



Washington State Department of
Labor & Industries
Division of Occupational Safety and Health

Fire Fighters

Chapter 296-305 WAC

April 2007 Edition



Division of Occupational Safety and Health



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1-800-423-7233

F414-036-000

Standards Update
Chapter 296-305 WAC, Fire Fighters
Form Number F414-036-000

Update: 4/1/07

The Department of Labor and Industries has rewritten and reorganized for clarity and ease of use, the Fire Fighters rules in chapters 296-305 WAC.

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- WISHA Interim Operations and Interpretive Memoranda (WIIM)
- Memoranda of Understanding

Chapter 296-305 WAC Safety Standards for Fire Fighters

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WAC 296-305-01001 Foreword.

These fire fighter safety and health standards were adopted by the department of labor and industries in accordance with the provisions of the Washington Industrial Safety and Health Act (WISHA) of 1973 (chapter 49.17 RCW), with recommendations from the fire service advisory committee.

The purpose of this chapter is to assist employers and employees in the reduction of work related injuries and illnesses. In addition to providing an enforceable set of safety and health standards for the fire protection services, it is the intent of the department that the provisions of this chapter be used to assist both employers and employees in achieving the safest workplace reasonably attainable under the conditions to which employees are or will be exposed. [Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01001, filed 5/10/96, effective 1/1/97]

WAC 296-305-01002 Effective date. Unless a particular provision of this chapter specifies otherwise, the effective date of chapter 296-305 WAC, shall be January 1, 1997.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01002, filed 5/10/96, effective 1/1/97.]

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 fire fighters 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 fire fighting 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 fire fighter safety elements of these standards were incorporated into this WAC. Chapter 296-305 WAC, shall be considered as the fire fighter 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 fire fighting and other rules in the chapter, only the rules regulating wildland fire fighting shall apply to wildland fire fighting 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.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 06-01-073 (Order 0520), § 296-305-01003, filed 12/20/2005, effective 03/01/2006. RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-01003, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14) § 296-305-01003, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01003, filed 5/10/96, effective 1/1/97.]

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 system: A system of fire fighter 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.

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.

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.

WAC 296-305-01005 (Cont.)

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 multi-piece, 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.

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

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:

- (1) Is large enough and 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.

dB(A): 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.

WAC 296-305-01005 (Cont.)

Department: Department of Labor and Industries.

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

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.

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

Driver: A person having satisfactorily completed the fire department's "requirements of driver" 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.

WAC 296-305-01005 (Cont.)

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.

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 fire fighting capability.

Fire combat training: Training received by fire fighters on the drill ground, drill tower, or industrial site to maintain the fire fighter's proficiency.

Fire department: An organization 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.

Fire fighter: A member of a fire department whose duties require the performance of essential fire fighting functions or substantially similar functions.

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

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.

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 fire fighting 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.

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.

WAC 296-305-01005 (Cont.)

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.

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.

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

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

Hot zone: Area immediately surrounding a hazardous materials incident, which extends far enough to prevent adverse effects from hazardous materials releases to personnel outside the zone. This zone is also referred to as the exclusion zone or the restricted zone in other documents.

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.

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.

Industrial fire brigade: An organized group of employees whose primary employment is other than fire fighting, 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.

WAC 296-305-01005 (Cont.)

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

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 fire fighting: 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 fire fighting.

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

Line: Rope when in use.

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

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: 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.

WAC 296-305-01005 (Cont.)**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 unfixated 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.

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.

WAC 296-305-01005 (Cont.)

PPE: Personal protective equipment.

Prefire training: The training of fire fighters 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 fire fighting protective clothing;
- (2) Liquid splash-protective clothing;
- (3) Vapor-protective clothing;
- (4) High temperature-protective proximity clothing; and
- (5) Wildland fire fighting clothing.

Note: See Protective ensemble.

Protective ensemble: Multiple elements of clothing and equipment designed to provide a degree of protection for fire fighters from adverse exposures to the inherent risks of structural fire fighting 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 fire fighter'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): On-scene team of at least two members designated, dedicated and equipped to effect an immediate rescue operation if the need arises.

RCW: Revised Code of Washington.

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

WAC 296-305-01005 (Cont.)

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.

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 fire fighter.

SCBA: Self contained breathing apparatus.

WAC 296-305-01005 (Cont.)

