AMENDATORY SECTION (Amending WSR 06-01-073, filed 12/20/05, effective 3/1/06)

WAC 296-305-01003 Scope and application. (1) The rules of this chapter shall apply with respect to any and all activities, operations and equipment of employers and employees involved in providing fire protection services which are subject to the provisions of the Washington Industrial Safety and Health Act of 1973 (chapter 49.17 RCW).

(2) The provisions of this chapter apply to all firefighters and their work places, including the fire combat scene. Although enforcement of applicable standards will result from provable violations of these standards at the fire combat scene, agents of the department will not act in any manner that will reduce or interfere with the effectiveness of the emergency response of a firefighting unit. Activities directly related to the combating of a fire will not be subjected to the immediate restraint provisions of RCW 49.17.130.

(3) In the development of this document many consensus standards of the industry were considered and evaluated as to adaptability to the Washington state fire service industry. Where adaptable and meaningful, the firefighter safety elements of these standards were incorporated into this WAC. Chapter 296-305 WAC, shall be considered as the firefighter safety standards for the state of Washington.

(4) The provisions of this chapter cover existing requirements that apply to all fire departments. All fire departments shall have in place their own policy statement and operating instructions that meet or exceed these requirements. This chapter contains state and/or federal performance criteria that fire departments shall meet.

(5) Unless specifically stated otherwise by rule, if a duplication of regulations, or a conflict exists between the rules regulating wildland firefighting and other rules in the chapter, only the rules regulating wildland firefighting shall apply to wildland firefighting activities and equipment.

(6) The provisions of this chapter shall be supplemented by the provisions of the general safety and health standards of the department of labor and industries((~~, chapters 296-24, 296-62, 296-800, and 296-811 WAC~~)). In the event of conflict between any provision(s) of this chapter and any provision(s) of the general safety and health standards, the provision(s) of this chapter shall apply.

(7) ((~~The provisions of this standard do not apply to industrial fire brigades, as defined in this chapter.~~)) Industrial fire brigades are covered under the provisions of chapter 296-811 WAC, Fire brigades.

AMENDATORY SECTION (Amending WSR 01-11-038, filed 5/9/01, effective 9/1/01)

WAC 296-305-01005 Definitions. Unless the context indicates otherwise, words used in this chapter shall have the meaning given in this section.

Accident: An unexpected event that interrupts or interferes with the orderly progress of the fire department operations and may or may not include personal injury or property damage.

Accountability (tracking) system: A system of firefighter accountability that provides for the tracking and inventory of all members.

ACGIH: American Conference of Governmental Industrial Hygienists.

((~~**Aerial ladder:** A ladder mounted on top of an apparatus, hydraulic or pneumatic controlled.~~

~~**Aerial tower:** Telescopic elevating platform or water tower assembly usually with a ladder on top of the section.~~

~~**Aerial platform:** A device consisting of two or more booms or sections with a passenger carrying platform assembly.~~))

ACM: Asbestos-containing material; any material containing more than 1 percent asbestos.

Aerial devices: Fire apparatus-mounted aerial ladders, elevated platforms, and water towers.

ANSI: American National Standards Institute.

Apparatus: A mobile piece of fire equipment such as a pumper, aerial, tender, automobile, etc.

Approved:

(1) A method, equipment, procedure, practice, tool, etc., which is sanctioned, consented to, confirmed or accepted as good or satisfactory for a particular purpose or use by a person, or organization authorized to make such a judgment.

(2) Means approved by the director of the department of labor and industries or his/her authorized representative: Provided, however, That should a provision of this chapter state that approval by an agency or organization other than the department of labor and industries is required, such as Underwriters' Laboratories or the Bureau of Mines, the provisions of chapter 296-800 WAC shall apply.

((~~**Audiogram:** A chart, graph, or table resulting from an audiometric test showing an individual's hearing threshold levels as a function of frequency.~~

~~**Authorized person:** A person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the job site.~~

~~**Beacon:** A flashing or rotating light.~~))

Asbestos: Includes chrysotile, amosite, crocidolite, tremolite, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated or altered.

Belt: See ladder belt and escape belt.

Bloodborne 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).

Blowup (wildfire): Sudden increase in fire intensity or rate of spread sufficient to preclude direct control or to upset existing control plans. Often accompanied by violent convection and may have other characteristics of a fire storm.

((~~**Chemical-protective clothing:** Items made from chemical-resistive materials, such as clothing, hood, boots, and gloves, that are designed and configured to protect the wearer's torso, head, arms, legs, hands, and feet from hazardous materials. Chemical-protective clothing (garments) can be constructed as a single, or multipiece, garment. The garment may completely enclose the wearer either by itself or in combination with the wearer's respiratory protection, attached or detachable hood, gloves, and boots.~~))

CBRN: Chemical, biological, radiological, and nuclear.

Chief: The employer representative highest in rank who is responsible for the fire department's operation.

Cold zone: The control zone of an incident that contains the command post and such other support functions as are deemed necessary to control the incident.

Combat scene: The site where the suppression of a fire or emergency exists.

((~~**Confinement:** Those procedures taken to keep a material in a defined or local area.~~))

Confined space: ((~~Means~~)) A space that is all of the following:

(1) Is large enough and arranged so ((~~configured that~~)) an employee can bodily enter and perform assigned work; and

(2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); and

(3) Is not designed for continuous employee occupancy.

Containment: The actions taken to keep a material in its container (e.g. stop the release of the material or reduce the amount being released.)

Contaminated: The presence or the reasonably anticipated presence of nuisance materials foreign to the normal atmospheres, blood, hazardous waste, or other potentially infectious materials on an item or surface.

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

Contamination: The process of transferring a hazardous material from its source to people, animals, the environment, or equipment, which may act as a carrier.

dBA: A measure of noise level expressed as decibels measured on the "A" scale.

((~~**Deck pipe:** A permanently mounted device which delivers a large stream of water.~~))

Decontamination:

(1) The physical or chemical process of reducing and preventing the spread of contamination from persons or equipment used at a hazardous materials incident.

(2) 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.

((~~**Department:** Department of labor and industries.~~

~~**Director of fire department:** The chief or principle administrator of the fire department.~~))

Direct attack: Any treatment applied directly to burning fuel such as wetting, smothering, or chemically quenching the fire or by physically separating the burning from unburned fuel.

Director: The director of the department of labor and industries, or his/her designated representative.

Disinfection: A procedure which inactivates virtually all recognized pathogenic microorganisms, but not necessarily all microbial forms (example: bacterial endospores) on inanimate objects.

Disturb/disturbance: Refers to activities that disrupt the matrix of, crumble or pulverize, or generate visible debris from ACM or PACM.

Dive rescue (public safety diving): The act of searching for or rescuing a viable or presumably viable person(s), while working in water using underwater apparatus which supplies compressed breathing gas at the ambient pressure.

Double-layer woven clothing: Clothing worn in two layers allowing air to reach the skin. For example, coveralls worn on top of regular work clothes.

Drill tower: A structure which may or may not be attached to the station and which is principally used for training firefighters in fire service techniques.

Drinking water: Potable water that is suitable to drink. Drinking water packaged as a consumer product and electrolyte-replenishing beverages (i.e., sports drinks) that do not contain caffeine are acceptable.

Driver/operator: A person having satisfactorily completed the fire department's "requirements of driver/operator" of a specific piece of fire apparatus.

Emergency: A sudden and unexpected event calling for immediate action.

Emergency incident: A specific emergency operation.

Emergency medical care: The provision of treatment to, and/or transportation of, patients which may include first aid, cardiopulmonary resuscitation, basic life support, advanced life support, and other medical procedures that occur prior to arrival at a hospital or other health care facility.

Emergency operations: Activities of the fire department relating to rescue, fire suppression, emergency medical care, and special operations, including response to the scene of an incident and all functions performed at the scene.

Employee: An employee of an employer who is employed in the business of his/her employer whether by way of manual labor or otherwise and every person in this state who is engaged in the employment of or who is working under an independent contract the essence of which is their personal labor for an employer under this chapter whether by way of manual labor or otherwise. Also see "Member."

Employer: Any person, firm, corporation, partnership, business trust, legal representative, or other business entity which engages in any business, industry, profession, or activity in this state and employs one or more employees or who contracts with one or more persons, the essence of which is the personal labor of such person or persons and includes the state, counties, cities, and all municipal corporations, public corporations, political subdivisions of the state, and charitable organizations.

Employer representative: A fire department officer authorized by the chief or director of the fire department to act in his/her behalf.

Engine (pumper): A piece of apparatus equipped with hose and a pump for the purpose of supplying water under pressure through hose lines.

((~~**Engineering control:** Any procedure other than an administrative control that reduces exposures by modifying the source or reducing the exposure to an individual. Examples of engineering controls include the use of isolation, containment, encapsulation, sound absorbing materials for noise control, and ventilation.~~

~~**Explosion proof equipment:** Equipment enclosed in a case that is capable of withstanding an explosion or a specified gas or vapor which may occur within it and of preventing the ignition of a specified gas or vapor surrounding the enclosure by sparks, flashes, or explosion of the gas or vapor within, and which operates at such an external temperature that it will not ignite a surrounding flammable atmosphere.~~

~~**Fastest means available:** The (nearest-closest) telephone, portable radio, mobile radio, telephone/radio dispatcher or any other mode of mechanical communication.~~))

Escape belt: A device that fastens around the waist only and is intended to be used by the wearer only as an emergency self-rescue device.

Escape rope: A single-purpose emergency self-escape (self-rescue) rope, not classified as a life safety rope.

Exclusion zone: The control zone designated to exclude all unauthorized personnel, responders, and equipment.

Note: Examples of exclusion zones could be holes in floors, explosive devices, or collapse hazards.

Extended attack: Suppression activity for a wildfire that has not been contained or controlled by initial attack or contingency forces and for which more firefighting resources are arriving, en route, or being ordered by the initial attack incident commander.

Extended attack incident: A wildland fire that has not been contained or controlled by initial attack forces and for which more

firefighting resources are arriving, en route, or being ordered by the initial attack incident commander. Extended attack implies that the complexity level of the incident will increase beyond the capabilities of initial attack incident command.

Fire apparatus: A fire department emergency vehicle used for rescue, fire suppression, or other specialized functions.

Fire boat: A fire department watercraft having a permanent, affixed firefighting capability.

((~~**Fire combat training:** Training received by firefighters on the drill ground, drill tower, or industrial site to maintain the firefighter's proficiency.~~))

Fire department: An organization or consortium of organizations providing any or all of the following: Rescue, fire suppression, and other related activities. For the purposes of this standard the term "Fire Department" shall include any public, private, or military organization engaging in this type of activity.

Fire department facility: Any building or area owned, operated, occupied, or used by a fire department on a routine basis. This does not include locations where a fire department may be summoned to perform emergency operations or other duties, unless such premises are normally under the control of the fire department.

((~~**Fire department safety officer:** The member of the fire department assigned and authorized as the principal safety officer to perform the duties and responsibilities specified in this standard.~~))

Firefighter: A member of a fire department whose duties require the performance of essential firefighting functions or substantially similar functions.

Fire retardant: Any material used to reduce, stop or prevent the flame spread.

Fire suppression training: Training received by firefighters on the drill ground, drill tower, or industrial site to maintain the firefighter's proficiency.

Fly: Extendible sections of ground or aerial ladders.

((~~**Foot stand, ladder:** Devices attached to inside of beams of ladders that when folded down, provide foot space.~~))

Full body harness: See life safety harness.

Gross decontamination: The initial phase of the decontamination process during which the amount of surface contaminant is significantly reduced.

Ground jack: Heavy jacks attached to frame of chassis of aerial-equipped apparatus to provide stability when the aerial portion of the apparatus is used.

((~~**Ground mobile attack:** The activities of wildland firefighting with hose lines being used by personnel working around a moving engine. See mobile attack.~~))

Guideline: An organizational directive that establishes a standard course of action.

Halyard: Rope used on extension ladders for the purpose of

raising or lowering fly section(s). A wire cable may be referred to as a halyard when used on the uppermost fly section(s) of three or four section extension ladders.

Harness: See life safety harness.

Hazard communication program: A procedure to address comprehensively the issue of evaluating the potential hazards of chemicals and communicating information concerning hazards and appropriate protective measures to employees. See WAC 296-800-170, Chemical Hazard Communication Program.

Hazard control zones:

Cold zone: The control zone of an incident that contains the command post and such other support functions as are deemed necessary to control the incident.

Note: The cold zone established the public exclusion or clean zone. There are minimal risks of human injury or exposure in this zone.

Exclusion zone: The control zone designated to exclude all unauthorized personnel, responders, and equipment.

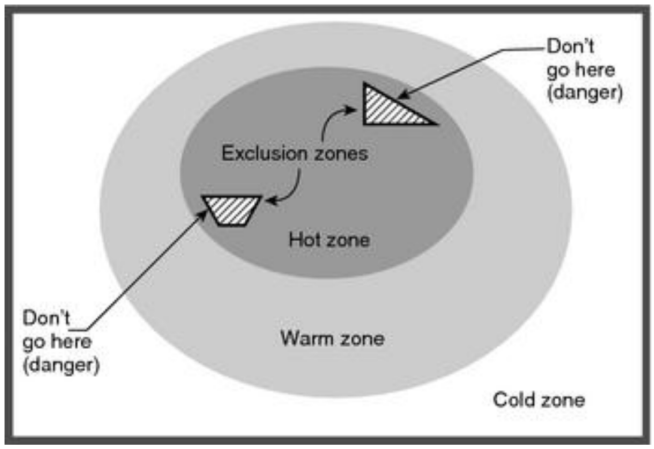
Note: Examples of exclusion zones could be holes in floors, explosive devices, or collapse hazards.

Hot zone: The control zone immediately surrounding the hazard area, which extends far enough to prevent adverse effects to personnel outside the zone. The hot zone is presenting the greatest risk to members and will often be classified as an IDLH atmosphere.

Warm zone: The control zone outside the hot zone where personnel and equipment decontamination and the hot zone support takes place.

Note: The warm zone is a limited access area for members directly aiding or in support of operations in the hot zone. Significant risk of human injury (respiratory, exposures, etc.) can still exist in the warm zone.

Hazard Zones:



Hazards: The characteristics of facilities, equipment, systems, property, hardware or other objects and those areas of structures or buildings posing a hazard greater than normal to the

general occupancy or structures.

Hazardous area: The immediate area where members might be exposed to a hazard.

Hazardous atmosphere: ((~~Any atmosphere, either immediately or not immediately dangerous to life or health, which is oxygen deficient or which contains a toxic or disease-producing contaminant.~~)) An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (escape unaided from a permit-required confined space), injury or acute illness caused by one or more of the following:

- Flammable gas, vapor, or mist in excess of 10% of its lower flammable limit (LFL);
- Airborne combustible dust at a concentration that meets or exceeds its LFL;
- Atmospheric oxygen concentration below 19.5% or above 23.5%;
- Atmospheric concentration of any substance which may exceed a permissible exposure limit. For additional information about atmospheric concentration, see chapter 296-62 WAC, Parts F, G, and I, General occupational health standards and chapter 296-841 WAC, Airborne contaminants.

Hazardous condition: The physical condition or act which is causally related to accident occurrence. The hazardous condition is related directly to both the accident type and the agency of the accident.

Hazardous material: A substance (solid, liquid, or gas) that when released is capable of creating harm to people, the environment, and property.

Hazardous substances: Substances that present an unusual risk to persons due to properties of toxicity, chemical activity, corrosivity, etiological hazards of similar properties.

((~~**HEPA filtration:** High efficiency particulate air filtration found in vacuum system capable of filtering 0.3 micron particles with 99.97% efficiency.~~))

Health and safety officer: The member of the fire department assigned and authorized as the administrator of the fire department health and safety program.

Heat-related illness: A medical condition resulting from the body's inability to cope with a particular heat load, and includes, but is not limited to, heat cramps, heat rash, heat exhaustion, fainting, and heat stroke.

Hose bed: Portion of fire apparatus where hose is stored.

Hose tower: A vertical enclosure where hose is hung to dry.

Hot zone: ((~~Area~~)) The control zone immediately surrounding ((~~a hazardous materials incident~~)) the hazard area, which extends far enough to prevent adverse effects ((~~from hazardous materials releases~~)) to personnel outside the zone. ((~~This~~)) The hot zone is ((~~also referred to as the exclusion zone or the restricted zone in other documents~~)) the area presenting the greatest risk to members and will often be classified as an IDLH atmosphere.

Ice rescue: The rescue of a person(s) who is afloat within an opening in the frozen surface or on the frozen surface of a body of water.

Identify: To select or indicate verbally or in writing using recognized standard terms. To establish the identity of; the fact of being the same as the one described.

IDLH: Immediately dangerous to life and health.

Imminent hazard (danger): An act or condition that is judged to present a danger to persons or property and is so immediate and severe that it requires immediate corrective or preventative action.

Incident commander: The person in overall command of an emergency incident. This person is responsible for the direction and coordination of the response effort.

Incident command system (ICS): A system that includes: Roles, responsibilities, operating requirements, guidelines and procedures for organizing and operating an on-scene management structure.

Incident safety officer: The person assigned the command staff function of safety officer in the incident command system.

Incipient (phase) fire: The beginning of a fire; where the oxygen content in the air has not been significantly reduced and the fire is producing minute amounts of water vapor, carbon dioxide, carbon monoxide and other gases; the room has a normal temperature and can be controlled or extinguished with a portable fire extinguisher or small hose, e.g., a kitchen stove fire.

Indirect attack: A method of suppression in which the control line is located some considerable distance away from the fire's active edge. Generally done in the case of a fast-spreading or high-intensity fire and to utilize natural or constructed firebreaks or fuelbreaks and favorable breaks in the topography. The intervening fuel is usually backfired; but occasionally the main fire is allowed to burn to the line, depending on conditions.

Industrial fire brigade: An organized group of employees whose primary employment is other than firefighting who are knowledgeable, trained and skilled in specialized operations based on site-specific hazards present at a single commercial facility or facilities under the same management.

((~~**Initial stage (initial action):** Shall encompass the control efforts taken by resources which are first to arrive at an incident.~~))

Initial action: The actions taken by the first resources to arrive at a wildfire or wildland fire use incident. Initial actions may be size up, patrolling, monitoring, holding action or aggressive initial attack.

Initial attack: A planned response to a wildfire given the wildfire's potential fire behavior. The objective of initial attack is to stop the fire and put it out in a manner consistent with firefighter and public safety and values to be protected.

Initial fire suppression training: The training of firefighters in recognizing sources and locations of potential fires and the method of fire suppression to be used.

Initial stages: Tasks undertaken by the first arriving company with only one crew assigned or operating in the hot zone.

Injury: Physical damage suffered by a person that requires

treatment by a practitioner of medicine (a physician, nurse, paramedic or EMT) within one year of the incident regardless of whether treatment was actually received.

Interior structural firefighting: The physical activity of fire suppression, rescue or both, inside of buildings or enclosed structures which are involved in a fire situation beyond the incipient stage. See structural firefighting.

Known rescue: A situation of compelling evidence where a member sees, hears, or is directly told of a trapped and viable victim by an occupant who has escaped or is a credible witness.

Ladder belt: A device that fastens around the waist only and is used as a positioning device for a person on a ladder.

Life safety or rescue rope: Rope dedicated solely for the purpose of constructing lines for supporting people during rescue, firefighting, or other emergency operations, or during training evolutions.

((~~**Line:** Rope when in use.~~))

Live fire: Any unconfined open flame or device that can propagate fire to the building, structure, or other combustible materials.

Live fire training: Any fire set within a structure, tank, pipe, pan, etc., under controlled conditions to facilitate the training of firefighters under actual fire conditions.

Locking in: The act of securing oneself to a ladder by hooking a leg over a rung and placing top of foot against the other leg or against the ladder.

((~~**Manned station:** See staffed station.~~))

May: A permissive use or an alternative method to a specified requirement.

Mayday: The nationally adopted "call for help" term used to indicate that an emergency responder is in a situation of imminent peril where they are in need of immediate help.

Member: A person involved in performing the duties and responsibilities of a fire department under the auspices of the organization. A fire department member may be a full-time or part-time employee or a paid or unpaid volunteer, may occupy any position or rank within the fire department, and engages in emergency operations. Also see Employee.

Mobile attack: The act of fighting wildland fires from a moving engine.

((~~**Monitor:** A portable appliance that delivers a large stream of water.~~

~~**Mop up:** The act of making a wildfire/wildland fire safe after it is controlled, such as extinguishing or removing burning materials along or near the control line, felling snags, trenching logs to prevent rolling.~~))

NFPA: National Fire Protection Association.

((~~**NIIMS:**~~)) **NIMS:** The National ((~~Interagency~~)) Incident Management System.

NIOSH: National Institute of Occupational Safety and Health.

((~~**Nondestructive testing:** A test to determine the~~

~~characteristics or properties of a material or substance that does not involve its destruction or deterioration.~~))

Nonskid: The surface treatment that lessens the tendency of a foreign substance to reduce the coefficient of friction between opposing surfaces.

Occupational exposure: Means 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.

Officer: (1) Person in charge of a particular task or assignment.

(2) A supervisor.

OSHA: Occupational Safety and Health Administration.

Other potentially infectious materials (OPIM): (1) The following 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;

(2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and

(3) 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.

Outrigger: Manually or hydraulically operated metal enclosures and jacks which are extended and placed in contact with the ground to give the apparatus a wide, solid base to support different loads.

((~~**Overhauling:** That portion of fire extinguishment involving discovery of hidden fires or smoldering material.~~)) **Overhaul:** A firefighting term involving the process of final extinguishment after the main body of a fire has been knocked down. All traces of fire must be extinguished at this time.

PACM: Presumed asbestos-containing material. Thermal system insulation and surfacing material found in buildings, vessels and vessel sections constructed no later than 1980.

PASS: Personal alert safety system.

PEL: Permissible exposure limit.

Personal protective equipment (PPE): (1) The equipment provided to shield or isolate a person from the chemical, physical, and thermal hazards that may be encountered at a hazardous materials incident. Personal protective equipment includes both personal protective clothing and respiratory protection. Adequate personal protective equipment should protect the respiratory system, skin, eyes, face, hands, feet, head, body, and hearing.

(2) 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.

((~~**Place of employment:** Any premises, room or other place where an employee or employees are employed for the performance of labor or service over which the employer has the right of access or control. For the purposes of this code, fireground and emergency scenes are also considered places of employment.~~))

Platform: The portion of a telescoping or articulating boom used as a working surface.

Positive communication: Visual, audible, physical, safety guide rope, or electronic means which allows for two way message generation and reception.

PPE: Personal protective equipment.

((~~**Prefire training:** The training of firefighters in recognizing sources and locations of potential fires and the method of fire combat to be used.~~))

Probable fatality: (1) An occupational injury or illness, which, by the doctor's prognosis, could lead to death.

(2) An occupational injury or illness, which by its very nature, is considered life threatening.

Protective clothing: Equipment designed to protect the wearer from heat and/or hazardous materials contacting the skin or eyes. Protective clothing is divided into five types:

(1) Structural firefighting protective clothing;
(2) Liquid splash-protective clothing;
(3) Vapor-protective clothing;
(4) High temperature-protective proximity clothing; and
(5) Wildland firefighting clothing.

Note: See Protective ensemble.

Protective ensemble: Multiple elements of clothing and equipment designed to provide a degree of protection for firefighters from adverse exposures to the inherent risks of structural firefighting operations and certain other emergency operations. The elements of the protective ensemble are helmets, coats, trousers, gloves, footwear, interface components (hoods), and if applicable, personal alert system (PASS) devices, and self-contained breathing apparatus.

Proximity protective clothing: Radiant reflective protective garments configured as a coat and trousers, or as a coverall, and interface components that are designed to provide protection for the firefighter's body from conductive, convective, and radiant heat.

Pumper: See engine.

Qualified: One who by possession of a recognized degree, certificate or professional standing, or who by knowledge, training or experience has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work or the project.

Rapid intervention ((~~team (RIT)~~)) <u>crew (RIC)</u>: On-scene team of at least two members designated, dedicated and equipped to effect an immediate rescue ((~~operation~~)) <u>of firefighters</u> if the need arises <u>(also known as RIT)</u>.

RCW: Revised Code of Washington.

Rehabilitation: The process of providing mental and medical evaluation, rest, hydration, and nourishment to members who are engaged in emergency operations.

Rescue: Those activities directed at locating endangered persons at an emergency incident and removing those persons from danger.

Rescue craft: Any fire department watercraft used for rescue operations.

Respirator: A device designed to protect the wearer from breathing harmful atmospheres. See respiratory protection.

Respiratory equipment: Self-contained breathing apparatus designed to provide the wearer with a supply of respirable atmosphere carried in or generated by the breathing apparatus. When in use, this breathing apparatus requires no intake of air or oxygen from the outside atmosphere.

(1) Respirators (closed circuit): Those types of respirators which retain exhaled air in the system and recondition such air for breathing again.

(2) Respirators (open circuit): Those types of respirators which exhaust exhaled air to the outside of the mask into the ambient air.

(3) Respirators (demand): Those types of respirators whose input air to the mask is started when a negative pressure is generated by inhalation.

(4) Respirators (pressure demand): Those types of respirators which constantly and automatically maintain a positive pressure in the mask by the introduction of air when the positive pressure is lowered (usually from .018 psi to .064 psi) through the process of inhalation or leakage from the mask.

Respiratory protection: Equipment designed to protect the wearer from the inhalation of contaminants. Respiratory protection is divided into three types:

(1) Positive pressure self-contained breathing apparatus (SCBA);

(2) Positive pressure airline respirators;

(3) Negative pressure air purifying respirators.

Responding: The usual reference to the act of responding or traveling to an alarm or request for assistance.

Risk assessment: To set or determine the possibility of suffering harm or loss, and to what extent.

