



HAZARD COMMUNICATION PROGRAM

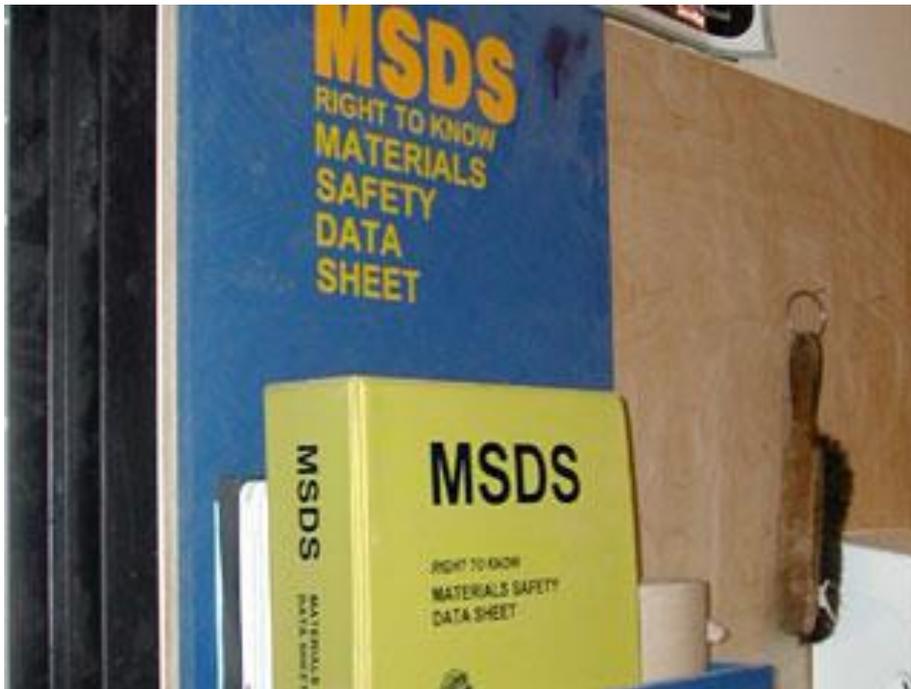


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See our website, cpps.org > Safety > Hazard Communications Plan, for the full 99-page version of the Hazard Communication Plan.

Hazard Communication Program

I. POLICY & PURPOSE

This School District is committed to the prevention of exposures that result in injury and/or illness; and to comply with all applicable health and safety rules. To make sure that all affected employees know about information concerning the dangers of hazardous chemicals used in our workplace, the following Chemical Hazard Communication Program has been established.

The purpose of this Hazard Communication Program is to ensure the hazards of chemicals located in the workplace are evaluated and that the information concerning the physical and health hazards is transmitted to employees who may be exposed to those chemicals. In addition, this Hazard Communication Program serves to meet the requirements of state regulations found in WAC 296-800-170. The goal of the program is to improve the overall safety of our agency by reducing the potential incidents of chemical source illnesses and injuries.

The school district has provided this program which includes provisions for container labeling, material safety data sheets (MSDSs), and employee information and training.

All affected employees will participate in the Hazard Communication Program. The program will be available from the District Office for review by an interested employee. If an employee has any questions about this program they may contact Superintendent / Business Manager or the Educational Service District (ESD) #112 Loss Control Specialist.

II. DEFINITIONS

- **Chemical** means any element, chemical compound or mixture of elements or compounds.
- **Exposure** means that an employee is/was subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes potential (e.g., accidental or possible) exposure.
- **Hazardous Chemical** means any chemical, mixture, product or material that presents a physical or health hazard. Look for words on the label, such as “Caution,” “Warning,” or “Danger.”
- **Physical Hazards** include chemicals that are combustible, flammable, explosive, pyrophoric, unstable (reactive), water-reactive, or is an oxidizer, a compressed gas, or an organic peroxide.
- **Health Hazards** include chemicals that may cause chronic or acute health effects in exposed employees. The term “health hazard” includes chemicals which are irritants, corrosives, sensitizers, carcinogens, toxic or highly toxic agents, reproductive toxins,

hepatotoxins, nephrotoxins, neurotoxins, and agents which damage the lungs, skin, eyes, or mucous membranes.

Note: Physical and health hazards may be “acute” (having adverse effects quickly) or “chronic” (adverse effects occur as a result of a long-term exposure). Exposure can be through inhalation (breathing it), ingestion (eating or drinking it), or skin contact or absorption.

- **Hazard Warning** means any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the hazards of the chemical in the container.
- **Label** means any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.
- **Identity** means any chemical or common name which is indicated on the material safety data sheet (MSDS) for the chemical.
- **Material Safety Data Sheet (MSDS)** is an informational sheet on a hazardous chemical (mixture, product or material), that includes:
 - chemical and common name
 - name of manufacturer
 - hazardous ingredients by percentage
 - physical and chemical characteristics and physical hazards
 - associated health hazards and permissible exposure limits
 - primary route(s) of entry
 - use and storage safety precautions and control measures
 - emergency and first aid procedures
 - the date of preparation or latest revision
 - name, address and telephone number of manufacturer or other responsible party

III. PROCEDURE

A. Container Labels

1. Personnel will verify that each original (primary) container of hazardous chemicals in the workplace be clearly labeled, tagged or marked with the following information:
 - Identity of the chemical using either the chemical or common name,
 - Appropriate hazard warnings which give general information about the relevant health and physical hazards of the chemicals. This includes health effects information, such as information about organs most likely to be affected by the chemicals.
 - Name and address of the chemical manufacturer

2. No hazard warning label (words, pictures or symbols conveying physical or health hazards), tag, or mark shall be removed from any package or container of a hazardous chemical until the package or container is empty. No container shall be used or stored with a damaged or defaced label. Supervisors and employees are responsible to replace damaged or defaced labels immediately.
3. Labels (or other forms of warning) will be legible, in English and prominently displayed on the container.
4. If a hazardous chemical is removed from its original container and not used immediately, the new (secondary) container shall be prominently and legibly marked with at least the following information by the employee who transfers the chemical:
 - Identity of the chemical as specified on the MSDS
 - Appropriate hazard warnings which give general information about the relevant health and physical hazards of the chemicals. This includes health effects information, such as information about organs most likely to be affected by the chemicals.
5. The Safety Officer will periodically confirm that all secondary containers are labeled properly.

B. Other Labeling Systems

Two of the most common labeling systems are the National Fire Protection Association (NFPA 704), and the Hazardous Materials Identification System (HMIS).

These systems provide a numeric key to indicate the relative hazard of the material in the areas of Health, Flammability, and Reactivity. The number system is from “0” for non-hazards to “4” for extreme hazards.

The numbers are displayed on a color-coded symbol or label. BLUE background for HEALTH hazard, RED background for FLAMMABILITY hazard, and YELLOW background for REACTIVITY hazard. An additional WHITE color background is provided for SPECIAL hazardous properties of the material; i.e., oxidizer, poison, water reactive, etc.

The NFPA system arranges the colors in a “diamond” shape, starting with BLUE on the left corner, RED on top, YELLOW on the right corner, and WHITE on the bottom.

The HMIS system stacks the colors vertically, with BLUE on top, then RED, then YELLOW, and WHITE on the bottom. The HMIS system also provides a field for required personal protective equipment to be used with the material.

Contact the Safety Officer or ESD 112 Loss Control Specialist for additional information on the rating systems.

C. Lists of Hazardous Chemicals and “Material Safety Data Sheets”

1. Chemical Inventory

Supervisors and/or the district Safety Officer will maintain an inventory of all hazardous chemicals used in the workplace to include any chemical to which an employee may be exposed under normal conditions of use or in a foreseeable emergency. This list will be made available to all employees.

This list will be reviewed and updated as needed by the Safety Officer with assistance from the appropriate school department.

2. Material Safety Data Sheets (MSDSs)

Material Safety Data Sheets are designed to provide information needed to handle hazardous chemicals safely. They provide the necessary information for training on hazard evaluation, proper handling, emergency procedures, and employee personal protective equipment.

A Material Safety Data Sheet should be provided for each hazardous chemical used by the district by the chemical manufacturer, with the initial product shipment. If not provided, the Safety Officer will obtain the MSDS before the chemical is put into use.

MSDSs will be available to all employees during each work shift. The location(s) of the MSDSs will be communicated to all affected employees. A master copy of each MSDS may also be kept by the Safety Officer. If a MSDS is not available or a new chemical in use does not have a MSDS, immediately contact the Safety Officer or the ESD Loss Control Specialist.

The Safety Officer will review incoming MSDSs for new and significant health and safety information. The Safety Officer will see that any new information is communicated to all affected employees.

Employees are not to purchase any new hazardous substance or bring any new hazardous substance on the site without having the MSDS available for review by the Safety Officer.

The Safety Officer is responsible to establish and monitor the MSDS program. These MSDSs will be reviewed with staff and updated as needed.

D. Employee Information and Training

1. The Safety Officer or the employee’s immediate supervisor will be responsible for providing each affected employee with information and

training on hazardous chemicals in their work area. An introductory explanation of the hazard communication standard will be given to employees at their new employee orientation. Additional training, specific to the chemical hazards encountered in their job duties will be provided to employees at the time of their initial assignment, when job duties change with exposure to new chemicals and whenever a new chemical hazard is introduced into the work area.

2. Employees shall be informed of the following:
 - The training requirements of the “Hazard Communication Program,” as outlined in this procedure, and the employee’s right to know about the hazards of the chemicals/products with which they work;
 - All operations in their work area where hazardous chemical are present, and what the hazardous chemicals are;
 - The location and availability of this written hazard communication program, including the lists of hazardous chemicals in use and their associated Material Safety Data Sheets.
3. Employee training shall include the following (for each chemical or class of chemicals):
 - Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area;
 - The physical and health hazards of the chemicals in the work area including the likely physical symptoms or effects of overexposure;
 - The measures employees can take to protect themselves from these hazards, including appropriate work practices, engineering controls, proper storage and handling, emergency procedures, and personal protective equipment to be used;
 - What the employee is to do if overexposed to hazardous chemicals;
 - Measures to be taken to protect people and the environment in the event of a spill or leak; and
 - Details of the hazard communication program, as listed in this procedure, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.
 - Steps that the district has taken to lessen or prevent exposure to these substances.
4. All new materials that contain hazardous materials shall not be used until employees have been trained in the proper use, handling, and disposal of the material, and their supervisor and the district Safety Officer has reviewed the MSDS covering the specific substance with them.
5. All training relative to the Hazard Communication Program will be documented. Documentation of training will be kept in the employee’s personnel file.

E. Hazardous Non-Routine Tasks

Before employees start work on a task that is not done routinely, they will be given information about the hazardous chemicals they may encounter during the task. This information will include specific chemical hazards, protective and safety measures they can use, and steps that must be followed to reduce the hazards, including ventilation, respirators, presence of another employee and emergency procedures.

F. Chemicals in Unlabeled Pipes

The district is required to inform employees about hazards associated with chemicals contained in unlabeled pipes in employee work areas.

G. Information for Other Workers

Whenever employees of another employer are at our facility performing work, a list of all hazardous chemicals in use at each work area, with their associated MSDSs, will be available for review. The outside employee will be informed about any precautionary measures that need to be taken to protect themselves during normal operating conditions or in foreseeable emergencies and also be provided with an explanation of the labeling system that is used by the district.

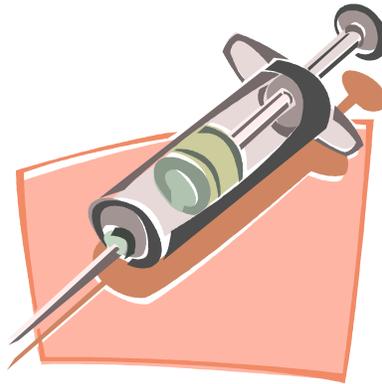
It is the responsibility of the Safety Officer to identify and obtain MSDSs for the chemicals being brought into the facility by outside contractors.

H. Program Review

This written plan and its elements will be reviewed and updated as necessary. Changes may need to be made under the following circumstances:

- New chemicals are introduced into the workplace.
- When new processes involving chemicals are introduced
- When program job duties are changed
- When locations in the program are changed
- When any other elements are changed.

Blood Borne Pathogens Exposure Control Plan



A. PURPOSE

It is the policy of this school district to provide a safe environment for employees and students. In accordance with board policy and the Washington Industrial Safety and Health Act (WISHA) Occupational Exposure to Blood borne Pathogens standard (WAC 296-823), this district has developed the following Exposure Control Plan. This Exposure Control Plan has been adopted by the school district as an element of the Accident Prevention Program (Safety Program). The purpose of this exposure control plan is to:

- 1) Eliminate or minimize employee occupational exposure to blood or other potentially infectious materials (OPIM);
- 2) Identify employees occupationally exposed to blood or other potentially infectious materials while performing their regular job duties;
- 3) To provide employees exposed to blood and OPIM information and training; and
- 4) Comply with all requirements as set forth in the WISHA Blood borne Pathogens standard.

All employees whose tasks may expose them to blood, body fluids, or other potentially infectious materials shall be provided with a copy of this Exposure Control Plan or shall have access to it during their work shift and shall receive training as described herein. A copy of the plan can be found in the school office.

B. ADMINISTRATION AND COMPLIANCE

The district Safety Officer or designee is the administrator of this plan and is responsible for its implementation.

C. OCCUPATIONAL EXPOSURE IN THE SCHOOL DISTRICT

The school district has performed an exposure determination for all common job classifications that may incur occupational exposures to blood or other potentially infectious materials. Occupational exposure means “reasonably anticipated skin, eye, mucous membrane, or parenteral (piercing of the skin) contact with blood or other potentially infectious materials that may result from the performance of an employee’s duties”. This exposure determination is made without regard to the use of personal protective equipment (PPE). Employees who are identified as having occupational exposure as listed below are required to comply with the procedures and work practices outlined in this exposure control plan.

1. Category One

All employees in the following job classifications may reasonably anticipate having an occupational exposure to bloodborne pathogens:

- School nurses and at-risk employees in the health occupations who provide physical care in which blood or blood tinged body fluids are present (suctioning, first aid, injections, etc.).
- Teachers and aides providing physical care with exposure to blood or blood tinged bodily fluids; e.g., first aid, feeding, diapering, work in classrooms for the developmentally disabled, medical needs students, and anyone with open cuts, abrasions, or skin disease or have contact with aggressive students who may bite or scratch.
- Bus drivers who transport students described above; i.e. the developmentally disabled, medical needs students and anyone with open cuts, abrasions, or skin disease.
- Classroom contacts with a student who is an HBV carrier
- Therapists (Physical, Communication, Occupational) providing therapy to students described above; i.e. the developmentally disabled, students who are HBV carriers and who behave aggressively (biting, scratching) or have special medical problems, such as open skin lesions that increase the risk of exposure to their blood or serous secretions.
- Coaches, assistants and physical education teachers who are required to provide first aid as part of their job classification (all coaches in Washington State schools).
- First aid providers who are required to provide first aid as a part of their job classification. (Note: Not all persons who have first-aid cards are required to provide first aid.).
- Custodians who clean and dispose of bloody wastes and/or who police areas with contaminated wastes (discarded drug paraphernalia, condoms, etc.).

2. **Category Two**

Some of the employees in the following job classifications could potentially be exposed to blood and/or body fluids in the performance of their duties resulting in an occupational exposure to bloodborne pathogens:

- Science teachers
- Special Education teachers and paraprofessionals
- Preschool teachers
- Staff playground monitors/aides
- Staff school crossing guards
- Vocational education teachers
- Physical education teachers
- Health Services Coordinators
- Athletic referees
- Plumbers and maintenance personnel who maintain bathroom and cleaning solution disposal facilities
- Teachers other than those listed in Category One
- Substitutes, classified and certificated
- Bus Drivers other than those in Category One

Employees in Category Two should examine the Tasks and Procedures list and then consult with their supervisors to determine if they are to be offered pre-exposure HBV vaccinations.

3. Tasks and Procedures

The following are “Tasks and Procedures” that may be performed in this school district and include a risk of exposure to bloodborne pathogens:

- Medical treatments and procedures
- Physical therapy exercises
- Occupational therapy exercises
- First aid procedures
- Athletic procedures commonly involving damage to skin or mucous membranes
- Athletic therapy procedures
- Vocational educational procedures involving equipment and tools which, unless properly operated, may cause injury to the skin or mucous membranes, i.e. wood & metal shops, arts & crafts, etc.
- Health Services educational procedures
- Toilet procedures
- Laundering of contaminated clothing, uniforms, towels, etc.
- Cleaning procedures involving blood or body fluid visibly contaminated with blood
- Plumbing procedures involving maintenance and repair of bathrooms or cleaning solution disposal areas
- Interaction with students known to bite and scratch
- Use and disposal of hypodermic needles
- All “sharps” use and disposal procedures in laboratory, classroom, kitchen, shops, maintenance and other settings
- All procedures involving equipment or materials which may cause injury to skin or mucous membrane

D. COMPLIANCE METHODS

1. Universal Precautions

All employees of the school district are required to know and follow “universal precautions” as described by the Center for Disease Control (CDC). “Universal precautions” recognizes all body fluids as though they are infected with blood borne pathogens. This requires that all employees of the district to assume that all human blood and specified human body fluids are infectious for HIV, HBV, and other blood borne pathogens. Where differentiation of types of body fluid is difficult or impossible, all body fluids are to be considered as potentially infectious.

2. Engineering Controls and Work Practices

Engineering controls and work practices will be used by all employees to eliminate or minimize occupational exposure to blood borne pathogens. The following controls are to be used:

Hand washing facilities are readily accessible to all employees who have a potential for exposure. Waterless antiseptic hand cleansers or antiseptic towelettes are available to employees at risk of exposure if running water is not readily available (e.g. bus drivers). If waterless cleansers or towelettes must be used, the employee must follow-up with a soap and water wash as soon as possible.

Employees will wash their hands with soap and water:

- after removal of gloves or other personal protective equipment;
- after contact with blood, body fluids, or OPIM;
- when work is completed and before leaving for home;
- before eating, drinking, smoking, applying cosmetics, changing contact lenses or using the bathroom;
- before activities that entail hand contact with mucous membranes, eyes, or breaks in the skin;
- after using the restroom

If blood or OPIM contacts mucous membranes, those areas will be washed or flushed with water immediately or as soon as possible.

