Hazard Communications Program

Contact: Director of Risk Management

1. Introduction
    a. Rogue Community College is committed to the safe requisitioning, handling and storage of all chemicals and to the prevention of exposures that could result in injury and or illness. Rogue Community College is also committed to complying with all applicable federal, state and local health and safety codes and regulations. To ensure that all affected employees and student employees are provided with the necessary information concerning the dangers of all hazardous chemicals used by Rogue Community College, the following Hazard Communication Program has been established.
    b. This program applies to all faculty, staff and student employees on all properties and facilities owned or operated by Rogue Community College, all faculty, staff and student employees while not on college owned or operated property but while participating in a college sponsored event or activity and all employees and locations outlined in the Rogue Community College Telecommuter Agreement.
    c. The Hazard Communication Program will be reviewed, updated and maintained by the Rogue Community College Risk Management Department. A printed copy of the program is available at the Risk Management office.
    d. Rogue Community College shall furnish to each of his employees, employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to employees.

2. Chemical Inventory Management
    a. The Risk Management Department will be responsible for document retention related to the Hazard Communication Program for all programs except for the Science Department programs and will maintain the following records for the length of time listed below. All Science Department Program Safety Data Sheets will be reviewed and retained by the Science Department Lab Coordinators following the same guidelines listed below. The documents may be retained in hard copy format or in electronic format at the discretion of Rogue Community College.
    b. Rogue Community College, with the exception of the College's Science Department, utilizes an online system to store Hazardous Chemical Safety Data Sheets that is accessible to all employees at http://roguecc-or.safecollegessds.com/. The system is also accessible in the Risk Management Department office.
    c. Safety Data Sheets for the Science Department programs are maintained on a 3rd party web-based tracking system. Printed copies of each SDS is also located inside a SDS binder in the RWC and RVC Central Supply Room and are available to all college employees.
    d. All hazardous chemical Safety Data Sheets or SDSs will be maintained electronically for 30 years following the date the chemical is last stored or utilized by Rogue Community College.

e. All chemical hazard requisition forms and attached documentation will be maintained for a period of seven years by the Risk Management Department from the date the order was received.
f. All training records related to the Hazard Communication Program will be maintained for a period of seven years from the date of the training by the Risk Management Department.
g. All other documents considered to be employee exposure records as defined by the Oregon Safe Employment Act including, but not limited to, air quality monitoring and testing records, confined space entry permits, and respiratory fit test results will be maintained for 30 years by the Risk Management Department.

3. Chemical Program Management
    a. The Risk Management Department or the Science Department Lab Coordinators are responsible for monitoring all hazardous chemicals that are ordered, handled and stored on any property or in any facility owned or operated by Rogue Community College.
    b. Hazardous chemicals in any form to include solid, liquid, or gas, will not be released for use by Risk Management Department or the Science Department Lab Coordinators (Science Department Chemicals Only) under any circumstances until all of the following steps have occurred. When ordering any hazardous chemical it is important to only order the minimum amount of the chemical needed in order to limit storage and disposal hazards.
        i. Once the determination is made by a College department that a specific hazardous chemical needs to be ordered, the ordering department will need to submit a copy of the chemical's Safety Data Sheet and a signed requisition form to the Director of Risk Management or the Science Department Lab Coordinators before the order is placed.
        ii. The Director of Risk Management or the Science Lab Coordinators for the Science Department programs will review the Safety Data Sheet to determine if the chemical possesses any specific hazards related to storage, use or disposal. The SDS must be updated to include all 16 required sections. The requisition form will then either be approved, denied or sent back to the requesting department for further clarification.
        iii. If the requisition is approved, a signed copy of the requisition will be provided to the ordering department. The original requisition form and the Safety Data Sheet will be maintained by the Risk Management Department or the Science Lab Coordinators for the Science Department programs. The Safety Data Sheet will also be entered into the online tracking system used by Rogue Community College.
        iv. If the order requisition is denied due to concerns related to the safe use, storage or disposal of a chemical, a signed copy of the requisition will be provided to the ordering department with an explanation of why the requisition was denied. The ordering department may appeal the denial. All appeals will be reviewed by the Vice President of College Services.

v. If the requisition is sent back for further clarification, the ordering department will be required to provide any additional requested information before the order will be reviewed again.
vi. Once a product has been approved by the Risk Management Department or the Science Lab Coordinators for the Science Department programs, the product may be re-ordered without any additional approval required. A master list of all approved chemical products will be maintained by the college Risk Management Department.