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 fire fighters 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.

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

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

Structural fire fighting protective clothing: This category of clothing, often called turnout or bunker gear, means the protective clothing normally worn by fire fighters during structural fire fighting operations. It includes a helmet, coat, pants, boots, gloves, and a hood. Structural fire fighters' 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.

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 fire fighting protective clothing.

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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.

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.

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.

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

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.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-01005, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14) § 296-305-01005, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01005, 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 provide.
- (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.)

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 295-305-01007, filed 5/10/96, effective 1/1/97.]

WAC 296-305-01009 Appeals.

Any party authorized to appeal from an action of the department as set forth in RCW 49.17.140(3), may do so by filing a notice of appeal in writing. The appeal must contain the recommended subject matter, as noted below, by serving a copy of such notice of appeal either in person or by mail upon the assistant director of the Consultation and Compliance Services Division, (7273 Linderson Way, Tumwater, Washington) P.O. Box 44600, Olympia, Washington 98504-4600. The appeal must be sent to the department within fifteen working days of the communication of the notice.

The notice of appeal should contain:

- (1) The name and address of the appealing party and his/her representative if any;
- (2) The place where the alleged safety violation occurred;
- (3) A statement identifying the order, decision or citation appealed from, by report number and date of issuance;
- (4) The grounds upon which the appealing party considers such order, decision, or citation to be unjust or unlawful;
- (5) A statement of facts in support of each grounds stated;
- (6) The relief sought, including the specific nature and extent;
- (7) A statement that the person signing the notice of appeal has read it and to the best of his/her knowledge, information and belief there is good ground to support it. A notice of appeal may be signed by the party or by his/her authorized representative.

[Statutory Authority: RCW 49.17.010, .020, .040, .050, and .060. 07-03-163 (Order 06-30), § 296-305-01009, filed 01/24/07, effective 04/01/07. Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-01009, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01009, filed 5/10/96, effective 1/1/97.]

WAC 296-305-01501 Injury and illness reports for fire fighters.

- (1) Notice of injury or illness.
 - (a) Whenever an occupational accident causes injury or illness to a fire fighter or other employee, or whenever a fire fighter or other employee becomes aware of an illness apparently caused by occupational exposure, it shall be the duty of such a fire fighter 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.
 - (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 fire fighter or employee from a work-related incident or the inpatient hospitalization of two or more employees as a result of a work-related incident, the employer of any employees so affected, shall orally report the fatality/multiple 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.
 - (i) This requirement applies to each such fatality or hospitalization of two or more employees 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.
- (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 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 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 1, and shall remain in place until March 1.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01501, filed 5/10/96, effective 1/1/97.]

WAC 296-305-01503 Accident investigation.

- (1) After the emergency actions following accidents that cause serious injuries that have immediate symptoms, a preliminary investigation of the cause of the accident shall be conducted. The investigation shall be conducted by a person designated 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 fire fighter or employee from a work-related incident or the in-patient 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 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) 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) 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).

[Statutory Authority: RCW 49.17.010, 040, .050, and .060. 09-01-058 (Order 08-27), § 296-305-05103, filed 12/23/08, effective 03/01/09. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01503, 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 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) How and when to report injuries, including instruction as to the location of first-aid facilities.
 - (ii) How to report unsafe conditions and practices.
 - (iii) The use and care of required personal protective equipment.
 - (iv) The proper actions to take in event of emergencies including the routes of exiting from areas during emergencies.
 - (v) Identification of the hazardous gases, chemicals or materials involved, along with the instructions on the safe use and emergency action following accidental exposure.

WAC 296-305-01505 (Cont.)

- (vi) A description of the employer's total safety program.
 - (vii) 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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01505, filed 5/10/96, effective 1/1/97.]

WAC 296-305-01507 Fire department safety officer.

- (1) The duties and responsibilities of the fire department 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 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

WAC 296-305-01507 (Cont.)

- (v) Medical Monitoring
 - (vi) Safety meetings
 - (vii) Apparatus
 - (viii) Equipment
 - (ix) Protective clothing
 - (x) Other fire department safety activities
- (3) The fire department 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 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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01507, filed 5/10/96, effective 1/1/97.]

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.
 - (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 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.
- (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.

WAC 296-305-01509 (Cont.)