Contaminated sharps shall, after use, be disposed of in the following manner:

- The person using the sharp instrument or item shall be responsible for its proper disposal immediately after use.
- All sharp items shall be placed in a closing, leak-proof, rigid, puncture-resistant, break resistant container, which is conspicuously, and/or color-coded, located as close as possible to the operation requiring sharps.
- Contaminated needles and other contaminated sharps must not be bent, recapped or removed. Shearing or breaking of contaminated needles is prohibited.
- Use mechanical means (i.e. tongs, forceps, broom and dust pan) when cleaning up broken glass.

Reusable items such as hand tools, equipment, etc., will be decontaminated using approved methods prior to re-use. A solution of one part household bleach in ten parts water (1:10) is an approved disinfectant for contaminated objects. All reusable contaminated items will be removed or secured from the work environment and labeled with a biohazard warning label until decontamination is completed.

All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to prevent or minimize any splashing, spraying, or spattering of blood or other potentially infectious materials.

Employees are prohibited from eating and drinking, applying cosmetics or lip balm, and handling contact lenses in areas where injuries or illnesses are treated or where there is reasonable likelihood of exposure to blood or other potentially infectious materials.

Food and drink must not be kept in refrigerators, freezers, on countertops, or in other storage areas where blood or OPIM are present.

3. Personal Protective Equipment (PPE)

Where there is an occupational exposure, the district will provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks, eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. The protective equipment will be considered appropriate only if it does not permit blood or OPIM to pass through or reach the employee's clothing, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time that the protective equipment will be used. Employees are required to use appropriate protective equipment for the task they are performing, and will receive training on the proper use of the PPE provided.

The use of gloves is indicated and **MUST BE WORN**:

- Where it is reasonable anticipated that employees will have hand contact with blood, other potentially infectious materials, non-intact skin, and mucous membranes.
- When the employee has cuts, abraded skin, chapped hands, or other non-intact skin and exposure to blood or other potentially infectious materials is reasonably anticipated.
- When handling or touching contaminated items or surfaces.

Gloves shall be of appropriate quality and material and shall comply with the standards of safety for the procedures performed. Hypoallergenic gloves, glove liners, powderless gloves or similar alternatives will be made available to those employees who are allergic to the gloves normally provided. Disposable gloves shall be single-use, are not to be washed or decontaminated for re-use, and shall be replaced and disposed of as soon as practical when they become contaminated or if they are torn, punctured, or when their ability to function as a barrier is compromised. Reusable utility gloves shall be decontaminated after each exposure to body fluids provided that the integrity of the glove is not compromised. Utility gloves will be discarded if they are cracked, peeling, torn, punctured, or exhibit any other signs of deterioration.

Eye protectors or facemasks will be available and are required to be used whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

Appropriate protective clothing such as gowns, aprons, and lab coats may be worn depending on the task and degree of exposure anticipated.

Resuscitation barrier equipment shall be provided in the event resuscitation is necessary.

All personal protective equipment must be inspected prior to use to verify that it is in good condition.

All contaminated or potentially contaminated personal protective equipment must be removed and placed in the appropriate area or container upon completion of the task and prior to leaving the work area.

Wash hands immediately or as soon as feasible after removal of gloves or other PPE.

4. Housekeeping

General Housekeeping Procedures

All equipment and work surfaces must be cleaned and decontaminated with an appropriate disinfectant as soon as possible after any contact with blood or other potentially infectious material.

Employees must wear appropriate personal protective equipment during all cleaning of blood or other potentially infectious materials.

Initial clean up of blood or OPIM must be followed with the use of a disinfectant chemical germicide or a solution of 5.25 percent sodium hypochlorite (household bleach) diluted 1:10 to 1:64 (1/4 cup bleach per one gallon of water) with water.

Broken glassware, which may be contaminated, is not to be picked up by hand, but cleaned up by using a broom and dustpan or other appropriate tools.

Employees, who handle or empty waste containers must not unnecessarily handle, squeeze or push down waste with hands or feet. Waste should only be pushed or tamped down with a device that removes the hands or feet from contact with the waste. This could be accomplished with something as simple as a 2x4 board.

Restroom waste containers should be lined with a strong, leak-proof plastic liner. The liners should be long enough to enable employees to gather the top of the bag and remove it without coming into contact with the contents or the interior of the liner. Employees will wear impervious utility gloves while handling waste and during general restroom cleaning. Employees will wash their hands with soap and water immediately after removing the gloves.

Regulated Waste

Regulated waste (see definition) must be disposed of in accordance with state, county or local health district regulations.

After use, disposable sharps are to be placed in the “sharps” container. The container shall be closable; puncture resistant; leakproof on sides and bottom; and labeled or

color-coded as required. Employees shall not reach into such container with their hands. Sharps disposal containers are available at:

- Each nurse's station
- Maintenance department
- Transportation department

Other regulated waste must also be placed in closable, leakproof containers that are labeled or color-coded properly.

Laundry

The following items are used in this school district and may be exposed to blood or body fluids:

- Sheets
- Pillowcases
- Blankets
- Towels
- Clothing (including athletic uniforms)

Contaminated laundry (see definition) shall be handled as little as possible with a minimum of agitation. Contaminated laundry shall be bagged at the location where it was used and shall not be sorted or rinsed.

Contaminated laundry shall be placed in a bag or container marked with the biohazard symbol. Should the outside bag become contaminated, double bagging is required. For wet laundry, the bags should be strong enough to hold the contents and be leak-proof.

Employees who handle or have contact with contaminated laundry shall wear gloves at a minimum. Wet laundry may require additional personal protective equipment; e.g. aprons, waterproof shoes, utility gloves.

The district is responsible for the procedures used and any expense incurred in laundering and disinfecting of contaminated linen, towels, and athletic uniforms. Student clothing should be sent home for washing bagged and with appropriate directions to parents.

5. Contaminated Disposable Material

The following disposable equipment and material is used in this school district and may come in contact with blood or body fluids, and could potentially expose employees to HIV/HBV or other blood borne pathogens:

- Tongue Depressors
- Cotton applicators
- Gauze pads and bandages

- Gloves (single use)
- Diapers
- Used tissues
- Feminine hygiene products

Contaminated disposable equipment and/or material should be handled with disposable gloves and should be segregated and disposed of in a leak-proof plastic bag which shall be available in the room where the item is used.

6. Contaminated Reusable Equipment

The following reusable equipment is used in this school district and may come in direct contact with blood or other body fluids and could potentially expose employees to HIV/HBV:

- Athletic equipment such as wrestling and gymnastic mats
- Earphones
- Toys
- Garbage cans
- Cleaning tools, i.e., mops, mop bucket, dust pan, broom, and brushes
- Utility gloves

If an incident occurs where the body fluid has contaminated a surface, cleaning and disinfecting should take place prior to allowing an activity to continue. During athletic events an ample supply of towels should be available. Disposable towels and tissues are recommended. **Towels must be used for one individual only and then disposed of in an appropriate receptacle.** “Competitors who are bleeding, have an open wound or blood on the uniform shall not participate in an event until proper treatment has been administered. . . The bloodied portion of the uniform must be properly disinfected or the uniform changed before the athlete may participate.” (WIAA Sport Rules).

Mops should be soaked in disinfectant after use and rinsed thoroughly or washed in a hot water cycle before rinse. Non-disposable cleaning equipment (buckets) should be thoroughly rinsed in the disinfectant. All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood of becoming contaminated with blood or OPIM must be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately, or as soon as feasible, upon visible contamination. Gloves must be worn during all cleaning and disinfecting procedures. After complete, remove gloves and wash hands.

Utility gloves may be decontaminated for re-use provided the integrity of the glove is not compromised. Utility gloves must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

7. Signs and Labels

Biohazard warning labels shall be affixed to all containers containing blood or other potentially infectious material designated as “regulated waste.”

Warning labels will include the biohazard symbol and will be fluorescent orange, or orange-red, or predominately so, with lettering and symbols in a contrasting color.

Warning labels will be affixed to containers by tape, string, wire, or adhesive in order to prevent their unintentional removal. Labels are not required when red bags or red containers are used.

8. Hepatitis B Vaccination

Hepatitis B vaccinations shall be offered to employees identified as likely to experience occupational exposure. The vaccination will be provided by the school district at no cost to the employee. Vaccinations will be provided to employees during normal working hours and any travel expenses incurred will be borne by the employer.

Vaccinations are encouraged and will be provided after the employee has received the training outlined in this plan, but within 10 days of assignment to duties unless:

- The employee has previously received the series;
- Antibody testing reveals that the employee is immune;
- Medical reasons prevent taking the vaccination; or
- The employee chooses not to participate.

A copy of the health care professional’s written opinion will be provided to the employee.

Vaccinations will be provided by a Professional Health Care Provider of the school district’s choosing or the Local Health District.

Employees for whom the vaccine is contraindicated will still be covered by all other portions of this plan.

If the Healthcare Professional decided the hepatitis B vaccine is contraindicated, he/she will so indicate that in the report to the district.

Routine booster dose(s) of the HBV vaccine shall be provided in accordance with U.S. Public Health Service recommendations at no cost to the employee if required.

If an employee declines the vaccinations, the employee will be required to document that refusal on the HBV Declination Statement Form which will be maintained in the employee’s medical record for the duration of employment plus 30 years. If, however, an employee subsequently decides to have an HBV vaccination, it will be made available under the same terms and conditions as stated above.

All school district employees will be offered a post-exposure HBV vaccination if an occupational exposure incident occurs.

E. FOLLOW-UP PROCEDURES AFTER POSSIBLE EXPOSURE TO BLOODBORNE PATHOGENS

1. Documentation and Testing:

If an exposure incident occurs (i.e. an employee comes into contact with blood or OPIM), provide the initial first aid treatment such as cleaning the wound, flushing eyes, or other mucous membranes. Report the incident to your supervisor immediately in the school office. An exposure incident report form (pages 21-22) as well as an accident report form must be completed. The supervisor must also contact the insurance department at ESD 112 (360-750-7504).

Following a reported exposure incident, the exposed employee will receive a confidential medical evaluation. The evaluation will include:

- Document the routes of exposure and how the exposure occurred.
- Identify and document the source individual (unless the district can establish that identification is infeasible or prohibited by state or local regulations).
- Obtain consent and arrange to test the source individual (if a student, must contact parent or guardian) as soon as possible to determine HIV and HBV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. Check with your local health department.
- Document that the source individual's test results were conveyed to the employee's health care provider.
- If the source individual is already known to be HIV, HCV, and/or HBV positive, new testing need not be performed.
- Provide the exposed employee with the source individual's test results if the source individual, or the parents or guardian, has given permission.
- Provide the exposed employee information about laws on confidentiality for the source individual.
- After obtaining consent, collect exposed employee's blood as soon as feasible after the exposure incident, and test for HBV, HCV, and HIV serological status.
- If the employee does not give consent for HIV serological testing during the collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if exposed employee elects to have the baseline sample tested during this waiting period, perform the testing as soon as feasible.

While this school district will always strive to comply with the requirements of the WISHA Bloodborne Pathogens regulation, the district will also use every precaution to protect the privacy of each individual in accordance with all applicable Washington State laws and all regulations issued by the Office of the Superintendent of Public Instruction.

Exposed employees shall have post-exposure prophylaxis made immediately available as recommended by the U.S. Public Health Service when medically indicated. Post exposure prophylaxis includes HBV immunization series if not already completed. Post exposure immunizations must be initiated within 24 hours of exposure for optimum results.

Any employee who declines a post exposure evaluation must sign a statement of declination.

Exposed employees shall also be advised to report and seek medical evaluation of any acute febrile (feverish) illness within the 12 weeks following exposure.

The employer must ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

2. Information to Healthcare Professional:

The district shall ensure that the following information is provided to the Healthcare Professional performing the post-exposure evaluation:

- A copy of the WISHA's bloodborne pathogens standard
- A description of the employee's duties relating to the exposure incident
- Documentation of the route(s) of exposure and circumstances under which the exposure occurred
- If possible, results of the source individual's blood test
- All relevant medical records of the employee, including vaccination status, and any known information on other findings maintained by healthcare professionals; e.g. information from earlier exposure incidents

3. Healthcare Professional's Written Report to the Employer:

The district will obtain and provide a copy of the healthcare professional's written opinion on post-exposure evaluation to the employee within 15 days of the completion of the evaluation:

- If the health care professional provides the written opinion directly to the employee, the district is not required to provide the report.
- If the employee's personal health care professional completes the evaluation, the district is not required to obtain the health care professional's written opinion.

This report shall be limited to:

- Whether or not the employee has been informed of the results of the evaluation.
- That the employee has been told about any medical conditions resulting from exposure to blood or other infectious materials which require further evaluation or treatment.

4. Review of Exposure Incidents

The plan administrator will review the circumstances of all exposure incidents to determine:

- Why the exposure incident occurred;
- If procedures were being followed; and
- If procedures, protocols, and/or training need to be revised.

If it is determined that revisions need to be made, the plan administrator will ensure that appropriate changes are made to this plan. Documentation of this evaluation should accompany the exposure report.

F. EDUCATION AND TRAINING OF EMPLOYEES

All public school employees are required by the State of Washington (WAC 392-198: Training-School Employees-HIV/AIDS) to receive appropriate education and training about the transmission, prevention, and treatment of HIV/AIDS. This school district will provide newly hired school district employees this training within six months from the first day of employment in the district. It is highly recommended that similar training for the Hepatitis B virus be provided concurrently.

All employees whose job functions involve the risk of occupational exposure to blood or body fluids shall receive appropriate education and training prior to the commencement of their duties, annually thereafter, and when changes in task or procedures take place that affect occupational exposure.

Such education and training shall, at a minimum, include:

- Training by a person knowledgeable in the subject matter.
- Access to a copy of the WISHA regulation WAC 296-823, Occupational Exposure to Bloodborne Pathogens, and an explanation of its contents. A personal copy of the regulations will be provided to any employee who requests one.
- Information on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases (HIV/HBV/HCV).
- An explanation of the use and limitations of engineering controls, work practices, and PPE.
- An explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM.
- What constitutes an exposure incident.
- An explanation of the employer's exposure control plan and means by which the employee can obtain a copy of the written plan.
- An explanation of Universal Precautions.
- Training in the selection, types, use, location, handling, removal, decontamination, and disposal of PPE.

- Information on the HBV vaccine, including its efficacy, safety, method of administration, offered free of charge and the benefits of being vaccinated.
- Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
- An explanation of the procedure to follow if an exposure incident occurs, methods of reporting the incident, and the medical follow-up that will be made available.
- Information on the post-exposure evaluation and follow-up following an exposure incident.
- An explanation of the signs, labels, tags, and/or color-coding used to denote biohazard.
- An opportunity for interactive questions and answers with the persons conducting the training.

Training records will be completed for each employee upon completion of training. These records will include:

- Date of training
- Summary of contents
- Name(s) and qualifications of person conducting the training sessions
- Names and job titles of all persons attending the training sessions

Training records will be maintained for a minimum of three (3) years from the date on which the training occurred.

Employee training records will be made available to employees, their representatives, and appropriate government representatives upon request within 15 working days from the District Office Superintendent / Business Manager.

G. RECORDKEEPING

1. Medical Records

The district will maintain a medical record for each employee whose duties include potential occupational exposure, in compliance with WAC 296-802, "Employee Medical and Exposure Records". These records will include:

- Name and Social Security number of the employee
- A copy of the employee's HBV vaccination status, including the dates of vaccination and any medical records regarding the employee's ability to receive the vaccination
- The HBV declination statement for employees who decline the vaccination
- A copy of any healthcare professional's written report to the employer involving post-exposure incidents
- A copy of any information provided to a healthcare professional regarding the possible exposure.

The Human Resources/Personnel department is responsible for maintaining medical records.

Such records will be kept confidential and will not be disclosed to any person, except as required by law, without the express written consent of the employee.

Employee medical records must be maintained for at least the duration of employment plus 30 years.

Employee medical records will be provided upon request of the employee or to anyone having written consent of the employee within 15 working days.

2. Sharps Injury Log

In addition to WAC 296-27, Recordkeeping Requirements (OSHA 300 log), all percutaneous injuries from contaminated sharps are also recorded in the Sharps Injury Log. This log must include at least:

- Date of injury
- Type and brand of the device involved
- Where the incident occurred
- How the incident occurred

This log will be maintained in a way that protects the confidentiality of the injured employee. Copies that are provided upon request must have any personal identifiers removed. The log will be reviewed at least once a year as part of the annual program evaluation and is kept for at least 5 years following the end of the calendar year

H. EVALUATION AND REVIEW

The plan administrator is responsible for review of this program and its effectiveness, and for updating as needed, at least annually or whenever necessary, to include new or modified tasks and procedures.

I. POLICY FOR VOLUNTARY WORKPLACE FIRST AID AND OTHER UNANTICIPATED CONTACTS

This section is intended to apply only to employees who perform infrequent, voluntary, “good samaritan” first aid activities. This policy is also intended to apply to employees who may have unanticipated, potential occupational exposures to blood or other potentially infectious materials.

A voluntary, “good samaritan” first aid provider:

- Does not render first aid as primary job duty
- Renders first aid only as a collateral duty
- May respond only to work place injuries on a non-routine basis

- Is not obligated by the district to render first aid assistance

Any employee responding to help another person with a first aid situation that involves the presence of blood or OPIM shall as a minimum put on gloves and be careful not to allow the blood or OPIM to come into contact with any part of the body or clothing.

Contaminated gloves or clothing should be removed as soon as possible after the incident. They will be placed in an impervious plastic bag as near as possible to the incident to control the spread of contamination.

Hands must be washed with soap and water immediately after removing gloves. Any other affected body surfaces will be washed immediately with soap and water. If there is exposure to the mucous membranes, flush with water immediately or as soon as possible.

Employees will report all first aid responses and incidents to their supervisor/principal before end of work-shift when first aid incident occurred (regardless of use of PPE).

The supervisor or designee will determine if an “exposure incident” occurred. If exposure incident occurred, follow the district’s bloodborne pathogens procedures found on pages 19-20 of this document.

DEFINITIONS

AIDS: Acquired Immunodeficiency Syndrome, the most severe manifestation of infection with the human immunodeficiency virus (HIV).

Antibody: Substance that a person's immune system develops to help fight infection.

Asymptomatic: Having a disease-causing agent in the body but showing no outward symptoms of disease. An infected person, even without symptoms, is capable of transmitting a disease to others.

Blood: Refers to human blood, human blood components, and products made from human blood. The term "human blood components" includes plasma, platelets, and serosanguinous fluids (e.g. exudates from wounds).