Rope rescue equipment: Components used to build rope rescue systems including life safety rope, life safety harnesses and auxiliary equipment.

Rope rescue system: A system composed of rope rescue equipment and an appropriate anchor system intended to support people during rescue, firefighting, or other emergency operations, or during training evolutions.

Safe and healthful working environment: The work surroundings of an employee with minimum exposure to unsafe acts and/or unsafe conditions.

((~~**Safety officer:** Either the fire department safety officer or an assistant safety officer (see fire department safety~~

~~officer).~~))

Safety net: A rope or nylon strap net not to exceed 6-inch mesh, stretched and suspended above ground level at the base of drill tower, and at such a height that a falling body would be arrested prior to striking the ground.

Scabbard: A guard which will prevent accidental injury and covers the blade and pick of an axe or other sharp instrument when worn by the firefighter.

SCBA: Self contained breathing apparatus.

Service testing: The regular, periodic inspection and testing of apparatus and equipment according to an established schedule and procedure, to insure that it is in safe and functional operating condition.

Shall: Mandatory.

Should: Recommended.

((~~**Signalman:** A person so positioned that he/she can direct the driver when the drivers vision is obstructed or obscured.~~

~~**SOP:** Standard operating procedure or guidelines.~~

~~**Staffed station:** A fire station continuously occupied by firefighters on scheduled work shifts. The staffed station may also serve as headquarters for volunteers.~~))

Standard operating procedure or guidelines: An organizational directive that establishes a standard course of action. ((~~See SOP.~~))

Standby firefighters: On-scene members designated to effect an immediate rescue of the initial team operating in the hot zone.

Station (fire station): Structure in which fire service apparatus and/or personnel are housed.

Structural firefighting: The activities of rescuing, fire suppression, and property conservation involving buildings, enclosed structures, aircraft, vehicles, vessels, or similar properties that are involved in a fire or emergency situation. See interior structural firefighting.

Structural firefighting protective clothing: This category of clothing, often called turnout or bunker gear, means the protective clothing normally worn by firefighters during structural firefighting operations. It includes a helmet, coat, pants, boots, gloves, and a hood. Structural firefighters' protective clothing provides limited protection from heat but may not provide adequate protection from the harmful gases, vapors, liquids, or dusts that are encountered during hazardous materials incidents.

((~~**Support function:** A hazardous chemical operation involving controlled chemical uses or exposures in nonflammable atmospheres with minimum threats in loss of life, personnel injury, or damage to property or to the environment. Functions include decontamination, remedial cleanup of identified chemicals, and training.~~

~~**Support function protective garment:** A chemical-protective suit that meets the requirements of NFPA Standard on Support Function Garments, 1993.~~))

Surf rescue: The rescue of a person(s) who is afloat on the

surface or the subsurface retrieval of a person(s) submerged in ocean water or bodies of water that are connected to oceans that either experience a twice daily rise and fall of their surface caused by gravitational pull of the moon or experience a corresponding ebb and flow of water in response to tides with a surf height of 1 foot or greater.

Surface water rescue: The rescue of a person(s) who is afloat on the surface of a body of water. A trained rescuer (surface based swimmer) may dive for submerged victims, limited to the rescuer's ability, with no sustained underwater capability other than a mask, fins, and snorkel in relatively shallow depths and retrieve or mark a victim.

Swift water rescue: The removal of person(s) from threat or harm from water that is moving faster than walking pace (1 Knot, 1.85 km/hr, 1.15 mph).

Tail/running board: Standing space on the side or rear of an engine or pumper apparatus.

Team: Two or more individuals who are working together in positive communication with each other through visual, audible, physical, safety guide rope, electronic, or other means to coordinate their activities and who are in close proximity to each other to provide assistance in case of emergency.

Tillerman: Rear driver of tractor-trailer aerial ladder.

Trench: A narrow excavation made below the surface of the ground. The depth is generally greater than the width, but the width of a trench is not greater than 15 feet.

Turnout clothing: See structural firefighting protective clothing.

Turntable: The rotating surface located at the base of an aerial ladder, or boom, on aerial apparatus.

((~~**Universal precaution:** 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.~~))

Uncontrolled fire: Any fire which threatens to destroy life, property, or natural resources; and (a) is not burning within the confines of firebreaks; or (b) is burning with such intensity that it could not be readily extinguished with ordinary tools commonly available.

Urban wildfire: An uncontained fire requiring suppression action, usually spreading through ground cover, vegetative fuels, brush, grass, and landscaping; often threatening residential and commercial structures within an urban environment with access to established roadways and water systems.

Vapor barrier: Material used to prevent or substantially inhibit the transfer of water, corrosive liquids and steam or other hot vapors from the outside of a garment to the wearer's body.

Vapor barrier clothing: Clothing that significantly inhibits or completely prevents sweat produced by the body from evaporating into the outside air. Such clothing includes encapsulating suits, various forms of chemical resistant suits used for PPE, and other forms of nonbreathing clothing.

Variance: An allowed or authorized deviation from specific standard(s) when an employer substitutes measures which afford an equal degree of safety. Variances are issued as temporary or permanent with interim measures issued, when requested, until a determination or decision is made.

Vessel: Means every description of watercraft or other artificial contrivance used or capable of being used as a means of transportation on water, including special-purpose floating structures not primarily designed for or used as a means of transportation on water.

WAC: Washington Administrative Code.

Warm zone: The control zone outside the hot zone where personnel and equipment decontamination and hot zone support take place.

Note: The warm zone is a limited access area for members directly aiding or in support of operations in the hot zone. Significant risk of human injury (respiratory, exposures, etc.) can still exist in the warm zone.

Water rescue: Any incident that involves the removal of victim(s) from any body of water other than a swimming pool. This includes rivers, creeks, lakes, washes, storm drains, or any body of water, whether still or moving.

Wheel blocks (chocks): A block or wedge placed under a wheel to prevent motion.

((~~**Wildfire:** An unplanned and unwanted fire requiring suppression action; an uncontrolled fire, usually spreading through vegetative fuels and often threatening structures.~~

~~**Wildland fire:** A fire burning in natural vegetation that requires an individual or crew(s) to expend more than one hour of labor to confine, control and extinguish. Agencies may substitute crews to avoid the one hour bench mark or increase crew size to complete the job in less than one hour. One hour was chosen as the maximum time that individuals should work in high temperatures in structural protective clothing.~~))

Wildland: An area in which development is essentially nonexistent, except for roads, railroads, powerlines, and similar transportation facilities. Structures, if any, are widely scattered.

Wildland fire: Any nonstructure fire that occurs in the wildland.

Wildland firefighting: The activities of fire suppression and property conservation in woodlands, forests, grasslands, brush, and other such vegetation or any combination of vegetation, that is involved in a fire situation but is not within buildings or structures.

Wildland firefighting enclosure: A fire apparatus enclosure with a minimum of three sides and a bottom.

Wildland urban interface: The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

WISHA: Washington Industrial Safety Health Act.

Work environment: The surrounding conditions, influences or forces to which an employee is exposed while working.

((~~**Workplace:** See place of employment.~~

~~**WRD:** WISHA regional directive.~~)) Any premises, room or other place where an employee or employees are employed for the performance of labor or service over which the employer has the right of access or control. For the purposes of this code, fireground and emergency scenes are also considered places of employment.

Work/rest ratio: An expression of the amount of rest that is required for each hour an individual is in work status. Current NWCG guidelines require one hour of rest for every two hours in work status.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-01007 Variance and procedure. (1) Conditions may exist in operations that a state standard will not have practical use. The director may issue a variance from the requirements of the standard when another means of providing equal protection is provided.

(2) Applications for variances will be reviewed and investigated by the department. Variances granted shall be limited to the specific WAC code covered in the application and may be revoked for cause. The variance shall remain prominently posted on the premises while in effect.

Note: Variance forms may be obtained from the department upon request. Requests for variance from safety and health standards shall be made in writing to the assistant director, Consultation and Compliance Services Division, Department of Labor and Industries, P.O. Box 44600, Olympia, Washington 98504-4600. ((~~(Reference RCW 49.17.080 and 49.17.090.)~~))

AMENDATORY SECTION (Amending WSR 08-05-012, filed 2/8/08, effective 4/1/08)

WAC 296-305-01501 Injury and illness reports for firefighters. (1) Notice of injury or illness.

(a) ((~~Whenever an occupational accident causes injury or illness to a firefighter or other employee, or whenever a firefighter or other employee becomes aware of an illness apparently caused by occupational exposure, it shall be the duty of such a firefighter or other employee, or someone on his/her behalf, to report the injury or illness to the employer before the end of his/her duty period but not later than twenty-four hours after the incident.~~)) Employees must report work-related injuries or illnesses to their employer before the end of their duty period, but not later than twenty-four hours after the incident.

(b) Exception: In the event that symptoms of an occupational injury or illness are not apparent at the time of the incident, the employee shall report the symptoms to his/her employer within forty-eight hours after becoming aware of the injury or illness.

(c) Within eight hours after the fatality or probable fatality of any firefighter or employee from a work-related incident or the inpatient hospitalization of any employee as a result of a work-related incident, the employer of any employees so affected, shall orally report the fatality/hospitalization by telephone (1-800-423-7233) or in person, to the nearest office of the department ((~~or by using the OSHA toll-free central telephone number, 1-800-321-6742~~)).

(i) This requirement applies to each such fatality or hospitalization which occurs within thirty days of the incident.

(ii) Exception: If any employer does not learn of a reportable incident at the time it occurs and the incident would otherwise be reportable under this subsection, the employer shall make a report within eight hours of the time the incident is reported to any agent or employee of the employer.

(iii) Each report required by this subsection shall relate the following information: Establishment name, location of the incident, time of the incident, number of fatalities or hospitalized employees, contact person, phone number, and a brief description of the incident.

(2) Recordkeeping - Written reports; all fire service employers shall maintain records of occupational injuries and illnesses. Reportable cases include every occupational death, every occupational illness, or each injury that involves one of the following: Unconsciousness, inability to perform all phases of regular duty-related assignment, inability to work full time on duty, temporary assignment, or medical treatment beyond first aid.

(3) All fire departments shall record occupational injury and illnesses on ((~~forms OSHA 101-Supplementary Record Occupational Injuries and Illnesses and OSHA 200-Log summary. Forms other than OSHA 101 may be substituted for the Supplementary Record of Occupational Injuries and Illnesses if they contain the same items~~)) OSHA Form 300, Log of Work-Related Injuries and Illnesses.

(4) Each employer shall post an annual summary of occupational injuries and illnesses for each establishment. This summary shall consist of a copy of the year's totals from ((~~the Form OSHA No. 200~~)) OSHA Form 300A, Summary of Work-Related Injuries and Illnesses and the following information from that form: Calendar year covered, company name, establishment name, establishment address, certification signature, title, and date. ((~~A Form OSHA No. 200~~)) An OSHA Form 300A shall be used in presenting the summary. If no injuries or illnesses occurred in the year, zeros must be entered on the totals line, and the form must be posted. The summary shall be completed by February 1 each calendar year. The summary covering the previous calendar year shall be posted no later than February 1st, and shall remain in place until ((~~March 1~~)) April 30th.

AMENDATORY SECTION (Amending WSR 09-01-158, filed 12/23/08, effective 3/1/09)

WAC 296-305-01503 Accident/incident investigation. (1) After the emergency actions following accidents that cause serious injuries ((~~that have~~)) with immediate symptoms or incidents resulting in exposure to occupational disease-causing chemicals or physical agents, a preliminary investigation of the cause ((~~of the accident~~)) shall be conducted. The investigation shall be conducted by a person designated as qualified by the employer. The fire department shall establish a written procedure and a program for investigating, and evaluating the facts, relating to the cause of accidents. The findings of the investigation shall be documented by the employer for reference at any following formal investigations.

(2) ((~~Within eight hours after the fatality or probable fatality of any firefighter or employee from a work-related incident or the inpatient hospitalization of any employee as a result of a work-related incident, the employer of any employees so affected, shall orally report the fatality/hospitalization by telephone or in person, to the nearest office of the department or by using the OSHA toll-free central telephone number, 1-800-321-6742.~~

~~(3)~~)) Equipment involved in an accident resulting in an immediate or probable fatality((~~,~~)) shall not be moved((~~,~~)) until a representative of the ((~~consultation and compliance services~~)) division of occupational safety and health investigates the accident and releases such equipment, except where removal is essential to prevent further accident. When necessary to remove the victim, such equipment may be moved only to the extent of making possible such removal.

((~~(4)~~)) (3) Upon arrival of the department's investigator, the employer shall assign to assist the investigator such personnel as are deemed necessary by the department to conduct the investigation.

((~~(5)~~)) (4) The fire department shall preserve all records, photographic materials, audio, video, recordings, or other documentation concerning an accident.

((~~Reference: WAC 296-24-020 (2), (3).~~))

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-01505 Accident prevention program. (1) All fire departments shall develop and implement a written safety program.

(2) Fire department safety programs shall have an assigned health and safety officer.

(3) Each employer shall develop a formal accident-prevention

program, tailored to the needs of the fire department and to the type of hazards involved. The department of labor and industries' consultation and compliance services division may be contacted for assistance in developing appropriate programs.

((~~(a)~~)) A safety orientation program describing the employer's safety program shall include:

((~~(i)~~)) (a) How and when to report injuries, including instruction as to the location of first-aid facilities.

((~~(ii)~~)) (b) How to report unsafe conditions and practices.

((~~(iii)~~)) (c) The use and care of required personal protective equipment.

((~~(iv)~~)) (d) The proper actions to take in event of emergencies including the routes of exiting from areas during emergencies.

((~~(v)~~)) (e) Identification of the hazardous gases, chemicals or materials involved, along with the instructions on the safe use and emergency action following accidental exposure.

((~~(vi)~~)) (f) A description of the employer's total safety program.

((~~(vii)~~)) (g) An on-the-job review of the practices necessary to perform the initial job assignments in a safe manner.

(4) Fire departments shall have a safety committee to serve in an advisory capacity to the fire chief. The number of employer-selected members shall not exceed the number of employee-elected members.

(5) The frequency of safety meetings shall be determined by the safety committee, but shall not be less than one hour per calendar quarter, however, special meetings may be held at the request of either party.

(6) Minutes shall be taken of all safety meetings. After review by the chief or his/her designee the minutes shall be conspicuously posted at all stations.

(7) Employee submitted written suggestions or complaints shall be considered. Action recommendations by the committee shall be transmitted in writing to the fire chief. The chief or his/her designated agent will reply to the submitter.

(8) Inspections of fire stations shall be made at least monthly and records maintained to ensure that stations are reasonably free of recognized hazards. These inspections shall include, but not be limited to, tools, apparatus, extinguishers, protective equipment, and life safety equipment.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-01507 Fire department health and safety officer. (1) The duties and responsibilities of the fire department health and safety officer shall include, but are not limited to:

(a) Plan and coordinate safety activities.

(b) Work closely with the safety committee.

(c) Ensure accidents are investigated.

(d) Devise corrective measures to prevent accidents.

(2) Realizing safety training and recordkeeping are management's responsibility, the fire department health and safety officer shall ensure the following requirements are being met:

(a) Ensure safety training for all employees.

(b) Ensure safety directives are complied with.

(c) Ensure that records are kept, but not limited to the following:

(i) Accidents;

(ii) Injuries;

(iii) Inspections;

(iv) Exposures;

(v) Medical monitoring;

(vi) Safety meetings;

(vii) Apparatus;

(viii) Equipment;

(ix) Protective clothing;

(x) Other fire department safety activities.

(3) The fire department health and safety officer, through the fire chief, shall have the authority and responsibility to identify and recommend correction of safety and health hazards.

(4) The fire department health and safety officer shall maintain a liaison with staff officers regarding recommended changes in equipment, procedures, and recommended methods to eliminate unsafe practices and reduce existing hazardous conditions.

Additional Reference: NFPA 1521 Standard for Fire Department Safety Officer, may be used as a guide for duties and responsibilities relating to the safety officer.

AMENDATORY SECTION (Amending WSR 01-11-038, filed 5/9/01, effective 9/1/01)

WAC 296-305-01509 Management's responsibility. (1) It shall be the responsibility of management to establish, supervise, maintain, and enforce, in a manner which is effective in practice:

(a) A safe and healthful working environment, as it applies to ((~~noncombat conditions or to combat conditions at a fire scene after the fire has been extinguished, as determined by the officer in charge~~)) both nonemergency and emergency conditions.

(b) An accident prevention program as required by this chapter.

(c) Programs for training employees in the fundamentals of accident prevention.

(d) Procedures to be used by the fire department health and safety officer and incident commander to ensure that emergency medical care is provided for members on duty.

(e) An accident investigation program as required by this chapter.

(f) Policies that clarify "rules of engagement" or parameters when personnel should commit to work activities within a hot zone.

(g) Policies that clarify the right of every employee to notify the employer of potential life-threatening situations during emergency operations and processes that clarify how this notification is to occur.

(2) The fire department shall be responsible for providing suitable expertise to comply with all testing requirements in this chapter. Such expertise may be secured from within the fire department, from equipment and apparatus manufacturers, or other suitable sources.

(3) Members who are under the influence of alcohol or drugs shall not participate in any fire department operations or other functions. This rule does not apply to persons taking prescription drugs as directed by a physician or dentist providing such use does not endanger the worker or others.

(4) Alcoholic beverages shall not be allowed in station houses, except at those times when station houses are used as community centers, with the approval of management.

(5) A bulletin board or posting area exclusively for safety and health and large enough to display the required safety and health posters. The WISHA poster (WISHA form F416-081-000) and other safety education material shall be provided. A bulletin board of "white background" and "green trim" is recommended.

(6) The fire department shall develop and maintain a hazard communication program as required by WAC 296-800-170, which will provide information to all employees relative to hazardous chemicals or substances to which they are exposed, or may routinely be exposed to, in the course of their employment.

(7) Personnel.

(a) The employer shall assure that employees ((~~who are expected to do interior structural firefighting~~)) are physically capable of performing duties that may be assigned to them ((~~during emergencies~~)).

(b) The employer shall not permit employees with known physical limitations reasonably identifiable to the employer, for example, heart disease or seizure disorder, to participate in ((~~structural firefighting emergency~~)) physically demanding activities unless the employee has been released to participate in such activities by a physician ((~~to participate in such activities~~)) or other licensed health care professional (LHCP) who is qualified by training or experience as determined by the fire department to evaluate firefighters.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-01513 Safe place standards. (1) Every employer shall furnish and require the use of appropriate safety devices and safeguards. All ((~~firefighting~~)) work methods, and operations shall be so designed as to promote the safety and health of employees. The employer shall do everything reasonably necessary to protect the safety and health of employees.

(2) No firefighter or other employee, employer or employer representative shall:

(a) Remove, displace, damage, destroy or carry off any safety device, safeguard, notice or warning furnished for use in any employment or place of employment.

(b) Interfere in any way with the use of any safety device, method or process adopted for the protection of any employee.

AMENDATORY SECTION (Amending WSR 01-11-038, filed 5/9/01, effective 9/1/01)

WAC 296-305-01517 First-aid kits. (1) To assure the emergency medical care of the firefighters there shall be present at each emergency incident at least the following items:

1 (one) utility scissors, EMT-type
1 CPR barrier
3 (three) rolls 1 inch adhesive tape
6 (six) 4" x 4" sterile, individually wrapped gauze pads
4 (four) combination pads, sterile, individually wrapped
4 (four) soft roller bandages, assorted size, sterile, individually wrapped cling type
2 (two) burn sheets, sterile, individually wrapped
2 (two) triangular bandages
1 (one) multitrauma dressing, sterile
2 (two) supply disposable gloves
2 (two) wire splints or equivalent

(2) All fire stations shall maintain a first-aid kit. The kit shall contain at least the following items:

6 (six) 4" x 4" sterile, individually wrapped gauze pads
4 (four) combination pads, sterile, individually wrapped
2 (two) rolls 1 inch adhesive tape
4 (four) soft roller bandages, assorted size, sterile, individually wrapped cling type
2 (two) triangular bandages
1 (one) utility scissors, EMT-type
1 (one) pair tweezers
1 (one) package assorted adhesive bandages

(3) All fire apparatus shall contain a first-aid kit as described in WAC 296-800-150.

(4) All fire departments providing emergency medical services to the public shall conform to the requirements of chapter 18.73 RCW Emergency Care and Transportation Services (and if applicable, chapter 248-17 WAC, Ambulance Rules and Regulations) which require additional first-aid equipment.

((~~Additional references: Chapter 296-800 WAC.~~))

AMENDATORY SECTION (Amending WSR 99-05-080, filed 2/17/99, effective 6/1/99)

WAC 296-305-02001 Personal protective equipment and protective clothing.

Note: For wildland firefighting personal protective equipment and clothing requirements see WAC ((~~296-305-07003~~)) 296-305-07012, Personal protective clothing and equipment for wildland firefighting.

(1) Employers shall provide and maintain at no cost to the employee the appropriate protective ensemble/protective clothing to protect from the hazards to which the member is or is likely to be exposed. Information on hazard assessments can be found in WAC 296-800-16005. Employers shall ensure the use of all protective equipment and clothing required by this standard. ((~~Employers shall assure that the protective clothing and equipment ordered or purchased after the effective date of this standard meets the requirements of this standard.~~)) Full protective equipment designated for the task, shall be worn for all department activities.

(2) Firefighters shall be trained in the function, donning and doffing, care, use, inspection, maintenance and limitations of the protective equipment assigned to them or available for their use.

(3) Protective clothing and protective equipment shall be used and maintained in accordance with manufacturer's instructions. A written maintenance, repair, retirement, servicing, and inspection program shall be established for protective clothing and equipment. Specific responsibilities shall be assigned for inspection and maintenance. This requirement applies to firefighter's personally owned equipment as well as equipment issued by the employer.

(4) The fire department shall provide for the cleaning of protective clothing and contaminated station/work uniforms at no cost to the employee. Such cleaning shall be performed by either a cleaning service, or at a fire department facility, that is equipped to handle contaminated clothing. If the fire department does its own cleaning, they shall follow the manufacturer's recommended cleaning procedure or the 2008 edition of NFPA 1851, Standard on Selection, Care and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.

((~~**Note:** See Appendix A.~~))

(5) Personal protective equipment and clothing shall be of a type specified by NIOSH, MSHA, NFPA, ANSI, or as specifically

referenced in the appropriate section of this chapter.

(6) Station/work uniforms. Station/work uniforms are not themselves intended as primary protective garments.

(a) Station/work uniforms if provided, shall meet the requirements as specified in the 1990 or 1994 edition of NFPA 1975, Standard on Station/Work Uniforms for Fire and Emergency Services. However, departments are not required to provide station/work uniforms for their employees.

(b) ((~~All station/work uniforms purchased after the effective date of this regulation shall meet the requirements set forth in this standard.~~

~~(c)~~)) Station/work uniforms include trousers, and/or coveralls, but exclude shirts, underwear, and socks.

((~~(d)~~)) (c) Members shall not wear any clothing that is determined to be unsafe due to poor thermal stability or poor flame resistance when engaged in or exposed to the hazards of structural firefighting. ((~~Because it is impossible to ensure that every member will respond to an incident in a station/work uniform or will change out of fabrics that have poor thermal stability or ignite easily, before donning protective garments,~~)) The fire department shall inform members of the hazards of fabrics that melt, drip, burn, stick to the skin and cause burns to the wearer due to poor thermal stability or poor flame resistance, and shall prohibit their use by employees. Garments that are not provided by the employer, and that are made from all or mostly cotton, will meet the requirements of this section.

((~~(e)~~)) (d) Garments meeting the requirements of WAC ((~~296-305-07003~~)) 296-305-07012(1), meet the intent of this section.

((~~(f) Station/work uniforms purchased prior to the effective date of this chapter shall be acceptable for a period of two years or until the employers current inventory has been exhausted, whichever comes first.~~))

(7) ((~~Turnout clothing/pants and coat:~~))

Proximity firefighting clothing:

(a) All turnout clothing used as proximity clothing shall meet the requirements of the 2000 edition of NFPA, 1976 Standard on Protective ((~~Clothing~~)) Ensemble for Proximity Firefighting((~~, 1992 edition~~)).

(b) There shall be at least a two-inch overlap of all layers of the protective coat and the protective trousers so there is no gaping of the total thermal protection when the protective garments are worn. The minimum overlap shall be determined by measuring the garments on the wearer, without SCBA, with the wearer in the most stretched position, hands together reaching overhead as high as possible.

(c) Single piece protective coveralls shall not be required to have an overlap of all layers as long as there is continuous full thermal protection.

(d) Fire departments that provide protective coats with protective resilient wristlets secured through a thumb opening may provide gloves of the gauntlet type for use with these protective coats. Fire departments that do not provide such wristlets attached to all protective coats shall provide gloves of the

wristlet type for use with these protective coats.

((~~(8) Structural firefighting clothing.~~

~~(a) All turnout clothing purchased after the effective date of these regulations shall meet the requirements of the 1991 edition of NFPA, Standard on Protective Clothing for Structural Firefighting 1971 or the 1997 edition of NFPA, Standard on Protective Ensemble for Structural Firefighting 1971. In no case, shall firefighters wear personal protective clothing manufactured prior to the 1986 edition, NFPA, Standard on Protective Clothing for Structural Firefighting 1971.~~

~~(b) Turnout clothing shall be maintained as specified by the manufacturer.~~

~~(c) Repairs to turnout clothing shall be done to the manufacturers specification by qualified individuals approved by the manufacturer. Repairs must be made using materials and methods in accordance with the applicable standards under which the article was produced. Repairs include any and all alterations, modifications, additions, deletions or any other change made to the manufacturers PPE article.~~

~~(d) Turnout clothing which is damaged or does not comply with this section shall not be used.~~

~~(e) All turnout clothing shall be inspected semi-annually by an individual qualified by the employer. Inspection intervals shall not exceed six months.~~))

NEW SECTION

WAC 296-305-02002 Structural firefighting clothing (SFF). (1) All SFF clothing purchased after January 1, 2014, shall meet the requirements of the 1991 edition of NFPA 1971, Standard on Protective Clothing for Structural Fire Fighting, or the 1997 edition of NFPA 1971, Standard on Protective Ensemble for Structural Fire Fighting. Firefighters shall not wear personal protective clothing manufactured prior to 1991, except for training purposes in nonhazardous areas.