- (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 expecting to do interior structural fire fighting 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 fire fighting emergency activities unless the employee has been released by a physician to participate in such activities.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-01509, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14), § 296-305-01509, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01509, filed 5/10/96, effective 1/1/97.]

WAC 296-305-01511 Employee's responsibility.

- (1) Fire fighters shall cooperate with the employer and other employees in efforts to eliminate accidents.
- (2) Each fire fighter or other employee shall comply with the provisions of this chapter which are applicable to his/her own actions and conduct in the course of his/her employment.
- (3) Fire fighters and other employees shall notify the appropriate employer representative of unsafe work practices and of unsafe conditions of equipment, apparatus, or work places.
- (4) Fire fighters and other employees shall apply the principles of accident prevention in their work. They shall use all required safety devices, protective equipment, and safety practices, as provided and/or developed by management.
- (5) Each fire fighter shall take proper care of all personal protective equipment.
- (6) Fire fighters shall attend, when on duty, required training and/or orientation programs designed to increase their competency in occupational safety and health.
- (7) Fire fighters 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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01511, 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 fire fighting 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 fire fighter 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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01513, filed 5/10/96, effective 1/1/97.]

WAC 296-305-01515 First-aid training and certification.

- (1) All fire fighters except directors of fire departments and the directors' designated personnel, shall have as a minimum first-aid training as evidenced by a current, valid first-aid card, EMT or First Responder certification.
- (2) New fire fighters shall have such first-aid training within 90 days of the date of their employment or enroll for training in the next available class for which they are eligible.
- (3) Fire service duties include exposure to bloodborne pathogens. The requirements of this section and chapter 296-823 WAC, Occupational exposure to bloodborne pathogens, shall apply.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 04-07-160 (Order 03-31), § 296-305-01515, filed 03/23/04, effective 05/01/04. [Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-09-110 (Order 02-29), § 296-305-01515, filed 04/22/03, effective 08/01/03. Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-01515, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01515, filed 5/10/96, effective 1/1/97.]

WAC 296-305-01517 First-aid kits.

- (1) To assure the emergency medical care of the fire fighters 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) multi-trauma dressing, sterile

WAC 296-305-01517 (Cont.)

- 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.*

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-01517, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-01517, filed 5/10/96, effective 1/1/97.]

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

Note: For wildland fire fighting personal protective equipment and clothing requirements see WAC 296-305-07003, Personal protective clothing and equipment for wildland fire fighting.

- (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. 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) Fire fighters 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.

WAC 296-305-02001 (Cont.)

- (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 fire fighter'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.

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.
 - (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) 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 fire fighting. 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.
 - (e) Garments meeting the requirements of WAC 296-305-07003(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 clothing:

- (a) All turnout clothing used as proximity clothing shall meet the requirements of NFPA, 1976 Standard on Protective Clothing for Proximity Fire Fighting, 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.

WAC 296-305-02001 (Cont.)

- (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 fire fighting 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 Fire Fighting 1971 or the 1997 edition of NFPA, Standard on Protective Ensemble for Structural Fire Fighting 1971. In no case, shall fire fighters wear personal protective clothing manufactured prior to the 1986 edition, NFPA, Standard on Protective Clothing for Structural Fire Fighting 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.

[Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14), § 296-305-02001, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02001, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02003 Eye and face protection.

- (1) Face and eye protection shall be provided for and used by fire fighters engaged in fire suppression and other operations involving hazards to the eye and face at all times when the face is not 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 ANSI Z87.1, 1989 edition.
- (2) 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:
 - (a) Spectacles with protective lenses that provide optical correction.
 - (b) Goggles that can be worn over corrective spectacles without disturbing the adjustment of the spectacles.
 - (c) Goggles that incorporate corrective lenses mounted behind the protective lens.

WAC 296-305-02003 (Cont.)

- (3) 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.
- (4) Care, use, and maintenance for any type of eye or face protection shall follow the manufacturers suggested recommendations.
- (5) Goggles shall be inspected, cleaned and disinfected prior to being reissued to other employees.

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

- (6) Helmet face shields shall meet the requirements of NFPA, Standard Helmets for Structural Fire Fighting 1972, 1992 edition.
- (7) For fire fighters that do not have a helmet face shield for eye and face protection, flexible or cushioned fitting goggles shall be provided.
- (8) 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.
 - (a) Materials used shall be chemical-resistant, nontoxic, nonirritating and slow burning.
 - (b) 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 comfortable and snugly in front of the eyes.