4. Employee Training
    a. The Risk Management Department will ensure that all employee training related to the College's Hazard Communication Program is completed by a competent and or qualified person as appropriate. Documentation of that training will be completed by Risk Management and kept by the Risk Management Department as part of the employee's permanent file. The following training requirements are outlined in Oregon Safe Employment Act.
    b. Rogue Community College will provide employees with effective information and awareness level training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new chemical hazard the employee has not previously been trained on is introduced into their work area.
    c. Information and training will 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.
    d. Employees must be informed of:
        i. Any operations in their work area where hazardous chemicals are present.
        ii. The location and availability of the written Hazard Communication Program including the required list(s) of hazardous chemicals, and Safety Data Sheets required under the Program.
    e. Employee training must include at least:
        i. 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 Rogue Community College, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.).
        ii. 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; to include symptoms of over exposure.
            1. Chemical are health hazards when they are classified as posing one of the following hazardous effects:
                a. Acute Toxicity
                b. Aspiration Toxicity
                c. Carcinogenicity
                d. Germ Cell Mutagenicity
                e. Reproductive Toxicity
                f. Respiratory or Skin Sensitization

g. Serious eye damage or eye irritation
h. Skin corrosion or irritation
i. Specific target organ toxicity single or repeated exposure.

2. Chemicals are physical hazards when they are classified as posing one of these hazardous effects:
    a. Corrosive to metals
    b. Explosive
    c. Flammable (includes aerosols, gases, liquids, and solids)
    d. Pressurized gases
    e. Organic peroxides
    f. Oxidizers (includes gases, liquids, and solids)
    g. Pyrophoric (includes liquids and solids)
    h. Self-heating substances
    i. Self-reactive substances
    j. Substances that emit flammable gases in contact with water

f. The measures employees can take to protect themselves from these hazards, including specific procedures Rogue Community College has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.
g. The details of the Hazard Communication Program developed by Rogue Community College, including an explanation of the labels received on shipped containers and the workplace labeling system used by Rogue Community College; the Safety Data Sheet, including the order of information and how employees can obtain and use the appropriate hazard information.

5. Storage of Hazardous Chemicals
    a. The storage of all hazardous chemicals on college property will comply with all applicable federal, state and local laws including but not limited to:
        i. The Oregon State Department of Ecology
        ii. The Oregon Safe Employment Act
        iii. The 2015 International Fire Code
        iv. Industry Standards as determined by the Compressed Gas Association
        v. National Fire Protection Association
        vi. Oregon Community Right to Know and Protection Act
    b. Effective June 1st, 2016, all employers that use, handle, or store hazardous chemicals must update alternative workplace labeling and hazard communication programs, as necessary, and provide additional employee training for newly identified physical or health hazards.
    c. Primary Container Labeling for all Chemicals
        i. At a minimum the label will contain the following information:
            1. Manufacturer's name and address
            2. Common or chemical product name
            3. Appropriate hazard warnings
    d. Secondary Container Labeling for all Chemicals

i. At a minimum the label will contain the following information:
    1. Common or chemical product name
    2. Appropriate hazard warnings
    3. The date the container was filled
    4. The name of the individual responsible for the container

e. Exception to Secondary Container Labeling - Immediate use Container labeling for all Chemicals
    i. Does not require any specific labeling if the container remains under the control of the individual who filled it and the product is used up prior to the end of the same shift in which it was filled.

f. Any unlabeled container will be treated as hazardous until testing proves otherwise. The individual department will be responsible for all financial costs associated with testing performed by the RCC Risk Management Department.