Blood borne Pathogens: Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV). Other examples include hepatitis C, malaria, syphilis, babesiosis, brucellosis, leptospirosis, Creutzfeldt-Jakob disease, Human T-lymphotrophic Virus Type 1, and viral hemorrhagic fever.

Centers for Disease Control (CDC): Federal health agency, which is a branch of the U.S. Department of Health and Human Services. CDC provides national health and safety guidelines and statistical data on AIDS and other diseases.

Contaminated: The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry: Laundry that has been soiled with blood or other potentially infectious materials or may contain contaminated sharps.

Contaminated Sharps: Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination: The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Engineering Controls: Controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident: A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that result from the performance of an employee's duties. "Non-intact skin" includes skin with dermatitis, hang nails, cuts, abrasions, chafing, etc.

Handwashing Facilities: A facility providing an adequate supply of running potable water, soap, and single use towels or hot air drying machines.

HBV: Hepatitis B virus is a viral infection that affects the liver. The effects of the disease on the liver can range from mild to severe or fatal.

High-Risk Behavior: A term that describes certain activities that increase the risk of transmitting HIV or HBV. These include anal intercourse, vaginal intercourse without a condom, oral-anal contact, semen in the mouth, sharing intravenous needles and intimate blood contact.

HIV: Human Immunodeficiency Virus.

Immune System: A body system that helps resist disease-causing germs, viruses or other infections.

Infection: A condition or state of the body in which a disease-causing agent has entered it.

Mucous Membrane: A moist layer of tissue that lines the mouth, eyes, nostrils, vagina, anus or urethra.

Non-intact Skin: Skin that is chapped abraded, weeping or that has rashes or eruptions.

Occupational Exposure: Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties. The term "reasonably anticipated" includes the potential for exposure as well as actual exposure.

Other Potentially Infectious Materials (OPIM):

- The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;
- Any unfixed tissue or organ (other than intact skin) from a human (living or dead), and
- HIV-containing cell or tissue cultures, organ cultures, and HIV-or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral: The piercing of mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

Pathogen: A disease-causing substance.

Personal Protective Equipment: Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants,

shirts, or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Regulated Waste: Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and micro-biological wastes containing blood or other potentially infectious materials.

Sharps: (see Contaminated Sharps)

Source Individual: Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients, clients in institutions for the developmentally disabled, trauma victims, clients of drug and alcohol treatment facilities, residents of hospices and nursing homes, human remains, and individuals who donate or sell blood or blood components.

Sterilize: The use of a physical or chemical procedure to destroy all microbial life.

Syndrome: A collection of signs and symptoms that occur together.

Universal Precautions: An approach to infection control. According to the concept of universal precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Vaccine: A substance that produces or increases immunity and protection against a particular disease.

Virus: An organism that causes disease.

Work Practice Controls: Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

EXPOSURE INCIDENT PROCEDURE

For The Exposed Employee:

Steps to follow in the event of exposure to blood or other potentially infectious materials:

1. Immediately and thoroughly clean or flush the area of direct contact.
2. Report incident immediately to your supervisor. Determine if the exposure was a significant exposure incident, i.e. blood or OPIM contacted eyes, mouth, other mucous membrane, and non-intact skin or there was a piercing of the skin or mucous membrane by a contaminated item. If yes go to step 3. If no, go to step 4.
3. If it is determined to be a significant exposure incident contact a licensed health care professional or your county health department immediately. Current recommendation is that treatment begins within 2 hours of exposure.
4. Contact licensed health care professional or your local health department within 24 hours for determination of the need for post exposure medical evaluation and follow-up.
5. Complete the exposure incident documentation form:
 - Document the route(s) of exposure and the circumstances under which the exposure incident occurred;
 - Identify and document the name of the source individual if feasible;
 - Identify and document the name, address, and telephone number of the health care professional who will evaluate the need for post-exposure medical evaluation and follow-up;
6. Complete Report of Accident/Injury as soon as feasible.
7. Report incident to the ESD 112 Insurance Department @ 360-750-7504. They will provide additional information and forms. (Supervisor may do this)
8. Receive copy of healthcare professional's written opinion. Follow through on the advice of the licensed health care professional.
9. Submit licensed health care professional's bill to Personnel Office.
10. Abide by any applicable laws and regulations concerning disclosure of the identity and infectious status on the source individual.

For The Immediate Supervisor:

Steps to follow in the event of an employee's exposure to blood or other potentially infectious materials:

1. Using the exposure incident documentation form, assist the exposed employee with completing the following:
 - Exposed employee information
 - Exposure incident information
 - Source individual information
2. Assist the exposed employee with contacting the identified health care professional for determination of the need for medical follow-up if the employee has not done so. Explain to the employee that the vaccination and follow-up is "at no cost to the employee."
3. Send all completed documents to the personnel office as soon as possible.
 - Exposure incident documentation form (completed through the fourth item under Post-Exposure evaluation information).

- Report of accident or injury form
4. Abide by any applicable laws and regulations concerning disclosure of the identity of the source individual.

For The Personnel Department:

Steps to follow in the event of an employee's exposure to blood or other body fluids:

1. Place all documentation of the exposure incident in the employee's medical file:
 - Exposure incident documentation form (complete through the third item under post-Exposure Evaluation Information).
 - Report of accident or injury form (district form)
 - Exposed employee consent form.
2. If post-exposure medical evaluation is considered necessary, provide the following information to the evaluation health care professional:
 - A copy of Chapter 296-62-08001 WAC;
 - A copy of the exposure incident documentation form
 - All medical records relevant to the appropriate treatment of the employee including hepatitis B vaccination status, which are the employer's responsibility to maintain.
3. Complete the final items on the exposure incident documentation form.
4. Establish and maintain an accurate record, pre-exposure incident, for each employee, in accordance with WAC 296-62-052, including:
 - The name and social security number of the employee
 - A copy of the employee's hepatitis B vaccination status including the date of all hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination;
 - A copy of all results of examinations, medical testing, and follow-up procedures required.
 - The employer's copy of the health care professional's written opinion;
 - A copy of the information provided to the health care professional
5. Provide employee a copy of the healthcare professional's written opinion.
6. Ensure that employee medical records are:
 - Kept confidential
 - Not disclosed or reported without the employee's express written consent to any person within or outside the work except as required by law.
 - Maintain employee medical records for at least the duration of employment plus thirty years.

For The Healthcare Professional:

- Evaluate the exposure incident.
- Arrange for testing of the employee and the source individual.
- Notify employee of results of all testing.
- Provide counseling.
- Provide post-exposure prophylaxis.
- Evaluate reported illnesses.

- Send (only) the written opinion to the employer. This includes documentation that the employee was informed of the evaluation results and the need for any further follow-up, and whether hepatitis B vaccine is indicated and if vaccine was received.

CHEMICAL HYGIENE PLAN



A. INTRODUCTION

1. Purpose of the Chemical Hygiene Plan

It is the policy of this school district to provide a place of employment that is free from recognized hazards likely to cause physical harm, and that complies with all federal, state, and local laws and regulations affecting the safety and health of its employees. The primary objective is to ensure that individuals at risk are adequately informed about the chemicals used in the laboratory, the risks involved, and the procedures to follow to minimize their exposure to those chemicals. This Chemical Hygiene Plan is derived from the Hazardous Chemicals in Laboratories Standard found in the Washington Industrial Safety and Health Act (WISHA) (WAC 296-62 Part Q) and is administered by the State of Washington, Department of Labor and Industries.

Many policies and practices may not be part of the Chemical Hygiene Plan as such, and yet they are crucial to the planning process that must be part of maintaining a safe environment for employees and students. Such items as the number of students per class (or per teacher) or the amount of physical space available to each student are examples of policies and practices that impact establishment of a safe environment, but which are not required by WISHA to be part of the Chemical Hygiene Plan.

2. What is Covered by the Laboratory Standard

Laboratories are defined as facilities where the "laboratory use of hazardous chemicals" occurs. "Laboratory use of hazardous chemicals" refers to the handling or use of such chemicals in which all of the following conditions are met:

- Chemical manipulations are carried out on a laboratory scale.
- Multiple chemical procedures are used.
- Protective laboratory practices and equipment are available and commonly used.
- The procedures involved are not part of a production process whose function is to produce commercial quantities of materials.

"Laboratory scale" means work with substances in which the containers used for reactions, transfers, and other handling of substances are designed to be easily and safely manipulated by one person.

"Hazardous chemicals" are those which pose a health hazard, defined by WISHA as any substance for which there is evidence showing that acute or chronic harm may result from exposure to that chemical. Health hazards include carcinogens, toxic or highly toxic agents, reproductive toxins, irritants and corrosives.

"Employees" who are to be addressed in the Chemical Hygiene Plan are individuals employed in the laboratory workplace that may be exposed to hazardous chemicals in the course of his or her assignments. This includes employees who actually work in the laboratory (instructors and aides) or employees who because of their work assignments may be required to enter a laboratory where potential exposures may occur, such as maintenance or custodial personnel.

3. What is not Covered by the Laboratory Standard

The Laboratory Standard does not apply to:

- Students. Because students are not employees, they are not formally covered by the provisions of the Chemical Hygiene Plan (CHP). However, there are recommendations in this document that suggest appropriate student rights and responsibilities related to issues of chemical safety.
- The occasional visitor to the laboratory, such as a guest or sales person, is not included in the definition of employee and therefore does not need to be addressed in the Chemical Hygiene Plan. Such persons will be offered the same protection offered to students, and they will conform to the same expectations as students in the laboratory.

4. Summary of the Requirements

The Laboratory Standard requires that covered laboratories prepare, implement, and make available to employees, a Chemical Hygiene Plan which is capable of:

- Protecting employees from health hazards associated with hazardous chemicals in the laboratory.
- Keeping laboratory employees' exposures to WISHA-regulated substances below the permissible exposure limits (PEL).
- Reviewed and evaluated for effectiveness at least annually.

The Chemical Hygiene Plan should include:

- General employee and laboratory rules and procedures regarding health and safety considerations for the use of hazardous chemicals in laboratories. This includes personal protective equipment requirements, housekeeping, storage and disposal, personal hygiene, chemical procurement, and chemical labeling and handling.
- Information and training to ensure that employees are apprised of the hazards of chemicals present in their work area(s).
- Procedures for employees who work with hazardous chemicals to receive medical attention under specified circumstances.
- Designation of personnel responsible for implementation of the Chemical Hygiene Plan.
- Criteria for requirement of “prior approval” of specified activities.
- Record keeping procedures for employee exposure monitoring measurements and medical records.
- Specific control measures such as laboratory design, including ventilation, fume hoods, or other engineering controls.
- Procedures for inspections of laboratories and annual review of the Chemical Hygiene Plan.
- Provisions for additional employee protection for work with particularly hazardous substances.

- Provisions for employee exposure monitoring if there is reason to believe that exposure levels for a regulated substance routinely exceed the action level (or permissible exposure level in the absence of an action level).
- A description of Emergency Response procedures.

B. CHEMICAL HYGIENE PERSONNEL

1. School District Administrators

Successful development and implementation of a Chemical Hygiene Plan (CHP) depends on the commitment and support of the senior administrators, the district Safety Officer and the laboratory Chemical Hygiene Officers (CHO).

2. Principal

The principal is responsible for chemical hygiene program in the local school. The principal should monitor school employees' compliance with the CHP. The principal may choose to designate a School Chemical Hygiene Officer.

3. School District

The school district is responsible for:

- Maintaining records of employee exposure to hazardous chemicals for the duration of employment plus 30 years.
- Reporting all exposures/accidents in writing to the ESD 112 Insurance Department.
- Providing medical consultations and examinations as required as a result of exposure to hazardous chemicals.
- Providing personal protective equipment when necessary.
- Measuring the concentration of hazardous chemical(s) if it is believed that the action level or permissible exposure level has been exceeded.

4. Chemical Hygiene Officer

The school district must appoint a CHO for each school housing a science laboratory covered by this standard. If there are several laboratories in one school, one CHO may supervise several labs. In large districts, there may be a Science Curriculum Director who oversees several Chemical Hygiene Officers. The Chemical Hygiene Officer should be knowledgeable in chemistry and chemical principles and practices.

The responsibilities of the Chemical Hygiene Officer are:

- Develop and implement the Chemical Hygiene Plan.
- Work with administrators and teachers to implement the program.
- Ensure that employees have access to the Chemical Hygiene Plan, Material Safety Data Sheets, and other reference materials.
- Monitor procurement, use, and disposal of chemicals used in the school's laboratories.

- Assure that inspections of the laboratory and laboratory equipment are performed on a regularly scheduled basis and that records of inspections are maintained.
- Determine the need for personal protective equipment beyond that specified for general laboratory use.
- Ensure that the appropriate training with regard to chemical hygiene is provided to employees whose normal work locations include laboratory areas. Make decisions regarding requests to use chemicals identified as particularly hazardous such as carcinogens, reproductive toxins, explosive, highly toxic, or generally unsuitable for general school laboratories.
- Conduct annual review and revision of the Chemical Hygiene Plan.

5. Employee Responsibilities

Each laboratory instructor is responsible for planning and conducting each laboratory operation in accordance with the appropriate laboratory procedures and rules outlined in the Chemical Hygiene Plan. It is also the instructor's responsibility to develop good personal chemical hygiene habits, maintain awareness of health and safety hazards, and to report accidents, injuries, unsafe practices and unsafe conditions.

6. Students

Students are not specifically covered by the Chemical Hygiene Standard. However, good personal chemical hygiene habits must also be taught to all students who use the lab while enrolled in science courses. Students shall not be allowed to use school district laboratories outside of regular science course classes unless they first obtain permission and are directly supervised during their work.

C. GENERAL PRINCIPLES

1. Minimize All Chemical Exposures

All prudent efforts should be taken to minimize all chemical exposures. Use the proper personal protective equipment to minimize contact with chemicals. Use the least toxic chemical that the task requires. The use of listed carcinogens or other highly toxic chemicals should be avoided. Specific guidelines for handling chemicals may be found on the Material Safety Data Sheet.

2. Routes of Exposure

The routes of exposure to chemicals may occur by inhalation, ingestion, contact with skin or eyes, or injection.

- Inhalation of chemical vapors, mists, gases or dusts can produce poisoning through the mucous membrane of the nose, mouth, throat, and lungs and can seriously damage these tissues. The degree of injury resulting from exposure to toxic vapors, mists, gases or dusts depends on the toxicity of the material and its solubility in tissue fluids, its concentration and the duration of exposure.

- Ingestion of many chemicals can be extremely dangerous. The relative acute toxicity of a chemical can be evaluated by determining its LD 50, which is defined as the quantity of chemical that will cause the death of 50% of the test animals when ingested in a single dose. In addition, many chemicals will directly damage the tissue of the mouth, throat, nose, lungs, and gastrointestinal tract.
- Contact with skin and eyes can lead to significant chemical injury. A common result of skin contact is local irritation, but many chemicals can be absorbed through the skin and cause systemic poisoning. Most chemicals are damaging to the eyes, which are very sensitive organs. Alkaline materials, phenols, and strong acids can cause permanent loss of vision.
- Injection of chemicals is not a very common route of exposure but may occur through mechanical injection from glass or other materials contaminated with chemicals, or when chemicals are handled in syringes.

Other factors to consider in evaluating the degree of exposure potential from the use of a particular chemical or activity involving the chemical include the:

- Chemical's volatility, flammability, and reactivity.
- Potential for unplanned chemical reactions.
- High heat of reaction.
- Amount of time that a worker will be exposed.
- Sensitivity of the lab worker (e.g., asthma, allergies, pregnancy).
- Potential for generating aerosols.
- Potential for an uncontrollable release.

3. Know the Hazards and the Risks of the Chemicals

Employees must learn the potential hazards of each chemical they use and not underestimate their risk. The decision to use a particular chemical will be based on the best available knowledge of each chemical's particular hazard and the availability of proper handling facilities and equipment. Substitutions, either of chemicals or experiments, will be made where appropriate to reduce hazards without sacrificing instructional objectives. When the risk outweighs the benefit and no substitute is available, then the experiment, procedure or chemical will be eliminated.

4. Provide Adequate Ventilation

The best way to prevent exposure to airborne substances is to prevent their escape into the working atmosphere by using hoods or other ventilation devices. Ensure that hoods and other ventilation devices are kept in good working condition and checked regularly to assure their effectiveness.

5. Use the Chemical Hygiene Program

The Chemical Hygiene Plan provides specific practices designed to minimize exposure to hazardous substances. It is the responsibility of the employee to follow these practices.

6. Observe the Exposure Limits

The Permissible Exposure Limits (PEL's) established by the Washington Department of Labor and Industries and the Threshold Limit Values (TLV's) of the American Conference of Governmental Industrial Hygienists (ACGIH) are found on the Material Safety Data Sheet for that chemical and shall not be exceeded.

7. Use the Material Safety Data Sheet (MSDS)

The district should not accept from a supplier or use a chemical unless a MSDS is immediately available and accessible to the employee. The employee shall be trained to read and use the information found on the MSDS.

D. STANDARD OPERATING PROCEDURES FOR LABORATORIES

The goal of the Chemical Hygiene Plan is to protect employees and students working in the laboratory, others who may be exposed, and to protect the environment from injury or contamination due to hazardous chemicals through training and careful attention to safe work practices.

1. General Rules

The instructor should be aware of the following:

- Know the safety rules and procedures that apply to the work at hand. Before beginning any new operation, determine the potential hazards and appropriate safety precautions to take.
- Know the location of, and how to use, emergency equipment in the area, as well as how to obtain additional help in an emergency. Be familiar with emergency procedures including evacuation routes, spill cleanup procedures and fire control.
- Know the types of protective equipment that are available and use the proper equipment for each job.
- Watch for unsafe conditions and work practices and report them to the CHO or Safety Officer so that corrections can be made as soon as possible. One person's accident can be a danger to everyone in the lab area.
- Know how and where to properly store the chemical when it is not in use.
- Proper personal hygiene practices.
- Procedures by which supervisory persons will be notified in case of accident or injury.
- Proper procedures for the disposal of hazardous substances.

If you leave an operation unattended for any period of time, leave the laboratory lights on, post a sign, and take the necessary precautions for the event of a failure of a utility service (such as electricity or cooling water). Any time chemicals are out of locked cabinets or storerooms, an unattended lab must be locked.

Notify the School or District Chemical Hygiene Officer immediately if you have been exposed to a hazardous chemical.