[Statutory Authority: RCW 49.17.040.99-05-080 (Order 98-14), §296-305-02003, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02003, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02005 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 fire fighting activities, hearing protection that will survive these conditions and not interfere with other essential gear may not always be available. Fire departments must consider daily noise exposures and exposures to noise outside direct fire fighting activities when selecting hearing protection and may use less protection during direct fire protection when adequate hearing protection is not technically feasible.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-11-060 (Order 02-16), § 296-305-02005, filed 05/19/03, effective 08/01/03. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02005, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02007 Hand protection.

- (1) Fire fighters' gloves shall when worn with turnout clothing, provide protection to the wrist area. In turnout clothing where wristlet protection is not provided fire fighters' gloves shall be closed at the top.
- (2) Fire departments shall establish written policy and procedure for the care, use, cleaning, replacement and/or retirement criteria, and maintenance of gloves issued.
- (3) Gloves purchased after the effective date of this chapter shall comply with this section.
- (4) Fire fighters' gloves used during structural fire fighting operations including rescue of victims from fires, and emergency medical operations where sharp or rough surfaces are likely to be encountered such as victim extrications shall meet the requirements of the 1993 edition of NFPA, Standard on Gloves for Structural Fire Fighting 1973 or the 1997 edition of NFPA, Standard on Protective Ensemble for Structural Fire Fighting 1971.
- (5) Fire fighters gloves are not designed to provide protection to all environments. For gloves desired to fill the needs of a specific requirement see that specific section of this chapter. It is the intent of this section to provide protection from intrusion throughout the glove body by certain common chemicals, and from bloodborne pathogens. Fire departments shall consult the manufacturer's recommendation.

Note: Fire fighters should have their hands sized for compliance with the sizing chart as specified in NFPA, Standard on Gloves for Structural Fire Fighting 1973, 1993 edition.

[Statutory Authority: RCW 49.17.040 99-05-080 (Order 98-14), § 296-305-02007, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02007, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02009 Body protection.

- (1) 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.
- (2) Fire departments shall establish written procedures for the use of components of any or all portions of protective equipment.
- (3) Fire departments that provide structural and wildfire suppression shall establish written procedures for the use of protective clothing on structural and wildfire suppression activities.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02009, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02011 Body armor. Fire departments that use protective body armor shall comply with the following:

- (1) 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.
- (2) All protective body armor shall meet or exceed National Institute of Justice NIF 0101.03, Threat Level II requirements, April 1987 edition, which is incorporated by reference (or shall be demonstrated by the employer to be equally effective), for both wet and dry ballistic performance.
- (3) Body armor shall be correctly fitted following the manufacturer's recommendations and shall not be used beyond the manufacturer's warranty.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02011, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02013 Foot protection for structural fire fighting.

- (1) Protective footwear purchased after the effective date of this standard shall comply with the 1992 edition of NFPA, Standard on Protective Footwear for Structural Fire Fighting 1974 or the 1997 edition of NFPA, Standard on Protective Ensemble for Structural Fire Fighting 1971.

WAC 296-305-02013 (Cont.)

- (2) Fire departments shall establish written policy and procedure, care, use, maintenance, and retirement criteria for footwear in conjunction with the manufacturer's recommendations.

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

- (3) Fire fighter footwear may be resoled but the footwear upon resoling shall meet the requirements specified in this section.

[Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14), § 296-305-02013, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02013, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02015 Head protection.

- (1) Fire fighters who engage in or are exposed to the hazards of structural fire fighting shall be provided with and use helmets that meet the requirements of NFPA 1972, Standard on Helmets for Structural Fire Fighting, 1987 edition.
- (2) Helmets purchased thirty days after the adoption of this chapter shall meet the requirements of the 1992 edition of NFPA, Standard on Helmets for Structural Fire Fighting 1972 or the 1997 edition of NFPA, Standard on Protective Ensemble for Structural Fire Fighting 1971.
- (3) Fire departments shall establish a written policy and procedure for the care, use, maintenance, and retirement criteria for helmets.
- (4) Helmets shall be provided with face shields or goggles.
- (5) Helmet accessories shall not interfere with the function of the helmet or its components parts and shall not degrade the helmets performance.
- (6) Helmets shall be maintained in accordance with the manufacturer's recommendations. No modifications shall be made without prior written approval from the manufacturer.
- (7) Fire fighters shall follow the manufacturer's recommendations regarding cleaning, painting, marking, storage, and frequency and details of inspection.