(2) SFF clothing shall be maintained as specified by the manufacturer.

(3) Repairs to SFF clothing shall be done to the manufacturer's specification by qualified individuals approved by the manufacturer. Repairs must be made using materials and methods in accordance with the applicable standards under which the article was produced. Repairs include any and all alterations, modifications, additions, deletions or any other change made to the manufacturer's PPE article.

(4) SFF clothing which is damaged or doesn't comply with this section shall not be used.

(5) All SFF clothing shall be inspected semiannually by an individual qualified by the employer. Inspection intervals shall not exceed six months.

NEW SECTION

WAC 296-305-02004 Protection ensemble for structural firefighting. (1) Face and eye protection.

(a) Face and eye protection shall be provided for and used by firefighters engaged in fire suppression and other operations involving hazards to the eye and face at all times when the face isn't protected by the full facepiece of the SCBA. Primary face and eye protection appropriate for a given specific hazard shall be provided for, and used by, members exposed to that specific hazard. Such primary face and eye protection shall meet the requirements of the 2003 edition of ANSI Z87.1.

(b) Persons whose vision requires the use of corrective lenses in spectacles, and who are required by this standard to wear eye protection, shall wear goggles or spectacles of one of the following types:

- Spectacles with protective lenses that provide optical correction.
- Goggles that can be worn over corrective spectacles without disturbing the adjustment of the spectacles.
- Goggles that incorporate corrective lenses mounted behind the protective lens.

(c) When limitations or precautions are indicated by the manufacturer, they shall be transmitted to the user and care taken to see such limitations and precautions are strictly observed.

(d) Care, use and maintenance for any type of eye or face protection shall follow the manufacturer's suggested recommendations.

(e) Goggles shall be inspected, cleaned and disinfected prior to being reissued to other employees.

(f) Helmet face shields shall meet the requirements of the 2000 edition of NFPA 1971, Standard on Protective Ensemble for Structural Fire Fighting.

Note: The helmet face shield alone doesn't always provide adequate eye protection against flying particles, splash, gases and vapors. For known eye hazards, such as cutting with power saws, chopping, drilling and using extrication equipment, the face shield should be worn with additional eye protection.

(g) For firefighters that don't have a helmet face shield, flexible or cushioned fitting goggles shall be provided.

(h) Goggles shall consist of a wholly flexible frame, forming a lens holder or a rigid frame with integral lens or lenses, having a separate, cushioned fitting surface on the full periphery of the facial contact area.

(i) Materials used shall be chemical-resistant, nontoxic, nonirritating and slow burning.

(ii) There shall be a positive means of support on the face, such as an adjustable headband of suitable material or other

appropriate means of support to retain the frame comfortably and snugly in front of the eyes.

(2) Hearing protection. Fire departments must address noise issues as required by chapter 296-817 WAC, Hearing loss prevention (noise).

Note: Although noise levels may exceed the 115 dBA ceiling limit for noise exposures during structural firefighting activities, hearing protection that will survive these conditions and not interfere with other essential PPE may not always be available. Fire departments must consider daily noise exposures and exposures to noise outside direct firefighting activities when selecting hearing protection and may use less protection during direct fire suppression when adequate hearing protection isn't technically feasible.

(3) Hand protection.

(a) Firefighters' gloves shall, when worn with turnout clothing, provide protection to the wrist area. In turnout clothing where wristlet protection isn't provided firefighters' gloves shall be tight-fitting at the top.

(b) Fire departments shall establish written policy and procedure for the care, use, cleaning, replacement or retirement criteria for gloves issued.

(c) Firefighters' gloves used during structural firefighting operations including rescue of victims from fires or emergency medical operations where sharp or rough surfaces are likely to be encountered shall meet the requirements of the 2000 edition of NFPA 1971, Standard on Protective Ensemble for Structural Fire Fighting.

Notes:
- Firefighters' gloves aren't designed to provide protection against all environments. For gloves needed to fulfill a specific requirement see that specific section of this chapter. It is the intent of this section to provide protection from intrusion through the glove by certain chemicals and from bloodborne pathogens. Consult the glove manufacturers' recommendations.
- Firefighters' hands should be sized for compliance using the sizing chart specified in the 2000 edition of NFPA 1971, Standard on Protective Ensemble for Structural Fire Fighting.

(4) Body protection. Body protection shall be coordinated with torso, hand, head, foot, respiratory, and face protection as outlined in WAC 296-305-02001 through 296-305-02019 and 296-305-04001.

(5) Foot protection.

(a) Protective footwear purchased after January 1, 2014, shall comply with the 2007 or later edition of NFPA 1971, Standard on Protective Ensemble for Structural Fire Fighting.

(b) Fire departments shall establish written policies and procedures on the use, maintenance, and retirement criteria for footwear in conjunction with the manufacturer's recommendations.

Note: Fire departments should establish cleaning and drying instructions for protective footwear, including applicable warnings regarding detergents, soaps, cleaning additives and bleaches.

(c) Firefighter footwear may be resoled, but upon resoling the footwear shall meet the requirements specified in this section.

(6) Head protection. Firefighters who engage in or are exposed to the hazards of structural firefighting shall be provided with and use helmets that meet, as a minimum, the requirements of the 1987 edition of NFPA 1972, Standard on Helmets for Structural Fire Fighting.

(a) Helmets purchased after January 1, 2014, shall comply with the 2007 or later edition of NFPA 1971, Standard on Protective Ensemble for Structural Fire Fighting.

(b) Fire departments shall establish a written policy and

procedure for the care, use, maintenance and retirement criteria for helmets, following the manufacturer's recommendations.

(c) Helmet accessories shall not interfere with the function of the helmet or its parts, and shall not degrade the helmet's performance.

(d) Firefighters shall follow the manufacturer's recommendations regarding inspection, cleaning, painting, marking, and storage of helmets.

NEW SECTION

WAC 296-305-02012 Body armor. Fire departments that use protective body armor shall comply with the following:

(1) If the employer's PPE assessment required by WAC 296-800-16005 documents a need for body armor, the employer must provide the necessary equipment and ensure that:

(a) The body armor fits properly;

(b) Employees are trained in the use and limitations of the body armor; and

(c) The body armor is worn when necessary.

Note: Employees may exceed the minimum requirements for body armor if they choose.

(2) The fire department shall develop and have in place written guidelines for the care, use and maintenance of the protective body armor in conjunction with the manufacturer's recommendations.

(3) All protective body armor purchased prior to the effective date of this standard shall meet or exceed the April 1987 edition of National Institute of Justice NIJ 0101.03, threat level II requirements, or be demonstrated by the employer to be equally effective. All protective body armor purchased after the effective date of this standard must meet either the September 2000 edition of NIJ 0101.04, threat level II requirements or the June 2001 revision, NIJ 0101.04A. All body armor made of decertified materials as outlined in the 2005 edition of NIJ 0101.05 should be removed from service as soon as replacement body armor is available.

(4) Body armor shall be correctly fitted following the manufacturer's recommendations and shall not be used beyond the manufacturer's warranty.

Note: DOSH Directive 5.09, Body Armor as Personal Protective Equipment, can provide additional guidance regarding selection of body armor.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-02017 Personal alert safety system (PASS) protection. (1) Each firefighter ((~~working in a hazardous area~~)) engaged in structural firefighting requiring the use of SCBA shall wear and use a PASS device. PASS devices shall meet the requirements of the 1993 edition of NFPA 1982, Standard on Personal Alert Safety Systems (PASS) for Firefighters ((~~1982, 1993 edition~~)). (See WAC 296-305-07001 through ((~~296-305-07019~~)) 296-305-07018 for wildland firefighting application.)

Note: Fire departments should provide one spare PASS device for each ten units in service. If a department has less than ten devices they should have one spare.

(2) Each PASS device shall be tested routinely to ensure it is ready for use and immediately prior to each use, and shall be maintained in accordance with the manufacturers' instructions.

(3) Fire departments shall provide written procedures for the use of PASS devices.

(4) ((~~Compliance with this section shall occur no later than two years after the effective date of this chapter.~~

~~**Note:** Fire departments should provide one spare PASS device for each ten units in service. If a department has less than ten devices they should have one spare.~~

~~(5)~~)) Fire departments shall establish a written procedure for the care, use, maintenance, and repair of PASS devices in conjunction with manufacturer's recommendations.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-02019 Life safety ropes, harnesses, and hardware protection. (1) All previously purchased life safety ropes, harnesses, and hardware used by fire departments shall meet the applicable requirements of the 2001 edition of NFPA 1983, Standard on ((~~Fire Service~~)) Life Safety Rope((~~, Harness, and Hardware, 1990 edition~~)) and System Components. Ropes and equipment purchased after the effective date of this rule must meet the 2006 edition of NFPA 1983, Standard on Life Safety Rope and Equipment for Emergency Services.

(2) Ropes used to support the weight of members or other persons during rescue, firefighting, other emergency operations, or during training evolutions shall be life safety rope.

(3) Life safety rope used for rescue at fires, or other emergency incidents, or for training, shall be permitted to be reused if inspected before, and after, each such use in accordance with the manufacturer's instructions and provided:

(a) The rope has not been visually damaged by the exposure to heat, direct flame impingement, chemical exposure, or abrasion.

(b) The rope has not been subjected to any impact load.

(c) The rope has not been exposed to chemical liquids, solids, gases, mists, or vapors of any materials, known to deteriorate rope.

(d) If the rope used for rescue at fires or other emergency incidents, or for training, has been subjected to (a), (b), or (c) of this section, or fails the visual inspection, it shall be destroyed after such use.

(e) If there is any question regarding the serviceability of the rope after consideration of the above, the safe course of action shall be taken and the rope shall be placed out of service. See Appendix B.

(f) Rope inspection shall be conducted by qualified inspectors in accordance with rope inspection procedures established and recommended as adequate by the rope manufacturer to assure rope is suitable for reuse.

(4) Fire departments shall establish written procedures for the use of life safety ropes and rescue operations utilizing harnesses and ropes.

(5) Records shall provide a history of each life safety and training rope. The minimum information to be reflected in the record of history of life safety and training ropes shall include: Date of manufacturer, organization serial number, date of use ((~~list to include~~)), type of use, date of inspection, inspectors name and space for comments.

(6) ((~~Rope used for training evolutions shall be designated as training rope and shall be permitted to be reused if inspected before and after each use in accordance with the manufacturer's instructions.~~

~~(7)~~)) The destruction of a rope means that it shall be removed from service and altered in such a manner that it could not be mistakenly used as a life safety rope. This includes disposal or removal of labels and cutting into short lengths to be used for utility purposes.

((~~(8)~~)) (7) All repairs to life safety harnesses shall be done by an authorized manufacturer's representative, or the manufacturer.

((~~Note: See WAC 296-305-06003 (3), (4), (5), and (6) for the testing of life belts, ropes, and harnesses.~~

~~(9) Class I safety harnesses~~)) (8) At a minimum, ladder belts shall be used for firefighter attachment to ladders and aerial devices.

((~~(10)~~)) (9) Class II and Class III life safety harnesses shall be utilized for fall arrest and rappelling operations. Class III harnesses shall be used when the potential to become inverted exists.

((~~(11) Rescue~~)) (10) Life safety ropes shall be padded when deployed over edges or rough surfaces.

Note: See WAC ((~~296-305-05005~~)) 296-305-05113 for rope rescue applications.

AMENDATORY SECTION (Amending WSR 05-03-093, filed 1/18/05, effective 3/1/05)

WAC 296-305-02501 Emergency medical protection. (1) Firefighters who perform emergency medical care or otherwise may be exposed to blood or other body fluids shall be provided with emergency medical face protection devices, and emergency medical garments that meet the applicable requirements of ((~~NAPA~~)) the 1999 edition of NFPA 1999, Standard on Protective Clothing for Emergency Medical Operations ((~~1999, 1992 edition~~)).

Note: Prior to purchase, fire departments should request the technical data package required in the 2003 edition of NAPA 1999, ((~~1992 edition,~~)) in order to compare glove and garment performance data. Departments reviewing these packages should ensure a relative ranking of the performance data before they purchase in order to provide the best performance of the EMS personal protective clothing.

(2) Firefighters shall don emergency medical gloves and eye protection prior to initiating any emergency patient care.

(3) Firefighters shall don emergency medical garments ((~~and emergency medical face protection devises~~)) prior to any patient care during which splashes of body fluids can occur such as situations involving spurting blood or childbirth.

Note: Firefighter turnout gear and gloves with vapor barriers may be used in lieu of emergency medical gloves and garments.

(4) Contaminated emergency medical garments, emergency medical face and eye protection, gloves, devices, and emergency medical gloves shall be cleaned and disinfected, or disposed of, in accordance with chapter 296-823 WAC, Occupational exposure to bloodborne pathogens.

(5) Fire departments shall establish a designated infection (exposure) control officer who shall ensure that an adequate infection control plan is developed and all personnel are trained and supervised on the plan.

(6) The infection control officer shall be responsible for establishing personnel exposure protocols so that a process for dealing with exposures is in writing and available to all personnel.

(7) The infection control officer or his/her designee will function as a liaison between area hospitals and fire department members to provide notification that a communicable disease exposure is suspected or has been determined by hospital medical personnel. The department infection control officer will institute the established exposure protocols immediately after report of an exposure. The infection control officer shall follow the confidentiality requirements of chapter 246-100 WAC and the medical protocol requirements of chapter 296-802 WAC.

(8) Fire departments shall have a written infection ((~~(exposure)~~)) control plan which clearly explains the intent, benefits, and purpose of the plan. The written document must cover the standards of exposure control such as establishing the infection control officer and all members affected; education and training; ((~~HB. vaccination requirements;~~)) documentation and record keeping; cleaning/disinfection of personnel and equipment; and exposure protocols.

(9) Policy statements and standard operating procedure

guidelines shall provide general guidance and specific regulation of daily activities. Procedures shall include delegation of specific roles and responsibilities, such as regulation of infection control, as well as procedural guidelines for all required tasks and functions.

(10) Fire departments shall establish a records system for members health and training.

(11) Firefighters shall be trained in the proper use of P.E., exposure protection, post exposure protocols, disease modes of transmission as it related to infectious diseases.

(12) Infectious disease programs shall have a process for monitoring firefighters compliance with established guidelines and a means for correcting noncompliance.

(13) Fire department members shall be required to annually review the infectious disease plan, updates, protocols, and equipment used in the program.

(14) Fire departments shall comply with chapter 296-823 WAC, Occupational exposure to bloodborne pathogens, in its entirety.

(15) Tuberculosis (TB) exposure and respiratory protection requirements.

(a) Firefighters shall wear a particulate respirator (PR) when entering areas occupied by individuals with suspected or confirmed TB, when performing high risk procedures on such individuals or when transporting individuals with suspected or confirmed TB in a closed vehicle.

(b) A NIOSH-approved, 95% efficient particulate air respirator is the minimum acceptable level of respiratory protection.

(i) Fit tests are required.

(ii) Fit tests shall be done in accordance with chapter 296-842 WAC.

(c) Employee tuberculosis screening shall be provided in accordance with current U.S. Centers for Disease Control and Prevention guidelines.

((~~**Note 1:** Emergency-response personnel should be routinely screened for tuberculosis at regular intervals. The tuberculin skin test is the only method currently available that demonstrates infection with Mycobacterium tuberculosis (M. tuberculosis) in the absence of active tuberculosis.~~))

Note ((~~2~~)): If possible, the rear windows of a vehicle transporting patients with confirmed, suspected, or active tuberculosis should be kept open, and the heater or air conditioner set on a noncirculating cycle.

((~~Additional References:~~

~~Chapter 296-823 WAC, Occupational exposure to bloodborne pathogens.~~

~~WAC 296-62-08001(3), Exposure Control.~~))

NEW SECTION

WAC 296-305-03002 Hazardous materials. (1) Fire department personnel involved in hazardous materials incidents shall be protected against potential chemical hazards. Chemical protective clothing shall be selected according to the technical data package

provided by the clothing manufacturer and used to protect the skin, eyes, face, hands, feet, head and body.

(2) Fire departments must select, provide, and require the use of additional personal protective equipment as required in chapter 296-842 WAC, Respiratory protection.

(3) Hazardous chemical protective equipment shall be classified by performance and is defined as:

(a) Vapor-protective suits (level A) meeting the criteria outlined in the 2000 edition of NFPA 1991, Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies.

(b) Liquid splash-protective suits (level B) meeting the criteria outlined in the 2000 edition of NFPA 1992, Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies.

(c) CBRN terrorism incident protective ensembles and ensemble elements meeting the criteria outlined in the 2001 edition of NFPA 1994, Standard on Protective Ensembles for First Responders to CBRN Terrorism Incidents.

(4) Vapor protective ensembles, liquid splash-protective ensembles, and CBRN protective ensembles shall completely cover both the wearer and the wearer's respiratory protection unless the respiratory protection has been specifically designed by the manufacturer for that type of chemical exposure.

(5) Vapor protective suits and liquid splash-protective suits shall not be used alone for any firefighting applications or for protection from radiological, biological, or cryogenic agents or in flammable or explosive atmospheres.

(6) Liquid splash-protective suits shall not be used when operations are likely to result in significant exposure to chemicals or specific chemical mixtures with known or suspected carcinogenicity as indicated by any one of the following documents if it can be reasonably expected that the firefighters in vapor-protective suits would be significantly better protected:

(a) Dangerous Properties of Industrial Chemicals, 10th edition-2000, N. Irving Sax.

(b) NIOSH Pocket Guide to Chemical Hazards, 2006 edition.

(c) U.S. Coast Guard Chemical Hazard Response Information System (CHRIS), Volume 13, Hazardous Chemical Data.

(7) Liquid splash-protective suits shall not be used when operations are likely to result in significant exposure to chemicals or specific chemical mixtures with skin toxicity notations as indicated by the American Conference of Government Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Agents and Biological Exposure Indices for 2004 or 2007 if it can be reasonably expected that firefighters in vapor-protective suits would be significantly better protected.

(8) Firefighters assigned to functional support operations outside the hot zone during hazardous chemical emergencies shall be provided with and shall use personal protective garments appropriate for the type of potential chemical hazard exposure.

(9) Fire departments responding to uncontrolled release of hazardous materials must comply with chapter 296-824 WAC, Emergency response.

AMENDATORY SECTION (Amending WSR 05-20-055, filed 10/3/05, effective 12/1/05)

WAC 296-305-04001 Respiratory equipment protection. (1) Firefighter's self-contained breathing apparatus (SCBA) shall((~~:~~

~~(a) Be pressure demand type (positive pressure);~~

~~(b) Operate in the positive pressure mode only;~~

~~(c) Have a minimum of thirty minutes service duration;~~

~~(d) Be NIOSH certified; and~~

~~(e) Meet the requirements of the 1992 or 1997 edition of NFPA, Standard on Open Circuit Self Contained Breathing Apparatus for Firefighters 1981~~)), at a minimum, meet the requirements of the 1997 edition of NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire Fighters. Equipment purchased after the effective date of this rule must meet the 2007 edition of NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Emergency Services.

(2) Closed circuit SCBA shall:

(a) Be positive pressure;

(b) Be NIOSH certified; and

(c) Have a minimum thirty-minute service duration.

(3) Members using SCBA's shall operate in teams of two or more.

(4) Except as otherwise provided in this chapter, fire departments shall adopt, maintain and implement a written respiratory protection program that addresses the requirements of chapter 296-842 WAC, ((~~Respirators and Part I-1, Asbestos, Tremolite, Anthophyllite, and Actinolite~~)) Respiratory protection. This includes program administration, medical limitations, equipment limitations, equipment selection, inspection, use, maintenance, training, fit testing procedures, air quality, and program evaluation.

Note: Additional information on respirators and respirator usage can be found in ANSI Z88.2 - American National Standard for Respiratory Protection((~~; ANSI Z88.5 - Practices for Respiratory Protection for Fire Service;~~)) and various NFPA publications (1981, 1404, 1500, etc.)((~~, and the Washington State Fire Service Training Program for respiratory training and usage~~)).

(5) ((~~When fire departments purchase compressed breathing air from a vendor, the fire department shall require the vendor to provide certification and documentation of breathing air quality as specified in subsection (21) of this section and in chapter 296-842 WAC.~~)) Reserved.

(6) When the fire department makes its own breathing air or uses vendor ((~~purchased~~)) supplied breathing air, ((~~the air quality from compressors, cascade systems cylinders,~~)) they shall ((~~be tested at least quarterly as specified in subsection (21) of this section~~)) maintain documentation certifying breathing air quality. The breathing air shall:

(a) Be tested at least quarterly by using an air sample taken

from the same outlet and in the same manner as the respirator breathing air cylinders are filled or air line respirators are connected.

(b) Meet the requirements of either the 2003 edition of NFPA 1989, Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection or the 1997 edition of ANSI/CGA G6-1 - Commodity Specification for Air, with a minimum air quality of grade D.

(c) Meet a water vapor level of 24 ppm or less.

(7) Fit testing shall be conducted in accordance with this section and chapter 296-842 WAC, ((~~Respirators~~)) Respiratory protection.

(a) Each new member shall be tested by a qualitative or quantitative method before being permitted to use SCBA's in a hazardous atmosphere.

(b) Only firefighters with a properly fitting facepiece shall be permitted by the fire department to function in a hazardous atmosphere with SCBA. ((~~(Reference WAC 296-842-18005.)~~))

(c) Fit testing shall be repeated:

(i) At least once every twelve months.

(ii) Whenever there are changes in the type of SCBA or facepiece used.

(iii) Whenever there are significant physical changes in the user. Example: Weight change of ten percent or more, scarring of face seal area, dental changes, cosmetic surgery, or any other condition that may affect the fit of the facepiece seal.

(d) The fit testing is done only in a negative-pressure mode. If the facepiece is modified for fit testing, the modification shall not affect the normal fit of the device. Such modified devices shall only be used for fit testing.

(e) The fit test procedures and test exercises described in ((~~WAC 296-62-07162, Asbestos, Appendix C,~~)) WAC 296-842-15005 and 296-842-22010 shall be followed unless stated otherwise in this chapter.

(f) Respirator fit test records shall include:

(i) Written guidelines for the respirator fit testing program including pass/fail criteria;

(ii) Type of respirator tested including manufacturer, model, and size;

(iii) Type of fit test and instrumentation or equipment used;

(iv) Name or identification of test operator;

(v) Name of person tested;

(vi) Date of test; and

(vii) Results of test.

Note: Firefighters should be issued individual facepieces.

(8) Facial hair, contact lenses, and eye and face protective devices.

(a) A negative pressure respirator, any self-contained breathing apparatus, or any respirator which is used in an atmosphere immediately dangerous to life or health (IDLH) equipped with a facepiece shall not be worn if facial hair comes between the sealing periphery of the facepiece and the face or if facial hair

interferes with the valve function.

(b) The wearer of a respirator shall not be allowed to wear contact lenses if the risk of eye damage is increased by their use.

(c) If ((~~a spectacle, goggle, or face shield~~)) corrective lenses must be worn with a facepiece, ((~~it~~)) they shall be worn so as to not adversely affect the seal of the facepiece to the face. See WAC ((~~296-62-07170(2)~~)) 296-842-18005(3).

(d) Straps or temple bars shall not pass between the seal or surface of the respirator and the user's face.

(9) At the end of suppression activities (to include fire overhaul) and before returning to quarters:

(a) ((~~Firefighters shall be decontaminated prior to removal of respirators~~)) Gross/field decontamination shall be performed on firefighters prior to removal of their respirator whenever firefighting activities resulted in exposure to a hazardous substance.

(b) When exchanging air supply bottles during suppression or overhaul activities, reasonable precautions shall be taken to maintain uncontaminated atmosphere to the breathing zone and facepiece supply hose.

(10) Self-contained respiratory equipment shall be available and used by all firefighters who enter into hazardous atmospheres during structural firefighting activities.

(11) ((~~Positive pressure air line respirators may be used only for atmospheres other than IDLH and must be equipped with a five minute minimum capacity positive pressure escape bottle.~~

~~(a) If the service life of the auxiliary air supply is fifteen minutes or less it shall not be used for entry into an IDLH atmosphere but it may be used for escape purposes. The auxiliary air supply may be used for entry into an IDLH atmosphere only when the service life of the unit exceeds fifteen minutes and when not more than twenty percent of the noted air supply will be used during entry.~~

~~(b) The maximum length of hose for supplied air respirators is 300 feet (91 meters). Such hose shall be heavy duty nonkinking and NIOSH approved.~~)) Reserved.

(12) Respirators shall be provided for, and shall be used by, all personnel working in areas where:

(a) The atmosphere is hazardous;

(b) The atmosphere is suspected of being hazardous; or

(c) The atmosphere may rapidly become hazardous((~~,~~)).

Reference: See WAC 296-305-05002(13) for additional requirements.

(13) ((~~Anytime firefighters are working inside a confined space, such persons shall be provided with SCBA or air line respirator with escape bottle, and shall use the equipment unless the safety of the atmosphere can be established by testing and continuous monitoring.~~)) Reserved.

(14) Firefighters using a properly functioning SCBA shall not compromise the protective integrity of the SCBA by removing the facepiece for any reason in hazardous atmospheres or in atmospheres where the quality of air is unknown.

(15) Firefighters shall receive training for each type and

manufacturer of respiratory equipment available for their use, the step-by-step procedure for donning the respirator and checking it for proper function. Required training shall include:

(a) Recognizing hazards that may be encountered;

(b) Understanding the components of the respirator;

(c) Understanding the safety features and limitations of the respirator; and

(d) Donning and doffing the respirator.