2. Avoidance of “Routine” Exposure

- Develop, use and encourage safe work habits.
- Become familiar with the laboratory procedures and all potential hazards involved before beginning any operation.
- Use the engineering and work control practices available for the procedure.
- Avoid unnecessary contact with chemicals by any route.
- Do not attempt to identify chemicals by smell or taste. All containers containing chemicals must be properly labeled.

3. Planning

- Do not rely solely on the textbook, laboratory manual, or other instructional material for an indication of safety precautions required for a particular experiment. Consult the MSDS for the chemicals being used and safety references for equipment utilized.
- The instructor shall review potential hazards and specifically describe them to all classes and all students.
- Reduce the scale of the procedure to a minimum in order to reduce generation of used chemicals.
- Use the least hazardous chemical which is effective for the task.
- The work conducted in the lab and its scale must be appropriate to the physical facilities available.
- Use only those chemicals for which the quality of the ventilation system is appropriate.

4. Personal Behavior

- Horseplay, pranks, careless behavior or other acts of mischief will not be tolerated in chemical work areas and laboratories.
- Activities using unauthorized chemicals will not be performed by employees or students.
- The laboratory should not be left unattended while an experiment is in progress. It is recognized that certain procedures, such as crystallization and evaporation are a normal part of some experiments and that such procedures may safely be left while they are in progress. The teacher should use the best available information when deciding whether a particular experiment may be left unattended.
- No experiments should be conducted by an instructor or student working alone in a laboratory. **There are no exceptions to this policy.**

5. Personal Hygiene

All employees should use appropriate personal hygiene practices, including:

- Wash exposed or contaminated skin promptly.
- Wash well before breaks, before eating, smoking, or using toilet facilities, and before leaving the laboratory. Wash hands after removing gloves.
- Smoking is not allowed in the laboratory.
- Avoid practices that may result in the ingestion of chemicals, such as biting fingernails, chewing gum, chewing on pencils or pens, or holding items in the mouth.

- Do not apply cosmetics in any chemical laboratory.
- Confine long hair and loose clothing.
- Open-toed shoes, sandals, and/or shoes with uppers constructed of woven material are not permitted in the laboratory.
- Jewelry such as rings, bracelets or watches should not be worn in order to prevent chemicals from collecting underneath them, from contacting electrical sources, catching on equipment or damage to the jewelry itself.
- At no time should shorts, cutoffs, or short skirts be allowed in the laboratory when an experiment is in progress.
- Never pipet by mouth. A pipetter, pipet bulb, or aspirator shall be used to provide a vacuum.

6. Food Handling

- No food or beverages will be stored, handled, prepared or consumed in the laboratory or other areas where chemicals are used or stored.
- Do not bring laboratory chemicals or laboratory equipment into areas that are designated for food consumption or smoking.
- Do not use glassware or utensils that have been used for laboratory operations to prepare or consume food. Laboratory refrigerators, ice chests, microwave ovens, cold rooms, etc., must not be used for food storage or preparation.

7. Housekeeping

- Keep work areas clean and free from obstructions. Cleanup the area following the completion of each operation and at the end of each day.
- Deposit wastes in the appropriate receptacles.
- Store equipment and chemicals properly. Do not store chemicals in aisles, on the floor, on desks or laboratory tables.
- Attend to laboratory accidents and spills immediately. Follow the appropriate emergency procedures.
- Label all containers with chemicals with the identity of the contents and the hazards those contents present to the user. Inform the laboratory supervisor immediately of the presence of any unlabeled containers. Do not open unlabeled containers.
- Do not block access to exits, emergency equipment, controls, etc. Keep all passageways, aisles, and doorways free from obstruction.
- Notify the laboratory supervisor immediately if equipment malfunctions. Discontinue use of the equipment if a safety hazard exists.
- Clean all working surfaces and floors regularly.

8. Protective Equipment

A Hazard Assessment will determine personal protective equipment needs for the individual laboratory. Personal protective equipment and instructions on the proper use of this equipment will be provided to employees, as appropriate, to minimize exposure to hazardous chemicals.

Eye Protection

- Eye protection, consisting of a minimum of safety glasses, will be worn by all persons in the laboratory (including visitors) at all times when working with chemicals.

- Goggles, or safety glasses in conjunction with a face shield, are required if a splash hazard exists or when corrosives are handled.
- All eye protection shall conform to ANSI Standard Z87.1.
- Contact lenses may be worn provided the same approved eye protection is worn as required of others in the area.

Gloves

- No gloves are good for all applications. The appropriate type of glove is determined by the type of chemical being handled. Consult the MSDS or a manufacturer's glove chart for information regarding the proper type of gloves to be used.
- Inspect gloves prior to use to ensure that there are no holes, tears, or cracks in them.
- Avoid skin contact between gloves and exposed skin, clothing, and mucous membranes (eyes, nose, and mouth) during use. Remove gloves before leaving the laboratory.

Clothing

- Clothing worn in the laboratory should offer protection from splashes and spills, should be easy to remove in case of an accident, and should be fire-resistant.
- Lab coats and rubber aprons are examples of clothing that may be worn. Lab coats should be long-sleeved and cover at least to the knee.

Respiratory Equipment

- Laboratories will not be operated under conditions that would require the use of respirators to maintain exposures below WISHA permissible exposure limits.

Safety Showers and Eyewashes

- Every instructor and student must know the location of all safety showers and eyewashes in the area.
- Every instructor and student must know how to use the safety showers and eyewashes.
- Flush eye, holding eyelid open or contaminated skin for a minimum of 15 minutes. Seek medical attention as soon as possible after flushing.

Fire Extinguishers

- Instructors must know the location and how to properly use a fire extinguisher in emergency situations.
- Fire extinguishers must be visually inspected monthly to ensure they are in proper working condition. Replace depleted extinguishers immediately. Recharge extinguishers promptly after use.

Glassware

- Accidents involving glassware are the leading cause of laboratory injuries. Use careful storage and handling procedures to avoid glassware breakage.
- Use hand protection (gloves) when inserting glass tubing into rubber stoppers or corks or when placing rubber tubing on glass hose connections. Tubing should be fire polished or rounded and lubricated, and hands should be held close together to limit movement of glass should a fracture occur.

- Discard and replace damaged glassware. Wear hand protection when picking up broken glass. Sweep up broken pieces with a brush and dustpan. Place broken glass in a separate container apart from regular waste.
- Clean glassware as soon as possible after use. Store glassware in clean areas designated for this purpose. Do not store dirty or broken glassware.

Chemical Handling

Know the hazards posed by the different classes of chemicals, including oxidizers, flammables, corrosives, compressed gases, acutely hazardous and chronically hazardous chemicals.

- Read and understand the Material Safety Data Sheet before using any new chemical.
- Be aware of the proper waste disposal methods for the chemicals you are handling. Improper disposal may lead to injury to human health, the environment and/or facility equipment.
- Be sure that equipment is carefully secured before its use. Combine reagents in the proper order, and avoid adding solids to hot liquids.
- Always add acid to water. Never add water to acid.
- When transporting, storing, using, or disposing of any substance, be sure that the substance cannot accidentally come into contact with an incompatible substance. This contact could result in explosions or the production of highly toxic or flammable substances. Refer to incompatibility charts.
- When chemicals are being transferred from one container to another, be sure that the new container is compatible with the chemical and is labeled with the identity of the chemical.

Flammability Hazards

In general, the flammability of a chemical is determined by its flash point, the lowest temperature at which a liquid will generate vapor in sufficient concentration to ignite when an ignition source is present. Chemicals with a flash point below 200 degrees Fahrenheit should be considered “fire-hazard chemicals.”

- Do not use an open flame to heat a flammable liquid or to carry out a distillation under pressure. Use an open flame only when it is necessary and extinguish it as soon as it is no longer needed.
- Before lighting a flame, remove all flammable substances from the immediate area and notify others in the area. Check all containers of flammable substances in the area to ensure that they are tightly closed.
- Store flammable materials in a flammable cabinet or other appropriate location. Store away from any ignition sources. Store flammable materials away from all oxidizers.
 - Make sure that all flammable cabinets and containers are properly grounded to prevent accidental ignition of flammable vapors and liquids from static electricity or other sources of ignition.

Electrical Hazards

- Equipment and electrical cords must be in good repair, properly grounded, and insulated.
- Circuit breakers for all laboratories must be readily accessible. Employees should know how to cut off electrical service to the laboratory in case of emergency.
- Use switches to turn equipment on or off, rather than unplugging equipment.
- If electrical equipment shows evidence of undue heating, it should be immediately unplugged.
- Do not use electrical equipment in a combustible atmosphere unless it has been approved as intrinsically safe.
- Electrical equipment must be located so that contact with water or chemical spills is eliminated.

Compressed Gases

If compressed gas cylinders are used in the laboratory, procedures for their use should be in accordance with guidelines established by the Compressed Gas Association and the NFPA.

- Only trained and authorized personnel will handle compressed gas cylinders.
- Always replace the cylinder cap when the cylinder is not in use and when it is being moved.
- Never lift a cylinder by its valve or its cap.
- Store both full and empty cylinders where they may be securely restrained by straps or chains.
- Never place cylinders in hallways or work areas where they could be knocked over.
- Avoid exposure of cylinders to heat. Do not store cylinders in direct sunlight.
- Never lubricate, modify, force or tamper with a cylinder valve.
- Cylinders of toxic, flammable or reactive gases should only be used under a fume hood.
- Cylinders shall be equipped with a pressure regulator designed and marked for its maximum use pressure.

Laboratory Operations/Activities Requiring Approval

Instructors must obtain prior approval from the CHO whenever a new laboratory experiment is to be carried out and the potential for harm is high. The following operations require prior approval:

- Non-routine procedures for which the employee or student has not been trained.
- Analytical work with an unknown substance.
- Operations or activities for which there are no written procedures.
- Where there is the potential for a rapid rise in temperature or pressure.
- Where there is the potential for chemical explosion or spontaneous combustion.
- Where substituting a more hazardous chemical for a less hazardous one.
- Where there is the potential for the generation of toxic gas that could result in airborne concentrations above the Action Level or Permissible Exposure Limit.
- When there is a failure of any of the equipment needed for the process, especially of safeguards such as fume hoods.

E. LABORATORY SAFETY PROCEDURES

1. Employee Exposure Monitoring

If there is reason to believe that exposure levels for an OSHA/WISHA-regulated substance routinely exceed the action level (or in the absence of an action level, the PEL), the Safety Program Manager or Chemical Hygiene Officer will ensure that employee or student exposure to that substance is measured.

Initial Exposure Determination

Factors that might raise the possibility of overexposure and therefore warrant an initial measurement of employee exposure include:

- The manner in which the chemical procedures or operations involving the particular substance are conducted (e.g., use of an open vessel instead of a closed system).
- The existence of historical monitoring data that shows elevated exposures to the particular substance for similar operations.
- The use of a procedure which involves significant quantities or is performed over an extended period of time.
- Signs or symptoms of exposure (e.g., skin or eye irritation, shortness of breath, nausea, headache, etc.) which are experienced by the employee.

None of these conditions should be allowed to exist in middle or high school laboratories in this school district.

Exposure Monitoring

If the initial exposure determination described above discloses employee exposure over the action level for a particular substance (or in the absence of an action level, the PEL), the school district will immediately comply with the exposure monitoring requirements of the WISHA standard for that substance.

Monitoring airborne concentrations of individual hazardous chemicals should be conducted in the following circumstances:

- In testing or redesigning the hoods and other local ventilation devices in the laboratory;
- When a specific substance that is toxic or highly toxic is regularly and continuously used (e.g., three times a week); and
- When requested by a laboratory employee because of a documented health concern or suspicion that a PEL may be exceeded.

Notification of Monitoring Results

- The district will maintain any records of exposure monitoring, including the test method and results. Employee exposure monitoring records should be kept in the employee's file.

- The employee will be notified of any monitoring results in writing within 15 working days after receipt of the results either individually or by posting the results in an appropriate location that is accessible to employees, such as the safety bulletin board.
- An accurate record of any measurements taken to monitor employee exposures must be kept, and made available for each employee in accordance with WISHA's Access to Employee Exposure and Medical Records requirements (WAC 296-62-052).

Laboratory Facilities

The work conducted in a lab must be appropriate to the physical facilities available and to the quality of the ventilation system.

Laboratory Design

A laboratory facility should include, where appropriate:

- An adequate general ventilation system with air intakes and exhausts located so as to avoid re-entry of exhausted air.
- Well-ventilated stockrooms and storerooms.
- Appropriate chemical storage for specific hazardous materials; e.g., flammables, corrosives, poisons.
- Adequate number of laboratory hoods and sinks for the number of students.
- Emergency equipment including fire extinguishers, spill kits, a nearby fire alarm and telephone.
- First aid equipment including first aid kits, eyewash fountains and drench showers.
- Appropriate personal protective equipment such as gloves, eye protection, aprons etc.
- Locate electrical receptacles, switches, and controls so as not to be subject to liquid spills.

Laboratory Ventilation and Hoods

- The general laboratory ventilation system should provide an adequate source and volume of air for breathing into the laboratory and non-laboratory areas and for input to local ventilation devices such as hoods, exhaust fans, etc. Ensure that laboratory air is continually circulated and direct air flow into the laboratory from non-laboratory areas. All air from chemical storerooms, laboratories and other chemical use areas must be exhausted directly to the exterior of the building.
- Do not rely on general laboratory ventilation for protection from exposure to hazardous chemicals released into the laboratory. A rate of 4-12 room air changes per hour is normally adequate general ventilation if local exhaust systems such as hoods are used as the primary method of control. General air flow should not be turbulent and should be relatively uniform throughout the laboratory. The ASHRAE standard should be consulted for new facilities and for any facility experiencing indoor air quality problems. ASHRAE recommends 15-20 CFM per person in school classrooms and higher rates for hazardous areas. General ventilation rates must be tied to the size of the room, the occupant load, and the exposure potential.
- Airflow into and within the fume hood should not be excessively turbulent and hood face velocity should be adequate (typically 60-120 fpm).
- Stockrooms should be well ventilated.

- Evaluate the quality and quantity of ventilation when installed. Regularly monitor (at least every six months), and reevaluate whenever a change in ventilation devices is made.
- Use the hood for any operation that might result in release of airborne concentrations of hazardous materials in the form of vapors, dust, or gases.
- Periodically inspect and clean the hood to ensure proper operation.
- Keep the hood sash as low as practical, leaving a minimum area open during use. Conduct operations in the enclosure without the insertion of any portion of the body other than hands and arms. Keep the hood sash closed at all times except when working in front of it.
- Keep materials in the hood to a minimum and do not allow them to block vents or air flow. Avoid the storage of materials in the hood.
- Leave the hood “on” if hazardous substances are stored in it or if it is uncertain whether adequate general laboratory ventilation will be maintained when the hood is “off”.

3. Chemical Procurement

- Check the laboratory inventory prior to initiation of a purchase.
- Purchase only the quantity of chemicals needed. Order chemicals in quantities that are likely to be consumed in one year or less. Purchase chemicals only when needed for specific experiments or projects. Use the minimum amount of chemicals required and order only in the quantity sufficient for the intended use.
- All chemicals will be contained in tightly closed, sturdy, and appropriate containers. The container will be marked with the date at the time it is received and the date it is opened.
- Do not accept a chemical if the original container has been broken, opened, or arrives without an adequate identifying label.
- Require that the supplier provide a MSDS for each chemical ordered to accompany the shipment.
- Update the Chemical Inventory List each time a chemical is received. A site-specific list of chemicals in the lab must be maintained.
- Accept donated chemicals only after approval is obtained from the District Chemical Hygiene Officer.
- Before a substance is received, obtain information on proper handling, storage and disposal. Provide this material to the employees involved in shipping, receiving and distribution of laboratory chemicals.
- No select carcinogens, reproductive toxins or highly acute toxins are allowed in middle school or high school laboratories in this school district without written approval.

4. Hazard Identification, Labels and Signs

- A MSDS for each chemical must be readily available to laboratory employees and, upon request, to students. Material Safety Data Sheets are documents that 1) describe the physical and chemical characteristics of the chemical; 2) provide information about the chemical’s physical and health hazards; 3) list the means for controlling those hazards; and 4) the name, address and phone number of the manufacturer or

other responsible party. MSDSs also inform the reader about first aid, other emergency procedures, and recommended exposure limits.

- If the chemical is transferred to a secondary container, the new container must be appropriately labeled with the chemical name, formula, concentration (if in solution), and hazards associated with exposure.
- Labels on incoming containers must not be removed or defaced.
- Unknown, unlabeled bottles should not be opened and such materials should be disposed of promptly.
- Post warning signs in laboratory areas that have special or unusual hazards. Post signs to show the location of safety showers, eyewash stations, exits, first aid kits, fire extinguishers, etc. Label extinguishers to show the type of fire for which they are intended. Label waste containers to show the type of waste that can be safely deposited. Consumption of food and beverages is not permitted in areas where laboratory operations are being carried out. Post a warning sign (e.g., EATING AREA - NO CHEMICALS) and mark areas where food is permitted.
- Identify exhaust systems used for the removal of hazardous materials to warn personnel of possible hazards.

5. Chemical Storage

- Quantities of chemicals stored in the laboratory should be kept to a minimum. Materials not in use should be returned to the stockroom.
- All chemicals will be contained in tightly closed, sturdy, and appropriate containers.
- Label all chemical solutions you make with the identity of the contents, date, concentration, hazard information and name of person who prepared the solution.
- Store chemicals based on the reactivity nature of the chemical. Segregate incompatible materials to prevent accidental contact with one another. Do not base storage patterns solely on the alphabetical arrangement of chemicals. Display the classification system used for storage in the principal storage area.
- Stored chemicals should be examined at least annually for container deterioration and integrity.
- Avoid storing chemicals on shelves above eye level.
- Secure shelving sections to walls or floor to prevent tipping of entire sections.
- All shelves on which chemicals are stored should have a lip of approximately 3/4" or greater in order to prevent bottles from sliding off the shelf.
- Do not store flammable materials outside an approved flammables storage cabinet unless in approved safety cans. Store flammables away from all sources of ignition. Store flammables away from all oxidizers.
- Keep all storage areas locked when not in use. Storage and preparation areas should be accessible only to those persons authorized to use the chemicals.
- Keep those chemicals classified as acute poisons in a separate, locked location, which has been labeled as to its purpose.
- Do not store chemicals on the floor or in or above sinks.
- Do not store chemicals where they may be exposed to heat or direct sunlight.
- Store corrosives in appropriate corrosive cabinets. If possible, keep containers in the original shipping packaging.
- Chemical storage under the hoods should be kept to a minimum and should not be allowed to block exhaust vents or airflow. Leave the hood ventilation system turned

on if chemicals are stored in or under the hood. Only temporary hood storage is allowed.