6. Hazard Communication Standard Pictogram
    a. The Globally Harmonized System is an international system used to classify hazardous chemicals and standardize hazard information on product labels and safety data sheets, called SDSs.
    b. As of June 1, 2015, the Hazard Communication Standard (HCS) will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.
    c. Pictograms and Hazards
        i. Health Hazard
            1. Carcinogen
            2. Mutagenicity
            3. Reproductive Toxicity
            4. Respiratory Sensitizer
            5. Target Organ Toxicity
            6. Aspiration Toxicity

ii. <u>Flame</u>

1. Flammables
2. Pyrophorics
3. Self-Heating
4. Emits Flammable Gas
5. Self-Reactives
6. Organic Peroxides

iii. <u>Exclamation Mark</u>

1. Irritant (skin and eye)
2. Skin Sensitizer
3. Acute Toxicity (harmful)
4. Narcotic Effects
5. Respiratory Tract Irritant
6. Hazardous to Ozone Layer

iv. <u>Gas Cylinder</u>

1. Gases Under Pressure

v. <u>Corrosion</u>

1. Skin Corrosion/Burns
2. Eye Damage
3. Corrosive to Metals

vi. Exploding Bomb
    1. Explosives
    2. Self-Reactives
    3. Organic Peroxides

vii. Flame Over Circle
    1. Oxidizers

viii. Environment (Non-Mandatory)
    1. Aquatic Toxicity

ix. Skull and Crossbones
    1. Acute Toxicity (fatal or toxic)

d. Chemical storage cabinets
    i. Rogue Community College will not store more than 25 gallons of flammable liquids in a room outside of an approved storage cabinet.

ii. Rogue Community College will not store more than 60 gallons of Category 1, 2 or 3 flammable liquids or 120 gallons of Category 4 flammable liquids in any 1 storage cabinet. No more than 3 such cabinets may be located in a single storage area. Rogue Community College must store quantities in excess of this in an inside storage room.
    1. Category 1 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point at or below 95 °F (35 °C).
    2. Category 2 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point above 95 °F (35 °C).
    3. Category 3 shall include liquids having flashpoints at or above 73.4 °F (23 °C) and at or below 140 °F (60 °C). When a Category 3 liquid with a flashpoint at or above 100 °F (37.8 °C) is heated for use to within 30 °F (16.7 °C) of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint below 100 °F (37.8 °C).
    4. Category 4 shall include liquids having flashpoints above 140 °F (60 °C) and at or below 199.4 °F (93 °C). When a Category 4 flammable liquid is heated for use to within 30 °F (16.7 °C) of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint at or above 100 °F (37.8 °C)
    5. Cabinets must be labeled in conspicuous lettering: Flammable – Keep Away from Open Flame.
    6. Cabinets must be grounded and vented if needed, based on the specific chemicals stored inside the cabinet. Cabinet bungholes must remain closed at all times except when needed for engineered ventilation.
    7. When storing chemicals inside of chemical storage cabinets, ensure that only compatible chemicals are stored together.
    8. Use safety cans that have been approved by the U.S. Department of Transportation (DOT) or a nationally recognized testing laboratory. They may be either metal or plastic and in quantities of five gallons or less.

iii. Do not store flammables with the following:
    1. Oxidizing agents such as chlorates, nitrates, perchlorates, permanganates, and peroxides. They usually do not combust on their own but provide the oxygen to accelerate the combustion rate of other chemicals.
    2. Corrosive chemicals (acids or bases that destructively attack organic and non-organic material). Common acids include sulfuric acid (battery acid), acetic acid, and nitric acid. Although acetic acid and nitric acid are both acids, they are incompatible and require further sepregation. Common alkalis (bases) include ammonium hydroxide, calcium oxide (lime), and sodium hydroxide (lye).