(16) After completing such training, each firefighter shall practice at least quarterly, for each type and manufacture of respirator available for use, the step-by-step procedure for donning the respirator and checking it for proper function.

(17) Members shall be tested at least annually on the knowledge of respiratory protection equipment operation, safety, organizational policies and procedures, and facepiece seals, to the fire department's standard. Such records shall remain part of the member training file.

(18) Members shall be allowed to use only the make, model, and size respirator for which they have passed a fit test within the last twelve months.

(19) In cases where there is a reported failure of a respirator, it shall be removed from service, tagged and recorded as such, and tested before being returned to service.

(20) Firefighters shall be thoroughly trained in accordance with the manufacturer's instructions on emergency procedures such as use of regulator bypass valve, corrective action for facepiece and breathing tube damage, and breathing directly from the regulator (where applicable).

(21) ((~~Compressed gaseous breathing air in the SCBA cylinder shall meet the requirements of ANSI/CGA G7.1 - Commodity Specification for Air, with a minimum air quality of grade D, as well as meeting a water vapor level of 24 ppm or less.~~)) Reserved.

(22) SCBA cylinders shall be hydrostatically tested within the periods specified by the manufacturer and the applicable governmental agencies.

((~~Additional reference: Chapter 296-842 WAC.~~))

AMENDATORY SECTION (Amending WSR 05-17-059, filed 8/10/05, effective 10/1/05)

WAC 296-305-04501 Automotive fire apparatus design and construction. (1) All new fire apparatus with the exception of specialized equipment, shall conform to the following minimum safety standards contained in ((~~NFPA Booklets No. 1901, 1902, 1903, 1904, and other 1900's~~)) the 2009 edition of NFPA 1901, Standard for Automotive Fire Apparatus, or the 2006 Edition of NFPA 1906, Standard for Wildland Fire Apparatus.

(2) Used fire apparatus, purchased after ((~~December 17, 1977~~))

the effective date of this rule, weighing 10,000 pounds or more shall conform with the following U.S. Department of Transportation standards, when applicable:

(a) 49 C.F.R. Ch. V (((~~10-93~~)) 10-03 edition) 571.121 "Air brake systems";

(b) 49 C.F.R. Ch. V (((~~10-93~~)) 10-03 edition) 571.106 "((~~Hydraulic~~)) Brake hoses";

(c) 49 C.F.R. Ch. V (((~~10-93~~)) 10-03 edition) ((~~571-211~~)) 571-103 "Hydraulic brake ((~~hoses~~)) systems."

(3) Employers acquiring used apparatus or used equipment shall not be required to bring it under a more stringent code than the one in force at the time the apparatus was manufactured. However, such vehicle must meet applicable U.S. Department of Transportation standards and chapter 296-865 WAC, Motor vehicles.

(4) Fire apparatus tailboards and steps shall have a nonskid rough surface.

(5) Exhaust systems shall be installed and maintained in proper condition, and shall be so designed as to minimize the exposure of the firefighter to the exhaust gases and fumes.

(6) Spinner knobs shall not be attached to the steering handwheel of fire apparatus.

(7) The transmission shifting pattern of the apparatus shall be clearly stenciled or labeled and posted so it can be clearly read by the driver while operating the apparatus.

(8) The height of any apparatus, over seven feet in height from the ground to the top of the beacon or highest point of the apparatus, shall be clearly labeled in a place where it can be easily and clearly read by the driver while operating the apparatus.

(9) All apparatus in excess of 10,000 pounds loaded weight, shall have the weight of the vehicle in pounds and tons clearly labeled in a place where it can be easily and clearly read by the driver while operating the apparatus.

(10) All hoses and equipment shall be secured to prevent unintentional or inadvertent deployment.

(11) Fire departments that purchase nonmotorized equipment to be used in emergency response situations on all roadways must comply with Title 46 RCW, Motor vehicles.

AMENDATORY SECTION (Amending WSR 99-05-080, filed 2/17/99, effective 6/1/99)

WAC 296-305-04503 Automotive fire apparatus equipment. (1) Vehicles used to transport firefighters and employer representatives shall have compartments for carrying sharp tools, saws, chisels, axes, etc., or if carried on the outside of the apparatus, equipment with sharp points and edges shall be covered to prevent injury to firefighters and employer representatives.

(2) Personnel restraints for traveling.

(a) All persons riding on fire apparatus shall be seated and secured to the vehicle by ((~~seatbelts~~)) seat belts or safety harnesses at any time the vehicle is in motion.

(b) ((~~Seatbelts~~)) Seat belts shall comply with U.S. Department of Transportation Part 49 C.F.R. Section 571, Standards 209 and 210.

(c) Riding on tailsteps or in any other exposed position such as sidesteps or running boards shall be specifically prohibited.

(d) Standing while riding shall be specifically prohibited.

(e) Members actively performing necessary emergency medical care while the vehicle is in motion shall be restrained to the extent consistent with the effective provision of such emergency medical care. All other persons in the vehicle shall be seated and belted in approved seating positions while the vehicle is in motion.

(f) Fire departments permitting hose loading operations while the vehicle is in motion shall develop a written policy and guidelines addressing all safety aspects.

Note: Policy and operating guidelines should address:

- The assigning of a member as a safety observer who should have an unobstructed view of the hose loading operation and be in visual and voice contact with the driver.
- Allowed maximum fire apparatus speed when hose loading;
- Control of nonfire department vehicular traffic; and
- Allowing members in the hose bed, but limit standing to only when the vehicle is not moving.

Note: See WAC ((~~296-305-07011~~)) 296-305-07018(3) for exceptions for wildland vehicles.

(3) Each fire apparatus shall carry a current U.S. Department of Transportation ((~~chemical identification book or the equivalent~~)) Emergency Response Guidebook.

(4) Ladders stowed on the sides of apparatus, which protrude past the tailboard, shall have guards over the protruding ends.

(5) No employer shall permit automotive fire apparatus equipment which has an obstructed view to the rear, to be used in reverse gear unless the equipment has in operation a reverse signal alarm distinguishable from the surrounding noise level.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-04505 Automotive apparatus operational rules. (1) Each employer of staffed fire apparatus shall establish a written policy and procedure whereby the apparatus has a scheduled daily operational check. Each employer of unstaffed fire apparatus shall establish a schedule appropriate to that department's activities.

(2) Any item found to be in need of repair shall be reported immediately to the officer in charge or other appropriate person.

(3) Firefighting apparatus shall be brought to a full stop before employees are allowed to step from the apparatus.

(4) Firefighters shall not be in the apparatus hose bed while

hose is being run out from the bed.

(5) Headlights shall be on at all times when any fire or emergency vehicle is responding to a call.

(6) All apparatus over 20,000 pounds (gross vehicle weight) shall utilize wheel ((~~blocks~~)) chocks, rated for the specific apparatus they are being used with, when parked at an emergency scene.

(7) Apparatus responding to alarms shall meet specifications in RCW 46.61.035, relating to operations of authorized emergency vehicles.

(8) All operators of emergency vehicles shall be trained in the operations of apparatus before they are designated as drivers of such apparatus. The training program shall be established by each fire department. Once trained, all operators shall familiarize themselves with any apparatus prior to operating such apparatus even for brief periods of time.

Additional Reference: Washington ((~~State Fire Protection Bureau~~)) Fire Chiefs - Emergency Vehicle ((~~Accident~~)) Incident Prevention (((~~EVAP~~)) EVIP) program or other Washington state accredited program.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-04507 Fire apparatus maintenance and repair. (1) If at any time a fire apparatus is found to be in an unsafe condition, it shall be reported immediately to the officer on duty.

(2) If in the driver or duty officer's determination, the apparatus cannot be used in a safe manner, it shall be taken out of service until it has been restored to a safe operating condition.

(3) All repairs ((~~and preventive maintenance to fire apparatus shall only be made by personnel deemed qualified by the registered owners of the fire apparatus~~)) to the suppression components of emergency vehicles of the fire department shall be done by an emergency vehicle technician, ASE certified technician or factory qualified individual. Repairs, maintenance or routine work to nonsuppression systems of suppression apparatus or other fire department vehicles and their equipment shall be done by personnel qualified in the specific area of repair. Fire service pumps with a capacity of 499 gallons per minute or less and not used for interior structural firefighting operations are exempt from this requirement.

(a) A preventive maintenance program shall be instituted and records maintained for each individual apparatus in order to record and track potential or on-going problems.

(b) ((~~A minimum annual service test of apparatus shall be made according to NFPA guidelines relating to pumper apparatus.~~

~~(c) Failure of any portion of the annual service test shall constitute the apparatus to be placed out of service as a pumper~~

~~until adequate repairs are made and the apparatus successfully completes said tests.~~)) Apparatus shall be maintained and tested in accordance with the manufacturer's recommendations.

Note: Additional information can be found in the 2007 edition of NFPA 1911, Standard for the Inspection, Maintenance, Testing and Retirement of In-service Automotive Fire Apparatus.
Qualifications for persons working on emergency response vehicles can be found in the 2000 edition of NFPA 1071, Standard for Emergency Vehicle Technician Professional Qualification, A.1.1 and A.2.1.

NEW SECTION

WAC 296-305-04510 Aerial apparatus. (1) All new aerial devices shall be constructed and initially tested in accordance with the 2009 edition of NFPA 1901, Standard for Automotive Apparatus.

(2) All aerial devices shall be operated in accordance with the manufacturer's recommendations.

(3) All aerial devices shall be maintained, tested and repaired in accordance with the manufacturer's instructions and nonconflicting portions of the 2002 edition of NFPA 1911, Standard for the Inspection, Maintenance, Testing and Retirement of In-Service Automotive Fire Apparatus.

(a) All devices, as well as the section of the apparatus which supports the turntable, shall be inspected at least once every year.

(b) All devices, as well as the section of the apparatus which supports the turntable, shall be nondestructively tested by a certified testing agency every five years.

(c) After any accident that causes structural damage, testing shall be performed and all defects corrected before the apparatus is returned to service.

(4) Aerial devices shall be used according to the following requirements:

(a) The number of firefighters permitted on aerial devices shall be in accordance with the manufacturer's instructions.

(b) Aerial devices shall not be positioned under dangerous cornices or other loose overhanging objects that may endanger firefighters and personnel working from or climbing the ladders, except where rescue operations are essential.

(c) When working near energized electrical lines, the following minimum working clearances for all equipment and personnel shall be observed:

(i) For lines rated 50 kv or below, the minimum clearance between the lines and any part of the equipment shall be ten feet.

(ii) For lines rated over 50 kv, the minimum clearance shall be ten feet plus 0.4 inch (1 cm) for each 1 kv.

(iii) For low voltage lines (operating at 600 volts or less), the work shall be performed in a manner to prevent the firefighters or equipment from contacting the energized conductor.

(d) Fire apparatus aerial devices shall be positioned for the greatest stability feasible at the fire scene.

(e) The tip of the aerial device shall not be forcefully extended against a solid structure.

Note: If allowed by manufacturer's recommendations, aerial devices may be utilized for ventilation in accordance with those recommendations.

(f) Aerial ladders shall not be extended or retracted while firefighters are climbing the ladder.

(g) Locking in shall not be permitted. If it is necessary for firefighters to be positioned on the aerial device, they shall be secured by at least a ladder belt.

(h) Ladder pipes, when in use, shall be secured to the aerial in such a manner so that the ladder pipe cannot accidentally be dislodged while in operation.

(i) The operator of an aerial device shall remain on the turntable whenever firefighters are working from the aerial. If the aerial device is used only as a ground ladder, no operator is needed on the turntable.

(5) The following shall regulate the design and use of the operating turntable and aerial device:

(a) Ladders shall have nonskid protection on the rungs.

(b) Turntable controls and valves for rotating, extending or elevating the aerial device shall be clearly and distinctly marked as to function.

(c) Aerial controls shall be spring loaded and have a safety catch so that the controls shall return to the neutral position if the operator is incapacitated.

(d) The operator of the aerial device shall be provided with a nonskid surface on the turntable.

(e) A railing of approximately forty-four inches in height, and if possible, not less than thirty-six inches in length, shall be installed on the turntable in back of the operator's position.

(f) A spotlight of not less than 75,000 candlepower (950,000 lumens) or a floodlight with not less than 850 cp (10,500 lumens) shall be provided at the base to illuminate the aerial device at night in any position of operation.

(6) The following shall regulate the communication systems on the aerial devices and on the automotive fire apparatus:

(a) A two-way voice communication system shall be installed between the top fly of the ladder or platform and the lower control station.

(b) There shall be some type of electrical signal or voice communication located in the tractor of tillered aerial for communication signals between the tillerman and driver. The apparatus shall not be moved unless the proper signal, as shown in Appendix E, is received from the tillerman.

(7) The automotive fire apparatus used in conjunction with aerial devices shall be used according to the following:

(a) Ground jacks or outriggers shall be deployed before an aerial device is put into operation.

(b) Ground plates shall be deployed under the outriggers or jacks at all times.

(c) Hand, airbrakes, and spring brakes shall be set whenever an aerial device is in operation.

(d) In addition to ground jack supports and outriggers, wheel chocks shall be used whenever the aerial device is in operation.

(e) Wheel chocks shall be rated by the manufacturer of the chock for the apparatus it is to be used on.

(f) Sand or similar products shall be put under jacks, outriggers, and ground plates when operating on ice or snow.

(8) Railings on elevated platforms shall be constructed so that there is no opening greater than twenty-four inches below them.

(9) A plate shall be located at the aerial device control units, clearly visible to the operator at the lower control position, listing the following information:

(a) Model and serial number of the manufacturer.

(b) Rated capacity of the platform.

(c) Operating pressure of the hydraulic and pneumatic systems.

(d) Cautions or restrictions of operation.

(e) Control instructions.

NEW SECTION

WAC 296-305-05000 Incident management. (1) The fire department shall establish an incident management system (IMS) consistent with the U.S. Department of Homeland Security National Incident Management System (NIMS) with written guidelines applying to all members involved in emergency operations.

(a) All members involved in emergency operations shall be trained in the IMS system.

(b) Personnel shall be trained and qualified by their department in the incident command system (ICS) that meets the requirements of NIMS prior to taking a role at an emergency scene.

(c) The incident management system shall be applied to drills, exercises, and other situations that involve hazards similar to those encountered at actual emergency incidents and to simulated incidents that are conducted for training and familiarization purposes.

(2) At all emergency incidents, the incident commander shall be responsible for the overall safety of all members and all activities occurring at the scene.

(3) All emergency incidents shall be managed by an ICS; the incident commander shall establish an organization with sufficient supervisory personnel to control the position and function of all members operating at the scene and to ensure that safety requirements are satisfied.

(4) At all emergency incidents, the incident commander shall have the responsibility to:

(a) Assume and confirm command and take an effective fixed physical command position.

(b) Perform situation evaluation that includes risk assessment.

(c) Initiate, maintain, and control incident communication.

(d) Develop an overall strategy and incident action plan.

(e) Develop an effective ICS organization by managing resources, maintaining an effective span of control, and maintaining direct supervision over the entire incident by creating geographical and/or functional area supervisors as appropriate for the scope and size of the incident.

(f) Review, evaluate, and revise the incident action plan as required.

(g) Continue, transfer, and terminate command.

(5) The fire department shall develop a risk management policy including rules of engagement that can be used by the incident commander in the development of incident strategies. The risk management policy should include direction and guidance to the incident commander in formulating incident planning relating to the level of risk that may be undertaken in any given incident to save lives and property in as safe a manner as dictated by the situation.

(6) The fire department shall establish an accountability system: Written procedures and guidelines for tracking all members operating at emergency incidents.

(7) The incident commander shall provide for control of access to hazardous areas of the incident scene. Procedures shall identify methods for identification of hazardous areas and communication of necessary protective equipment and other protective measures necessary to operate in the hazardous area.

(a) Control zones shall be established at emergency incidents.

(b) The perimeters of the control zones shall be designated by the incident commander and communicated to all members.

(c) If the perimeters of the control zones change during the course of the incident, these changes shall be communicated to all members on the scene.

(d) Hazard control zones shall be designated as hot, warm, cold and exclusion zones.

(e) All members shall wear the PPE (SCBA, flash hood, etc.) appropriate for the risks that might be encountered while in the hot zone.

(f) All members operating within the hot zone shall have an assigned task.

(g) No unauthorized personnel shall enter an exclusion zone that was designated due to the presence of imminent hazard(s) or the need to protect evidence.

(8) Firefighters operating in a hot zone shall operate in teams of two or more regardless of rank or assignment. Members of these teams shall be in constant communication with each other through touch, visual, or voice means in order to provide assistance in case of emergency.

(9) The fire department shall provide personnel for the rescue of members operating at emergency incidents as the need arises.

(10) The fire department shall develop and maintain written guidelines for the safety of members at incidents that involve

violence, unrest, or civil disturbance. Such situations may include, but not be limited to, riots, fights, violent crimes, drug related situations, family disturbances, deranged individuals, and people interfering with fire department operations.

(11) When members are operating at an emergency incident and their assignment places them in potential conflict with motor vehicle traffic, all reasonable efforts shall be made to protect the members.

Note: Chapters 6H and 6I of the Manual on Uniform Traffic Control Devices, 2003 edition revision 1, provides information on how to set up traffic control zones during emergency operations on different types of roadways. This information can be accessed for free at the following link: http://mutcd.fhwa.dot.gov/pdfs/2003r1/pdf-index.htm.

(12) Responders shall not manipulate equipment that they have not been trained or equipped to use.

(13) In the event a firefighter becomes lost, trapped, seriously injured, has a medical emergency, has exhausted their breathing air, or finds themselves in any other form of life threatening situation they shall immediately call for help, using the nationally adopted term "Mayday" to declare that an emergency situation now exists. The fire department shall specifically establish and routinely practice standard procedures for managing a Mayday situation.

(14) Emergency scene communications.

(a) Incident radio communication shall use clear text terminology.

(b) Incident communication shall use the phrase "emergency traffic" as the standard alert for all units operating on the scene to clear the air.

(c) The fire department shall specifically establish and routinely practice standard procedures for managing an "emergency traffic" situation.

Note: The fire department communication center should start an incident clock when the first arriving unit is on scene of a working structure fire or when conditions appear to be time sensitive or dangerous. The dispatch center should notify the incident commander, at an interval established by their policy or procedure, until incident stabilization is achieved.

NEW SECTION

WAC 296-305-05002 Fire suppression. (1) Before beginning interior structural firefighting operations, the incident commander must evaluate the situation and risks to operating teams.

(2) The "initial stages" of an incident shall encompass the tasks undertaken by the first arriving company with only one crew assigned or operating in the hot zone.

(3) In the initial stages of an incident where only one crew is operating in the hot zone at a working structural fire, a minimum of four individuals shall be required, consisting of two individuals working as a crew in the hot zone and two individuals present outside the hot zone available for assistance or rescue of firefighters during emergency operations where entry into the hot

zone is required.

(4) Initial attack operations shall be organized to ensure that if, on arrival at the emergency scene, responders find a known rescue situation where immediate action could prevent the loss of life or serious injury, such action shall only be permitted when no less than three personnel (2-in/1-out) are present and equipped to provide emergency assistance or rescue of the team entering the hot zone.

No exception shall be allowed when there is no possibility to save lives or no "known" viable victims.

(5) Firefighters must not engage in interior structural firefighting in the absence of at least two standby firefighters (2-in/2-out) except as provided in WAC 296-305-05002(4).

(6) Standby team members shall comply with the following:

(a) Members shall remain aware of the status of firefighters in the hot zone.

(b) Members shall remain in positive communication (radio, visual, voice or signal line) with the entry team, in full protective clothing with respiratory protection donned while in standby mode.

(c) Only one standby team member may be permitted to perform other duties outside the hot zone, provided constant communication is maintained with the team in the hot zone, and provided that those duties will not interfere with his or her ability to initiate a rescue as appropriate.

(d) No standby team members shall be permitted to serve as a standby member of the firefighting crew when the other activities in which the firefighter is engaged inhibit the firefighter's ability to assist in or perform firefighter rescue or are of such importance that they cannot be abandoned without placing other firefighters in danger.

Note: Nothing in this section shall prevent actions which may reasonably be taken by members first on the scene to determine the nature and extent of fire involvement.

(7) Once a second crew arrives at the hot zone, the incident shall no longer be considered to be in the "initial stage," and at least one rapid intervention crew should be assigned. For further guidance, see nonmandatory Appendix D.

(8) Teams in the hot zone shall have positive communication capabilities with the incident command structure in place. Incident radio communication capabilities within the incident management structure shall include monitoring the incident-assigned frequencies (including mutual aid radio frequencies).

(9) Officers at emergency scenes shall maintain an awareness of the physical and mental condition of members operating within their span of control and ensure that adequate steps are taken to provide for their safety and health. The command structure shall be utilized to request relief and reassignment of fatigued crews.

(10) Personal protective clothing/equipment designed for wildfire suppression shall not be used for interior structural firefighting.

(11) Firefighters shall not cut the electrical drip loop providing power to the structure nor pull the electrical meter.

(12) Prior to overhaul, buildings shall be surveyed for possible safety and health hazards. Firefighters shall be informed of hazards observed during the survey and measures shall be taken to protect firefighters from these hazards.

(13) Self-contained breathing apparatus (SCBA) shall be worn throughout overhaul. SCBA shall also be worn during activities taking place in the area previously considered the hot zone after overhaul unless the officer in charge conducts an exposure evaluation to determine or reasonably estimate whether an employee is or could be exposed to either an airborne contaminant above a permissible exposure limit (PEL) listed in WAC 296-841-20025 Table 3 or other airborne hazards, such as biological/radiological/nuclear hazards. When the officer in charge cannot determine or reasonably estimate employee exposure they shall conclude that an atmosphere is hazardous to the employees in accordance with WAC 296-842-13005.

(14) During the overhaul phase officers shall identify materials likely to contain asbestos, limiting the breaching of structural materials to that which is necessary to prevent rekindle.

(15) Prior to removing firefighting ensembles worn in the hot zone, a gross decontamination shall be performed to remove potentially harmful contaminants.

(16) Members of the department conducting post-fire investigations must comply with subsections (12) through (15) of this section.

(17) Employees working on, over, or along water where the chance of drowning exists shall be provided with and shall use approved personal flotation devices, unless it can be shown that conditions are such that flotation would not be achieved.

NEW SECTION

WAC 296-305-05004 Occupational exposure to heat and cold stress. (1) Fire departments shall develop written guidelines that outline a systematic approach for the rehabilitation of members operating at incidents and training exercises. The following components must be included in this guideline:

(a) Supervisor's role in identifying climate conditions (hot or cold).

(b) The signs and symptoms of heat or cold stress and how to identify them in subordinates and fellow members.

(c) How to identify the climatic condition likely to produce heat or cold stress on members operating at emergency scenes or during training exercises.

(d) What steps the incident commander (IC) must take when the climatic condition poses a heat or cold stress hazard to members.

(e) What rest-to-work (recovery) schedule the IC must consider

during climatic conditions that present a heat or cold stress hazard to members.

Example: NFPA 1584 states that after members use 2 30-minute SCBA bottles or 1 45-to-60-minute SCBA bottle or 40 minutes strenuous work without an SCBA the member should go to rehabilitation for a 10 to 20 minute rest and rehydrate.

(f) Which active or passive cooling and warming techniques will be used based on the incident type and climatic condition.

(g) What rehydration schedule will be followed, including the amount and type of fluids.

(h) What the department will do to ensure caloric replacement and electrolyte replacement during longer term emergencies and exercises.

(i) What medical monitoring will be provided to members in rehabilitation and what criteria will be used to release members from rehabilitation.

(j) What the IC will do when a member is showing signs of heat or cold stress after completing the department's rest-to-work cycle.

(k) What medical personnel will be present in rehabilitation to evaluate members sent to rehabilitation during the rest-to-work cycle.

To determine what temperature triggers action at each worksite, select the general type of clothing or personal protective equipment each employee is required to wear and find the corresponding temperature in Table 1.

Table 1
Outdoor Temperature Action Levels

Nonbreathing clothing including vapor-barrier clothing or chemical resistant suits	52°
Double-layer woven clothing including coveralls, jackets and sweatshirts	77°
All other clothing	89°

Note: There is no requirement to maintain temperature records. The temperatures in Table 1 were developed based on Washington state data and are not applicable in other states.

(2) Employee training. Training on the following topics must be provided to all employees who may be exposed to outdoor heat at or above the temperatures listed in Table 1:

(a) The environmental factors that contribute to the risk of heat-related illness.

(b) General awareness of personal factors that may increase susceptibility to heat-related illness including, but not limited to, an individual's age, degree of acclimatization, medical conditions, drinking water consumption, alcohol use, caffeine use, nicotine use, and use of medications that affect the body's responses to heat. This information is for the employee's personal use.

(c) The importance of removing heat-retaining personal protective equipment such as nonbreathable chemical resistant clothing during all breaks.

(d) The importance of frequent consumption of small quantities

of drinking water or other acceptable beverages.

(e) The importance of acclimatization.

(f) The different types of heat-related illness and their common signs and symptoms.

(g) The importance of immediately reporting signs or symptoms of heat-related illness in either themselves or in coworkers to the person in charge and the procedures the employee must follow including appropriate emergency response procedures.

(3) Supervisor training. Prior to supervising employees working in outdoor environments with heat exposure at or above the temperature levels listed in Table 1, supervisors must have training on the following topics:

(a) The information required to be provided to employees listed in subsection (1) of this section.

(b) The procedures the supervisor must follow to implement the applicable provisions of this section.

(c) The procedures the supervisor must follow if an employee exhibits signs or symptoms consistent with possible heat-related illness, including appropriate emergency response procedures.