Note: Helmets should be stored at room temperature and out of direct sunlight.

[Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14), § 296-305-02015, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02015, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02017 Personal alert safety system (PASS) protection.

- (1) Each fire fighter working in a hazardous area requiring the use of SCBA shall wear and use a PASS device. PASS devices shall meet the requirements of NFPA, Standard on Personal Alert Safety Systems (PASS) for Fire Fighters 1982, 1993 edition. (See WAC 296-305-07001 through 296-305-07019 for wildland fire fighting application.)
- (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.

WAC 296-305-02017 (Cont.)

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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02017, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02019 Life safety ropes, harnesses, and hardware protection.

- (1) All life safety ropes, harnesses, and hardware used by fire departments shall meet the applicable requirements of NFPA 1983, Standard on Fire Service Life Safety Rope, Harness, and Hardware, 1990 edition.
- (2) Ropes used to support the weight of members or other persons during rescue, fire fighting, 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, use list to include 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.

WAC 296-305-02019 (Cont.)

(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) 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 shall be used for fire fighter attachment to ladders and aerial devices.

(10) Class II and Class III life safety harnesses shall be utilized for fall arrest and rappelling operations.

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

Note: See WAC 296-305-05005 for rope rescue applications.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02019, filed 5/10/96, effective 1/1/97.]

WAC 296-305-02501 Emergency medical protection.

(1) Fire fighters 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 NFPA, 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 NFPA 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) Fire fighters shall don emergency medical gloves prior to initiating any emergency patient care.

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

Note: Fire fighter 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 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.

WAC 296-305-02501 (Cont.)

- (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; HBV 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) Fire fighters shall be trained in the proper use of PPE, 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 fire fighters 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) Fire fighters 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.

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.

WAC 296-305-02501 (Cont.)*Additional References:*

*Chapter 296-823 WAC, Occupational exposure to bloodborne pathogens.
WAC 296-62-08001(3), Exposure Control.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-03-093 (Order 04-41), § 296-305-02501, filed 01/18/05, effective 03/01/05. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 04-10-026 (Order 03-04), § 296-305-02501, filed 04/27/04, effective 08/01/04. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-09-110 (Order 02-29), § 296-305-02501, filed 04/22/03, effective 08/01/03. Statutory Authority: RCW 49.17.010, .040, .050. 99-10 (Order 98-10), § 296-305-02501, filed 05/04/99, effective 09/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-02501, filed 5/10/96, effective 1/1/97.]

WAC 296-305-03001 Hazardous materials protection.

- (1) Structural fire fighting protective clothing shall not be used as primary protection for hazardous material incidents except as noted in the current edition of the Department of Transportation Emergency Response guidebook, which is incorporated by reference or shall be demonstrated by the employer to be equally effective.
- (2) Fire departments shall use the technical data package provided by the clothing manufacturer when selecting the hazardous chemical protection.
 - (a) The approach to selecting personal protective clothing must encompass an ensemble of clothing items that are integrated to provide a level of protection and the ability to carry out emergency response activities.
 - (b) The following is a check list of components that may form the chemical protective ensemble:
 - (i) Protective clothing (suits, coveralls, hoods, gloves, boots)
 - (ii) Respiratory equipment (SCBA)
 - (iii) Cooling system (ice vest, air circulation, water circulation)
 - (iv) Head protection
 - (v) Inner garments
 - (vi) Outer protection (overgloves, overboots, flashcovers)
- (3) Hazardous chemical protective equipment shall be classified by performance and for the purpose of this chapter are defined as:
 - (a) Vapor-Protective Suits (Level “A”)
 - (b) Liquid Splash-Protective Suits (Level “B”)
 - (c) Support Function Protective Suits
- (4) Fire department personnel involved in hazardous materials incident shall be protected against potential chemical hazards. Chemical protective clothing shall be selected and used to protect the respiratory system, skin, eyes, face, hands, feet, head, and body.

WAC 296-305-03001 (Cont.)