3. Materials susceptible to spontaneous heating and/or explosions. Hydrogen peroxide contacting combustible material can result in spontaneous combustion. Picric acid can be explosive.
4. Substances that react with air or moisture to create heat (water-reactive materials react with water to release a gas that is flammable or presents a health hazard). Sulfuric acid is a corrosive that reacts violently with water, giving off an irritating and toxic fume.

iv. Rogue Community College must separate areas in which flammable liquids are transferred at the same time, in quantities greater than 5 gallons from one tank or container to another tank or container, from other operations by 25-feet distance or by constructing a wall or barrier with at least a one-hour fire resistance rating. Rogue Community College must provide drainage or other means to control spills. Rogue Community College must provide adequate natural or mechanical ventilation to maintain the concentration of flammable vapor at or below 10 percent of the lower flammable limit.

v. Do not store chemicals underneath fume hoods for more than one work day without permission from the Risk Management Department or the Science Department Lab Coordinators.

vi. Rogue Community College must transfer Category 1, 2, or 3 flammable liquids from one container to another only when containers are electrically interconnected (bonded).

7. Compressed Gas Cylinders
    a. Rogue Community College employees who utilize compressed gas cylinders during the performance of their duties are responsible for performing visual inspections of each compressed gas cylinder when it first is delivered and then on a monthly basis. Each employee and their supervisor are responsible for understanding and complying with all State of Oregon Regulations regarding the storage and use of compressed gas. In addition, the State of Oregon incorporates outside standards from multiple organizations including the Compressed Gas Association, the Department of Transportation and the American National Standards Institute. Employees who store or use compressed gas cylinders will be responsible for understanding and complying with all standards outlined by these additional organizations.
    b. Compressed Gas Cylinders will be inspected, stored and utilized in accordance with guidelines established by the Compressed Gas Association. Reference Compressed Gas Association Pamphlets C-6-1968 and C-8-1962.
    c. Rogue Community College will order compressed gas cylinders only from contract vendors.
    d. Any unlabeled cylinder will be treated as hazardous until testing proves otherwise. The individual department will be responsible for all financial costs associated with testing performed by the RCC Risk Management Department.
    e. Safety relief valves will be installed and utilized on all compressed gas cylinders.

f. Compressed gas cylinders should be stored in an organized, ventilated, well-lit place away from combustible materials.
g. All gas cylinders must be stored upright and be firmly secured to a wall or a cart designed for use with compressed gas cylinders.
h. Any storage area must be protected from excessive heat, open flame, or ignition sources.
i. Storage outside should be above grade, dry, and protected from weather conditions.
j. Any department that changes quantity of compressed gas cylinders or changes location of the stored cylinders within a building needs to immediately notify the Risk Management Department in order to comply with the Oregon State Fie Marshall.

8. Levels of Responsibility
    a. College
        i. Rogue Community College is responsible for all aspects of the Hazard Communication Program
        ii. Rogue Community College is responsible for ensuring a culture that focuses on safety.
    b. Supervisors
        i. Supervisors at Rogue Community College are responsible for implementing the Hazard Communication Program and for creating an atmosphere that focuses on safety.
    c. Employees
        i. Employees are responsible for understanding the Hazard Communication Program and complying with all aspects of the Program.
        ii. Employees are responsible for bringing any concerns, suggestions or thoughts related to any aspect of the plan to the attention of their supervisor.
        iii. Employees are responsible for promptly reporting all spills, exposures, accidents or injuries to their immediate supervisor and to the Risk Management Department.

9. Emergency Response and Chemical Spills
    a. Employees of Rogue Community College will respond to chemical spills or other chemical exposure based on the following guidelines. All spills or exposures regardless of the incident level must be reported to the Risk Management Department and to Campus Facilities.
    b. Level 1 Incident (Small Spill or Exposure)
        i. Level 1 Incidents should be considered small spills or exposures that can be easily contained, extinguished or managed by employees in the immediate vicinity of the incident using available emergency response equipment such as fire extinguishers, chemical spills kits and Personal Protective Equipment already in the employee's possession. The employee must know exactly what chemical has been spilled or exposed, if not the incident automatically

becomes a Level 2 incident. Coordinate with the Risk Management Department for the proper disposal of the spilled material.

c. Level 2 Incident (Medium Spill or Exposure)
    i. Level 2 Incidents should be considered spills or exposures that cannot be easily contained, extinguished or managed by employees using available emergency response equipment. A Level 2 incident would require contacting local emergency response personnel. Contact 911 immediately. Follow building evacuation procedures and be able to provide emergency response personnel with relevant information.
d. Level 3 Incident (Large Spill or Exposure)
    i. Level 3 Incidents should be considered castrophic and have the potential for significant property damage, pose a serious health risk, are a potentially deadly threat to human life or cannot be contained. Contact 911 immediately. Follow building evacuation procedures and be able to provide emergency response personnel with relevant information.