(d) Procedures for moving or transporting an employee to a place where the employee can be reached by an emergency medical service provider if necessary.

(4) The fire department shall rotate crews as necessary to allow for rehabilitation.

(5) All members shall be provided training and information on how the body regulates core temperatures and how to recognize the signs, symptoms and controls for heat and cold stress.

(6) All members shall be provided training on the department's guideline addressing heat and cold stress.

(7) Employees are responsible for monitoring their own personal factors for heat-related illness including consumption of water or other acceptable beverages to ensure hydration.

(8) A rehabilitation area shall be designated with features that provide shade or air conditioning with a place to sit for extremely hot environments.

(9) A rehabilitation area shall be designated with features that provide dry protected areas out of the wind or rain and a heated area with a place to sit for extremely cold or wet environments.

(10) Multiple rehabilitation areas must be set up if the geographical area or size of the scene creates barriers limiting members' access to rehabilitation.

(11) The rehabilitation area shall be of sufficient size to accommodate the number of crews using the area at the same time.

(12) Members entering the rehabilitation area that feel warm or hot shall remove their personal protective clothing. Personnel trained in basic life support shall evaluate the member and institute active or passive cooling as indicated.

(13) At a minimum, a person trained in basic life support with the knowledge and training needed shall be located in the rehabilitation area to conduct medical monitoring and evaluation of crews entering the rehabilitation area.

(14) Members shall not be released from rehabilitation until

a person trained in basic life support okays their return to work.

(15) Supervisors shall assess their crew at least every forty-five minutes and more frequently when climatic conditions warrant to determine their need for rehabilitation.

(16) Members on emergency scenes and during exercises shall be provided a minimum of one quart of water per hour when the climatic conditions present heat or cold stress hazards. After one hour, caloric and electrolyte replacement must be considered.

(a) Employers must ensure that a sufficient quantity of drinking water is readily accessible to employees at all times.

(b) Employers must ensure that all employees have the opportunity to drink at least one quart of drinking water per hour.

(c) Employers must encourage employees to frequently consume water or other acceptable beverages to ensure hydration.

(17) Employees showing signs or complaining of symptoms of heat-related illness must be relieved from duty, provided with a sufficient means to reduce body temperature, and monitored to determine whether medical attention is necessary.

Note: For further guidance, sample policies and information please consult the 2008 edition of NFPA 1584, Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises or the United States Fire Administration's Emergency Incident Rehabilitation Manual FA-314 issued February 2008.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-05013 Aircraft rescue and firefighting. ((~~Fire departments that engage in aircraft rescue and firefighting operations shall review NFPA, Manual for Aircraft Rescue and Firefighting Operations 402M, 1991 edition.~~)) (1) Fire departments that expect to respond to aircraft fires shall meet the applicable portions of the 2008 edition of NFPA 402, Guide for Aircraft Rescue and Firefighting Operations.

(2) Airport based fire departments shall meet the applicable portions of the 2008 edition of the NFPA 402, Guide to Aircraft Rescue and Firefighting Operations.

NEW SECTION

WAC 296-305-05101 Technical rescue general requirements. (1) The following sections apply to fire departments that choose to operate for any type of technical rescue operations addressed in WAC 296-305-05113 at the following levels:

- Operations level. This level represents the capability of organizations to respond to technical rescue incidents

and to identify hazards, use equipment, and apply limited techniques specified in this rule to support and participate in technical rescue incidents.

- Technician level. This level represents the capability of organizations to respond to technical rescue incidents, to identify hazards, use equipment, and apply advanced techniques specified in this rule necessary to coordinate, perform, and supervise technical rescue incidents.

Note: Awareness level represents the minimum capability of organizations that provide response to technical rescue incidents or discover technical rescue situations during emergency scene operations and takes no offensive action. This level requires no written procedures.

(2) Members shall not operate at a level that exceeds the identified level of capability established in subsection (1) of this section.

(3) Basic life support shall be provided by the fire department at technical rescue incidents.

(4) Fire departments must meet all requirements in this section, along with all relevant requirements in the specific technical rescue sections, before operating at the operations or technician level at a technical rescue incident.

(5) Fire departments choosing to not respond to technical rescue emergencies will ensure their employees can recognize when a technical rescue situation is present and what to do in those cases.

NEW SECTION

WAC 296-305-05103 Technical rescue training. (1) Training shall be provided to correspond to the operational level of the fire department. All fire departments which will be expected to perform at the operations level or higher operational level shall be trained to that level.

Note: The 2008 edition of NFPA 1006, Standard for Technical Rescuer Professional Qualifications outlines the minimum individual Job Performance Requirements for Level I (Operations) and Level II (Technician) rescuers.

(2) Continuing education necessary to maintain all requirements of the level of capability shall be provided by the fire department.

(3) The training program shall be evaluated annually to ensure the fire department is prepared to function at the established operational level.

(4) All required training shall be documented. Documentation shall be maintained and available for inspection by employees, their representatives, and the department of labor and industries.

NEW SECTION

WAC 296-305-05105 Technical rescue standard operating procedure. Fire departments that choose to operate above the awareness level for technical rescue incidents shall establish written procedures outlining the operational level of their department that are specific to their chosen level of response and the type of technical rescue operations they plan to perform.

NEW SECTION

WAC 296-305-05107 Technical rescue incident response planning. (1) Fire departments or a consortium of departments that choose to operate at the operations level or above shall create a written special operations incident response plan for the specific type(s) of technical rescue at which they plan to operate at or above the operations level.

(2) When nonemergency resources may be required, procedures for acquisition of these resources for technical rescue incidents shall be developed.

(3) Fire departments that choose to respond to chemical, biological, radiological, and nuclear (CBRN) incidents shall provide training and equipment to all members expected to respond.

NEW SECTION

WAC 296-305-05109 Technical rescue equipment. (1) Equipment.

(a) Equipment necessary for operations at technical rescue incidents, along with training exercises, shall be provided by the fire department.

(b) Training shall be provided to ensure that all equipment is used and maintained according to the manufacturer's instructions.

(2) Personal protective equipment (PPE) specific to technical rescue.

(a) Departments will provide, at no cost to employees, protective clothing and equipment to provide protection from the specific hazards to which they could be exposed.

(b) Employees must be trained in the care, use, inspection, maintenance and limitations of the protective clothing and equipment.

(c) Employees are required to wear the protective clothing and equipment provided by the department's procedures and guidelines.

NEW SECTION

WAC 296-305-05111 Technical rescue safety. (1) General.

(a) All employees must be trained on:

(i) The hazards and risks associated with department's chosen level of technical rescue operations.

(ii) How to conduct technical rescue operations at the department's chosen level while minimizing threats to rescuers.

(iii) How to use PPE.

(b) Employees assigned specific duties and functions must be trained and qualified by their department prior to being assigned those duties or functions.

(c) When employees are operating in positions or performing functions that pose a high potential risk for injury, employees qualified in basic life support must be standing by.

(2) Emergency evacuation. Departments shall establish a procedure for members to abandon the technical rescue area and to account for their safety when an imminent hazard condition is discovered. This shall include a method for notifying all members in the affected area immediately.

(3) Technical rescue safety officer. The incident commander shall assign an incident safety officer with the requisite knowledge and responsibility for the identification, evaluation, and with the authority to correct hazardous conditions and unsafe practices, at all emergency scene operations and training exercises.

(4) Incident management. Departments shall use an ICS at all technical rescue incidents and training exercises.

NEW SECTION

WAC 296-305-05113 Technical rescue operational specialties.

Note: When chapters of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents, are required by the following sections, internal references requiring compliance with further NFPAs or additional resources are not included in these requirements.

(1) Structural collapse. Fire departments choosing to operate at the operations or technician level for structural collapse incidents must meet the requirements found in chapter 5 of the 2009 edition of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.

(2) Rope rescue.

(a) Fire departments choosing to operate at the operations or technician level for rope rescue incidents must meet the requirements of this section and the nonconflicting portions of chapter 6 of the 2009 edition of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.

(b) Fire departments performing rope rescue operations must make sure previously purchased life safety ropes and equipment

complies with the 2001 edition of NFPA 1983, Standard on Fire Service Life Safety Rope and System Components. Ropes and equipment purchased after the effective date of this rule must meet the requirements of the 2006 edition of NFPA 1983, Standard on Life Safety Rope and Equipment for Emergency Services.

(c) Life safety rope and rope rescue equipment shall be inspected after purchase and prior to placing in service, after each use, and at least semiannually.

(d) Harnesses shall be inspected for worn or broken stitching, rivets worn out of holes, and damage from abrasion, cuts, or chemicals.

(e) Descending/ascending hardware shall be inspected for wear, cracks, distortion, sharp edges, and ease of operation.

(f) The manufacturer's recommended shelf life of life safety ropes shall be followed. If no shelf life is specified, ropes greater than six years old shall be taken out of service as a life safety rope.

Note: See WAC 296-305-02019, Life safety ropes, harnesses, and hardware protection, for further requirements.

(3) Confined space rescue.

(a) Fire departments choosing to operate at the operations or technician level for confined space rescue incidents must meet the requirements of this section, chapter 296-809 WAC Table 1, and the nonconflicting sections of chapter 7 of the 2009 edition of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.

(b) Fire departments shall comply with chapter 296-809 WAC for their own confined spaces.

(c) Fire departments which will respond to calls to perform rescue from a permit-required confined space are required to have each member of a rescue team practice making permit space rescues at least every twelve months by means of simulated rescue operations in which they remove dummies, mannequins or actual persons from permit space. A permit is required for the practice permit space entry.

(d) During an actual rescue response, written or verbally recorded hazard sizeup will be allowed in lieu of the written permit requirements in WAC 296-809-50004 and shall be completed prior to any entry. This sizeup shall include at a minimum:

(i) Recognition and declaration of the situation as a confined space incident.

(ii) Denial of entry to unprotected persons.

(iii) Assessment of all readily available confined space documentation, e.g., MSDSs, any existing permit, plans or blueprints of the space.

(iv) Assessment of number of victim(s), locations and injury conditions.

(v) Discussion with witnesses, supervisors, and other sources of information.

(vi) Assessment of any current or potential space hazards, in particular, any hazard(s) which lead to the necessary rescue.

(vii) Determination and declaration if the situation is a body recovery or a victim rescue.

(e) At confined space incidents, at least two people outside shall be equipped with appropriate breathing apparatus to act as the back-up team, which shall remain free of the contaminated area in order to rescue disabled firefighters.

(f) Written documentation of the rescue team's training on the fire department's confined space operating procedures, authorized entrant training, and the contracted host's confined space program shall be kept. A record of each of the hazard sizeups shall be maintained for at least one year.

(g) Anytime firefighters are working inside a confined space, such persons shall be provided with SCBA or air line respirator with escape bottle, and shall use the equipment unless the safety of the atmosphere can be established by testing and continuous monitoring.

(i) If the service life of the auxiliary air supply is fifteen minutes or less it shall not be used for entry into an IDLH atmosphere but it may be used for escape purposes. The auxiliary air supply may be used for entry into an IDLH atmosphere only when the service life of the unit exceeds fifteen minutes and when not more than twenty percent of the noted air supply will be used during entry.

(ii) The maximum length of hose for supplied air respirators is three hundred feet (91 meters). Such hose shall be heavy duty nonkinking and NIOSH approved.

(4) Machinery rescue. Fire departments choosing to operate at the operations or technician level for machinery rescue incidents must meet the requirements of this section and the nonconflicting portions of chapter 12 of the 2009 edition of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.

(5) Water rescue.

(a) Fire departments choosing to operate at the operations or technician level for water rescue incidents must meet the requirements of this section and the nonconflicting portions of chapter 9 of the 2009 edition of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.

(b) Organizations choosing to operate at the operations or technician level for dive rescue incidents must meet the requirements found in chapter 9 of the 2009 edition of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.

(c) Fire departments choosing to operate at the operations or technician level for dive recovery incidents must meet the requirements found in chapter 296-37 WAC, Standards for commercial diving operations, and the nonconflicting parts of chapter 9 of the 2009 edition of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.

(d) If a manufacturer's specifications are such that an engineer is required for the operation of a vessel, one shall be provided.

(e) When fire boats perform rescue activities they shall have two dedicated personnel. Any member not specifically required to operate the vessel, e.g., an operator (pilot) or engineer (if required by the manufacturer's specification) may be used as a deck hand. This may include the boat officer if his/her duties do not

include operating the fire boat.

(f) Watercraft load capabilities shall not exceed the manufacturer's specifications.

(g) Each fire department shall determine the function of their watercraft; firefighting, rescue, or both.

(h) Watercraft operating within navigable waters of the state of Washington (as defined by the United States Coast Guard) shall comply with all of the rules of the United States Coast Guard.

(i) Fire boats operating within navigable waters of the state of Washington (as defined by the United States Coast Guard) shall have a fully dedicated pilot.

(j) The operator (pilot) of the watercraft is responsible for its safe operation.

(k) Training for all personnel shall cover the physical characteristics of the vessel involved and shall be included in the employer's accident prevention program.

(i) All assigned personnel shall be trained in safe operation of watercraft and the operations the craft is intended to perform.

(ii) All employees involved in water rescue shall be trained in water rescue techniques and use Coast Guard approved personal flotation devices, Type III, minimum.

Exception: Employees working below deck or in enclosed cabins or when working above, on or alongside still water where flotation would not be achieved, are exempt from this requirement.

(l) All employers operating watercraft in nonnavigable waters shall be responsible for training all employees to local hazards.

(6) Trench and excavation rescue.

(a) Fire departments choosing to operate at the operations or technician level for trench and excavation rescue incidents must meet the requirements of this section and nonconflicting portions of chapter 11 of the 2009 edition of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.

(b) Employees that directly engage in trench rescue operations shall be under the direct supervision of person(s) with adequate training in trench and excavation hazard recognition, equipment use and operational techniques.

(c) Each employee in an excavation shall be protected from cave-ins by an adequate protective system except when:

(i) Excavations are made entirely in stable rock; or

(ii) Excavations are less than four feet (1.22 meters) in depth and examination of the ground by a competent person provides no indication of a potential cave-in.

(7) Mine and tunnel rescue.

(a) Fire departments choosing to operate at the operations or technician level for mine and tunnel rescue incidents must meet the requirements of this section and the nonconflicting portions of chapter 14 (Mine and Tunnel Search and Rescue) of the 2009 edition of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.

(b) The requirements of this section shall apply to agencies that provide varying degrees of response to tunnels under construction or other underground excavations formerly classified as mines or tunnels.

(c) The requirements of this section shall not apply to operating mines, tourist mines, basements, or subterranean structures that are complete and in use or that meet the definition of a confined space.

(d) Emergency services that are the designated primary provider of rescue services for operational mines and tunnels under construction are required to comply with the nonconflicting portions of chapter 296-155 WAC Part Q, Underground construction.

(e) Members who regularly enter a tunnel under construction as part of their regular duties shall receive training meeting the requirements of the safety instruction required by WAC 296-155-730(3).

(f) Regardless of whether an atmospheric hazard is detected, any entrant into a tunnel under construction, mine or any related shaft or excavation shall have a means of emergency egress respiratory protection with no less than a thirty minute rated service life immediately available. There shall be at least one unit immediately available for each member in the tunnel.

MSHA or NIOSH approved "Self Rescuer" or "Self Contained Self Rescuer" devices fulfill this requirement provided the user has been trained in its use and the device is suitable for the type of potential hazards that may be encountered.

(g) A rescue service entry team shall have the ability at a minimum to continuously monitor the air for oxygen, carbon monoxide, hydrogen sulfide, and combustible gasses as well as any other atmospheric contaminants that are known or suspected.

(h) The rescue service entry team shall have at least two methods of communication with the surface, one of which shall be voice communication.

This requirement may be satisfied by using both the "direct" and "trunked" features of the same radio systems provided adequate equipment is available to the entry team to provide constant simultaneous communication using both methods.

(i) Rescue service entry teams that enter a mine or tunnel with a known atmospheric hazard shall have a clearly defined "turnaround" benchmark to ensure adequate egress to an area of refuge or safety.

(j) Each rescue service entry team that enters a mine or tunnel with a known or suspected atmospheric hazard shall have at least one source of breathable air independent of each wearer's SCBA to be used in the event of an SCBA failure or "out of air" emergency. This source of air is to be independent of any device brought in for the use of victims.

(k) A backup team with similar size and capabilities as the rescue service entry team shall be immediately available to enter the space.

(l) Each member of the organization who is designated as part of the technician level rescue service shall practice making mine or tunnel rescues as part of a rescue team no less than once every twelve months. This may be accomplished by means of simulated rescue operations in which the team removes dummies, mannequins, or persons from actual mines and tunnels or from representative mines and tunnels.

Representative mine and tunnels should, with respect to opening size, configuration, and accessibility, simulate the types of mines and tunnels from which rescue is to be performed.

NEW SECTION

WAC 296-305-05502 Training and member development. (1) The employer must provide training, education and ongoing development for all members commensurate with those duties and functions that members are expected to perform.

(a) Training and education must be provided to members before they perform emergency activities.

(b) Fire service leaders and training instructors must be provided with training and education which is more comprehensive than that provided to the general membership of the fire department.

(c) The fire department shall develop an ongoing proficiency cycle with the goal of preventing skill degradation.

(2) Training on specific positions/duties deemed by the fire department critical to the safety of responders and the effectiveness of emergency operations (such as driver operators or support personnel) shall be provided at least annually.

(3) Firefighters shall be trained in the function, care, use/operation, inspection, maintenance and limitations of the equipment assigned to them or available for their use.

(4) Members who are expected to perform interior structural firefighting shall be provided with an education session or training at least quarterly.

(5) When firefighters are engaged in training above the ten foot level, where use of lifelines or similar activities are to be undertaken, a safety net or other approved secondary means of fall protection recommended in chapter 296-155 WAC, Part C-1, fall protection requirements for construction, shall be used.

(6) Continuing education live fire training.

(a) All members who engage in interior structural firefighting in IDLH conditions shall be provided live fire training appropriate to their assigned duties and the functions they are expected to perform at least every three years. Firefighters who do not receive this training in a three-year period will not be eligible to return to an interior structural firefighting assignment until they do. Responding to a fire scene with a full alarm assignment, an ICS established and a postincident analysis will meet this requirement, but for no more than two training evolutions.

(b) All live fire training shall be conducted by fire department qualified fire service instructors. When conducting their own training, fire departments must meet the requirements set out in the 2007 edition of the NFPA 1403, Standard on Live Fire Training Evolutions.

(c) An incident safety officer shall be appointed for all live

fire training evolutions. The incident safety officer function shall be filled by a person who is trained and qualified in the IMS/Incident safety officer duties and who is not responsible for any other function at the training evolution other than the role of incident safety officer.

(7) When using structures for live fire suppression training, activities shall be conducted according to the 2007 edition of NFPA 1403, Standard on Live Fire Training Evolutions. When using structures for nonlive fire training, the following requirements shall be met:

(a) All structures used for training must be surveyed for potential hazardous substances, such as asbestos, prior to the initiation of any training activities. The survey must comply with chapter 296-62 WAC Part I-1 and shall be conducted by an AHERA accredited inspector and performed in accordance with 40 C.F.R. 763, Subpart E. If the hazardous substances or asbestos containing materials of > 1% asbestos are to be disturbed during any training activity they must be removed prior to beginning that activity. Removal of asbestos < or = 1% is not required prior to live fire training.

In live fire training structures where < or = 1% asbestos has been disturbed, the fire department will provide written notice to the owner/agent that asbestos has been disrupted and remains on-site.

For structures built before 1978, you must assume that painted surfaces are likely to contain lead and inform workers of this presumption. Surveys for lead containing paints are not required. Lead containing paints are not required to be removed prior to training activities.

If the training activity will not disturb the hazardous substance, the material must be clearly marked and all participants must be shown the location of the substance and directed not to disturb the materials.

(b) Acquired or built structures used for fire service training that does not involve live fire must be surveyed for the following hazards and those hazards abated prior to the commencement of training activities:

(i) In preparation for training, an inspection of the training building shall be made to determine that the floors, walls, stairs and other structure components are capable of withstanding the weight of contents, participants and accumulated water.

(ii) Hazardous materials and conditions within the structure shall be removed or neutralized, except as exempted in (a) of this subsection.

- Closed containers and highly combustible materials shall be removed.
- Oil tanks and similar closed vessels that cannot easily be removed shall be vented sufficiently to eliminate an explosion or rupture.
- Any hazardous or combustible atmosphere within the tank or other vessel shall be rendered inert.
- Floor openings, missing stair treads or railings, or other potential hazards shall be repaired or made inaccessible.

(iii) If applicable, floors, railings and stairs shall be made safe. Special attention shall be given to potential chimney hazards.

(iv) Debris hindering the access or egress of firefighters shall be removed before continuing further operations.

(v) Debris creating or contributing to unsafe conditions shall be removed before continuing further operations.

(c) Asbestos training. Firefighters must be provided asbestos awareness training, including communication of the existence of asbestos-containing material (ACM) and presumed-asbestos-containing material (PACM). Training shall be provided prior to initial assignment and annually thereafter, and must include:

(i) The physical characteristics of asbestos including types, fiber size, aerodynamic characteristics and physical appearance.

(ii) Examples of different types of asbestos and asbestos-containing materials to include flooring, wall systems, adhesives, joint compounds, exterior siding, fire-proofing, insulation, roofing, etc. Real asbestos shall be used only for observation by trainees and shall be enclosed in sealed unbreakable containers.

(iii) The health hazards of asbestos including the nature of asbestos related diseases, routes of exposure, dose-response relationships, synergism between cigarette smoking and asbestos exposure, latency period of diseases, hazards to immediate family, and the health basis for asbestos standards.

(iv) Instruction on how to recognize damaged, deteriorated, and delamination of asbestos-containing building materials.

(v) Decontamination and clean-up procedures.

(vi) Types of labels that are used within different industries to identify ACM or PACM that is present within structures. The labeling system the employer will use during training to identify asbestos and ACM/PACM during destructive drilling and training.

(vii) The location and types of ACM or PACM within any fire department owned or leased structures and the results of any "Good Faith Survey" done on fire department owned or leased structures.

(8) Asbestos exposure during destructive training activities. Fire department employees are exempt from the requirements of chapter 296-65 WAC and WAC 296-62-077, provided they comply with the following requirements:

(a) Fire departments must obtain a good faith asbestos inspection/survey from the property owner/agent prior to disturbing building materials. The good faith survey must comply with chapter 296-62 WAC Part I-1 and shall be conducted by an AHERA accredited inspector and performed in accordance with 40 C.F.R. 763, Subpart E.

(b) Good faith surveys must be shared with all employers and employees prior to using any structure.

(c) Materials containing >1% asbestos must be marked by a system recognized by all members. ACM/PACM may not be disturbed prior to, or during training, or must be removed by a certified asbestos abatement contractor prior to training activities. The incident safety officer for the training must walk all participants through the structure and inform them of the location of all ACM/PACM and that this material is not to be disturbed. If the

structure is used for a black-out drill, the incident safety officer must instruct members that ACM/PACM is present and take precautions to ensure these materials are not disturbed during the training. A walk through is not required for black-out drills.

(d) Destructive drilling must not occur in a structure until the fire department has received a good faith asbestos survey from the owner/agent and ensured that any ACM or PACM has been abated from substrates upon which destructive drill tasks are planned to be performed. All suspect asbestos materials designated for destructive drill tasks will be identified, evaluated and tested by an accredited AHERA lab.

(e) Materials containing < or = 1% asbestos must be labeled by a system recognized by all members. Prior to initiating any destructive drilling on materials containing < or = 1% asbestos, the incident safety officer for the training must walk all participants through the structure and inform them of the location of asbestos.

(f) Firefighters must wear SCBA and turnouts whenever exposed to asbestos.

(g) Firefighters must be provided gross decontamination at the drill site by rinsing/brushing the firefighters turnouts and SCBA with water.

(h) Hand tools and other asbestos contaminated equipment will be rinsed off prior to being returned to the apparatus or service. Tools and equipment that cannot be decontaminated on site must be placed in sealed containers until they can be decontaminated. Care must be taken to not spread the asbestos.

(i) PPE that may have been contaminated with asbestos must be cleaned in a manner recommended by the manufacturer and that prevents the exposure of the employee cleaning the PPE. PPE that cannot be cleaned on-site must be placed in sealed containers until they can be decontaminated.

(j) In structures scheduled for demolition, or that will be turned over to another employer, where < or = 1% asbestos has been disturbed, the fire department will provide written notice to the owner/agent that asbestos has been disrupted and remains on-site. The fire department will inform the owner/agent, in writing, that access to the property must be limited to the demolition or asbestos contractor.

(k) The fire department will secure the structure after all drills and at the conclusion of the use of the structure. Securing the structure may include but not be limited to: Locking or boarding up windows, doors, and wall and roof openings. The site of the structure may also require fencing. When asbestos material of < or = 1% has been disturbed by the fire department's drill activities, the site will be posted with warning signs. These signs will notify entrants onto the site that asbestos debris of < or = 1% has been left on the site. For fire department members who plan to enter the structure or the building footprint, the signs will state the necessity of full turn-outs and SCBA with decontamination procedures. The signs will also state that entry into the building or the building footprint is prohibited by any persons other than the fire department and the demolition/abatement

contractor.

(9) Additional training. Training must be provided on topics according to the job duties and potential hazards as outlined in Table X, Subject Specific Training.