- (5) Vapor protective and liquid splash-protective suits shall completely cover both the wearer and the wearer's breathing apparatus. Wearing a SCBA or other respiratory equipment outside the suit subjects this equipment to the chemically contaminated environment, increasing possible failure potentials and decontamination problems.
- (6) Fire fighters who engage in operations likely to result in significant exposure to vapors that can reasonably be presumed harmful by way of dermal exposure shall have available and make appropriate use of vapor protective suits. Vapor protective suits shall meet the requirements of NFPA, Standard on Vapor Suits for Hazardous Chemical Emergencies in 1991, 1990 edition, with the single exception that suits meeting all but the flammability standard may only be worn in atmospheres verified by means of appropriate air monitoring to be at no more than 10% of the lower explosive limit (LEL).
- (7) Prior to the use of vapor protective suits, liquid splash-protective suits or support function protective suits, the department shall consult the technical data package to assure that the garment is appropriate for the specific hazardous chemical emergency.
- (8) Vapor protective suits and liquid splash-protective suits shall not be used alone for any fire fighting applications or for protection from radiological, biological, or cryogenic agents or in flammable or explosive atmospheres.
- (9) Fire fighters who engage in operations or who are exposed to known chemicals in liquid-splash chemical environments during hazardous chemical material emergencies shall be provided with, and shall use, liquid splash-protective suits. Liquid splash-protective suits shall meet the requirements of NFPA, Standard on Liquid-Splash Protective Suits for Hazardous Chemical Emergencies 1992, 1991 edition.
- (10) 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 reasonably be expected that fire fighters in vapor protective suits would be significantly better protected:
 - (a) N. Irving Sax, *Dangerous Properties of Industrial Chemicals*, current edition.
 - (b) NIOSH Pocket Guide to Chemical Hazards, current edition.
 - (c) U.S. Coast Guard Chemical Hazard Response Information System (CHRIS), Volumes 13, Hazardous Chemical Data.
- (11) 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 and Biological Exposure Indices for 1988-1989* if it can reasonably be expected that fire fighters in vapor protective suits would be significantly better protected.
- (12) Support garments shall not be used in the hot zone of any hazardous material operation.
- (13) Fire fighters assigned to functional support operations outside the hot zone during hazardous chemical emergencies shall be provided with and shall use support function protective garments. Support function garments shall meet the requirements of NFPA, *Standard on Support Function Protective Garments for Hazardous Chemical Operations 1993, 1990 edition*.
- (14) Support function protective garments shall not be used for protection from chemical or specific chemical mixture with known or suspected carcinogenicity as indicated by (10)(a), (b), or (c).

WAC 296-305-03001 (Cont.)

- (15) Support function protective garments shall not be used for protection from chemicals or specific chemical mixtures with skin toxicity notations as indicated in the American Conference of Governmental Industrial Hygienists, Threshold Values and Biological Exposure Indices for 1988-1989.

Note: Decontamination - See Appendix C.

Additional References:

WAC 296-305-05011, Hazardous materials operations.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-03001, filed 5/10/96, effective 1/1/97.]

WAC 296-305-04001 Respiratory equipment protection.

- (1) Fire fighter'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 Fire Fighters 1981.
- (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, Respiratory protection and Part I-1, Asbestos, Tremolite, Anthophyllite, and Actinolite. 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; 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.

WAC 296-305-04001 (Cont.)

- (6) When the fire department makes its own breathing air or uses vendor purchased breathing air, the air quality from compressors, cascade systems cylinders, shall be tested at least quarterly as specified in subsection (21) of this section.
- (7) Fit testing shall be conducted in accordance with this section and chapter 296-842 WAC, Respiratory protection.
- (a) Each new member shall be tested before being permitted to use SCBA's in a hazardous atmosphere.
 - (b) Only fire fighters 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, 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: Fire fighters should be issued individual facepieces.

WAC 296-305-04001 (Cont.)

- (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 must be worn with a facepiece, it shall be worn so as to not adversely affect the seal of the facepiece to the face. See WAC 296-62-07170(2).
 - (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) Fire fighters shall be decontaminated prior to removal of respirators whenever fire fighting 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 fire fighters who enter into hazardous atmospheres during structural fire fighting 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.
- (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;
- (13) Anytime fire fighters 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.

WAC 296-305-04001 (Cont.)