10. Personal Protective Equipment
    a. It is the responsibility of Rogue Community College, as the employer, to conduct a hazard assessment for each job task that has the potential to put an employee at the risk of exposure to a hazard including a chemical hazard. It is the responsibility of the department director or manager to conduct each hazard assessment for each task performed by their employees. That hazard assessment will be submitted to the Risk Management Department for review and retention. If a hazard is determined to exist, Rogue Community College will take the following steps to address the hazard using an established hierarchy of controls:
        i. Elimination of the hazard by replacing the chemical with a non-hazardous or less hazardous chemical substitute.
        ii. Providing engineering controls to remove or reduce the hazard exposure, such as barriers or ventilation.
        iii. Administrative controls to remove or reduce the hazard exposure to include policies, procedures or training.
        iv. As a last resort, if the hazard assessment determines that an employee has a potential exposure, and the options listed above cannot control the hazard, Rogue Community College will provide all personal protective equipment to the employee at no charge. PPE may include goggles, face shields, gloves, aprons, respirators, etc. Details regarding PPE are included in the College PPE Program.

11. Introduction of Chemicals to Campus by Third Parties
    a. Any third party contractor working on property owned or operated by Rogue Community College will provide copies of Safety Data Sheets for any chemical they will use during their project to the Risk Management Department in advance of any work being done. The Risk Management Department retains the authority to deny or

restrict the use of a chemical if the chemical presents a hazard to employees of the College.

b. The Risk Management Department will also make available to any third party contractor working on any property owned or operated by Rogue Community College, Safety Data Sheets for all chemicals that the contractor may be exposed to during the performance of their contract.

12. Definitions
    a. Acute – Symptoms resulting from exposure usually during or shortly after exposure to a sufficiently high concentration of a contaminant.
    b. Acute Toxicity - Acute toxicity refers to those adverse effects occurring following oral or dermal administration of a single dose of a substance, or multiple doses given within 24 hours, or an inhalation exposure of 4 hours
    c. Administrative Controls – Changes to the way people work to reduce exposure levels to chemicals. Includes policy, procedures, training, etc. The third option in the Hierarchy of Controls.
    d. Aspiration Toxicity – The harmful effect of a liquid or solid chemical when it enters the oral or nasal cavity directly by being breathed in or indirectly entering the respiratory system as a result of vomiting.
    e. Auto ignition Temperature – Auto Ignition Temperature of a substance is the temperature at or above which a material will spontaneously ignite (catch fire) without an external spark or flame.
    f. Carcinogen - A substance or a mixture of substances, which induce cancer or increase its incidence. Substances and mixtures which have induced benign and malignant tumors in well-performed experimental studies on animals are also considered to be presumed or suspected human carcinogens.
    g. Chemical – Any substance or mixtures of substances.
    h. Chronic – Refers to symptoms from exposure to a low concentration of a substance over a long period of time.
    i. Combustible Dust - Combustible dust is a particulate solid that becomes a fire or explosion hazard when suspended in air or in another oxidizing medium over a range of concentrations, regardless of the particle size or shape
    j. Combustible Liquid - Any liquid having a flashpoint at or above 100 °F. (37.8 °C.).
    k. Competent Person - One who is capable of identifying existing and predictable hazards in their surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
    l. Cryogenic Gases – Gases that have dangers of low temperature, potential frostbite, and may expand into large volumes of gas that could displace oxygen and result in suffocation.
    m. Emergency Eye Wash Stations and Emergency Showers – Are provided by Rogue Community College whenever there is potential for an employee's eyes and/or major portions of the body to contact corrosives, strong irritants, or toxic chemicals. If major portions of an employee's body could be exposed to hazardous substances,

then emergency showers and emergency eyewashes must be provided. Employees are considered to be exposed to corrosive, strong irritant, or toxic chemicals, if there is a reasonable likelihood that the material can get on their skin or into their eyes at a concentration that would be harmful, regardless of the use of personal protective equipment. Must be available within a 10 second walk.