Table X **Subject Specific Training**	
Topic	**Training requirements found in:**
HEALTH AND SAFETY	
Noise and hearing loss prevention	● Chapter 296-817 WAC, Hearing loss prevention (noise) ● WAC 296-305-02004
Respiratory equipment	● Chapter 296-842 WAC, Respirators ● WAC 296-305-04001
Employee right-to-know procedures	● WAC 296-800-170, Employer chemical hazard communication--Introduction
Identification and handling of asbestos-containing materials likely to be encountered during a fire response	● WAC 296-62-07722(5) as appropriate to asbestos encountered during a fire response, or EPA awareness level asbestos two hour training course
FIRE SUPPRESSION	
Overhaul procedures and operations	● WAC 296-305-05000 and 296-305-05002
Live fire training in structures	● NFPA 1403, Standard on Live Fire Training Evolutions, 2007 Edition
Wildland fires	● WAC 296-305-07010 through 296-305-07019 ● The National Wildfire Coordination Group (NWCG) firefighter II ● All training for assigned wildland incident command positions must be completed prior to assignment by the IC
INCIDENT MANAGEMENT	
Incident management training	● National Incident Management System ● NFPA 1561, Standard on Emergency Services Incident Management System, 2008 edition (available on-line)
EMERGENCY MEDICAL	
Emergency medical training	● WAC 296-305-02501
HAZARDOUS MATERIALS	

Table X Subject Specific Training	
Topic	**Training requirements found in:**
Hazardous materials training	● Chapter 296-824 WAC, Emergency response ● Nonconflicting portions of NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents, 2008 edition
TECHNICAL RESCUE	
Confined space entry and/or rescue	● Chapter 296-809 WAC, Confined spaces ● WAC 296-305-05004 ● Nonconflicting portions of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents, 2004 edition ● Nonconflicting portions of NFPA 1006, Professional Qualifications for Technical Rescue, 2008 edition
Other technical rescue situations, such as rope, structural collapse, transportation/ machinery, trench, water, and wilderness rescue	● NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents, 2004 edition ● Nonconflicting portions of NFPA 1006, Professional Qualifications for Technical Rescue, 2008 edition
POSITION SPECIFIC DEVELOPMENT	
Aircraft	● NFPA 402, Guide for Aircraft Rescue and Firefighting Operations, 2008 edition
Driver training	● WAC 296-305-04505(8)

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-06001 Fire service equipment. (1) All portable equipment shall be inspected routinely to ensure that it is ready for use.

(2) Any defective equipment shall be removed from service.

(3) Nylon utility straps or straps of equivalent strength should be used instead of hose belts. The utility strap shall be of one-inch nylon, or equivalent belting, with a four-inch overlap and sewn with polyester thread and shall measure at least 102 inches on the outside circumference.

(4) The load capacity shall be stenciled on each portable jack and the load capacity shall not be exceeded.

(5) The instruction plate on portable jacks shall be maintained in a legible condition.

(6) Portable powered cut-off saws (rescue saws) shall be used in accordance with the manufacturer's recommendations.

Exception: The lower blade guard described in WAC ((~~296-24-65501 (1)(a)~~)) 296-807-12005 is not required on hand-held portable powered cut-off saws used by fire/rescue personnel for rescue procedures and/or roof ventilation for smoke removal, provided the operator is wearing appropriate eye, face, head, and body protection as specified in WAC 296-305-02001 through ((~~296-305-02013~~)) 296-305-02012. This exception also applies to qualified persons (e.g., instructors) wearing personal protective equipment as described herein to instruct personnel in safe roof ventilation/rescue techniques.

(7) When not in use, the cutting teeth on a chain saw shall be covered either by an old section of hose, a wooden scabbard, or an equivalent method.

(8) All axes worn by employees shall be provided with a scabbard to guard against injury from the blade and pick of the axe.

(9) The guards on smoke ejectors, as supplied by the manufacturer, shall not be removed and the operator of the ejector shall wear gloves.

(10) Acetylene cylinders. Handling, storage and utilization of acetylene in cylinders shall be in accordance with the Compressed Gas Association Pamphlet G-1 - ((~~1966~~)) 2003 edition.

(11) Powder activated life-line guns and accessories shall be stored in a box or container equipped with a lid or cover.

(a) The box shall be kept closed when not in use.

(b) A loaded life-line gun shall not be placed in the storage box.

(c) Instruction books, cleaning kits and hand tools needed for maintenance or breakdown purposes shall be kept in the life-line gun storage box.

(d) The words "powder activated tool" shall be conspicuously printed on the top of the storage box.

(12) Abrasive blades in storage, not on a saw, shall be protected from contact with water, liquids, petroleum products and their fumes.

(13) Fiber rope that has been subjected to injurious chemicals or excessive heat shall not be used for load carrying purposes.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-06003 Testing fire service equipment. (1) ((~~When testing fire hose, a restricted orifice disc having not more than a 25% opening, shall be installed on the pumper discharge port. Or in the alternative, the pumper discharge valve may be opened not more than 25% to insure a minimum volume of water in case of a bursting hose.~~)) All fire suppression and supply hose must be tested annually as well as when there is reason to believe the hose has been damaged. Testing shall be in accordance with the 2003 edition of NFPA 1962, Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose.

(2) Safety nets shall be tested annually by dropping a weight of not less than 400 pounds from the highest point to be used above the net. The test weight object may consist of two tightly tied rolls of two and one-half inch hose, each 100 feet long, or any other object having similar weight and dimension.

(a) The net suspension system shall be designed and constructed with a safety factor of four and as a minimum, shall withstand the test loading without permitting contact between the net and any surface or object below the net.

(b) Forged steel safety hooks or shackles shall be used to fasten the net to its supports.

(c) Training requiring safety net protection shall not be undertaken until the net is in place and has been tested by the weight of three firefighters on the net.

(d) Safety nets shall extend eight feet beyond the edge of the work surface.

(e) The mesh size of nets shall not exceed six inches by six inches.

(f) All nets shall meet accepted performance standards of 17,500 foot pounds minimum impact resistance as determined and certified by the manufacturer, and shall bear a label of proof test.

(g) Edge ropes shall provide a minimum breaking strength of 5,000 pounds.

(3) ((~~Life belts shall meet or exceed the strength requirements of ANSI. A10.14 - Requirements for Safety Belts, Harnesses, Lanyards, Lifelines and Drop Lines for Industrial Use. Life belts shall be inspected after each use and not less than semi-annually in accordance with manufacturer's instructions.~~

~~(4) Rescue ropes shall be used for rescue purposes only.~~

~~(5) Rescue ropes shall meet the following requirements:~~

~~(a) Rescue ropes shall be constructed of rot-proof fiber with a melting point of not less than 400 degrees F;~~

~~(b) They shall be of abrasion resistant construction;~~

~~(c) They shall have a minimum breaking strength of not less than 9,000 pounds.~~

~~(6) Rescue ropes shall be inspected after each use and not less than semi-annually in accordance with manufacturer's instructions.~~

~~(7)~~)) The method of testing a life line gun shall be in accordance with the manufacturer's recommended procedure.

NEW SECTION

WAC 296-305-06006 Ground ladders. This section establishes the minimum requirements for the construction, care and use of fire department ground ladders.

(1) New ground ladders purchased after the effective date of this chapter shall be constructed and certified in accordance with the 2004 edition of NFPA 1931, Standard on Design and Design Verification Tests for Fire Department Ground Ladders.

(2) Firefighters shall climb and descend ground ladders with the fly in, for safety purposes, when not in conflict with the manufacturer's recommendations. Even when ladders are routinely used in the fly-out configuration, in adverse conditions firefighters shall be permitted to climb and descend ground ladders with the fly in to assure secure footing.

(3) All ground ladders shall be maintained in accordance with the manufacturer's recommendations and visually inspected at least once a month and after every use. The following ladder components shall be visually inspected:

(a) Heat sensor labels, if provided, for a change indicating heat exposure.

(b) All rungs for snugness and tightness.

(c) All bolts and rivets for tightness.

(d) Welds for any cracks or apparent defects.

(e) Butt spurs for excessive wear or other defects.

(f) Halyards for fraying or breaking.

(g) Roof hooks for sharpness and proper operation.

(h) Beam and rungs for punctures, wavy conditions, worn serrations or deformation.

(i) Surface corrosion.

(4) The following wood ladder components shall be checked:

(a) Beams for dark streaks. When a wood ground ladder develops dark streaks in the beams, the ladder shall be removed from service and service tested as specified in subsection (9) of this section.

(b) Loss of gloss on the protective finish of fiberglass or wood ladders, signifying damage or wear.

(5) Any sign of damage or defect during a visual inspection shall be cause to remove the ladder from service until it has been repaired. Scratches and dents shall not be cause for a ladder to fail a test if it passes the appropriate service test.

(6) If the heat sensor label has an expiration date, and that date has passed, the heat sensor label shall be replaced.

(7) Whenever any ground ladder has been exposed, or is suspected of having been exposed to direct flame contact, or wherever the heat sensor label has changed to indicate heat

exposure, the ladder shall be service tested according to subsection (9) of this section.

(8) Temporary repairs shall not be made to ground ladders.

(9) When ground ladders are tested, they shall be tested in accordance with the strength service testing procedures of the 2004 edition of NFPA 1932, Standard on Use, Maintenance and Service Testing of In-Service Ground Ladders, section 7.2.

NEW SECTION

WAC 296-305-06008 Electrical. (1) Temporary power and lighting with the use of 110 - 120 VAC and 220 - 240 VAC equipment.

(a) All lighting equipment shall be provided with heavy duty flexible cords with SO or SJ jackets or equivalent. All lighting equipment shall be used with heavy duty flexible extension cords rated for the intended load with SO or SJ jackets or equivalent.

(b) Flexible cords and cables shall be approved and suitable for conditions of use and location.

(c) Flexible cords shall be used only in continuous lengths without splice or tap. Hard service flexible cords No. 12 or larger may be repaired if spliced so that the splice retains the insulation, outer sheath properties, and usage characteristics of the cord being spliced.

(d) Flexible cords shall be connected to devices and fittings so that strain relief is provided which will prevent pull from being directly transmitted to joints or terminal screws.

(e) Flexible cords and cables shall be protected from accidental damage. Sharp corners and projections shall be avoided. Where passing through doorways or other pinch points, flexible cords and cables shall be provided with protection to avoid damage.

(f) The path to ground from power cords, equipment, and temporary lights shall be continuous.

(g) Electrical equipment, tools, and temporary lights that are used in wet or damp locations or other hazardous atmospheres shall be approved for the purpose.

(h) Electrical equipment, tools, and temporary lights shall be constructed so that water cannot enter or accumulate in wireways, lampholders or other electrical parts.

(i) Electrical equipment, tools, and temporary lights that are used in wet or damp locations or hazardous atmospheres shall have 120 VAC single-phase 15 or 20 amp in-line resettable ground fault circuit interrupters.

(j) Temporary lights shall be equipped with a handle and be insulated from heat and possible electrical shock.

(k) Temporary lights shall not be suspended by their electrical cords unless cords and lights are designed and labeled for this means of suspension.

(l) Temporary lights shall be protected by guards of a nonconductive or insulated material to prevent accidental contact

with the bulb.

(2) 120 VAC cord reels shall be approved for use in wet or damp locations or hazardous atmospheres.

(a) Bodies and caps shall be weather tight, 15 amp rated at 120 VAC.

(b) Cords on cord reels that do not exceed one hundred fifty feet in length shall be SO or SJ type jackets or equivalent.

(c) Cords that exceed one hundred fifty feet in length on reels, shall have 10-gauge conductors.

(d) Cord reels that are not permanently mounted on a vehicle shall be insulated from the ground when in use.

(3) 12 volt portable type hand lanterns shall be constructed of molded composition or other type approved for the purpose.

(a) Portable hand lanterns used in wet or damp conditions or other hazardous atmospheres shall be operated at a maximum of 12 volts.

(b) Hand lamps shall be equipped with a handle and a substantial guard over the bulb and attached to the lampholder.

(4) Portable and vehicle-mounted generators.

(a) Portable generators. Under the following conditions, the frame of a portable generator shall not be required to be grounded and shall be permitted to serve as the grounding electrode for a system supplied by the generator:

(i) The generator supplies only equipment mounted on the generator or cord-connected and plug-connected equipment through receptacles mounted on the generator, or both; and

(ii) The noncurrent-carrying metal part of equipment and the equipment grounding conductor terminals of the receptacles are bonded to the generator frame.

(b) Vehicle-mounted generators. Under the following conditions, the frame of a vehicle may serve as the grounding electrode for a system supplied by a generator located on the vehicle:

(i) The frame of the generator is bonded to the vehicle frame;

(ii) The generator supplies only equipment located on the vehicle and/or cord-connected and plug-connected equipment through receptacles mounted on the vehicle or on the generator; and

(iii) The noncurrent-carrying metal parts of equipment and the equipment grounding conductor terminals of the receptacles are bonded to the generator frame.

(5) Electrical equipment used in classified locations must conform to the requirements set out in WAC 296-24-95613, Hazardous (classified) locations. Definitions pertaining to classified locations can be found in WAC 296-24-95601.

Additional references: Article 250 National Electrical Code. Chapter 296-24 WAC, Part L and WAC 296-800-280.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-06501 Requirements for fire ((~~station~~)) department facilities. WAC 296-305-06501 through 296-305-06519 pertain to all fire department facilities as defined in WAC 296-305-01005.

AMENDATORY SECTION (Amending WSR 01-11-038, filed 5/9/01, effective 9/1/01)

WAC 296-305-06503 General requirements. (1) Stations and administrative offices shall comply with the requirements of the general occupational health standards, WAC 296-800-210, Lighting in the workplace.

(2) Every new fire station ((~~built after the effective date of this chapter~~)), whether manned or unmanned, shall be equipped with an approved emergency lighting system that will light dormitories, hallways, and apparatus bay areas in case of electrical power failure.

(3) ((~~No~~)) New fire stations or new additions to an existing fire station((~~, shall~~)) that incorporate sliding poles or slides in their design or construction must meet the following requirements:

(a) The sliding pole floor opening will be enclosed by walls with access provided to the floor opening only through a door.

(b) The door will have a latch or knobs no lower than five feet from the floor.

(c) The door will be equipped with a system that will automatically keep the door locked unless an alarm requiring a response sounds in the fire station. This automatic lock system will allow for a manual override, which will be used only to enable inspection, maintenance, repair or replacement of the sliding pole, the enclosure, the door, or other features of the sliding pole system. The automatic lock system will feature a warning light above or adjacent to the door that will indicate when the door is unlocked.

(d) Permanent illumination which cannot be manually turned off will be provided in the pole hole.

(e) The automatic lock system will be subject to monthly inspections.

(f) The sliding pole floor opening will be illuminated constantly in a manner that cannot be overridden manually, except as needed for inspection, repair, maintenance, or replacement.

(g) The bottom of the sliding pole will be cushioned by a minimum three-foot diameter rubber mat or its equivalent.

(h) Nothing will be stored or placed at the bottom of the sliding pole for a radius of three feet from the pole.

(i) Doors will not protrude within three feet of the pole.

(j) Proper sliding pole use will be included as part of the formal firefighter training program.

(4) The requirements of chapter ((~~296-24~~)) 296-878 WAC, ((~~Part B-2,~~)) window ((~~washing~~)) cleaning, shall be followed when employees are engaged in window washing operations.

(5) All new fire stations and other new fire department facilities which contain sleeping quarters shall be fully protected with automatic sprinkler systems.

(6) All existing fire stations and existing fire department facilities with sleeping quarters, that undergo a major renovation that consists of more than sixty percent of the assessed evaluation of the existing structure shall be fully protected with automatic sprinkler systems.

(7) Eye protection shall be worn when charging, changing or adding fluid to storage batteries. Personnel that will be charging storage batteries shall be qualified to perform this function by the employer. See WAC ((~~296-24-23015~~)) 296-800-16050.

(8) Stairway tread shall be of a nonskid design. Examples of nonskid: Grip strut grating, serrated edge grating, metal grating, aluminum safety tread, abrasive metal stair tread, or pressure sensitive nonskid type.

(9) In existing facilities where sliding poles or slides are used, the pole or slide hole shall be guarded in such a manner as to prevent anyone from walking directly into the pole or slide hole opening.

(10) To absorb the shock to sliding employees, the bottom of all slide poles or slides shall have a three-foot diameter cushioned rubber mat, or its equivalent.

(11) Nothing shall be stored or placed at the bottom of a pole or slide hole for a radius of three feet from the pole. Doors shall not protrude within three feet of the pole or slide.

(12) Stair and landing protection: Stairways, guardrails, landings, and handrails shall be constructed to the requirements of chapter 19.27 RCW the State Building Code Act, and ((~~chapter 296-24 WAC, Part J-1~~)) WAC 296-800-250.

(13) A standard guard railing for a landing platform shall include a toeboard, which is a vertical barrier, at floor level erected along exposed edges of a floor opening, wall opening, platform, runway or ramp to prevent falls of material.

(14) Any new facility, or addition, alteration, or repair to an existing facility shall be in compliance with chapter 19.27 RCW, the State Building Code Act.

(15) New stations containing a kitchen, and station kitchens remodeled after the date of this chapter, shall have an alarm activated service disconnect of fixed cooking appliances.

(16) Asbestos in facilities, buildings, and properties used by fire departments.

(a) Fire department employees shall be informed of the presence and location of asbestos-containing material (ACM) and presumed-asbestos-containing material (PACM) in areas of buildings where employees work.

(b) Damaged and deteriorating asbestos in fire stations and facilities must be repaired, removed, enclosed or encapsulated.

(c) ACM and PACM in fire stations and facilities shall be labeled according to WAC 296-62-07721(6).

(d) WAC 296-62-07723, Housekeeping, shall apply to fire stations and facilities.

(e) Fire departments that do not comply with this section must comply with the requirements relating to asbestos set out in chapters 296-62 and 296-65 WAC.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-06505 Sanitation, disinfection, cleaning, and storage areas. (1) Fire departments shall provide facilities for disinfecting, cleaning, and storage.

(2) A designated cleaning area shall be provided for under the fire department's exposure control plan for the cleaning and disinfecting of protective equipment, portable equipment, and other clothing.

(a) Fire departments that engage in emergency medical operations shall provide or have access to disinfecting facilities for the cleaning and disinfecting of emergency medical equipment.

(b) Disinfecting shall not be conducted in fire station kitchen, living, sleeping, or personal hygiene areas.

(c) Disinfecting facilities in fire stations shall be vented to the outside environment, and designed to prevent contamination of other fire station areas.

(d) The disinfecting facility shall contain a sink with hot and cold water faucets. All surfaces shall be nonporous surfaces.

(e) Handwashing facilities shall be readily accessible to members. Handwashing facility means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines. When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleaner in conjunction with clean cloth/paper towelettes or antiseptic towelettes.

(3) Protective clothing or equipment that ((~~needs to be decontaminated and/or disinfected~~)) is contaminated or potentially contaminated shall not be allowed in any kitchen, living, sleeping, ((~~or~~)) personal hygiene or other nonwork area.

(4) The designated cleaning area shall be physically separate from areas used for food preparation, cleaning of food and cooking utensils, personal hygiene, sleeping, and living areas.

(5) Drying areas for protective clothing shall be well ventilated.

(6) Storage areas: Emergency medical supplies and equipment stored in fire stations, other than that stored on vehicles, shall be stored in a dedicated enclosure and maintained per manufacturer's instructions.

(7) Reusable emergency medical supplies and equipment, protective clothing, and protective equipment shall not be stored in kitchen, living, sleeping, or personal hygiene areas, nor shall it be stored in personal clothing lockers.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-06507 Sleeping areas. (1) All sleeping areas in fire stations shall be separated from vehicle storage areas by at least one-hour fire resistive assemblies. ((~~Compliance with this section shall be required within three years of the effective date of this chapter.~~))

(2) Sleeping areas shall be protected by smoke and carbon monoxide detectors.

AMENDATORY SECTION (Amending WSR 01-11-038, filed 5/9/01, effective 9/1/01)

WAC 296-305-06511 Indoor air quality. Air quality shall be consistent with ((~~WAC 296-62-075 through 296-62-07515, Air~~)) chapter 296-841 WAC, Airborne contaminants, and WAC 296-800-240, Environmental tobacco smoke.

((~~Note: For extended work shifts all eight-hour PEL's shall be time-weighted to adjust for additional worker exposure during extended work shifts.~~))

(1) If indoor air monitoring indicates over-exposure to contaminant PEL's, engineering controls shall be utilized to reduce firefighter exposure to the lowest feasible level.

(2) All fixed internal combustion equipment such as, but not limited to emergency generators, shall be effectively exhausted to the exterior of the fire stations.

(3) All facilities dedicated to the maintenance and repair of internal combustion equipment shall have means for effective ventilation to the exterior of the building.

(4) All new fire stations ((~~built after January 1, 1997,~~)) shall be designed and constructed to conform to ACGIH ventilation recommended criteria for exhaust of internal combustion engines.

Additional reference: Industrial Ventilation Manual of Recommended Practices ISBN No.: 0-936712-65-1.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-06513 Refueling areas. (1) Refueling pumps, if installed, shall be in accordance with the provisions of the ((~~Uniform~~)) International Fire Code and WAC 296-24-33015.

(2) Dispensing of Class 1 liquids shall be as required in the ((~~Uniform~~)) International Fire Code.

(3) Spillage of oil or fuel shall be properly disposed of or completely evaporated and the fuel tank cap replaced before restarting engine.

(4) Fueling areas shall be posted - "NO SMOKING - STOP YOUR MOTOR."

AMENDATORY SECTION (Amending WSR 01-11-038, filed 5/9/01, effective 9/1/01)

WAC 296-305-06515 Hose drying towers. (1) The floor openings on hose tower platforms shall be equipped with a forty-two inch guardrail with mid-rail and shall be capable of withstanding a force of 250 pounds applied in any direction at any point on the top rail. The work platform shall be equipped with toeboards.

(2) The requirements for offset ladder platforms and ladder cage guards, when ladders extend beyond twenty feet, shall apply to hose drying towers.

(3) Ropes and attachments used to hoist hose in the hose towers shall have a breaking strength of 1500 pounds for a safe load strength of 300 pounds (five-to-one safety factor).

(4) Approved head protection shall be worn by all persons in the hose tower whenever hose handling/hanging operations are taking place.

(5) Ropes utilizing a pulley block shall be appropriately sized for the sheave to prevent possible jamming or damage to the rope.

((~~Additional reference: Chapter 296-24 WAC, Part J-1 and chapter 296-800 WAC.~~))

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-06517 Drill tower training facilities. (1) Permanent fixed ladders on the outside of drill towers and drill buildings are exempt from the requirements of offset platform landings and ladder cage guards.

(2) Drill tower construction and operations shall comply with

the following:

(a) Burn buildings used for live fire training shall be engineered for such use.

(b) Drill towers shall not be used for live fire training except when burn rooms are provided.

(c) Burn rooms, if included in the building, shall be engineered into drill towers.

(d) All walking surfaces in the drill tower shall be slip resistant.

(e) Railings shall be designed with a four-to-one safety ratio for 250 pound firefighters who may be operating a charged hose line on the fire escape.

(f) Rappelling anchors shall be engineered to support ((~~4500~~)) 5000 pounds per person supported by the anchor.

(g) Rappelling anchors shall be readily identifiable.

(h) Rappelling anchors shall be certified by a structural engineer.

AMENDATORY SECTION (Amending WSR 04-14-028, filed 6/29/04, effective 1/1/05)

WAC 296-305-06519 Fire station equipment and tools. (1) Equipment and tools in maintenance shops shall be guarded as required by the guarding provisions of chapter 296-806 WAC, Machine safety, and chapter 296-807 WAC, Portable power tools.

(2) Exposure of fan blades. When the periphery of the blades of a fan is less than ten feet above the floor or working level, the blades shall be guarded. The guard shall have openings no larger than one-half inch. This provision shall not apply to residential ceiling fans.

(3) Abrasive wheels and grinders.

(a) All abrasive wheels and grinders, shall be guarded as required by chapter 296-806 WAC, Machine safety.

(b) Goggles or face shields shall be used when grinding.

(c) Abrasive and composite blades shall be stored and protected against exposure to fuel and oil.

(d) Work rests on bench mounted abrasive wheel grinders shall be used to support the work. These shall be of rigid construction and designed to be adjustable to compensate for wheel wear. Work rests shall be kept adjusted sufficiently close to the wheel with a maximum opening of one-eighth inch to prevent the work from being jammed between the wheel and the rest. Adjustment of the work rest shall not be made while the wheel is turning.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-07001 Wildland fire operations. ((~~(1) This section shall apply to all personnel and agencies called on to provide services at any fire defined as a "wildland fire."~~

~~(2) This section shall not apply to suppression action taken on fires prior to the fire meeting the definition of a "wildland fire."~~

~~(3) Employers shall provide at no cost to the employee, the protective equipment and protective clothing required by this chapter. Personnel performing suppression actions on a wildland fire shall wear the provided protective clothing as directed by their fire department's procedures/guidelines.~~)) Definitions:

Urban wildfire: An uncontained fire requiring suppression action usually spreading through ground cover, vegetative fuels, brush, grass, and landscaping; often threatening residential and commercial structures within an urban environment with access to established roadways and water systems.

Wildland firefighting: The activities of fire suppression and property conservation in woodlands, forests, grasslands, brush, and other such vegetation or any combination of vegetation that is involved in a fire situation but is not within buildings or structures.

(1) WAC 296-305-07010 through 296-305-07018 shall only apply to personnel and agencies called on to provide services at any fire defined as a "wildland fire."

(2) Employers shall provide, at no cost to the employee, the protective equipment and protective clothing required by this chapter. Personnel performing suppression actions on a wildland fire shall wear and maintain the provided protective equipment and clothing as directed by their department's procedures and guidelines.

NEW SECTION

WAC 296-305-07002 Wildland fire personnel accountability. (1) Urban wildfire and wildland firefighters shall not be required to wear personal alerting devices except when wearing self-contained respiratory equipment.

(2) An officer shall maintain positive communication with any individual during those times that the member is assigned an ancillary firefighting task (examples would include, but are not limited to, scout, incident safety officer, or lookout).

(3) Urban wildfire and wildland firefighters engaged in direct fire attack shall work in teams of two or more unless they are in visual or voice contact with an officer.