6. Compressed Gas Storage

- Secure all gas cylinders in an upright position with restraints such as chains to prevent them from falling or being knocked over.
- Keep protective plugs and caps in place on cylinders when not in use.
- Avoid exposure of cylinders to heat. Do not store gas cylinders in direct sunlight.
- Never lubricate, modify, force or tamper with a cylinder valve
- Never use cylinders with contents that cannot be positively identified.
- Never direct high pressure gases at a person; serious injury could result.
- Always wear safety glasses when handling and using compressed gases.

7. Handling and Distribution

- When chemicals are being transferred from one container to another, ensure that the new container is compatible with the chemical and is labeled with the identity of the chemical. Also, the use of hazard warning labels are required, e.g., poison, corrosive, flammable, etc.
- When chemicals are hand carried, they should be placed in an outside container or acid-carrying bucket to protect against breakage and spillage. Do not roll or drag compressed gas cylinders. Transport cylinders with a suitable handcart and with the cylinder strapped in place.

8. Waste Disposal

The Chemical Hygiene Officer will coordinate with the district Safety Officer to ensure that laboratory chemicals are disposed of in compliance with appropriate regulations and in a manner that minimizes damage to human health and the environment. The following are guidelines:

- Label waste and the date the waste was placed in the container. Ensure that labels are visible and legible.
- Check containers to ensure they are securely closed and not leaking. Liquids should be stored in screw-cap bottles.
- Never place hazardous waste in the common solid trash container.
- Paper and similar solid waste may be stored in sealed plastic bags. Store other solid waste chemicals in bottles, jars, or plastic-lined sealed boxes.
- Do not discharge laboratory wastes to septic systems.
- Check with your local sanitary sewer authority before discharging wastes into the sewer.
- Do not allow waste materials to accumulate in laboratories or preparation rooms. Remove the sealed containers to the designated waste storage location.
- Recycle waste products whenever possible.
- Proper personal protective equipment must be worn when handling and disposing of waste.
- Follow the guidelines established by the appropriate county, state and federal regulations for the disposal of hazardous waste.

F. MEDICAL CONSULTATION AND EXAMINATIONS

Employees who work with hazardous chemicals will be provided with an opportunity to receive medical attention when overexposure to a hazardous chemical is suspected.

1. Medical Attention

Medical attention will be provided to an employee under the following circumstances:

- Whenever an employee develops signs or symptoms of exposure to a hazardous chemical to which they may have been exposed in the laboratory, the employee will be provided with the opportunity to receive an appropriate medical examination.
- When exposure monitoring reveals an exposure level routinely above the action level (or PEL) for a WISHA-regulated substance, medical surveillance will be conducted as required by the particular WISHA standard.
- Whenever an event takes place in the laboratory such as a spill, leak or explosion that results in the likelihood of a hazardous exposure, the affected employee will be provided with the opportunity for medical consultation to determine the need for a medical exam.

2. Type of Medical Attention

All medical examinations and consultations will be performed under the direct supervision of a licensed physician and will be provided without cost to the employee, without loss of pay and at a reasonable time and place. All questions regarding medical consultations and examinations should be directed to the District Chemical Hygiene Officer.

3. Information for the Physician

The following information will be provided to a physician conducting medical consultations and exams:

- The identity of hazardous chemicals to which the employee may have been exposed.
- A description of the conditions under which the exposure occurred, including quantitative exposure data if available.
- A description of the signs and symptoms of exposure that the employee is experiencing, if any.

4. Physician's Report

A written opinion from the examining physician for any consultations or exams performed under this Operating Procedure must include:

- Any recommendations for further medical follow-up.
- The results of the medical examination and any associated tests.
- Any medical condition revealed during the course of the exam which might compromise employee safety during, or as a result of, exposure to hazardous chemicals found in the workplace.

- A statement that the employee has been informed by the physician of the results of the consultation or medical exam and any medical condition that may require further examination or treatment.

The written opinion should not reveal specific diagnoses unrelated to occupational exposure, except as noted above.

Provisions equal to the above shall be extended to affected students when an overexposure situation occurs. Application of specific provisions related to student medical records, method of payment for physician services, etc., will vary according to student safety requirements and school district policy.

G. INSPECTION PROCEDURES AND PLAN REVIEW

General safety inspections of the laboratory and annual review of the Chemical Hygiene Plan will contribute to overall laboratory and employee safety. The instructor should be alert to unsafe conditions and will inform the principal and Chemical Hygiene Officer, in writing, when an unsafe condition occurs. A written record of all inspections will be maintained by the Chemical Hygiene Officer.

1. Inspecting Laboratory Safety Equipment

Laboratory safety equipment will be inspected at least semi-annually to ensure fitness for use and modified if inadequate, including:

- Fume hoods: Should have a face velocity of 60-120 linear fpm. Velocities greater than 125 fpm result in air turbulence at the hood face and within the hood.
- Personal protective equipment: Eye protection must be clean and functional. Gloves must be of the proper type and must be free from cracks, holes and tears.
- Emergency equipment: Fire extinguishers must be of the right type, easily accessible and fully charged. Have appropriate spill kits available for emergency use.
- First aid equipment: Eyewashes and showers must provide a continuous flow of clean water. First aid kits need to be readily accessible and fully stocked with appropriate supplies.

2. General Inspections

The following are examples of other areas that should be inspected. A sample audit form is found in the appendices.

- Gas cylinders (if present) must be firmly secured.
- Chemicals should not be stored in the fume hood.
- Aisles must be clear of any impediment.
- Chemicals storage practices.
- Electrical cords must be in good condition.
- Rubber hoses must not be cracked and are otherwise in good condition.
- Glassware must be in good condition.

3. Review of the Chemical Hygiene Plan

The Chemical Hygiene Plan for the laboratory will be reviewed by the Chemical Hygiene Officer and others as designated by the CHO at least **annually** and updated as necessary in a timely manner. Be sure that the **review is documented in writing and dated**. Factors to consider in the review include:

- Compliance with current regulations
- For adequacy in protecting employees from the health and physical hazards associated with chemicals in use in the laboratory.
- Changes in laboratory procedures, operations or equipment that may affect the potential for personal exposure to hazardous chemicals.
- The addition or deletion of the use of specific hazardous chemicals that warrant a review of laboratory safety procedures.
- Changes in laboratory personnel and/or their responsibilities.
- The review and evaluation of inspection records, accident investigations, professional research on chemical hygiene techniques, etc.

H. RECORDKEEPING

1. Training Records

- The District will maintain records of employee training relating to the safety and health of employees who work in a laboratory.

2. Exposure Testing Records

- Records of exposure assessments and methods will be maintained for the duration of employment plus thirty years, and will be made available to the employee or their representative upon request.
- The employee will be notified of any monitoring results within 15 working days after receipt of the results, either individually, in writing, or by posting the results in an appropriate location that is accessible to employees.

3. Medical Records

The District requires the records of medical consultations, medical examinations and all reports derived from such consultations and examinations be maintained for the duration of employment plus thirty years. These records must be accessible to employees or their representatives upon request in accordance with WAC 296-62-Part B “Access to Records”.

4. Material Safety Data Sheets

The District will maintain a file of manufacturer’s Material Safety Data Sheets for all chemicals and make them available to employees (and students) in the laboratory. If a

chemical is present that does not have an MSDS, that chemical is not to be used until one is obtained.

5. Accident Reports

Each incidence of an accident or injury will be reported to the School CHO, school principal, and/or the District CHO, in writing, within 5 working days of the accident. If staff or students were witnesses to the accident/injury, they should also report their observations. The District will keep accident reports on file in the event of lost work resulting from an exposure to a hazardous chemical or a job-related accident.

6. Chemical Inventory

Each school will maintain a Chemical Inventory List which will be updated as changes occur and reviewed at least annually.

7. Safety Inspections

The District will keep records of the regular safety inspections, including the date of the inspection and the person conducting the inspection.

I. TRAINING

The District will provide laboratory and other appropriate employees (e.g., receiving and shipping personnel, custodial, maintenance, stockroom personnel, emergency teams) with information and training on the hazards of chemicals present in their work area and what to do if an accident occurs.

1. Training Program

Training will consist of at least the following subjects:

- The applicable details of the Chemical Hygiene Plan.
- Methods that may be used, and observations to detect, the release or presence of a hazardous chemical (such as continuous monitoring devices and the visual appearance or odor of hazardous chemicals when being released).
- The physical and health hazards of chemicals in the work area.
- The measures that instructors can take to protect themselves and their students from these hazards, including specific procedures that this school district has implemented to protect instructors and students from exposure to hazardous chemicals (e.g., general laboratory safety rules, emergency procedures, waste disposal methods, material handling and protective equipment to be used).

2. Information for Employees

Employees will be provided with the following information:

- The WISHA Standard for Occupational Exposure to Hazardous Chemicals in Laboratories WAC 296-62-Part Q and its Appendices which are included in this manual.
- The location and availability of the Chemical Hygiene Plan.
- The permissible exposure limits (PEL's) for WISHA-regulated substances or recommended exposure limits for other hazardous chemicals where there is no applicable standard.
- The signs and symptoms associated with exposure to hazardous chemicals used in the laboratory.
- The location and availability of reference material on the hazards, safe handling, storage and disposal of hazardous chemicals found in the laboratory including Material Safety Data Sheets.

3. When to Provide Training and Information

Information and training will be provided at the time of the employee's initial assignment to the work area where hazardous chemicals are present and prior to assignments involving new exposure situations. Refresher information and training will be provided at least annually.

4. Students

The District requires that comparable laboratory safety training and personal protective equipment be provided to students appropriate to their potential exposure to hazardous chemicals. This will vary based on their grade level, courses of study, the lab facility and the individual policies of the school district, school, instructor, local health district, workers' compensation insurance and property and casualty insurance carriers. Specific safety procedures will be taught whenever the need dictates.

J. EMERGENCY PREVENTION AND RESPONSE

Laboratory instructors and other employees should be familiar with emergency procedures in order to prevent and reduce the impact of laboratory accidents.

1. General Emergency Procedures

The emergency procedures should address a failure in the ventilation system, evacuation of the laboratory, fire response, chemical exposure to personnel and spills. Emergency procedures will be a topic for training and posted in a prominent location. They should include the following:

- Routes of egress (exit) from the laboratory. Ensure that employees and students know the main and alternate routes, as well as the procedure for accounting for each person in the laboratory.
- Procedures by which to notify appropriate individuals (including telephone numbers). There should be a telephone or intercom in the laboratory. The teacher will call for assistance if there is any doubt about how to handle the emergency.

To report a fire, accident, or other emergency call 911.

If a hazardous condition threatens your health and safety, go to a safe location first, then call the number above. Provide the following information:

- Nature of emergency
 - Location of emergency
 - Your name
 - Telephone number from which you are calling
- stay on the line. Do not hang up until emergency response person has hung up.

When helping another person, the employee should evaluate the potential danger to himself/herself before taking action.

Do not move any injured persons unless they are in immediate danger from chemical exposure or fire. Keep the victim(s) warm.

Alert others in the vicinity about the nature of the emergency.

2. Evacuation

In case of building evacuation do the following:

- Shut down equipment, if appropriate and safe to do so,
- Leave the building by the most direct route,
- Proceed to the predetermined assembly area,
- Stay at the assembly area until released by the person in charge.

3. First Aid

Departments must have personnel trained in first aid available during working hours to render assistance until medical help can be obtained. All laboratory science personnel in this district are required to possess a valid first aid card. Suitable first aid equipment should be available in the laboratory area such as a first aid kit. Seek additional medical attention if needed.

4. Emergency Equipment

The Chemical Hygiene Officer will ensure that adequate emergency equipment is available in the laboratory and inspected periodically to ensure that it is functioning properly. Emergency equipment includes but is not limited to the following: eyewash fountain; fire extinguisher of an appropriate type; safety drench shower; telephone; spill kit, fire blanket; and identification signs.

5. Fire Response

The best way to fight a fire is to prevent it. Fires can be prevented or their severity considerably reduced by proper housekeeping. This includes the prompt removal of waste, separation of flammable liquids from combustible material, storage of only limited quantities of flammable material, and the maintenance of unobstructed aisles and exits. When a fire occurs, the following actions should be followed, depending on its severity:

- Suffocate a fire contained in a small vessel by covering the vessel. The vessel should not be picked up, nor covered with dry towels or cloths.
- Remove nearby flammable materials if it can be done safely, to avoid spread of the fire.
- If a fire burns over a larger area, all persons should evacuate the area, except those trained and equipped to fight a fire.
- Activate the fire alarm and call the Fire Department.
- The fire extinguisher should only be used by those who have training, and only from a position from which escape is possible.
- If the fire is electrical, turn off the electrical power to the affected work area at the circuit panel if possible.
- Inform firefighters of what chemicals are involved. Make a copy of the current Chemical Inventory List and MSDSs available to the firefighters.
- Fires involving laboratory chemicals increase the possibility of explosions. Special care should be taken to keep heat from volatile solvents, compressed gas cylinders, reactive metals, and explosive compounds.
- As soon as possible, recharge or replace all extinguishers that were used.
- Drench any persons whose clothing is on fire under the safety shower. If the shower is not convenient, the individual may be doused with water, covered with a blanket, or other procedure to quench the fire. After the fire is out, wrap the individual to keep them warm and to help avoid the onset of shock. Seek medical attention immediately.

6. Chemical Spills on Personnel

Eye Contact: Immediately flush the eye(s) with water for at least 15 minutes. Hold the eyelid away from the eyeball while the eyeball is moved around to ensure all areas of the eye is flushed. If contact lenses are worn, do not allow attempts to remove them interfere with immediate and continued eye flushing. Only medical personnel should attempt to remove contact lenses. Seek medical attention.

Ingestion: If a chemical is ingested, follow label or MSDS directions for first aid treatment. Seek medical attention.

Skin Contact: Promptly flush the affected area with water and remove any contaminated clothing. Consult the MSDS for additional instructions. Seek medical attention.

Medical personnel should be fully informed as to the chemical involved in the accident, and of the circumstances of the spill. Supply a copy of the appropriate MSDS to the medical personnel/healthcare facility.

7. Other Accidents Involving Personal Injury

- Call emergency number with the nature and location of the injured party.
- Remove anyone overcome with smoke or chemical fumes/vapors to fresh air as soon as possible. If breathing difficulties persist, seek medical attention.
- If an injured person is not breathing, the rescuer should provide rescue breathing/CPR using appropriate methods, if the rescuer is certified to provide this aid. Seek medical attention as soon as possible.

- Control bleeding by compressing the wound with a clean cloth or compress. Elevate the injury above the level of the heart. Treat the injured person for shock. Seek medical attention as soon as possible.
- If a person is in contact with a live electrical circuit, shut the power off at the most convenient switch. Do not contact the victim until power has been disconnected. Seek medical attention as soon as possible.

8. General Chemical Spills

- Clean up all chemical spills promptly. Notify any individual at risk of the spill. Spill kits are available commercially.
- Wear protective clothing such as gloves, safety glasses and lab coats or aprons when cleaning up a spill. If strong fumes are encountered or if symptoms of exposure are experienced, stop clean up, evacuate the area, notify the appropriate personnel and determine the appropriate action.
- Stop the spread of the spill if possible, but do not step in the spill. Absorbent material can be used to surround the spill.
- If it is not known what is spilled, check the spill area for any information that will help identify the spill, such as broken glass or overturned containers. These might have a label on them that will identify the material. If no information is available, check the pH of the spill using pH paper.
- If the spill is an acid it may be neutralized with sodium bicarbonate.
- If the spill is a base it may be neutralized with sodium bisulfate, citric acid, or vinegar. Neutralization of bases produces heat, so allow time for it to dissipate.
- Solvent spills need to be properly ventilated due to their flammability and ignitability. Extinguish all ignition sources in the area. Solvent spills can be cleaned up by applying an absorbent material to cover the spill area.
- For halogen spills, sodium thiosulfate should be used.
- When dry, the spilled material, along with all material used in the clean up, should be treated as chemical waste and disposed of properly.

9. Accident Reports

Investigate all accidents and near accidents carefully. Forward the results of this investigation and recommendations for the prevention of similar occurrences to the District Chemical Hygiene Officer, the Principal, and the Safety Committee. Accident reports will be kept on file by the district. Accident and incident forms will be forwarded to the ESD.

K. SPECIFIC EXPOSURE CONTROL MEASURES FOR EXTREMELY HAZARDOUS CHEMICALS

Additional employee protection is required for work with particularly hazardous substances such as “select carcinogens,” reproductive toxins, and other substances with a high degree of acute toxicity. These control measures are designed to reduce the exposure of instructors, aides, students and other employees to especially hazardous chemicals.

No select carcinogens, reproductive toxins or highly acute toxins are allowed in middle or high school laboratories in this school district without written authorization.

1. Special Provisions

Provisions needed for work with those types of chemicals are a) a special designated work area for work with the chemical; b) containment devices (fume hoods or glove boxes); c) decontamination procedures; and d) procedures for safe removal of contaminated waste.

A) Designated Areas

WISHA recommends that the use of select carcinogens, reproductive toxins, or substances of high acute toxicity be restricted to "designated areas," especially when other less toxic chemicals are being used in the same area. A designated area may be an entire laboratory, an area within a lab, or a device such as a lab hood. The goal is to limit exposures and alert all employees in the vicinity to the potential hazard. No select carcinogens, reproductive toxins or highly acute toxins are allowed in middle or high school laboratories in this school district without written authorization.

B) Containment Device

Circumstances involving select carcinogens, reproductive toxins, or substances of high acute toxicity that may warrant the use of containment devices (such as a fume hood) include:

- The use of volatile substances.
- Manipulations that may generate an aerosol.
- Any handling or reaction that may result in an uncontrollable release.
- Critical hoods should have a monitoring device to allow convenient confirmation of adequate hood performance prior to use.

C) Decontamination Procedures

It may be appropriate to establish decontamination procedures to adequately address the decontamination required for certain designated areas in the laboratory. Vacuum pumps and other contaminated equipment including glassware should be decontaminated in the hood before removing them from the designated area. The controlled area should be decontaminated periodically and always before normal work is resumed there.