n. Engineering Controls – Physical changes to the workplace that reduce worker exposure levels to chemicals. Includes ventilating or redirecting the chemical exposure away from the employee or any other physical change to a workplace. The second option in the Hierarchy of Controls.
o. 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).
p. Explosives – A solid or liquid chemical that is capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic chemicals are included even when they do not evolve gases
q. Flammable Liquid - Any liquid having a flashpoint below 100 °F. (37.8 °C.), except any mixture having components with flashpoints of 100 °F. (37.8 °C.) or higher, the total of which make up 99 percent or more of the total volume of the mixture.
r. Flammable Gases – A gas that forms a flammable mixture with air at ambient temperature and pressure.
s. Flammable Aerosols – A chemical in a non-refillable container with a gas compressed, liquefied, or dissolved under pressure and fitted with a release device allowing the contents to be ejected as particles in suspension in a gas, or in another form; and meeting flammability test criteria.
t. Flashpoint – Means the minimum temperature at which a liquid gives off vapor within a test vessel in sufficient concentration to form an ignitable mixture with air near the surface of the liquid.
u. Gas Under Pressure – Gases in a container at a pressure of 29 psi (gauge) or more, are liquefied, or are liquefied and refrigerated.
v. Global Harmonized System - A system for harmonizing hazard classification criteria and chemical hazard communication elements worldwide.
w. Hazards Not Otherwise Classified - HNOC describes adverse physical or health effects based on scientific evidence that does not currently meet federal OSHA's specified criteria for a physical or health hazard class. These hazards do not have to be disclosed on a label, but must be disclosed in Section 2, Hazard identification, of its safety data sheet.
x. Hazardous Chemical – Any chemical which is classified as a physical hazard or health hazard, a simple asphyxiant, combustible dust, pyrophoric gas or a hazard not otherwise classified,
y. Hierarchy of Controls – Steps taken to protect workers for chemical exposure. Begins with Elimination, then Engineering Controls, then Administrative Controls and ends with Personal Protective Equipment.

z. 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 during the work shift it is transferred.
aa. Inert Gases - Gases such as Argon, Helium, Neon and Nitrogen, are not toxic and do not burn or explode. Yet, they can cause injury or death if they are present in sufficiently high concentrations. They can displace enough air to reduce oxygen levels. If oxygen levels are low enough, people entering the area can lose consciousness or die from asphyxiation. Low oxygen levels can particularly be a problem in poorly ventilated, confined spaces.
bb. Irritant – A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.
cc. Lower Explosive Limit – Also known as "LFL". The lowest concentration (percentage) of a gas or a vapor in air capable of producing a flash of fire in presence of an ignition source (arc, flame, heat) at a concentration in air lower than the LFL, gas mixtures are "too lean" to burn.
dd. Multi-Employer Workplace - More than one employer may be citable for a hazardous condition that violates an Oregon OSHA standard.
ee. Mutagenicity – Chemical exposure causing permanent changes in the amount or structure of the genetic material in a cell.
ff. Narcotic Effects – Depression of the central nervous system, exhibited as sleepiness, reduced alertness, loss of reflexes, lack of coordination, and dizziness caused by chemical exposure. Can also be shown as severe headache or nausea and can lead to irritability, fatigue, and worsen memory, perception, and reaction time.
gg. Oxidizing Gases - Includes any gases containing oxygen at higher than atmospheric concentrations (above 23-25 percent), nitrogen oxides, and halogen gases such as Chlorine and Fluorine.
hh. Personal Protective Equipment – Equipment that is worn by an employee to reduce exposure levels to chemicals. Includes eye and face shields, aprons, gloves, etc. The fourth and final option in the Hierarchy of Controls. Personal Protective Equipment should be considered a last resort.
ii. PH Level – pH is a measure of how acidic or basic a chemical is when it is in aqueous (water) solution. A neutral pH value (neither an acid nor a base) is 7. Substances with a pH greater than 7 up to 14 are considered bases. Chemicals with a pH lower than 7 down to 0 are considered acids.
jj. PPM – Permissible Exposure Limit is the legal limit in the United States for exposure of any employee to a chemical substance.
kk. Pyrophoric Gas - A pyrophoric gas is a chemical in a gaseous state that will ignite spontaneously in air at or below a temperature of 130 degrees F.
ll. Pyrophoric Liquids – A liquid chemical that, even in small quantities, is likely to ignite within five minutes after coming into contact with air.
mm. Pyrophoric Solids – A solid chemical that even in small quantities is likely to ignite within five minutes after coming into contact with air.
nn. Organic Peroxides – Any organic (carbon-containing) compound having two oxygen atoms joined together (-O-O-) called a "peroxy" group, where one or both of the