(4) On initial attack fires, the incident commander shall

maintain the name and location of all personnel on the incident.

(5) On extended attack fires, the incident commander shall:

(a) Ensure the maintenance of the name and location of all personnel within their unit, division, or branch.

(b) Transfer/confirm personnel and unit information to the appropriate incident command system (ICS) staff as soon as possible.

(c) Announce transfer of command to all on scene.

(d) Ensure that personnel and unit information is recorded in the command post as soon as possible.

(6) When a fire "blows up" or makes a run that crosses planned control lines, officers with affected crews shall conduct an accounting of all personnel assigned to fire suppression and report any missing personnel to the incident commander.

NEW SECTION

WAC 296-305-07004 Heat-related illness prevention for wildland firefighters. (1) At all wildland fires, members shall be provided with a minimum of one quart per hour of electrolyte drinks or potable water.

(2) Officers at wildland fires shall be trained in the symptoms of heat-related disorders and shall observe their crews for such behavior. Appropriate action shall be taken in the event a crew member displays such symptoms.

(3) At all wildland fires, the incident commander shall consider the circumstances of the incident and make adequate provisions early in the incident for the rest, rehabilitation and hydration of all members operating at the scene. These provisions shall include fluid replenishment; other factors to consider are the extremes of the climatic conditions and other environmental factors that increase the firefighter's heat stress.

(4) One hour is the maximum time that individuals can work in high temperatures in structural protective clothing. Agencies may substitute crews to avoid the one-hour bench mark or increase crew size to complete the job in less than one hour.

(5) Members may be reassigned to return to duty throughout the incident cycle once a work-to-rest ratio (company and crew) rehabilitation rotation has been established.

Note: WAC 296-305-05004, Occupational exposure to heat and cold stress, may be of assistance while developing a plan, establishing training topics, and identifying environmental factors to consider for incident rehabilitation. The 2008 edition of NFPA 1584, Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises may also assist in establishing a rehabilitation plan.

NEW SECTION

WAC 296-305-07006 Equipment for wildland firefighting.

Note: Equipment is considered in this section as those items not configured as a part or portion of the vehicle body.

(1) All equipment on an apparatus shall be carried in an enclosed compartment or otherwise securely mounted on the apparatus and guarded, so that individuals cannot accidentally come in contact with equipment that may injure them.

(2) All hand tools, when not in use, shall have appropriate covers and guards to prevent injury.

(3) Firefighters whose duties require them to operate a power chain saw shall wear flexible ballistic nylon pads, sewn or otherwise fastened into the trousers, or other equivalent protection that shall cover the full length of the thigh to the top of the boot. Additional trouser, eye, hearing, face and head protection as required by this chapter shall be worn.

(4) Employees shall not use the chainsaw to cut directly overhead, or at a distance that would require the operator to relinquish a safe grip on the saw.

(5) Only personnel trained in firing equipment shall handle and use such equipment, and observe the manufacturers' recommendations.

NEW SECTION

WAC 296-305-07008 Aircraft operations for fighting wildland fires. (1) Whenever fixed wing and rotary aircraft are being utilized on an incident, personnel trained in air operations management shall be assigned as necessary by the incident commander/operations section chief.

(2) Prior to the initiation of air operations, all personnel operating in close proximity to an air drop shall be notified of such activity.

(3) Personnel shall not intentionally operate in an area where it can reasonably be expected that they may be hit with retardants or suppressants from fixed wing or rotary aircraft.

(4) Radio communications shall be maintained between an aircraft/air attack group supervisor and the appropriate ground officer.

(5) Personnel assigned to ride in fixed wing or rotary aircraft shall be briefed in the correct approach, riding and off-loading procedures for the particular type of aircraft.

Note: The NWCG aircraft passenger briefing/checklist can be found in the "*Incident Response Pocket Guide*" at http://www.nwcg.gov/pms/pubs/IRPG_Jan2004.pdf

NEW SECTION

WAC 296-305-07010 Training for wildland firefighting. (1) This section shall apply to all personnel and agencies called on to provide services at any fire defined as a "wildland fire."

(2) This section shall not apply to structural suppression crews' actions taken on urban wildfires.

(3) Suppression personnel assigned to a wildland fire shall be trained to a NWCG firefighter level II or a comparable class of training.

(a) "Comparable" training shall be determined by the employer.

(b) Nothing in this section shall preclude the use of local residents, affected parties or contracted firefighting resources to suppress wildland fires if they are under the direct supervision of a qualified fire line officer.

(4) Supervisory personnel shall be trained to a level commensurate to the position and responsibility they are to assume.

(5) All personnel will be trained and capable of demonstrating competency in utilizing the Incident Command System (ICS).

(6) All suppression personnel shall annually review the ten fire orders, the eighteen "watch out" situations, and the four common denominators of tragedy fires.

Note: The National Interagency Fire Center's "Wildland Fire Safety Training Annual Refresher (WFSTAR)" is a good resource for training topics related to wildland firefighting. These resources can be found at http://www.nifc.gov/wfstar/index.htm

NEW SECTION

WAC 296-305-07012 Personal protective clothing and equipment for wildland firefighting. (1) Protective apparel and equipment for wildland firefighters shall be designed to provide thermal protection for the firefighters against external heat sources with flame resistant clothing and equipment without creating high heat stress loads due to the prolonged work periods they experience. Members performing suppression on a wildland fire shall wear a provided protective clothing ensemble as directed by their employer. The combined protective clothing ensemble includes:

(a) Hardhat/helmet;

(b) Upper and lower torso clothing;

(c) Gloves; and

(d) Goggles.

The 2005 edition of NFPA 1977, Standard Protective Clothing and Equipment for Wildland Firefighting, shall serve as a guideline for determining performance characteristics of this clothing.

Note: This requirement does not apply to logging company employees whose primary job duty is not fire suppression, but are called upon to fight a wildland fire they discover.

(2) As a minimum, members shall wear provided leather lace-up boots of sturdy construction which shall extend upward a minimum of

eight inches above the top of the sole to the lowest point of the top of the boot. The sole of the boot shall be slip resistant.

(3) Additional personal protective equipment to be provided and worn shall include a fire shelter as directed by the incident commander. Persons provided fire shelters shall be trained in their use and shall receive refresher training at least annually.

(4) Wildland protective clothing shall comply with this standard.

(5) Personnel operating Type 1 or Type 2 engines assigned to structural protection shall carry structural firefighting ensembles for each firefighter on their assigned apparatus.

(6) Wildland personnel protective clothing shall not be used for interior structural firefighting.

(7) Personnel wearing full structural firefighting clothing while engaged in fighting wildland fires shall not expend more than one hour before rotating to rest and rehabilitation. Agencies may rotate crews to avoid the one-hour benchmark when containing and controlling wildland fires.

(8) Fire departments shall establish written procedures for the care, use, maintenance, and retirement criteria for wildland firefighting protective equipment in conjunction with the manufacturers' recommendations.

(9) Fire departments shall establish written procedures for the use of protective clothing and protective equipment while performing wildland firefighting activities.

(10) All wildland fire shelters purchased after the effective date of this rule must meet or exceed the United States Forest Services' Missoula Technology and Development Center (MTDC) design criteria and performance requirements for "new generation fire shelters."

NEW SECTION

WAC 296-305-07014 Apparatus standards for wildland firefighting. This section applies to wildland fire apparatus meeting the NIMS ICS typing of a Type 3 through Type 7 engine, and intended for use combating fires occurring in natural vegetation or occurring in natural vegetation and threatening improvements.

(1) In a wildland fire, an engine may provide the primary protection for a crew in the event of unexpected fire behavior or an action that places the engine crew in a position of being exposed to heat and smoke.

(2) Apparatus speed shall be determined to be safe if in the judgment of the officer in charge, the following are taken into consideration:

(a) The particular wildland fire attack methods being utilized including, but not limited to, the nature of the fire, the type of terrain, weather conditions, equipment conditions, and whether

personnel are positioned in wildland firefighting enclosures;

(b) The forgoing provision shall not relieve a driver from the duty to drive with due regard for the safety of all persons in all conditions;

(c) Nor shall such provision protect the driver from the consequences of his/her reckless disregard for the safety of others.

(3) Because of the sheltering offered by an engine, the following minimum standards shall be complied with:

(a) The number of individuals working/assigned as an engine crew shall not exceed the manufacturer's cab capacity.

(b) Any time an engine is moved when not directly attacking a fire, personnel shall ride in the vehicle's enclosed cabin area, in a seat-belted location, or be off the vehicle.

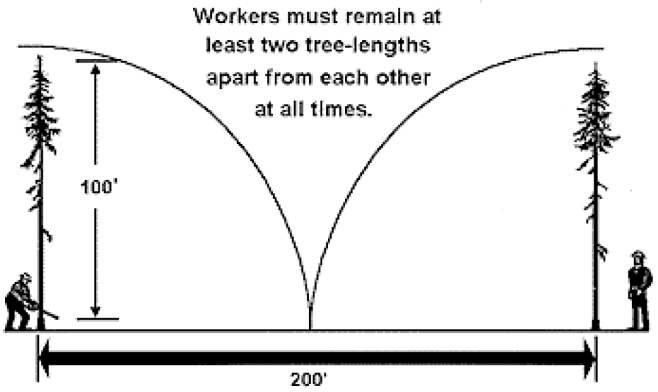
(c) Any time engines are used in a mobile attack configuration, and personnel other than the driver are on the apparatus, personnel shall ride in the manufacturer's enclosed cabin, or use the personnel restraints and enclosures identified in WAC 296-305-07018.

(d) All personnel working on or around engines in a ground mobile attack mode or in riding positions shall have visual or voice contact with the driver.

(e) Vehicles operating in smoke or dust shall have their headlights, and if so equipped, a flashing or rotating roof light illuminated.

NEW SECTION

WAC 296-305-07016 Falling and equipment in forest lands.



(1) The employer must assign work areas so that:

(a) Trees cannot fall into an adjacent occupied work area;

(b) The distance between work areas is at least two tree lengths of the trees being fell (see Figure 1: Distance Between Work Areas);

(c) The distance between work areas reflects the degree of

slope, the density of the growth, the height of the trees, the soil structure and other hazards reasonably anticipated at the worksite; and

(d) A distance of more than two tree lengths is maintained between work areas on any slope where rolling or sliding of trees or logs is reasonably foreseeable.

Exception: This rule does not apply to a team of cutters working on the same tree.

(2) Before falling or bucking, conditions such as, but not limited to, the wind, the lean of tree, dead limbs, and the location of other trees, must be evaluated by the cutter and precautions taken so a hazard is not created for an employee.

(3) Employees must not approach a cutter closer than two tree lengths of trees being felled until the cutter has acknowledged that it is safe to do so.

(4) A competent person, properly experienced in this type of work, must be placed in charge of falling and bucking operations. Inexperienced workers must not be allowed to fall timber, buck logs or windfalls unless working under the direct supervision of an experienced cutter.

(5) Before an employee falls or bucks any tree:

(a) A sufficient work area must be swamped.

(b) The cutter must plan and clear an escape path.

(i) The escape path must extend diagonally away from the expected felling line unless such an escape path poses a greater hazard than an alternate escape path.

(ii) An escape path must be used as soon as the tree or snag is committed to fall, roll, or slide.

(6) If a cutter has determined a tree cannot be safely fell, the work must stop until the cutter has conferred with a supervisor or an experienced cutter and determined the safest possible work method or procedure.

(7) The person in charge of cutting crews must regularly inspect the work of the cutting crews and is responsible to ensure the work is performed in a proper and safe manner.

(8) All cutters must carry or have in near proximity at all times:

(a) An axe or suitable tool for driving wedges.

(b) A minimum of two wedges.

(c) A first-aid kit.

(9) Where felled trees are likely to roll and endanger workers, cutting must proceed from the bottom toward the top of the slope, and uphill from previously fell timber.

(10) A cutter must not be placed on a hillside immediately below another cutter or below other operations where there is probable danger.

(11) Cutters must be informed of the movement and location of other employees placed, passing, or approaching the vicinity of trees being fell.

(12) Trees must be fell into the open whenever conditions permit.

(13) Domino falling of trees, including danger trees, is prohibited. Domino falling does not include the falling of a

single danger tree by falling another single tree into it.

(14) Undercuts large enough to safely guide trees and eliminate the possibility of splitting must be used on all trees over six inches diameter at breast height.

(15) A cutter must place an adequate undercut and leave enough holding wood to ensure the tree will fall in the intended direction.

(16) The two cuts that form the undercut must not cross where they meet.

(17) The undercut must not be made while other workers are in an area into which the tree could fall.

(18) A backcut must be made in each tree being fell.

(a) The backcut must be as level as possible;

(b) The backcut must leave enough hinge wood to hold the tree to the stump during most of its fall so that the hinge is able to guide the tree's fall in the intended direction; and

(c) The backcut must be above the level of the horizontal facecut to provide an adequate platform to prevent kickback.

(19) Trees with facecuts and/or backcuts must not be left standing unless all the following conditions are met:

(a) The cutter clearly marks the tree;

(b) Discontinues work in the hazardous area;

(c) Notifies all workers who might be endangered; and

(d) Takes appropriate measures to ensure that the tree is safely fell before other work is undertaken in the hazardous area.

(20) Undercuts and backcuts must be made at a height above the highest ground level to enable the cutter to safely begin the cut, control the tree, and have freedom of movement for a quick escape from a falling tree.

(21) Lodged trees must be clearly marked and identified by a predetermined method and all persons in the area must be instructed not to pass or work within two tree lengths of the trees except to ground them.

(22) On slopes over fifty percent grade, tree(s) must at least be quartered to a degree that prevents employees from being exposed to the possibility of sliding or rolling trees or logs.

(23) Each danger tree must be carefully checked for signs of loose bark, broken branches and limbs, or other damage before they are fell or removed. Accessible loose bark and other damage that may create a hazard for an employee must be removed or held in place before falling or removing the tree. When a danger tree has elevated loose bark that cannot be removed, the buddy system must be used to watch for and give warning of falling bark or other hazards.

(24) Danger trees that are unsafe to cut must be blown down with explosives or fell by other safe methods.

(25) To avoid use of wedges, which might dislodge loose bark or other material, danger trees must be fell in the direction of lean unless other means (mechanical or dynamite) are used.

(26) All bosses and supervisors must survey their assigned work area for danger trees and mitigate them prior to crews commencing work in that area.

Definition.

Danger trees: *Any tree of any height, dead or alive, that presents a hazard to workers because of rot, root, stem or limb damage, lean, or any other observable condition created by natural process or man-made activity.*

(27) All fallers and faller bosses must be trained in the type of timber they will be falling prior to being assigned to a falling crew.

(28) All dozers, tractors, and similar machines in use where limbs or brush may injure the operator must be guarded as follows:

(a) Shear or deflector guards must be installed on each side of the vehicle at an angle leading forward and down from the top front edge of the canopy of the vehicle, which will tend to slide the brush or limbs up and over the top of the canopy.

(b) Open mesh material with openings of a size that will reject the entrance of an object larger than one and three-quarter inches in diameter, must be extended forward as far as possible from the rear corners of the cab sides to give the maximum protection against obstacles, branches, etc., entering the cab area.

(c) Deflectors must also be installed ahead of the operator to deflect whipping saplings and branches.

(d) Deflectors must be located so as not to impede entrance to or exit from the compartment area.

(e) The floor and lower portion of the cab must be completely enclosed with solid material, except at entrances, to prevent the operator from being injured by obstacles which otherwise could enter the cab compartment.

(29) All dozers used on terrain that has sufficient slope or of such material as to hinder the movement of the dozer must have an attached winch or drum line that is in good working order. When such a situation is encountered, the dozer assistant must be knowledgeable in the operation of the dozer, winch or drum line operations, the hazards associated with winching or drum line operations, and line anchor selection.

(30) Operators must operate and control their machines in a safe manner and avoid operations in areas where machine stability may not be maintained.

(31) Employee work areas must be spaced and employee duties organized so the actions of one employee do not create a hazard for any other employee.

NEW SECTION

WAC 296-305-07018 Occupant restraints and enclosures for wildland firefighting. (1) While in motion, the driver and passengers in the cab shall wear seat belts.

(2) Seat belts shall comply with the U.S. Department of Transportation, Part 49 C.F.R., Section 571, Standards 209 and 210.

(3) Passengers on wildland vehicles shall use a safety belt or a short lanyard securely connected to the apparatus.

(a) Safety belts or lanyards shall be secured to an anchorage or structural member capable of supporting a minimum dead weight of one thousand five hundred pounds per person or a 4:1 safety factor.

(b) Safety lanyard lengths shall not allow for the firefighter to reach the ground.

(4) Safety belts shall be constructed and maintained in compliance with ANSI A10.14-1975.

(5) Lanyards shall be a minimum of one-half inch nylon or equivalent with a nominal breaking strength of five thousand four hundred pounds.

(6) The structural components for wildland vehicle enclosures shall be constructed of metal tubing not less than one inch in diameter, capable of supporting a minimum of one thousand five hundred pounds per person, a 4:1 safety ratio or the equivalent. This applies to vehicle enclosures manufactured after the effective date of this chapter.

(7) The enclosure shall be constructed to a minimum toprail height of forty-two inches and shall include a midrail and either a toeboard at least four inches high or a bottom rail a maximum of six inches from the platform.

(8) Access door(s) and latching mechanisms to tail board enclosures shall be constructed and mounted to achieve structural integrity comparable to the remainder of the enclosure.

(9) A strap or butt-bar utilized for the fourth side of the enclosure shall be a minimum of a four-inch nylon strap capable of supporting one thousand five hundred pounds dead weight.

(10) While actively fighting a fire in the mobile attack mode, firefighters shall either remain in a three-sided enclosure and use a safety lanyard, or remain in a four-sided enclosure.

AMENDATORY SECTION (Amending WSR 96-11-067, filed 5/10/96, effective 1/1/97)

WAC 296-305-08000 Appendices. These appendices are nonmandatory and are included to reference and information purposes only.

((~~Appendix A -- Recommended cleaning procedures for protective turnout clothing and station uniforms.~~

~~(1) Protective clothing should be washed separately from other garments.~~

~~(2) Do not use chlorine bleach (sodium hypochlorite) as this will adversely affect the tear strength of your protective clothing and lessen its life. Oxygenated bleaches such as Liquid Clorox II, and Vivid may be used.~~

~~(3) Protective clothing may be spot treated or pretreated for hard to remove stains with products such as liquid Spray and Wash,~~

~~liquid Tide, liquid dishwashing detergent or liquid Shout.~~

~~**Note:** The use of brand names is intended only to indicate a type of cleaning agent. All products listed by name must be used in accordance with the manufacturer's recommendations. Use of a brand name does not constitute an endorsement nor does omission of a particular product brand imply that a product is inferior. Solvents should not be used as they lessen the life of the garment, reduce visibility on the trim, and degrade leather.~~

~~(4) When pretreating or spot treating a garment, apply the detergent onto the soiled area. Gently rub the fabric together until a light foam appears on the surface. Use a soft bristle brush (toothbrush type) and scrub the area for about one and one-half minutes. Reapply liquid detergent onto the soiled area and place the garment into the washing machine.~~

~~(5) When cleaning turnout clothing the garment should be turned inside out, the hooks and dees fastened, the liner removed, and the garment placed in a laundry bag. These instructions can be used for cleaning any wash loads in a large capacity (sixteen gallon) top loading or front loading machine. Load the machine with any one of the following combinations - do not overload:~~

~~(a) One protective coat and one pair of trousers.~~

~~(b) Two protective coats.~~

~~(c) Two protective pair of trousers.~~

~~**Note:** Heavily soiled garments should be treated as outlined in (4).~~

~~(6) While the washing machine is filling with hot water (temperature between 120 degrees F and 130 degrees F), add one-half cup (four ounces) of liquid oxygenated bleach and one cup (eight ounces) of liquid detergent.~~

~~(a) Fill washing machine to highest water level,~~

~~(b) Add garments to be washed,~~

~~(c) Set washing machine for normal cycle, cotton white, or similar setting.~~

~~(d) Machines should be programmed for a double rinse. If the machine will not automatically double rinse, a complete second cycle can be run without adding detergent or oxygenated bleach. Double rinse helps remove any residual dirt and ensures detergent removal.~~

~~(e) Remove garments from washing machine when done and dry by hanging in a shaded area that receives good cross ventilation, or hang on a line and use a fan to circulate air. A water extractor may be utilized.~~

~~(f) After the garments have been removed, run the laundry machine empty or with a dummy (rag) load with detergent at least once; but preferably several times to purge the machine of any residue.~~

~~(7) Inspect and examine the trim as to the effectiveness of the trim performance under daytime and nighttime conditions. It is important that a high visibility be maintained at all possible orientations to the light source.~~

~~(8) The above procedures can be used for any article of clothing issued that is not contaminated with bloodborne pathogens or any other infectious disease. For clothing exposed to hazardous materials, consult the manufacturer or the appropriate decontamination document.~~

~~(9) Procedure for clothing (except wool clothing) that has~~

~~been exposed to bloodborne pathogens or infectious diseases.~~

~~(a) Disposable gloves should be used when handling contaminated clothing.~~

~~(b) Each station should have an area designated for the cleaning of equipment. The area designated should not be near kitchen, living, sleeping, or personal hygiene areas.~~

~~(c) Contaminated clothing should be handled as little as possible with a minimum of agitation. Contaminated clothing should be cleaned as soon as possible. When the on-coming shift has to clean contaminated clothing for the off-going shift, all contaminated clothing should be stored in red biohazard bags, properly sealed to prevent the spread of potential contamination.~~

~~(d) To clean clothing that has been contaminated, a germicidal detergent should be used. Such germicidal should be EPA approved and effective as staphylocidal, pseudomonacidial, virucidal, and fungicicial detergent.~~

~~(e) The germicidal detergent is intended to be a complete disinfecting and cleaning agent when mixed according to the manufacturer's directions. Do not add any chemical or detergent to the germicidal solution. After the clothing has been disinfected the clothing should be washed as outlined under normal use.~~

~~(f) Wool uniforms should be spot cleaned, placed in the red biohazard bags and sent to an industrial laundry for cleaning.~~

~~(10) Helmets, gloves, hoods, and boots should be cleaned as follows:~~

~~(a) Preclean using a germicidal solution and scrub all contaminated areas with a soft bristled brush. Rinse with clean water. Dispose of the precleaning solution by pouring it down the drain in the cleaning area.~~

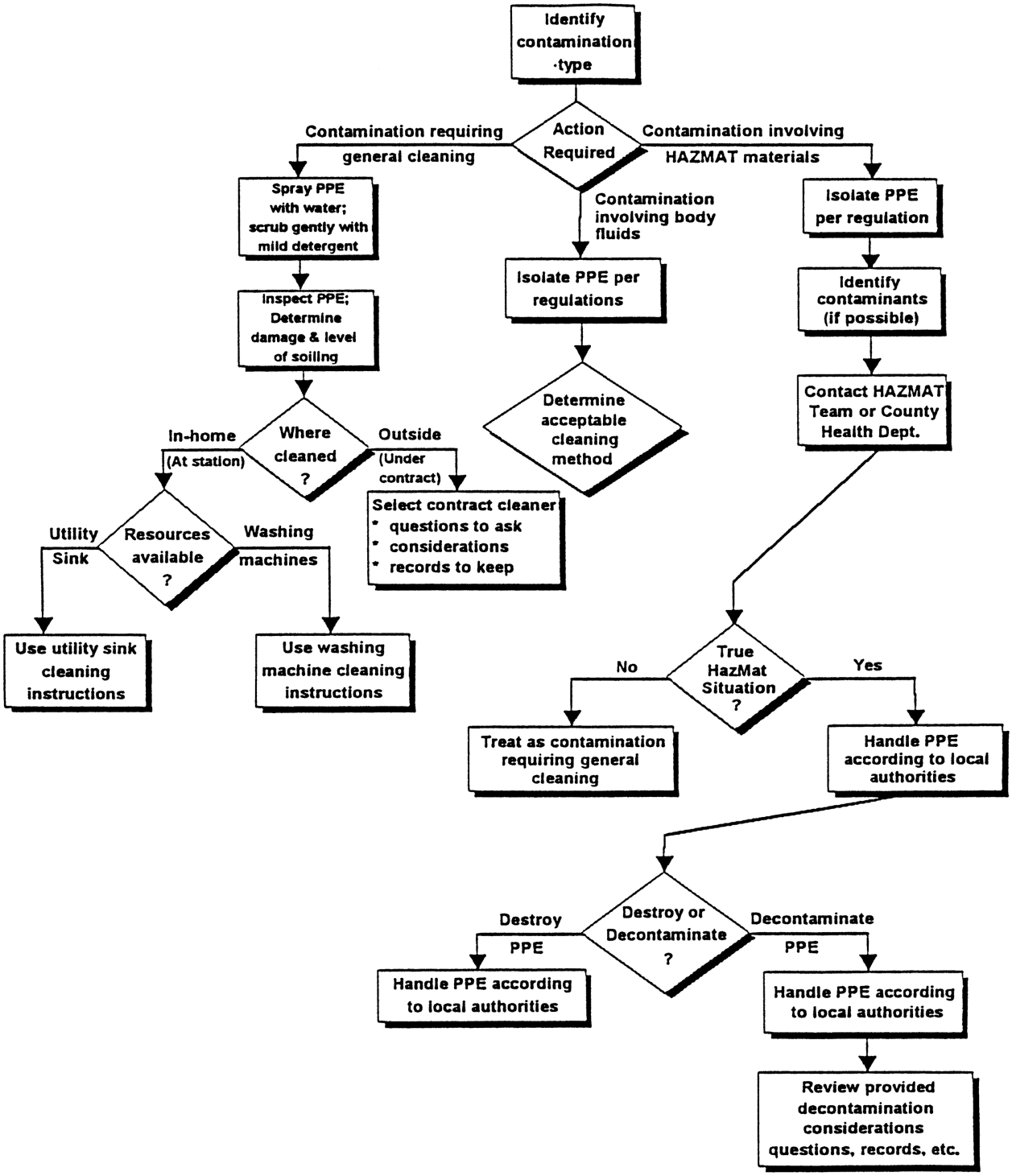
~~(b) Using a fresh germicidal solution, repeat the above procedure allowing the areas to remain wet for a minimum of fifteen minutes. Double rinse with clean water and air dry. Dispose of the solution by pouring it down the drain in the cleaning area.~~

~~(c) For gloves, use a third fresh water rinse, squeezing and rinsing several times. Dispose of the solution by pouring it down the drain in the cleaning area.~~

~~(11) Front loading industrial laundry machines are designed for the type of cleaning required for protective clothing. Machines are available from Milnor, Model 30015C6M-AAC, for washing; or a Huebsch Originator, Model 3705H, for a dryer.~~

~~**Note:** The use of brand names is intended only to indicate a type of cleaning equipment. All products listed by name must be used in accordance with the manufacturer's recommendations. Use of a brand name does not constitute an endorsement nor does omission of a particular product brand imply that a product is inferior.~~))

((~~STRICKEN GRAPHIC~~



PPE Cleaning and Decontamination Decision-Making Process

~~STRICKEN GRAPHIC~~))

Appendix B -- Life safety ropes. (1) Life safety rope may be significantly weakened by abrasion, misuse, contamination, wear, and stresses approaching its breaking strength, particularly impact loading. Since there are no approved methods to service test a rope without compromising its strength, rope rescue and training

operations should be carefully observed and monitored for conditions that could cause immediate failure or result in undetectable damage to the rope.