D) Safe Removal of Contaminated Waste

Safe disposal of contaminated wastes should be part of the planning process for any laboratory experiment or procedure. If practical, very hazardous substances should be converted to less hazardous substances in the laboratory rather than being directly placed in containers for disposal. Personnel removing contaminated waste should be aware of the hazards and should know what to do in the event of a spill during transport. To ensure the safe removal of wastes from the laboratory, the Hazardous Waste Coordinator--through the Chemical Hygiene Officer and the Safety Program Manager--should be contacted for the proper disposal methods.

Place solid chemical wastes in suitable containers. It is important to ensure that all waste containers are properly labeled to identify the associated contents and hazards. Laboratory employees involved in disposing of the wastes should be aware of the

hazards of the waste, the importance of segregating incompatible materials and the applicable regulatory requirements.

2. Procedures for Handling Reproductive Toxins

(Examples: Lead Compounds, Organomercurials, Ethidium Bromide)

- Women of childbearing age should only handle these substances in a hood and when satisfactory performance of the hood has been confirmed.
- Avoid skin contact by using gloves and wearing long sleeves and other protective apparel as appropriate.
- Always wash hands and arms immediately after working with these materials.
- Keep records of the amounts of these materials on hand, amounts used, and the names of the workers involved.
- Employees should be familiar with the emergency procedures for accidents or spills involving these substances. Notify the Chemical Hygiene Officer of all incidents of exposures or spills.
- Unbreakable containers of these substances should be stored in a well-ventilated area and labeled properly.

3. Procedures for Handling Chemicals with High Acute Toxicity

(Examples: Hydrofluoric Acid, Hydrogen Cyanide)

- Use and store these substances in areas of restricted access with special warning signs.
- Always use a hood or other containment device for procedures that may result in the generation of aerosols or vapors containing the substance. The released vapors should be trapped to prevent their discharge with the hood exhaust.
- Avoid skin contact by using gloves and wearing long sleeves and other protective apparel as appropriate.
- Always wash hands and arms immediately after working with these materials.
- Keep records of the amounts of these materials on hand, amounts used, and the names of the workers involved.
- Employees should be familiar with the emergency procedures for accidents or spills involving these substances. If a major spill occurs outside of the hood, emergency responders should wear appropriate personal protective equipment and all other workers should evacuate the area.
- Be sure that at least two people are present at all times when a highly toxic compound, or compound of unknown toxicity, is being used.
- Store breakable containers of these substances in chemically resistant trays, and cover work and storage surfaces with removable, absorbent plastic-backed paper.
- Chemically decontaminate, if possible, or destroy contaminated clothing. Store contaminated waste in suitably labeled impervious containers. Liquids can be stored in glass or plastic bottles containing vermiculite.

4. Procedures for Handling Select Carcinogens

(Examples: Benzene and Vinyl Chloride)

- Conduct all work with these substances in a "designated area" such as a restricted access hood, glove box, or portion of a lab designated for use of chronically toxic substances. People with access to this area need to be aware of the substances used and the necessary precautions to take. Clearly mark the designated area with warning and restricted access signs.
- The use and disposal of these substances should be approved by the Chemical Hygiene Officer prior to this activity.
- Always use a hood or other containment device for procedures that may result in the generation of aerosols or vapors containing the substance. The released vapors should be trapped to prevent their discharge with the hood exhaust.
- Vacuum pumps should be protected against contamination by scrubbers or other devices and vented into the hood. Decontaminate vacuum pumps and other contaminated equipment in the hood prior to removing them from the designated area. Decontaminate the designated area before resuming work there.
- Avoid skin contact by using gloves and wearing long sleeves and other protective apparel as appropriate.
- Remove any protective clothing before leaving a designated area and place it in an appropriate, labeled container.
- Always wash hands, arms, face and neck immediately after working with these materials.
- Keep records of the amounts of these materials on hand, amounts and dates used, and the names of the employees involved.
- Employees should be familiar with the emergency procedures for accidents or spills involving these substances. If a major spill occurs outside of the hood, emergency responders should wear appropriate personal protective equipment and all other workers should evacuate the area.
- Be sure that at least two people are present at all times when a highly toxic compound, or compound of unknown toxicity, is being used.
- Store these substances in unbreakable containers in a ventilated area with limited access. Cover work and storage surfaces with removable, absorbent plastic-backed paper. Label all containers with the identity and hazards of the substance.
- Chemically decontaminate if possible, or destroy contaminated clothing. Store contaminated waste in suitably labeled impervious containers. Liquids can be stored in glass or plastic bottles containing vermiculite.
- Determine the appropriateness of medical surveillance for employees if they are working with toxicologically significant quantities of these substances on a regular basis.
- Check positive pressure glove boxes for leaks before each use. Negative pressure glove boxes should have a ventilation rate of at least 2 volumes per hour and a pressure of at least 0.5 inches of water. Exit gases should be trapped or filtered and then released through the hood.

No select carcinogens, reproductive toxins or highly acute toxins are allowed in middle or high school laboratories in this school district without written authorization.

GLOSSARY OF COMMON TERMS

ACGIH-American Conference of Governmental Industrial Hygienists. ACGIH develops and publishes recommended occupational exposure limits (see TLV) for chemical substances and physical agents.

ACS-American Chemical Society.

Acid-A chemical compound that yields hydrogen ions when dissolved in water; whose hydrogen can be replaced by metals or basic radicals; or reacts with bases to form salt and water.

Action Level-Term used to express the level of a toxicant that require medical surveillance, usually one half of the Permissible Exposure Limit (PEL).

Acute effect-An adverse effect on the human body with symptoms developing rapidly and coming quickly to a crisis. Acute effects are normally the result of short-term exposures and short duration.

ANSI-The American National Standards Institute is a nonprofit organization of various trade, technical, professional, and consumer groups who develop voluntary standards.

ASHRAE-American Society of Heating, Refrigeration, and Air Conditioning Engineers.

Asphyxiant-A vapor or gas that displaces oxygen or prevents its use in the body, leading to unconsciousness or death by suffocation.

Base-A compound that yields hydroxyl ions in aqueous solutions; and which reacts with an acid to form water and a salt.

Boiling Point-The temperature at which a liquid changes to a vapor state (gas), expressed in degrees.

Carcinogen-A substance capable of causing cancer. A cancer is characterized by the proliferation of abnormal cells, sometimes in the form of a tumor.

CAS Number-An identification number assigned by the Chemical Abstracts Service (CAS) of the American Chemical Society.

Chemical Hygiene Officer-An employee who is designated by the employer and who is qualified by training or experience to provide technical guidance in the development and implementation of the provisions of the Chemical Hygiene Plan.

Chemical Hygiene Plan-A written program developed and implemented by the employer which sets forth procedures, equipment, personal protective equipment and work practices that are both capable of protecting employees from the health hazards presented by hazardous chemicals used in the workplace and meets the requirements of WAC 296-62 Part Q.

Chronic-An adverse effect on the human body with symptoms that develop slowly over a long period of time or that frequently recur. Chronic effects are the result of long-term exposure and are of long duration.

Combustible-A term used to classify liquids, gases, or solids that will burn readily.

Combustible Liquid-Any liquid having a flash point at or above 100°F (37.8° C) and below 200° F (93.3° C).

Concentration-A figure used to define relative quantity of a particular material. Examples are parts per million (ppm) and milligrams per cubic meter (mg/m³).

Corrosive-A chemical that causes visible destruction or irreversible alteration in living tissue by chemical action at the site of contact.

Decomposition-The breakdown of materials or substances into other substances or parts of compounds. Usually associated with heat or chemical reactions.

Density-The mass (weight) per unit volume of a substance. Usually compared to the density of water. The density of water is 1. Substances with a density of less than 1 float in water and those with a density greater than 1 sink in water.

Dermal-Used on or applied to the skin.

DOT-Department of Transportation.

Dusts-Solid particles generated by handling, crushing, grinding, etc. of organic and inorganic materials such as rock, metal, and wood.

Emergency (chemical)-A situation created by an accidental release or spill of hazardous chemicals that pose a threat to the safety of workers, residents, the environment, or property.

Employee-An individual employed in a laboratory workplace who may be exposed to hazardous chemicals in the course of his/her assignment. Teachers, laboratory aides, paid teaching assistants, janitorial and maintenance personnel are part of this group.

Explosive-A chemical that causes a sudden, almost instantaneous release of pressure, gas and heat when subjected to sudden shock, pressure or high temperature.

Exposure-Occurs when an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, injection), and includes potential (e.g., accidental or possible) exposure.

Flammable-Any substance that is easily ignited, burns intensely, or has a rapid rate of flame spread. Flammable liquid is any liquid with a flash point below 100°F.

Flammable Range-The difference between the lower and upper flammable limits, expressed in terms of percentage of vapor or gas in air by volume, and is also often referred to as the “explosive range.”

Flash Point-The minimum temperature at which a liquid gives off enough vapor to form an ignitable mixture with air and produce a flame when an ignition source is present.

Fume-Airborne particulate formed by the evaporation of solid materials, e.g., metal fume emitted during welding.

General Exhaust-A system for exhausting air containing contaminants from a general work area, usually accomplished via dilution.

Hazardous Chemical-A chemical that has the capability of producing adverse health effects on the health and safety of humans.

Health Hazard- A chemical for which there is evidence that acute or chronic health may occur in exposed employees.

High Acute Toxicity Substances- Substances which may be fatal or cause damage to target organs as a result of a single exposure.

Ignitable-Capable of burning or causing a fire.

Incompatible- Materials which could cause dangerous reactions from direct contact with one another.

Ingestion-The process of taking substance into the stomach through the mouth. Chemicals that enter the body by this route may have local effects and/or may be absorbed into the bloodstream through the small intestine.

Inhalation-The breathing in of a substance in the form of a gas, vapor, fume, mist, or dust. Chemicals that enter the body by this route may have local effects and/or may be absorbed into the bloodstream through the lungs.

Irritant-A substance which causes a reversible, local inflammatory effect on the site of contact, however is not considered a corrosive. Normally, irritants affect the eyes, nose, skin, or respiratory system.

Label-Means any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals. Containers in the workplace must be labeled with the following information: identity of the hazardous chemical and appropriate hazard warnings.

Lethal Concentration 50 (LC50)-The concentration in air of a toxic substance that was required to cause the death of half the test animal population. This evaluates inhalation as a potentially harmful route of entry.

Lethal Dose 50 (LD50)-The dosage of a toxic substance that was required to cause death in half the test animal population. Either ingestion or skin contact may be evaluated.

L.E.L. (Lower Explosive Limit)The lowest concentration of gas or vapor (% by volume in air) which will burn or explode if an ignition source is present.

Local Exhaust Ventilation-A ventilation system that captures and removes contaminants at the point they are being produced before they escape into the work area.

MSDS (Material Safety Data Sheet)-A document that contains information and instructions on the chemical and physical characteristics of a substance, its hazards and risks, the safe handling procedures, and actions to be taken in the event of a fire, spill, overexposure etc.

Melting Point-The temperature at which a solid changes to a liquid state.

Mist-Suspended liquid droplets generated by condensation from the gaseous to the liquid state or by breaking up a liquid into a dispersed state.

Mutagen-A chemical or physical effects which can alter the genetic material in a living cell and result in physical or functional changes in subsequent generations.

NFPA (National Fire Protection Association)-An organization which promotes fire protection/prevention and establishes safeguards against loss of property and/or life by fire.

NIOSH (National Institute for Occupational Safety and Health)-A federal agency that conducts research on health and safety concerns due to workplace exposures, tests and certifies respirators and trains occupational safety professionals.

Nonflammable-Not easily ignited, or if ignited, not burning with a flame (smolder).

OSHA (Occupational Safety and Health Administration)-Federal agency with safety and health regulatory and enforcement authorities for general U.S. industry and business.

Oxidizer-A chemical (other than a blasting agent or explosive) that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

Particulate-A suspension of fine solid or liquid particles in air, such as dust, fog, fume, mist, smoke, or sprays.

Permissible Exposure Limit (PEL)-The legally enforced exposure limit for a substance. The PEL indicates the permissible concentration of air contaminants to which nearly all workers may be repeatedly exposed eight hours a day, forty hours a week, over a working lifetime without adverse health effects.

pH-A measure of the acidity or alkalinity of a liquid or solid material.

Physical Hazard-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.

Poison-A substance that causes the disturbance, disease, or death of an organism.

PPM (Parts per Million)-A unit of measurement for expressing small concentrations of contaminants in the air, water, soil, etc. For example, the number of parts per million parts of air.

Pyrophoric-A chemical substance or mixture that will ignite spontaneously in dry or moist air at or below 130°F.

Reactive-A chemical substance or mixture that may vigorously polymerize, decompose, condense, or become self-reactive under conditions of shock, pressure or temperature.

Reproductive toxins- Chemicals which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis).

Select carcinogen- Any substance which meets one of the following criteria:

- (a) It is regulated by WISHA as a carcinogen; or
- (b) It is listed under the category, “known to be carcinogens,” in the Annual Report on Carcinogens published by the National Toxicology Program (NTP) (latest edition); or
- (c) It is listed under Group I (“carcinogenic to humans”) by the International Agency for Research on Cancer Monographs (IARC) (latest editions); or
- (d) It is listed in either Group 2A or 2B by IARC or under the category, “reasonably anticipated to be carcinogens” by NTP, and causes statistically significant tumor incidence in experimental animals in accordance with any of the following criteria:
 - (i) After inhalation exposure of 6-7 hours per day, 5 days per week, for a significant portion of a lifetime to dosages of less than 10 mg/m³; or
 - (ii) After repeated skin application of less than 300 (mg/kg of body weight) per week; or
 - (iii) After oral dosages of less than 50 mg/kg of body weight per day

Sensitizer-A chemical substance or mixture that causes a substantial number of persons to develop an allergic reaction in normal tissue after repeated exposure.

Smoke-An air suspension of particles, originating from combustion of materials.

Solvent-A substance that dissolves another substance.

Specific Gravity-The weight of a material compared to the weight of an equal volume of water, which has a specific gravity of 1. A material with a specific gravity greater than 1 will sink in water, while a material with a specific gravity of less than 1 will float on water. Also an expression of the density (or heaviness) of the material.

Teratogen-A substance that causes malformation of embryos and fetuses.

TLV (Threshold Limit Value)-A term used by ACGIH to express the airborne concentration of a material to which nearly all workers can be exposed day after day, without adverse health effects. Similar to the PEL but is a recommended level.

Toxicity-The sum of adverse effects resulting from exposure to a material, generally by the mouth, skin, or respiratory tract.

TWA (Time-Weighted Average)-The airborne concentration of a material to which a person can be exposed over an 8-hour work day.

UEL (Upper Explosive Limit)-The highest concentration (expressed in percent vapor or gas in the air by volume) of a substance that will burn or explode when an ignition source is present.

Vapor-The gaseous form of substances that are normally in the solid or liquid state at room temperature and pressure.

Vaporization-The change of a substance from a liquid to a gas.

Vapor Density-A term used to define the weight of a vapor or gas as compared to the weight of an equal volume of air, which is assigned a vapor density of 1. Materials lighter than air have a vapor density of less than 1, whereas materials heavier than air have a vapor density greater than 1.

Volatile-A description of any substance that evaporates readily at an ambient temperature of 70° F. Examples: butane, gasoline, and paint thinner are 100% volatile; their individual evaporation rates vary, but over a period of time each will evaporate completely.

Water-reactive-A chemical substance or mixture that reacts with water to release heat or gas which is flammable or toxic.

WAC (Washington Administrative Code)-Contains the safety rules that apply throughout the state of Washington to any and all work places under the jurisdiction of the Department of Labor and Industries. These rules are minimum safety requirements.

WISHA (Washington Industrial Safety and Health Act)-Legislation enacted to regulate safety and health in the workplace.

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FALL PROTECTION PLAN



1. PURPOSE

Falls from elevated work surfaces present a potential for serious injury. In Washington State in 2003, falls were the third leading cause of worker deaths, accounting for 16.2 of the 68 total fatalities. To help reduce the incidence of fall injuries and protect employees, the school district has established this Fall Protection Plan. This plan applies to all employees involved in construction, alteration, repair or maintenance, and who are assigned to perform tasks where fall hazards of 10 feet or more exist. This program involves establishing a fall protection work plan, and providing a fall protection system or a combination of prevention and protection measures. Through this program, the district will ensure that employees are aware of the fall hazards that they may be exposed to at work and that available protective measures are to be employed.

2. Fall Protection Standards

WISHA's fall protection general standards are set forth in WAC 296-155-245, Part C-1, "Fall Restraint and Fall Arrest." This standard requires that a written fall protection work plan be

developed and maintained on the job site when employees are assigned to perform tasks where fall hazards of 10 feet or more exist. The district Safety Officer will oversee the fall protection program. This plan is a summary of the WISHA requirements; users should refer to the standard for specific details of its implementation.

There are other WISHA standards that require the use of fall protection for employees. These include those addressing floor and wall openings and holes; open-sided floors, platforms and runways; stairways and risers; scaffolding; ladders; boom supported elevating work platforms; vehicle mounted elevated and rotating work platforms and order pickers. These WISHA requirements can be found in the following standards:

- A. Chapter 296-24 WAC, "General Safety and Health Standards":
 - * Part J-1, "Working Surfaces, Guarding Floors and Wall Openings"
 - * Part J-3, "Powered Platforms"
- B. Chapter 296-155 WAC, "Safety Standards for Construction Work":
 - * Part J, "Stairways and Ladders"
 - * Part J-1, "Scaffolding"
 - * Part K, "Floor Openings, Wall Openings, and Stairways"
- C. Chapter 296-800-250 WAC, "Stairs and Stair Railings"
- D. Chapter 296-800-260 WAC, "Floor Openings, Floor Holes & Open-sided Floors"
- E. Chapter 296-800-290 WAC, "Portable Ladders: Metal and Wooden"
- F. Chapter 296-874 WAC, "Scaffolds"
- G. Chapter 296-863-20025 WAC, "Order Pickers"

(Note: Fall protection is not required when working off of a ladder below 25 feet if the employee's hands are free to climb and there are no power tools in use while on the ladder.)

3. Definitions

Fall protection is a system used by employees to eliminate or reduce fall hazards. This system involves fall restraint (that physically warns the worker before s/he falls), fall arrest (that physically stops the worker from a fall), and/or a positioning device system (that supports the employee in place while working).