hydrogen atoms have been replaced by organic radicals (with an unpaired electron). Organic peroxides are thermally unstable chemicals, which may undergo exothermic self-accelerating decomposition. In addition, they are likely to have one or more of the following properties: Likely to explode, Burn intensely, be sensitive to impact or friction, React dangerously with other substances

oo. Qualified Person - Means a person with specific training, knowledge and experience in the area for which the person has the responsibility and the authority to control.

pp. Oxidizing Liquid - Means a liquid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material.

qq. Oxidizing Solid - Means a solid, which, while in itself is not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material.

rr. Reproductive Toxicity - Reproductive toxicity includes adverse effects on sexual function and fertility in adult males and females, as well as adverse effects on development of the offspring. Some reproductive toxic effects cannot be clearly assigned to either impairment of sexual function and fertility or to developmental toxicity. Nonetheless, chemicals with these effects must be classified as reproductive toxicants.

ss. Respiratory Sensitizer - A chemical that if inhaled may lead to an allergic-type reaction of the lungs (respiratory system) if inhaled again.

tt. Respiratory Tract Irritants – Chemical exposure effects, characterized by localized redness, swelling, and fluid build-up that weakens respiratory function with symptoms such as cough, pain, choking, and difficulty breathing.

uu. Safety Can - Shall mean an approved container, of not more than 5-gallon capacity, having a spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.

vv. Secondary Containment – As a small quantity generator in Washington State, Rogue Community College is not required to provide secondary containment for chemical storage areas.

ww. Self Reactives – Thermally unstable liquid or solid chemicals likely to undergo a strongly exothermic decomposition even without participation of oxygen (air). This definition excludes chemicals classified under this section as explosives, organic peroxides, oxidizing liquids, or oxidizing solids.

xx. Skin Sensitizer- A chemical that will lead to an allergic response following skin contact.

yy. Simple Asphyxiants - Is a substance or mixture that displaces oxygen in the ambient atmosphere and can cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

zz. Target Organ Toxicity (Single exposure) – The significant health effects that can impair the function of a specific target organ (for example, the eyes or the kidneys) caused by a single exposure to a chemical. Toxic effects may be reversible or irreversible, immediate or delayed.

aaa. Target Organ Toxicity (Repeated exposure) – The significant health effects that can impair function of a specific target organ (for example, the eyes or the kidneys) caused by repeated exposure to a substance or mixture. Toxic effects may be reversible or irreversible, immediate or delayed.

bbb. TWA- A time-weighted average is used to calculate a worker's daily exposure to a hazardous substance (such as chemicals, dusts, fumes, mists, gases, or vapors) or agent (such as occupational noise), averaged to an 8-hour workday, taking into account the average levels of the substance or agent and the time spent in the area.

ccc. TLV- Threshold limit value (TLV) of a chemical substance is believed to be a level to which a worker can be exposed day after day for a working lifetime without adverse effects.

ddd. Upper Explosive Limit – Highest concentration (percentage) of a gas or a vapor in air capable of producing a flash of fire in presence of an ignition source (arc, flame, heat). Concentrations higher than UFL or UEL are "too rich" to burn.

eee. Water Reactive - Means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.