(2) If a rope has been used in a situation that could not be supervised or where potential damage may have occurred, it must be removed from service and destroyed.

(3) It is important that ropes be inspected for signs of wear by qualified individuals after each use. If indication of wear or damage are noted, or if the rope has been stressed in excess of the manufacturer's recommendation or impact loaded, it must be destroyed.

(4) The destruction of the rope means that it must be removed from service and altered in such a manner that it could not be mistakenly used as a life safety rope. This alteration could include disposing of the rope, or removal of identifying labels and attachments, and cutting the rope into short lengths that could be used for utility purposes.

(5) The assignment of "disposable" life safety ropes to members or to vehicles has proved to be an effective system to manage ropes that are provided for emergency use and are used infrequently. Special rescue teams, which train frequently and use large quantities of rope, should include members who are qualified to manage and evaluate the condition of their ropes and determine the limitations upon their reuse.

Appendix C -- Decontamination. (1) A decontamination area should be established whenever civilians or fire department personnel have had known or suspected exposure to toxic chemicals.

(2) Such decontamination areas should be established before any personnel are allowed to enter the "Hot" zone.

(3) The decontamination area should be set up using the following guidelines:

(a) The decontamination area should be located uphill, upwind and at a right angle to the "Hot" zone.

(b) The decontamination area entry/exit point and boundaries should be clearly marked using flagging tape, ropes, cones, etc.

((~~(3) Visqueene~~)) (4) 4 to 6 mil poly sheeting should be spread on the ground in the decontamination area to control runoff.

((~~(4)~~)) (5) The decontamination process is divided into stations. In most cases it will not be necessary to utilize all the stations. The decision to use all or part of the stations should be based on the following factors:

(a) The hazards associated with the product involved.

(b) The estimated levels of contamination.

(c) The type of protective equipment worn by contaminated responders.

(d) Recommendations from outside sources such as, but not limited to CHEMTREC, the agency for toxic substance and disease registry, poison control centers or the manufacturer of the product.

((~~(5)~~)) (6) The following is a list of all the stations in a nine-step decontamination area set up for a worst case scenario involving a hazardous materials response team member whose chemical

suit has been breached:

(a) Station #1 - Segregated equipment drop: Contaminated equipment that will be used again in the "Hot" zone, disposed of, or decontaminated at a later time or place, will be deposited here.

(b) Station #2 - Wash/rinse: Entry personnel will be washed with appropriate decontamination solution and rinsed with water by attendant(s) to remove gross contamination. This station may consist of multiple wash/rinse steps depending on the severity of the hazards involved.

(c) Station #3 - Outer protective clothing removal: Attendant(s) will remove the outer protective clothing from entry personnel being cautious to avoid touching the inside of the suit while removing it. Protective clothing that has been removed at this step shall be placed in an overpack or other appropriate container for later testing and further decontamination, if needed.

(d) Station #4 - Removal of SCBA: The entry personnel are assisted in removing their SCBA by an attendant. The SCBA facepiece should be left in place and the low pressure hose held away from any potentially contaminated inner clothing.

(e) Station #5 - Removal of inner clothing: All clothing worn inside the suit must be removed in cases where the suit has been penetrated and the entry personnel are contaminated.

(f) Station #6 - Personal shower: Entry personnel should wash and rinse entire body with mild soap and water. Contain runoff water if possible, however this is an emergency situation and containment is secondary to removing contaminants from personnel.

(g) Station #7 - Drying off: Entry personnel that have showered should dry off using towels or whatever is available. Items used should be placed in an appropriate container for disposal. Emergency clothing such as disposable coveralls should be provided.

(h) Station #8 - Medical evaluation: Entry personnel should be evaluated by paramedics - checking vital signs including temperature and level of consciousness. Records of the evaluation must be kept and given to the team safety officer to be included in the members exposure records.

(i) Station #9 - Transport to emergency room: Any personnel exhibiting any signs or symptoms of exposure should be transported to the emergency room for evaluation and observation.

((~~(6)~~)) (7) The hazardous materials response team van should carry premeasured packets of decontamination solution mixes for the purpose of decontaminating chemical protective clothing and other equipment at the scene of a hazardous materials emergency. These solutions are not to be used to decontaminate turnouts or exposed skin under any circumstances.

((~~(7)~~)) (8) The primary solution used will be a simple detergent and water mixture. Other special decontamination solution mixes will only be used in those situations when it is determined that the detergent and water solution is inappropriate.

((~~(8)~~)) (9) Contaminated civilians that are exhibiting signs or symptoms of exposure should be treated as patients. Due to the risk of secondary contamination, all patients should undergo emergency field decontamination at the scene before being evaluated

by medical personnel or being transported to the emergency room. Medical personnel should not accept any patient that has not been grossly decontaminated.

((~~(9)~~)) (10) The emergency field decontamination process should consist of removing the clothing from all affected body parts of the exposed person and flushing with copious quantities of water from a garden hose or low pressure one and three-quarter inch handline to remove gross contamination. Patients will be flushed for up to fifteen minutes, depending on the material recommendations on patient decontamination.

((~~(10)~~)) (11) Members performing patient decontamination should wear, at a minimum, full turnouts and SCBA and should avoid splashes and overspray to the extent possible. They should also undergo decontamination when they have finished decontaminating the patient.

((~~(11)~~)) (12) Containment of the runoff water from patient decontamination is not required. Do not delay decontamination of patients to set up containment. However, some form of privacy screen should be erected to protect the modesty of those being decontaminated.

((~~(12)~~)) (13) Responders that are contaminated in the process of performing rescue or other tasks will, at the minimum, be flushed with water for a minimum of one minute. Further flushing will be performed depending on the extent of contamination and subsequent adverse health effects.

((~~Appendix D--Wildland Firefighting Equipment Typings.~~

	~~PUMP RATE GMP MINIMUM~~	~~TANK CAPACITY IN GALLONS~~
~~PUMPER/BRUSH ENGINE:~~		
~~ICS Type 7~~	~~20~~	~~125~~
~~ICS Type 6~~	~~50~~	~~200~~
~~ICS Type 5~~	~~50~~	~~500~~
~~ICS Type 4~~	~~70~~	~~750~~
~~ICS Type 3~~	~~120~~	~~300~~
~~PUMPER/CLASS A RATED:~~		
~~ICS Type 2~~	~~500~~	~~400~~
~~ICS Type 1~~	~~1000~~	~~400~~

~~Ten standard fire orders~~

~~Fight fire aggressively but provide for safety first.~~

~~Initiate all action based on current and expected fire behavior.~~

~~Recognize current weather conditions and obtain forecasts.~~

~~Ensure instructions are given and understood.~~

~~Obtain current information on fire status.~~

~~Remain in communication with crew members, your supervisor, and adjoining forces.~~

~~Determine safety zones and escape routes.~~

~~Establish lookouts in potentially hazardous situations.~~

~~Retain control at all times.~~

~~Stay alert, keep calm, think clearly, act decisively.~~

~~Four common denominators of tragedy fires~~

~~1. Small fires or relatively quiet sectors of large fires.~~

~~2. Light fuels.~~

~~3. Steep slopes.~~

~~4. Change in wind speed and/or direction.~~

~~"Watch Out" Situations~~

~~1. Fire not scouted and sized up.~~

~~2. In country not seen in daylight.~~

~~3. Safety zones and escape routes not identified.~~

~~4. Unfamiliar with weather and local factors influencing fire behavior.~~

~~5. Uninformed on strategy, tactics and hazards.~~

~~6. Instructions and assignments not clear.~~

~~7. No communication link with crew members or supervisor.~~

~~8. Constructing line without safe anchor point.~~

~~9. Building fire line downhill with fire below.~~

~~10. Attempting frontal assault on fire.~~

~~11. Unburned fuel between you and fire.~~

~~12. Cannot see main fire, not in contact with someone who can.~~

~~13. On a hillside where rolling material can ignite fuel below.~~

~~14. Weather becoming hotter and drier.~~

~~15. Wind increases and/or changes direction.~~

~~16. Getting frequent spot fires across line.~~

~~17. Terrain and fuels make escape to safety zones difficult.~~

~~18. Taking nap near fire line.~~

~~National Wildlife Coordinating Group Firefighter II Performance Tasks~~

~~1. Agency policy for wildfires.~~

~~2. Extended attack fire orientation and dispatch.~~

~~3. Inmate orientation.~~

~~4. Fire line organization.~~

~~5. Tools and equipment.~~

~~6. Firing devices.~~

~~7. Wildland water delivery systems and pump use.~~

~~8. Introduction to wildland fire behavior.~~

~~9. Fire line safety.~~

~~10. Size up and initial attack.~~

~~11. Fire line construction.~~

~~12. Wildland fire investigation.~~

~~13. Structure protection.~~

~~14. Use of foam.~~

~~15. Mop up.~~

~~16. Compass use.~~

~~17. Map use.~~

~~18. Radio communications.~~

~~19. Incident command system.~~

~~20. Basic first aid.~~

~~21. Hazardous materials awareness.~~))

Appendix D

Guidelines for Managing Two-in/Two-out

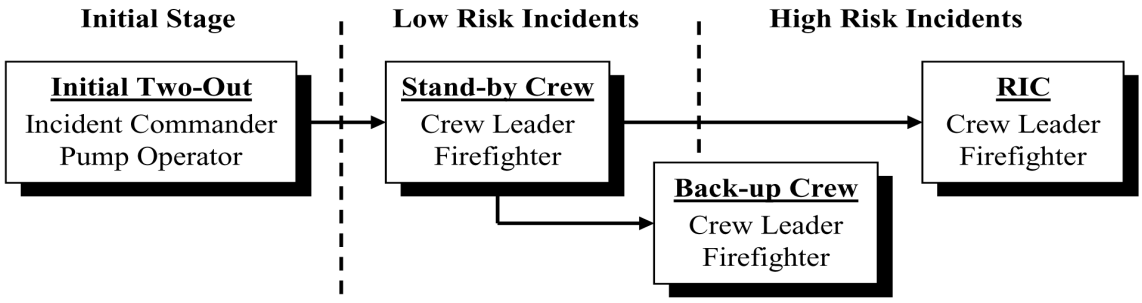
Rapid Intervention (Two-in/Two-out)

Incident Commanders must maintain rapid intervention capability (Two-out) so that, should the need arise, a rescue crew is readily available to provide for the rescue of any responders operating within a hazard area (Two-in). A hazard area is defined as any area that requires the use of PPE or in which a responder is at risk of becoming lost, trapped, or injured by the environment or structure. This includes entering a structure reported to be on fire, operating in close proximity to the structure during exterior operations, confined space operations, rope rescue, haz-mat, etc.

> Rapid Intervention is the **systematic management** of response to a "Mayday" situation where the need for an immediate rescue of emergency responders has become necessary.

Responsibility – Incident Commanders are ultimately responsible for the incident outcome and the safety of all responders operating at the scene. Therefore, Incident Commanders must maintain a constant balance between the urgent need to perform critical tasks and the personal safety of the responders performing those tasks. To support this, and before responders can be assigned to operate within a hazard area, Incident Commanders must establish a two-out resource capable of providing rapid intervention. Incident Commander must maintain this capability throughout the incident until the risk to responders has been sufficiently mitigated.

Providing Two-Out Capability – The methods for providing Two-out should match the incident's degree of potential risk and can evolve as resources become available. The following flowchart provides a decision-making guideline, illustrating a model sequence for determining how, and to what extent. Two-out capability should be provided so that it corresponds with the incident stage, size, complexity, and level of risk to responders.



For high risk incidents, a RIC should be assigned, given time to prepare, while the Stand-by Crew provides two-out. Once ready, the RIC replaces the Stand-by Crew who can move up to Back-up.

Two-Out Staffing Options

Initiating Two-out – During the "Initial Stage" of an incident, the two-out provision may be provided as a secondary responsibility by the Pump Operator and the Incident Commander.

> The "Initial Stage" of an incident is defined as the stage that encompasses the tasks undertaken by the first arriving company with only one crew assigned or operating in the hot zone.

Once a second crew is assigned to operate within the hazard area, the incident is no longer in the "Initial Stage". With multiple crews operating in a hazard area, the Incident Commander and Pump Operator's ability to realistically function as an effective two-out rescue crew drastically diminishes. At this point, the Incident Commander shall assign a dedicated crew of two-out, which may be in the form of a Stand-by Crew or a RIC.

The IC and Pump Operator can only initiate Two-out during the Initial Stage

Stand-by Crew - A Stand-by Crew is assigned when the Incident Commander opts not to assign a RIC Crew. This would be done as a short term assignment for incidents that can be quickly and safely mitigated because they are contained, limited to contents, and are of minimal risk to responders. Examples include a smoldering mattress, an appliance fire, or a stovetop fire.

Standby Crews are assigned as a short term two-out provision for low risk incidents

A Stand-by Crew can also be assigned as an interim step while waiting for a RIC to arrive and/or assemble. A Stand-by Crew consists of at least two firefighters held outside the hazard area, available for immediate assistance or rescue of an entry crew. Once relieved by a RIC, the Stand-by Crew may be assigned to become a Back-up Crew.

Rapid Intervention Crew (RIC) – Functionally synonymous to a Stand-by Crew, a RIC is assigned for high risk incidents involving sustained operations to replace the Stand-by Crew. A RIC consists of at least two firefighters held outside the hazard area available for immediate assistance or rescue of an entry crew operating within the hazard. It must be recognized that a RIC alone may not be adequate when it comes to actually conducting a rescue of a trapped firefighter. Therefore, it must be understood that the primary role of a RIC is only to initiate the rescue effort.

RIC should be assigned to replace the Stand-by Crew during high risk incidents

The primary role of a Stand-by Crew or RIC is to:

1. **Locate** and gain access to the firefighter in peril;
2. Provide them with **emergency air** management; and to
3. Provide **reconnaissance** information to the Incident Commander for the coordination of additional crews assigned to support the rescue effort. **Rescue if able.**

RIC effectiveness is limited to only reacting to a rescue situation

Back-up Crews

Back-up Crews are strategically pre-positioned in the immediate vicinity of crews operating in areas with a high level of risk. A pre-positioned back-up crew is the most familiar with the other crew's location, situation, the hazards they are exposed to, and the immediate surroundings. A back-up crew's placement also positions them to better recognize a potential or developing "Mayday" situation, enabling them to immediately intervene, thus averting a "Mayday" situation.

Back-up Crews are intended to provide a crew of at least two members positioned offensively with a charged hose line and/or other applicable equipment. Back-up Crews operate with three given priorities. In coordination with the Incident Commander and in order of priority, they are assigned for the specific purpose of:

Back-up Crews provide protection because they are positioned in a manner that allows them to initiate actual intervention

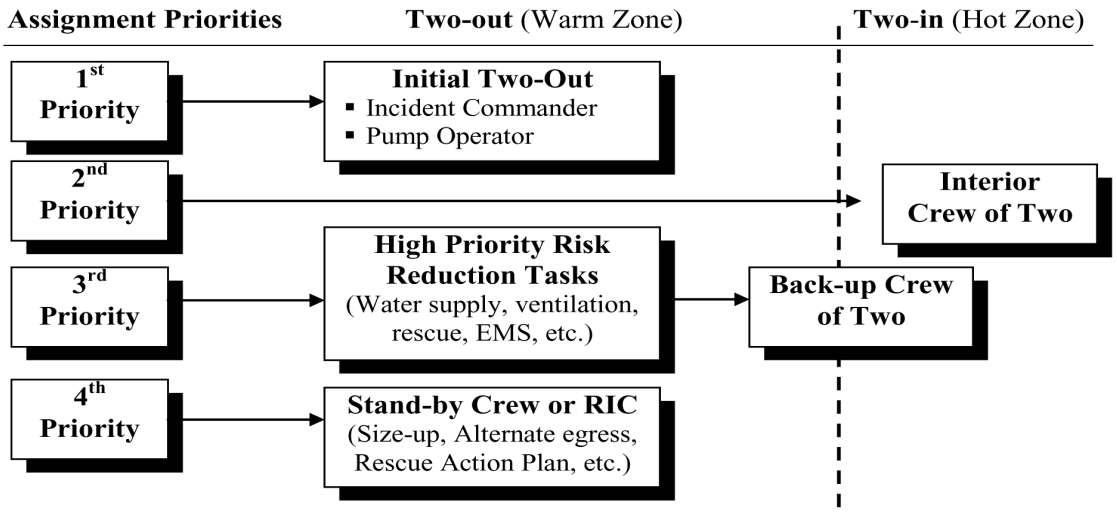
1. As dictated by fire and/or other hazardous conditions, protecting the means of egress for interior crews;
2. Serving as the Incident Commander's eyes and ears specifically to assess conditions within the Hot Zone, conveying risk assessment reconnaissance information to the Incident Commander, monitoring conditions, and if conditions begin to deteriorate, immediately initiating the appropriate form of intervention;
3. If priorities 1 and 2 are accounted for, conducting a primary search, or supplement initial fire attack efforts.

Although protecting egress is the Back-up Crew's primary responsibility, they may also support entry crews with hose advancement, victim removal, monitoring fire extension, etc.

As a general guideline, Back-up Crews are assigned with the following progression:

- If an entry crew is assigned to enter the hazard area, a Stand-by Crew or RIC must also be assigned as the two-out provision for providing rapid intervention capability.
- If a RIC has been assigned, the Stand-by Crew can move up to become the Back-up Crew.

Deployment Order of Priority (Structure Fire Example) – Though maintaining Two-in/Two-out is a requirement, how the Incident Commander chooses to do so is flexible. The following flowchart provides a decision-making guideline for planning tactical assignments while maintaining Two-in/Two-out. The following sequence is intended to guide crew deployment in a manner that balances the need to initiate and establish a Two-out crew while also assigning crews to critical incident mitigation tasks within the hazard area.



Adjacent and Additional Crews

Case studies prove that a Stand-by Crew or RIC operating alone may not be sufficient when rescuing a trapped firefighter when extrication and/or rescue are required. Rescue efforts will likely require the support of additional crews to provide extrication equipment and rescue personnel. To create these supporting crews the Incident Commander can reassign adjacent crews or assign additional crews, generally a combination of the two.

Adjacent Crews – When a crew declares a "Mayday", the rescue efforts initiated by other crews operating in close proximity is nearly as effective as what a back-up crew can provide. Adjacent crews may be in a position to suspend their current assignment and immediately initiate rescue efforts. But if an adjacent crew is performing an activity that will protect rescue efforts, they should not be re-assigned if suspending their current assignment would potentially compromise this protection. Re-assignment of adjacent crews does not preclude the deployment of the Stand-by Crew or RIC. The primary role of the Stand-by Crew or RIC is to locate the firefighters in peril, provide them with emergency air management, and to facilitate their rescue.

Crews must not self-dispatch!

Additional Crews – When a crew declares a "Mayday, Mayday, Mayday", additional crews can be assigned by the Incident Commander to support rescue efforts or to replace adjacent crews who were re-assigned to the rescue effort. Additional crews will generally be deployed from a staging area.

Resource Reserve – Incident Commanders should maintain a reserve of resources so that if a rapid intervention must be initiated, they have enough resources to support the rescue effort while continuing to sustain the original incident operations. Often this means calling for additional resources, second, or third alarms. Early consideration should be given to assure these reserve resources are on scene and available when needed.

Appendix E--Standard apparatus operation communications. When firefighters ride in the tiller's seat or other remote location, an electrical signal or voice communication should be installed between the tiller's seat, work station, and driver's compartment.

(1) These signals should be used between the driver and the firefighters:

(a) One long buzz means stop;

(b) Two buzzes mean forward;

(c) Three buzzes mean reverse.

(2) Before any of the above functions are undertaken, with the exception of stopping, the same signal must be both sent and received. The driver should not act without sending and receiving a confirming signal.

(3) When using hand signals, these signals are as follows:

STOP

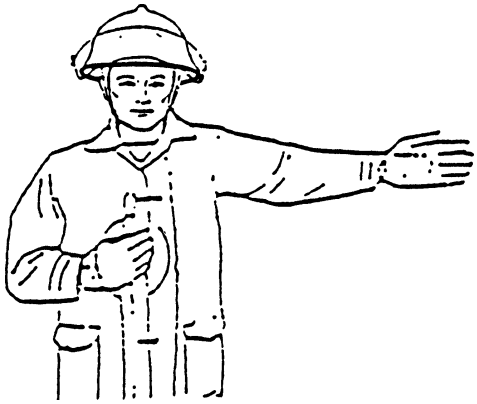
Hold hand to the side, shoulder high, exposing palm to the driver. At night, hold hands in the same manner, with the addition of a flashlight in one hand ((~~shinning~~)) <u>shining</u> at the driver. This will indicate an immediate STOP.

STOP

Hold hand to the ((~~die~~)) side, shoulder high, exposing palm to the driver. At night, hold hands in the same manner, with the addition of a flashlight in one hand shining at the driver. This will indicate an immediate STOP.

RIGHT OR LEFT

Point in the desired direction with one hand and motion in a circular "come-on" gesture with the other hand at the chest level. At night direct a flashlight beam at the hand pointing in the desired direction.



RIGHT OR LEFT

Point in the desired direction with one hand and motion in a circular "come-on" gesture with other at the chest level. At night, direct a flashlight beam at the hand pointing in the desired direction.

DIMINISHING CLEARANCE

Hold the hands to one side of the body indicating the approximate amount of distance the apparatus is from the obstacle. Close hands accordingly as the driver slowly maneuvers the apparatus to point where the signal indicates immediate STOP. Always allow enough for drivers reaction time.

At night, indicate in the same manner with the flashlight in the upper hands and beam directed at the palm of the other. On STOP, cover the flashlight beam with the hands.

DIMINISHING CLEARANCE

Hold the hands to one side of the body indicating the approximate amount of distance the apparatus is from the obstacle. Close hands accordingly as the driver slowly maneuvers the apparatus to point where the signal indicates immediate STOP. Always allow enough for divers reaction time. At night, indicate in the same manner with the flashlight in the upper hands and beam directed at the palm of the other. On STOP, cover the flashlight beam with the hands.

AHEAD OR ((~~BACK UP~~)) BACK UP

Hold hand directly in front, chest high, fingers on hands directed toward one another, and motion in a circular "come-on" gesture. At night hold a flashlight in one hand and direct the beam toward the other.

AHEAD OR BACK UP

Hold hand directly in front, chest high, fingers on hands directed toward one another, and motion in circular "come-on" gesture. At night hold a flashlight in one hand and direct the beam toward the other.

REPEALER

The following sections of the Washington Administrative Code are repealed:

WAC 296-305-01002	Effective date.
WAC 296-305-01009	Appeals.
WAC 296-305-02003	Eye and face protection.
WAC 296-305-02005	Hearing protection.
WAC 296-305-02007	Hand protection.
WAC 296-305-02009	Body protection.
WAC 296-305-02011	Body armor.
WAC 296-305-02013	Foot protection for structural firefighting.
WAC 296-305-02015	Head protection.
WAC 296-305-03001	Hazardous materials protection.
WAC 296-305-04509	Aerial ladders.
WAC 296-305-04511	Elevated platforms.
WAC 296-305-05001	Emergency fireground operations--Structural.
WAC 296-305-05003	Confined space rescue operations.
WAC 296-305-05005	Rope rescue operations.
WAC 296-305-05007	Trench rescue operations.
WAC 296-305-05009	Watercraft rescue operations.
WAC 296-305-05011	Hazardous materials operations.
WAC 296-305-05501	Fire training.
WAC 296-305-05503	Summary of training requirements.
WAC 296-305-06005	Ground ladders.
WAC 296-305-06007	Electrical.
WAC 296-305-07003	Personal protective clothing and equipment for wildland firefighting.
WAC 296-305-07005	Respiratory protection for wildland firefighters.
WAC 296-305-07007	Wildland personnel accountability.
WAC 296-305-07009	Apparatus standards for wildland firefighting.
WAC 296-305-07011	Occupant restraints and enclosures for wildland firefighting.
WAC 296-305-07013	Equipment for wildland firefighting.
WAC 296-305-07015	Aircraft operations for fighting wildland fires.
WAC 296-305-07017	First aid for wildland firefighters.
WAC 296-305-07019	Training for wildland firefighting.