FALL PROTECTION OPTIONS INCLUDE:

<u>Fall Restraint</u>	<u>Fall Arrest</u>	<u>Positioning System</u>
Restrained from falling	Stopped after the fall	Held in place while working
Standard guardrails	Full-body harness	Safety belt/harness
	6 ft. max. free fall	2 ft. max. free fall
Safety belt/harness		
	Safety nets	
Warning line system		

and/or safety monitor
low pitched roofs only

Catch platforms

Fall restraint system means an approved device and any necessary components that function together to restrain an employee in such a manner as to prevent that employee from falling to a lower level. Fall restraint systems include guardrails, safety belts and harnesses attached to securely rigged restraint lines and anchorage points, and warning lines systems. (See WAC 296-155-24510(1).)

Fall arrest system means the use of multiple, approved safety equipment components, such as: body harnesses, lanyards, deceleration devices, drop lines, horizontal and/or vertical lifelines and anchorages, interconnected and rigged as to arrest a free fall. (See WAC 296-155-24510(2).)

Positioning device system means a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning. (See WAC 296-155-24510(3).)

Other related definitions include the following:

Anchorage means a secure point of attachment for lifelines, lanyards, or deceleration devices which is capable of withstanding the specified forces.

Competent person means an individual knowledgeable of fall protection equipment, including the manufacturer's recommendations and instructions for the proper use, inspection, and maintenance; and who is capable of identifying existing and potential fall hazards; and who has the authority to take prompt, corrective action to eliminate those hazards; and who is knowledgeable of the rules contained in this section regarding the erection, use, inspection, and maintenance of fall protection equipment and systems.

Drop line means a vertical lifeline secured to an upper anchorage for the purpose of attaching a lanyard or device.

Full body harness means a configuration of connected straps to distribute a fall arresting force over at least the thighs, shoulders and pelvis, with provisions for attaching a lanyard, lifeline, or deceleration devices. All components must be compatible. (See WAC 296-155-2510(2)(a).)

Lanyard means a flexible line of webbing, rope, or cable (usually 2, 4, or 6 feet long) used to secure a body belt or harness to a lifeline or an anchorage point.

Lifeline means a vertical line from a fixed anchorage or between two horizontal anchorages, independent of walking or working surfaces, to which a lanyard or device is secured.

Deceleration device means any mechanism, such as a rope grab, ripstitch lanyard, specifically woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc. which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

Guardrail requirements differ by application. Generally, a **standard railing** consists of a smooth-surfaced top rail (36" to 42" from the walking surface), intermediate rail (halfway between the top rail and the walking surface), toe board (minimum of 4" high), and posts (spaced at least on 8' centers). Railings must withstand a load of at least 200 pounds applied in any direction, with no overhang of rail ends. (See WAC 296-155-505.)

Horizontal lifeline means a rail, rope, wire, or synthetic cable that is installed between two anchorages and used for attachment of a worker's lanyard or lifeline device while moving horizontally; it is used to control dangerous pendulum-like swing falls.

Roof means the exterior surface on the top of a building. A **low pitched roof** has a slope equal to or less than 4 in 12; a **steep roof** has a slope greater than 4 in 12. (Note: There are more stringent fall protection requirements for steep roofs.)

Safety monitoring system means a safety system in which a designated competent person monitors the safety of all employees in a roofing crew, and warns them when it appears to the monitor that they are unaware of the hazard or are acting in an unsafe manner. The competent person, who must be easily distinguished from the work crew, must be on the same roof and within visual distance of the employees, be close enough to verbally communicate with the employees, and engage in no other duties. This can be used for low pitched roofs and leading edge work only. (See WAC 296-155-24521.)

Warning line system means a barrier erected on all sides of a walking and working surface or a low pitched roof, to warn employees that they are approaching an unprotected fall hazard(s). It shall consist of a wire, rope or chain and supporting stanchions, and be flagged at no more than 6' intervals. (See WAC 296-155-24515(3).)

4. Where Fall Protection May Be Needed In Schools

Examples of maintenance and custodial activities where employees could work 10 feet off of the ground, and fall protection may be required, include (but are not limited to) the following:

- * changing light bulbs in high ceilings
- * replacing ceiling tiles in high ceilings
- * maintenance or cleaning of rain gutters and scuppers
- * repairing and maintaining roofs
- * pruning trees
- * changing air handling unit filters
- * working on exhausters on roofs
- * changing street light bulbs
- * replacing/repairing skylights
- * maintenance in or around HVAC cooling towers
- * removing snow, debris, or equipment from roofs
- * painting
- * maintenance or repair of motorized basketball backboards, gymnasium dividers, sound system components, scoreboards, etc.

5. Fall Protection Work Plan

A fall protection work plan is a written planning document, developed by the employee's supervisor or competent person, for all instances where an employee is required to work 10 feet or more above the ground or other work surface. The plan will be maintained at the work site and be available for inspection. (See WAC 296-155-24505.)

The six primary elements required in the plan are as follows:

- 1. Identify all fall hazards in the work area.**
- 2. Describe the method of fall arrest or fall restraint to be provided.**
- 3. Describe the correct procedures for the assembly, maintenance, inspection, and disassembly of the fall protection system to be used.**
- 4. Describe the correct procedures for handling, storage and securing of tools and materials.**
- 5. Describe the method of providing overhead protection for workers who may be in, or pass through, the area below the work site.**
- 6. Describe the method for prompt, safe removal of injured workers.**

The following may assist in the completion of a fall protection work plan.

Work at elevations of 10 feet or higher with use of a fall restraint system.

- Method of fall protection: Fall restraint system including guardrails with a toe board, when necessary, or safety belt/harness, or warning line system, or warning line system with a safety monitor. (Fall restraint regulations allow falls of less than two (2) feet. They are intended to protect workers from getting too close to the working edge. They are not intended as free-fall protection.)
- Procedures for assembly, maintenance, etc., of fall protection:
 - A standard railing including a top rail, intermediate rail, posts and, if necessary, a toe board will be erected and the top rail will stand 39-45 inches above the platform or runway.
 - The middle rail will be less than, or equal to 19 inches below the top rail.
 - A standard toe board will be installed if:
 - (a) persons pass beneath the open sides,
 - (b) there is moving machinery, or
 - (c) there are falling materials, equipment or tools that create a hazard.
- Procedures for handling, storing, and securing tools and equipment to be used:
 - Tool belts will be used to carry hand tools.
 - Tools too large for the tool belt will be raised to the work area by means of a rope or mechanical device.
 - After use, hand tools will be returned to the tool belt immediately.
 - Tools and loose materials will not be left on overhead platforms or scaffolds.
- Overhead protection measures:

- Signs warning of overhead work will be posted to warn passers-by.
- Procedures for rescue of injured workers:
 - If an employee is injured, a trained person will be available to administer first aid and evaluate the employee's condition.
 - If the employee's condition appears serious, the supervisor or another individual will call "911" to obtain emergency medical assistance.
 - District employees will assist the emergency response unit as appropriate.

Work at elevations of 10 feet or higher with use of a fall arrest system.

- Method of fall protection: Fall arrest system including a full-body harness, lanyards, anchor points and horizontal lifelines. (Fall arrest regulations allow free-falls of less than six (6) feet.)
- Procedures for assembly, maintenance, etc., of fall protection:
 - Fall protection equipment will be inspected by the employee prior to each use.
 - Inspection will include checking for damage, wear and mildew.
 - Any equipment found to be defective by the employee must be tagged, removed from use and turned in to the supervisor for evaluation.
 - Equipment found by the supervisor will be turned in for repair or destruction, as appropriate.
 - Fall arrest equipment, including approved harness, lanyards, and lifelines attaching to a secured anchorage point, will be used while working.
 - Employees will don all equipment prior to climbing the roof. They will connect to the anchor point or horizontal lifeline immediately after mounting the roof.

NOTE: If conducting large scale roofing projects with several employees involved, a safety warning line with a safety monitor system may be more convenient and may be used in place of the harness, lanyard and horizontal lifeline.

- Procedures for handling, storing, and securing tools and other equipment to be used:
 - Tool belts will be used to carry hand tools to the roof.
 - Tools too large for the tool belt will be raised to the work area by a rope or mechanical device.
 - After use, hand tools will be returned to the tool belt immediately.
 - Materials to be used on the roof will not be stored within 6 feet of the roof edge, unless guardrails are erected at the roof edge.
- Overhead protection measures:
 - Signs warning of overhead work will be posted to warn passers-by.
- Procedures for rescue of injured workers:
 - If an employee is injured, a trained person will be available to administer first aid and evaluate the employee's condition.

- If the employee's condition appears serious, the supervisor or another individual will call "911" to obtain emergency medical assistance.
- Assistance will be provided to the emergency unit as appropriate.

Work on open-sided platforms or runways of heights of 10 feet or more.

- Method of fall protection: Fall restraint system including standard guardrails and toe board, when necessary, safety belt/harness, or warning line system, or warning line system with a safety monitor.
- Procedures for assembly, maintenance, etc., of fall protection:
 - A standard railing including a top rail, intermediate rail, posts and, if necessary, a toe board will be erected and will stand 39-45 inches above the platform or runway.
 - A standard toe board will be installed if
 - persons pass beneath the open sides;
 - (a) there is moving machinery; or
 - (b) there are falling materials, equipment or tools that create a hazard.
- Procedures for handling, storing, and securing tools, and equipment to be used:
 - Tool belts will be used to carry hand tools.
 - After use, hand tools will be returned to the tool belt immediately.
 - Tools too large for the tool belt will be raised to the work area by a rope or mechanical device, if necessary.
 - Tools and loose materials will not be left on overhead platforms or scaffolds.
- Overhead protection measures
 - Signs warning of overhead work will be posted to warn passers-by.
- Procedures for rescue of injured workers:
 - If an employee is injured, a trained person will be available to administer first aid and evaluate the employee's condition.
 - If the employee's condition appears serious, the supervisor or another individual will call "911" to obtain emergency medical assistance.
 - District employees will provide assistance to the emergency response unit as appropriate.

6. Assignment of Competent Person

A **competent person** means an individual knowledgeable of fall protection equipment, including the manufacturer's recommendations and instructions for the proper use, inspection, and maintenance; and who is capable of identifying existing and potential fall hazards; and who has the authority to take prompt, corrective action to eliminate those hazards; and who is knowledgeable of the rules contained in this section regarding the erection, use, inspection, and maintenance of fall protection equipment and systems.

The designated competent person is the district's maintenance supervisor or Safety Officer unless otherwise specified. Other competent persons can be designated if adequately trained and/or experienced.

The competent person has the following responsibilities:

- knowing the requirements of the fall protection standard
- identifying where fall hazards exist in the workplace
- determining adequate fall protection for each job over 10 feet high
- completing fall protection work plans
- ensuring that necessary fall protection systems are suitable, compatible, available, and inspected prior to use
- ensuring that the designated fall protection is used by employees
- ensuring a system of adequate emergency removal of injured employees

7. Employee Training

Employees whose job duties include working at heights of 10 feet or more shall be trained in the primary elements of the Fall Protection Work Plan listed in part 5 above, as well as in the inspection of fall protection devices and systems. Employees must be trained in the specific fall protection/arrest equipment that they will be using; manufacturer's instructions should be reviewed. Employee training shall be documented, and such documentation will be available on the job site.

8. Inspection of Equipment

Components of fall restraint/arrest systems and positioning systems shall be inspected **prior to each use** for mildew, wear, damage, cuts, other deterioration, and rough metal surfaces on hardware, and shall be removed from service if their function or strength have been adversely affected or the assembly has been shock-loaded. Items removed from service should be tagged as defective. Defective equipment should not be returned to use until deemed safe by a trained individual. This pre-use equipment inspection should be documented before each job and daily.

PERSONAL PROTECTIVE EQUIPMENT PLAN



I. INTRODUCTION

The purpose of the Personal Protective Equipment Policies is to protect the employees of this school district from exposure to work place hazards and the risk of injury through the use of personal protective equipment (PPE). PPE is not a substitute for more effective control methods and its use will be considered only when other means of protection against hazards are not adequate or feasible. It will be used in conjunction with other controls unless no other means of hazard control exist.

Personal protective equipment will be provided, used, and maintained when it has been determined that its use is required to ensure the safety and health of our employees and that such use will lessen the likelihood of occupational injury and/or illness.

This section addresses general PPE requirements, including eye and face, head, foot and leg, hand and arm and body (torso) protection. Separate programs exist for respiratory protection and hearing protection as the need for participation in these programs is established. PPE required for protection from falls from heights is found in the school district's Fall Protection Program.

The district Personal Protective Equipment Policies includes:

- Responsibilities of supervisors and employees
- Hazard assessment and PPE selection

- Employee training
- Cleaning and Maintenance of PPE

II. RESPONSIBILITY

Safety Officer

The Safety Officer, with assistance as needed from the ESD Loss Control Specialist is responsible for the development, implementation, and administration of PPE policies. This involves:

1. Conducting workplace hazard assessments to determine the presence of hazards which necessitate the use of PPE.
2. Selecting and purchasing PPE.
3. Reviewing, updating, and conducting PPE hazard assessments whenever:
 - a job changes
 - new equipment is used
 - there has been an accident
 - a supervisor or employee requests it
 - or at least every year
4. Maintaining records on hazard assessments.
5. Maintaining records on PPE assignments and training.
6. Providing training, guidance, and assistance to supervisors and employees on the proper use, care, and cleaning of approved PPE.
7. Periodically re-evaluating the suitability of previously selected PPE.
8. Reviewing, updating, and evaluating the overall effectiveness of PPE use, training, and policies.

Supervisors

Supervisors have the primary responsibility for implementing and enforcing PPE use and policies in their work area. This involves:

1. Providing appropriate PPE and making it available to employees.
2. Ensuring that employees are trained on the proper use, care, and cleaning of PPE.
3. Ensuring that PPE training certification and evaluation forms are signed and given to the Safety Officer or employee's supervisor and or Human Resources for inclusion in the employee's personnel file.
4. Ensuring that employees properly use and maintain their PPE, and follow school district PPE policies and rules.

5. Notifying school district administration and the Safety Officer when new hazards are introduced or when processes are added or changed.
6. Ensuring that defective or damaged PPE is immediately disposed of and replaced.

Employees

Employees are expected to report to work reasonably dressed to protect themselves during routine assignments and from exposure to usual and/or predictable physical and environmental conditions found in the workplace.

Employees are personally responsible to use good judgment and wear PPE as directed or whenever they are involved in a work activity where they can reasonably be expected to be exposed to a hazard, or where a hazard may cause injury or illness.

The PPE user is responsible for following the requirements of the PPE policies. This involves:

1. Properly wearing PPE as required.
2. Attending required training sessions.
3. Properly caring for, cleaning, maintaining, and inspecting PPE as required.
4. Following school district policies and rules.
5. Informing the supervisor of the need to repair or replace PPE.

Employees who repeatedly disregard and do not follow PPE policies and rules will be subject to disciplinary action as described the district Accident Prevention Program.

III. PROCEDURES

A. Hazard Assessment for PPE (WAC 296-800-16005 - 16010)

The district Safety Officer, in conjunction with Supervisors, will conduct a walk-through survey of each work area to identify sources of work hazards. Each survey will be documented using the Hazard Assessment Certification Form, which identifies the work area surveyed, the person conducting the survey, findings of potential hazards, and date of the survey.

The Safety Officer will conduct, review, and update the hazard assessment for PPE whenever:

- a job changes
- new equipment or process is installed
- there has been an accident
- whenever a supervisor or employee requests it
- or at least every year.

Any new PPE requirements that are developed will be added into the school district's written accident prevention program.

B. Selection of PPE (WAC 296-800-16015 - 16020)

Once the hazards of a workplace have been identified, the Safety Officer will determine if the hazards can first be eliminated or reduced by methods other than PPE, such as changes in work

practices, reducing the use of hazardous materials or processes, or applying engineering controls to reduce or eliminate hazards. If such methods are not adequate or feasible, then the Safety Officer will determine the suitability of the PPE presently available; and as necessary, will select new or additional equipment which ensures a level of protection greater than the minimum required to protect our employees from the hazards. Care will be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards will be recommended for purchase.

All personal protective clothing and equipment will be of safe design and construction for the work to be performed and will be maintained in a sanitary and reliable condition. Only those items of protective clothing and equipment that meet NIOSH (National Institute of Occupational Safety and Health) or ANSI (American National Standards Institute) standards will be procured or accepted for use. Newly purchased PPE must conform to the updated ANSI standards which have been incorporated into the PPE regulations, as follows:

- Eye and Face Protection ANSI Z87.1-1989
- Head Protection ANSI Z89.1-1986
- Foot Protection ANSI Z41.1-1991
- Hand Protection (There are no ANSI standards for gloves, however, selection must be based on the performance characteristics of the glove in relation to the tasks to be performed.)

Affected employees whose jobs require the use of PPE will be informed of the PPE selection and will be provided PPE by the Safety Officer at no charge if the PPE:

- Will be used to protect against hazardous materials.
- Is the type that would not reasonably or normally be worn away from the workplace, such as single use or disposable PPE.

Note:

Examples of PPE that the school district **must** provide are:

- Boots or gloves that could become contaminated with hazardous materials in the workplace.
- Safety glasses, goggles, and nonprescription protective eye wear.
- Goggles that fit over prescription eye wear.
- Hard hats.
- Full body harnesses and lanyards.
- Single use or disposable PPE such as plastic type gloves used in the food service or health services.

Examples of PPE that the employer may **not** have to provide are:

- Coats to protect against inclement weather.
- Leather boots, with or without steel toes that will not become contaminated on the job.
- Prescription protective eye wear (except as part of a full face piece or hooded respirator).

Careful consideration will be given to the comfort and proper fit of PPE in order to ensure that the right size is selected and that it will be used.

C. Training WAC 296-800-16025 - 16035

Any worker required to wear PPE will receive training in the proper use and care of PPE before being allowed to perform work requiring the use of PPE. Periodic retraining will be offered to PPE users as needed. The training will include, but not necessarily be limited to, the following subjects:

- When PPE is necessary to be worn
- What PPE is necessary
- How to properly don, doff, adjust, and wear PPE
- The limitations of the PPE
- The proper care, maintenance, useful life, and disposal of the PPE.

After the training, the employees will demonstrate that they understand when and how to use PPE properly, or they will be retrained.

Training of each employee will be documented and kept on file. The document certifies that the employee has received and understood the required training on the specific PPE he/she will be using and includes the name of the person trained, the date(s) of training and the subject of the training.

Retraining

The need for retraining will be indicated when:

- an employee's work habits or knowledge indicates a lack of the necessary understanding, motivation, and skills required to use the PPE (i.e., uses PPE improperly)
 - new equipment is installed
 - changes in the work place make previous training out-of-date
- changes in the types of PPE to be used make previous training out-of-date

D. Cleaning and Maintenance of PPE (WAC 296-800-16045)

It is important that all PPE be kept clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. Employees must inspect, clean, and maintain their PPE according to the manufacturers' instructions before and after each use. Supervisors are responsible for ensuring that users properly maintain their PPE in good condition.

