used on site.

10.1.2.17 When a new product is proposed for use at KUCC, the manufacturer or distributor shall supply a MSDS. The person responsible for obtaining, ordering or specifying the product not presently in use, will notify the HSE Department prior to receiving the new product. A copy of the MSDS shall be forwarded to the HSE Department so that it may be reviewed, approved, assigned an identification number, and entered into the KUC master MSDS system. (See KUCC Safety and Health Standard 14.2)

10.1.2.18 The KUCC master MSDS data system shall be updated as needed. The HSE Department is accountable for maintaining the MSDS system

10.1.2.19 A MSDS must be used to:

- Provide adequate information regarding health effects, precautions and safe handling practices to end users of all hazardous materials/substances on site.
- Conduct a risk assessment to determine the need for workplace monitoring, medical surveillance and controls.
- Prepare workplace labels as necessary; and

- Provide emergency response information.
- 10.1.2.20 A MSDS for products and any process or waste materials sent off site must be sent to the customers. When new information concerning health hazards or protective measures is obtained for a substance, the new information must be included in the MSDS and must accompany any subsequent shipments of the material within three months from the time the information becomes available. The MSDS will be maintained and updated by the HSE Department and included in the KUCC master MSDS system.

#### **NON-ROUTINE TASKS**

- 10.1.2.21 When performing non-routine tasks such as cleaning enclosed vessels or tanks, the following methods and procedures will be implemented prior to beginning the task.
- As applicable, all provisions of KUCC Safety and Health Standards 16.2 (Confined Space Entry) and 16.1 (Hot Work Permit) shall be followed.
  - An assessment to determine the potential chemical hazards that may be involved will be conducted. The review should include knowledgeable individuals representing Operations, Maintenance, Technical, and HSE.
  - A written work plan will be developed outlining each step to be followed, the potential hazards involved and the personal protective equipment required.
  - The HSE Department or a properly trained and qualified person will conduct air monitoring before and during work where exposure to hazardous airborne materials may be encountered.
  - Portable ventilation equipment, portable eyewash and showers or hose with running water, and any other emergency equipment that may be required will be provided at the job site.
  - Employee(s) assigned to the task will be trained using the developed work plan prior to beginning work.
- 10.1.2.22 The assessment as to potential for adverse exposure during routine and non-routine or intermittent operations or tasks must be conducted and include:
- Inhalation as airborne particulate, gases, or vapors.
  - Skin contact with hazardous substances; and
  - Ingestion of hazardous substances.

#### **CONTRACTOR INFORMATION**

- 10.1.2.23 Prior to beginning work in plant areas where hazardous substances may be present, the responsible project coordinator will review the KUCC Hazard Communication Program in a pre-job conference with the contractor. The KUCC project coordinator will be responsible to ensure that the contractor complies with the Hazard Communication Program.
- 10.1.2.24 The contractor will be provided with the following information:
- The location and availability of the KUCC Hazard Communication Program.
  - A list of hazardous substances that may be present in the plant area(s) where contract work will be performed.
  - The location and availability of MSDS for hazardous substances

#### **TRAINING**

- 10.1.3.1 Safe working procedures and training in the handling, transport and storage of hazardous substances, appropriate storage facilities, and personal protective equipment must be provided as follows:

- The HSE Department is responsible for developing the basic training program and conducting training for new employees.
- Supervisors are responsible for ensuring that training is properly conducted for employees assigned to specific tasks involving a hazardous substance.
- Information to be provided to employees will include the following:
  - A review of the requirements set forth in the Hazard Communication Program including an explanation of the labeling system, MSDS system, and how employees can obtain and use the information concerning hazardous substances.
  - A review of the operations involving hazardous substances in the work area.
  - The location and availability of the Hazard Communication Regulations, KUCC Hazard Communication Program, and MSDS pertaining to chemicals in assigned work areas.
  - A review of methods and observations used to detect the presence, or release of hazardous substances in the work area. This review will include a discussion concerning personal exposure monitoring programs, continuous monitoring, alarm systems, and other means of detection such as visual appearance or odor of hazardous substances.
  - A review of physical and health hazards of the chemicals in the work area. This review should include a discussion of the target organ affected by exposure to each specific chemical.
  - A review of specific safe work practices and precautions (task training) pertaining to hazardous substances that the employee will be assigned to work with or around.

#### 10.1.4. **RESPONSIBILITIES**

10.1.4.1 The HSE Department is responsible for the following:

- Maintaining the master list of hazardous substances and the MSDS database program on the KUCC Intranet.
- Preparing MSDS for all products and any process or waste materials sent off site.
- Developing the basic Hazard Communications training program and conducting training for new employees.

10.1.4.2 The plant manager is responsible for assigning a coordinator who is accountable for maintaining the hazardous substance inventory at the plant level. The coordinator will ensure a MSDS is obtained and forwarded to the HSE Department for review and approval prior to adding any new item to the list.

10.1.4.3 Any person who obtains, orders or specifies a chemical not presently in use, is responsible for notifying and providing a copy of the product MSDS to the HSE Department prior to receiving the new chemical so that it may be evaluated.

10.1.4.4 Supervisors are responsible for:

- Ensuring that Hazard Communication training is properly conducted and documented for employees assigned to specific tasks involving hazardous substances.
- Ensuring that the container(s) are promptly re-labeled or appropriate warning tags are attached if the original labels or warning tags become obliterated or accidentally removed during handling and use.

10.1.4.5 The KUCC contractor project coordinator is responsible for reviewing the KUCC Hazard Communication Program in a pre-job conference with the contractor prior to beginning work in

plant areas where hazardous substances may be present.

**REVISION HISTORY**

Revision #	MOC#	Description of Change	Prepared By	Date
4	TS00116	General review and revision of standard	KUCC Safety and Health Standards Committee	04 / 2007