Personal protective equipment must not be shared between employees until it has been properly cleaned and sanitized. PPE will be distributed for individual use whenever possible.

If employees provide their own PPE, make sure that it is adequate for the work place hazards, and that it is maintained in a clean and reliable condition.

Defective or damaged PPE will not be used and will be immediately discarded and replaced.

***NOTE:** Defective equipment can be worse than no PPE at all. Employees would avoid a hazardous situation if they knew they were not protected; but they would get closer to the hazard if they erroneously believed they were protected, and therefore would be at greater risk.*

It is also important to ensure that contaminated PPE which cannot be decontaminated is disposed of in a manner that protects employees from exposure to hazards.

RESPIRATORY PROTECTION PLAN

For Voluntary Use of Respirators



1. PURPOSE

The purpose of the program is to give detailed instruction for elements that are required for voluntary use of respirators, as required in the Respirators Rule - WAC 296-842-11005.

2. DEFINITIONS

Voluntary Use: Respirator use that's requested by the employee and permitted by the employer when no respiratory hazard is exists.

Respirator: A type of personal protective equipment designed to protect the wearer from harmful airborne hazards, oxygen deficiency, or both.

Respiratory Hazard: Harmful airborne hazards and oxygen deficiency that are addressed in chapter 296-841 WAC.

Filtering Face Piece Respirator: A tight-fitting, half-facepiece, negative-pressure, particulate air-purifying respirator with the facepiece mainly composed of filter material. These respirators don't use cartridges or canisters and may have sealing surfaces composed of rubber, silicone or other plastic-like materials. They are sometimes referred to as "dust masks."

Air-Purifying Respirator (APR): A respirator equipped with an air-purifying element such as a filter, canister, or cartridge, or having a filtering facepiece.

Permissible Exposure Limit (PEL): PELs are employee exposures to toxic substances or harmful agents that must not be exceeded. PELs are specified in applicable WISHA rules (296-841-200).

3. SCOPE and APPLICATION

This program applies to all employees who voluntarily choose to use a respirator. It applies to both respirators supplied by employers or brought in by employees.

It will be determined that the use of respirator does not itself create a hazard, that the proper type of respirator has been selected for use, that the employee is medically able to use the respirator, and that the respirator is cleaned, stored and maintained so that it does not present a health hazard.

Voluntary use of filtering face piece respirators (dust masks) is exempt from the written respiratory requirements, medical evaluations, fit testing, and cleaning, storage, and maintenance requirements.

Type of Respirator	Program Administrator Required	Written Program Required	Provide Table 2 to users	Provide Medical Evaluations	Fit Testing Required	Maintenance of Respirators Required
Filtering facepieces	No	No	Yes	No	No	No
Non-filtering	Yes	Yes	Yes	Yes	No	Yes

facepieces						
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This program does not apply to the required use of respirators or to emergency or spill use of respirators. Respirator use would be required if a respiratory hazard, such as exposure to a substance over the Permissible Exposure Limit (PEL) or hazardous exposure to an airborne biological hazard, is present.

4. RESONSIBILITIES

The respirator program administrator is responsible for overseeing and implementing this voluntary use respiratory protection program. The person designated as the Program Administrator is the district Safety Officer. The Educational Service District Loss Control Specialist will assist the Safety Officer as needed.

5. SAFE USE

The program administrator will determine if there are any factors of voluntary respirator use that will create a hazard for the user. These hazards will be eliminated before use of the respirator is permitted.

The following questions are suggested for consideration in determining whether use of the respirator presents a hazard to the user:

- Would the respirator significantly hinder vision, communication, hearing or movement in a way that would present a safety hazard?
- Can work situations or changes occur, such as emergency spills or chemical leaks where the respirator in use would not provide enough protection?

6. SELECTION

The Program Administrator will ensure that the respirator selection is appropriate for its intended use and contaminant. Only respirators approved by the National Institute of Occupational Safety and Health (NIOSH) are to be selected for use by district employees. This district does not use supplied-air respirators.

7. MANDATORY INFORMATION

Each employee that voluntarily uses a respirator, including filter facepieces – dust masks, will be given a copy of the advisory information contained in Table 2. If other non-English speaking employees need to be included, an interpreter will read the document to the workers.

8. MEDICAL EVALUATIONS

Employees who voluntarily use respirators must be physically able to perform the work while using the respirator. Accordingly, the district has the responsibility of ensuring that employees are medically fit and able to tolerate the physical and psychological stress imposed by respirator use, as well as the physical stress originating from job and workplace conditions. Employees will not be

allowed to wear respirators (except filtering facepieces – dust masks) until a licensed health care professional (LHCP) has determined that they are medically able to do so.

Any employee refusing the medical evaluation cannot use a respirator.

The purpose of a medical evaluation program is to determine if employees can tolerate the physiological burden associated with respirator use, including:

- The cardio-pulmonary or other burdens imposed by the respirator itself (e.g., its weight, breathing resistance during both normal operation and under conditions of filter, canister, or cartridge overload and increased carbon dioxide levels inside the respirator facepiece due to re-breathing of expired air).
- Musculoskeletal stress (i.e., when a heavy supplied air respirator with tanks is worn).
- Limitations on auditory, visual, and olfactory sensations.
- Isolation from the workplace environment.
- Psychological limitations such as claustrophobia

Since certain jobs and workplace conditions in which a respirator is used can also impose a physiological burden on the user, the medical evaluation must also consider the following factors:

- Type and weight of the respirator to be worn.
- Duration and frequency of respirator use.
- Expected physical work effort.
- Use of other protective clothing and equipment to be worn.
- Temperature and humidity extremes that may be encountered.

The above information must be provided to the licensed health care professional (LHCP) before the LHCP can make a recommendation regarding an employee's ability to use a respirator. In Washington State, physicians, physicians assistants or nurse practitioners, and possibly other health care professionals are qualified by the scope of their license to perform some or all of the tasks necessary for medical evaluations. These individuals are designated as "LHCPs".

The medical evaluation is designed to identify medical conditions that may place employees who use respirators at risk of serious medical consequences. The LHCP, using the medical questionnaire provided in WAC 296-842-22005 or an initial exam, will determine which medical conditions are relevant to a particular employee's respirator use situation and if/when further follow up is necessary.

8.1 Information Provided to the LHCP

The program administrator will provide the LHCP the following general information before evaluations begin (**not required for filter facepieces – dust masks**):

- A blank "WISHA Respirator Medical Evaluation Questionnaire" (Table 10 attached)
- A copy of this written respiratory protection program
- A copy of the Respirator Rule -WAC 296-842.

In addition, the following specific respirator use information will be provided to the LHCP:

- The type and weight of the respirator to be used by the employee.
- The frequency (how often) and duration (how long) of respirator use (e.g., for routine, rescue and escape tasks).
- The expected physical work effort (e.g., “low”, “medium” or “high”).
- Additional protective clothing and equipment to be worn.
- Temperature and humidity extremes expected during use.

Attachment A may be used by the employer to provide the information above to the physician or licensed health care provider (LHCP) for employees that are required to have medical evaluations for respirator use.

8.2 Medical Questionnaire Administration

Employees who voluntarily use respirators (**except filtering facepieces – dust masks**) will be required to complete the “WISHA Respirator Medical Evaluation Questionnaire” found in WAC 296-842-22005 – Table 10 (attached). The Program Administrator will make available a copy of the questionnaire to all employees requiring medical evaluations. The medical questionnaire will be administered confidentially and during working hours in a place on site that is convenient to employees.

A stamped and addressed envelope for mailing the questionnaire to the LHCP will be provided. Employees will be paid normal wages during questionnaire administration.

To the extent feasible for maintaining confidentiality, the Program Administrator or his/her designee will aid employees who are unable to read the questionnaire by providing reading assistance. To ensure confidentiality, the questionnaire will not be reviewed at anytime by the Program Administrator or his/her designee. The Program Administrator or designee will not review completed questions and there will be no employee/employer interaction that could be considered a breach of confidentiality. Where confidentiality cannot be maintained during administration of the questionnaire, the employee will be sent to the LHCP for medical evaluation.

If needed, employees will have the opportunity to discuss the questionnaire content and/or examination results with the LHCP via telephone call. During questionnaire administration, the LHCP's phone number will be given to employees and access to a phone will be provided at no charge to the employee. All records from medical evaluations, including completed questionnaires, will remain confidential between the employee and the LHCP.

8.3 Results of the Medical Evaluation-The LHCP’s Written Recommendation

The company will obtain a written recommendation from the LHCP on whether/or not the employee is medically able to wear a respirator. The recommendation must identify any limitations on the employee's use of the respirator, as well as specifying whether or not periodic or future medical evaluations are required by the LHCP.

The employee will receive a copy of the LHCP's written recommendations directly from the LHCP. Information concerning diagnosis, test results, or other confidential medical information will not be disclosed to the company by the LHCP.

8.4 Additional Medical Evaluations

In addition to periodic reevaluations that may be specified by the LHCP, the company will provide a medical reevaluation for any employee when:

- The employee reports medical signs or symptoms that are related to the employee's ability to use a respirator.
- A LHCP, supervisor, or the respirator program administrator observes that the employee is having a medical problem during workplace respirator use.
- Changes occur in workplace conditions (e.g., physical work effort, type of respirator used, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an employee.

The content of such additional medical evaluations will be determined by the LHCP.

9.0 Maintenance and Care

The district Safety Officer will oversee the maintenance and care program.

Respirators used should be clean, sanitary, and in good working order. Clean and sanitary respirators are essential in the prevention of dermatitis, skin irritation and communicable respiratory diseases.

To ensure that the respirator does not create a health hazard (i.e., skin irritation) for users, a maintenance program must be in place prior to respirator use and must address:

- Cleaning and disinfecting procedures.
- Proper storage.

In addition to the above, the manufacturer's instructions for inspection, cleaning, and maintenance of respirators should be consulted.

Filtering facepiece respirators are to be discarded after use and thus are not subject to the cleaning and maintenance requirements.

9.1 Cleaning and Disinfecting

Respirators (**except filtering facepieces – dust masks**) will be cleaned and disinfected by the employee using the procedures in Table 20 – “Respirator Cleaning Procedures.” The respirator manufacturer’s cleaning procedures may be used if they are equivalent in effectiveness as Table 20.

Respirators will be cleaned and disinfected as follows:

- Respirators that are issued for the exclusive use of an employee will be cleaned and disinfected as often as necessary to be maintained in a sanitary condition.
- Respirators used by more than one employee will be cleaned and disinfected prior to being used by a different individual.

9.2 Storage

Respirators will be stored so that they are protected against damage, contamination, dust, sunlight, temperature extremes, excessive moisture, and damaging chemicals. When respirators are packed or stored, the facepiece and exhalation valve will be stored in a manner that prevents deformation. Each respirator will be positioned so that it retains its natural configuration.

10. Training

Training will be given to voluntary respirator users only when necessary to prevent the respirator from creating a hazard. Training for voluntary use may include:

- The respirator's capabilities and limitations including how the respirator provides protection and why air-purifying respirators can't be used in oxygen-deficient conditions.
- How improper fit, use, or maintenance can compromise the respirator's effectiveness and reliability
- How to properly inspect, put on, seal check, use, and remove the respirator
- How to clean, disinfect, repair, and store the respirator or in the case of filtering facepieces, when to dispose of it.
- Medical signs and symptoms that may limit or prevent the effective use of respirators such as shortness of breath or dizziness

The employer's general obligations under the respirator rule (WAC 296-842), including developing a written program, selecting appropriate respirators, and providing medical evaluations.

11. Recordkeeping

The Program Administrator will retain a copy of the LHCP's written recommendation for each employee subject to medical evaluation (**not required for filtering facepieces - dust masks**). Each employee's completed medical questionnaire, results of relevant medical tests, examinations, and diagnosis, etc., will be maintained for a period of 30 years.

Table 2
Advisory Information for Employees
Who Voluntarily Use Respirators

[To be given to employees voluntarily wearing respirators including filtering facepieces]

- Respirators protect against airborne hazards when properly selected and used. WISHA recommends voluntary use of respirators when exposure to substances is below WISHA permissible exposure limits (PELs) because respirators can provide you an additional level of comfort and protection.
 - If you choose to voluntarily use a respirator (whether it's provided by you or your employer) be aware that respirators can create hazards for you, the user. You can avoid these hazards if you know how to use your respirator properly and how to keep it clean. Take these steps:
 - Read and follow all instructions provided by the manufacturer about use, maintenance (cleaning and care), and warnings regarding the respirator's limitations.
 - Choose respirators that have been certified for use to protect against the substance of concern. The National Institute for Occupational Safety and Health (NIOSH) certifies respirators. If a respirator isn't certified by NIOSH, you have no guarantee that it meets minimum design and performance standards for workplace use.
 - A NIOSH approval label will appear on or in the respirator packaging. It will tell you what protection the respirator provides.
 - Keep track of your respirator so you don't mistakenly use someone else's.
 - Do not wear your respirator into:
 - Atmospheres containing hazards that your respirator isn't designed to protect against.
- For example, a respirator designed to filter dust particles won't protect you against solvent vapor, smoke, or oxygen deficiency.
- Situations where respirator use is required.

Attachment A - Employer Provided Information for Medical Evaluations

The WISHA Respirators Rule (WAC 296-842) requires that certain information regarding respirator use be provided by the employer to the licensed health care provider (LHCP).

The following general information must be provided to the LHCP by the employer:

- A copy of our written respiratory protection program;
- A copy of the Respirators Rule WAC 296-842.

In addition, certain respirator user specific information must be provided.

This form may be used by the employer to provide the respirator user specific information to the LHCP, but is not a required form.

Specific Respirator Use Information For Respirator Use Medical Evaluation

Employee Name: _____

Company name:

Employee job title: _____

Company Address:

Company contact person and phone #:

1. Will the employee be wearing protective clothing and/or equipment (other than the respirator) when using the respirator?
Yes/No _____. If "yes," describe this protective clothing and/or equipment:

2. Will employee be working under hot conditions (temperature exceeding 77 deg.F)?
Yes/No _____. If yes, describe temperature and duration.

3. Will employee be working under humid conditions? Yes / No _____

4. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases).

Attachment A - Specific Respirator Use Information, (Continued)

Check Appropriate Box	Respirator Type	Face / Head Cover Type (i.e. 1/2 or full face, helmet, hood)	Frequency of Use (i.e. hours / day, week, month)	Work Effort Light, Moderate, Heavy (see descriptions below)	Respirator Weight
	Disposable facepiece particulate filter (N, R or P series)	1/2 facepiece			
	Mask with replaceable filter or cartridge				
	Mask with canister				
	Powered air-purifying respirator (PAPR)				
	Air line, continuous flow				
	Air line, negative pressure demand				
	Air line, positive pressure demand				
	SCBA, negative pressure demand	Full facepiece			
	SCBA, positive pressure demand	Full facepiece			

Work Effort Descriptions

Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1-3 lbs.) or controlling machines.

Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.

Examples of heavy work effort are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lb.).

Table 20
Respirator Cleaning Procedure

Step	Task
1. 2.	<p>Remove filters, cartridges, canisters, speaking diaphragms, demand and pressure valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.</p> <p>Wash components in warm (43°C [110°F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer</p> <ul style="list-style-type: none"> • A stiff bristle (not wire) brush may be used to help remove the dirt • If the detergent or cleaner does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following: <ul style="list-style-type: none"> – A bleach solution (concentration of 50 parts per million of chlorine). Make this by adding approximately one milliliter of laundry bleach to one liter of water at 43°C (110°F) – A solution of iodine (50 parts per million iodine). Make this in two steps: <ul style="list-style-type: none"> ◆ First, make a tincture of iodine by adding 6-8 grams of solid ammonium iodide and/or potassium iodide to 100 cc of 45% alcohol approximately ◆ Second, add 0.8 milliliters of the tincture to one liter of water at 43°C (110°F) to get the final solution – Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
3.	<p>Rinse components thoroughly in clean, warm (43°C [110°F] maximum), preferably, running water.</p> <p>Note: The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces could cause dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts, if not completely removed.</p>
4.	Drain components.
5.	Air-dry components or hand dry components with a clean, lint-free cloth.
6.	Reassemble the facepiece components.
7.	<p>Replace filters, cartridges and canisters, if necessary (for testing)</p> <p>Test the respirator to make sure all components work properly.</p>

Comparison Chart for Fall Protection Requirements

Industry or Activity	Rule number	Verbiage	Height requirement (in feet)
Construction Fall Protection	155-24510	When employees are exposed to a hazard of falling from a location 10 feet or more in height, the employer shall ensure that fall restraint, fall arrest systems or positioning device systems are provided, installed, and implemented according to the following requirements.	10
Dangerous equipment, pickling or other similar hazards	800-26010(1) 155-505(6)(e)	Guard open-sided floors, walkways and platforms above or adjacent to dangerous equipment, pickling or galvanizing tanks, degreasing units, and other similar hazards, regardless of height with a railing and toeboard.	Always
Scaffolds	874-20052	Protect each employee on a scaffold more than 10 ft. (3.1 m) above a lower level, from falling to the lower level, by providing either: A personal fall arrest system or guardrails. Make sure employees erecting the scaffold install the guardrail system, if required, before the scaffold is used by any other employees.	10
Open-sided floor, platforms or surface	800-26010(1)	Guard open-sided floors and platforms four feet or more above adjacent floor or ground level by a railing. The entrance to a ramp, stairway, or fixed ladder does not need a railing.	4
Open-sided floor, platforms or surface	155-505(6)(a)	Every open sided floor, platform or surface four feet or more above adjacent floor or ground level shall be guarded by a standard railing, or the equivalent, as specified in	4

		subsection (7)(a) of this section, on all open sides, except where there is entrance to a ramp, stairway, or fixed ladder.	
Order pickers	863-20025	Make sure order pickers have either: Standard guardrails on all open sides or A safety harness and lanyard that are connected to a tie off point that has been approved by the PIT manufacturer. Make sure personal fall arrest equipment meets the requirements of WAC 296-24-88050, <i>Appendix C, Personal Fall Arrest Systems</i> .	10
Boom supported elevating work platforms –general industry	24-87510(19)(f)	Safety harness and lanyard devices fixed to attachment points provided and approved by the manufacturer must be used by all occupants.	Always