- (14) Fire fighters 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) Fire fighters 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 fire fighter 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) Fire fighters 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.
- (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.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-03-093 (Order 04-41), § 296-305-04001, filed 01/18/05, effective 03/01/05. Statutory Authority: RCW 49.17.010, .040, .050. 02-12-98 (Order 00-20) § 296-305-04001, filed 06/05/02, effective 08/01/02. Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14) § 296-305-04001, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-04001, filed 5/10/96, effective 1/1/97.]

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.
- (2) Fire apparatus, purchased after December 17, 1977, weighing 10,000 pounds or more shall conform with the following U.S. Department of Transportation standards, when applicable:
 - (a) 49 CFR Ch. V (10-93 edition) 571.121 "Air brake systems";
 - (b) 49 CFR Ch. V (10-93 edition) 571.106 "Hydraulic brake hoses";
 - (c) 49 CFR Ch. V (10-93 edition) 571-211 "Hydraulic brake hoses."
- (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 fire fighter 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.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-16-099 (Order 04-18), § 296-305-04501, filed 08/02/05, effective 10/01/05. Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14), § 296-305-04501, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-04501, filed 5/10/96, effective 1/1/97.]

WAC 296-305-04503 Automotive fire apparatus equipment.

- (1) Vehicles used to transport fire fighters 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 fire fighters 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 or safety harnesses at any time the vehicle is in motion.
 - (b) Seatbelts shall comply with U.S. Department of Transportation Part 49 CFR 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.

WAC 296-305-04503 (Cont.)

- (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(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.
- (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.

[Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14), § 296-305-04503, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-04503, 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) Fire fighting apparatus shall be brought to a full stop before employees are allowed to step from the apparatus.
- (4) Fire fighters 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 when parked at an emergency scene.

WAC 296-305-04505 (Cont.)

- (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 - Emergency Vehicle Accident Prevention (EVAP) program.
[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-04505, 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 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.
 - (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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-04507, filed 5/10/96, effective 1/1/97.]

WAC 296-305-04509 Aerial ladders.

- (1) When operating aerial ladders, the manufacturer's suggested procedures shall be followed.
- (2) Aerial ladders shall be used according to the following requirements:
 - (a) The number of fire fighters permitted on aerial ladders shall be in accordance with the manufacturer's instructions.
 - (b) Aerial ladders shall not knowingly be positioned under dangerous cornices or other loose overhanging objects that may endanger fire fighters and fire fighters working on, or climbing the ladders, except where rescue operations are essential.
 - (c) When working on, or near energized electrical lines, the following minimum working clearances shall be observed:

WAC 296-305-04509 (Cont.)

- (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 for each 1 kv.
 - (iii) For low voltage lines (operating at 750 volts or less), the work shall be performed in a manner to prevent the fire fighters contacting the energized conductor.
 - (d) Fire apparatus aerial ladders shall be positioned for the greatest stability feasible at the fire scene.
 - (e) The tip of the aerial ladder shall not be forcefully extended against a solid structure.
 - (f) Aerial ladders shall not be extended or retracted while fire fighters are climbing the ladder.
 - (g) Locking in shall not be permitted. If it is necessary for fire fighters to be positioned on the aerial, they shall be secured by a life 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 ladder shall remain on the turntable whenever fire fighters are working on the aerial. If the ladder is used only as a ground ladder, no operator is needed on the turntable.
- (3) The following shall regulate the design and use of the operating turntable and ladder:
- (a) Ladders shall be designed to have nonskid protection on the rungs.
 - (b) Turntable controls and valves for rotating, extending, or elevating the aerial ladder 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 shall be provided with a nonskid surface on the turntable surface.
 - (e) A railing of approximately 44 inches in height, and if possible, not less than 36 inches in length, shall be installed on the turntable in back of the operators position.
 - (f) A light of not less than 10,000 candlepower shall be provided at the base to illuminate the ladder at night in any position of operation.
- (4) The following shall regulate the communication systems on the aerial ladder and on the automotive fire apparatus.
- (a) A two-way voice communication system shall be installed between the top fly of the ladder and the lower control station.

WAC 296-305-04509 (Cont.)

- (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.
- (5) When maintaining the aerial ladder, the manufacturer's instructions shall be followed.
- (a) Cables, pulleys, rails and rungs of aerial ladders shall be inspected for wear and tightness on a monthly basis or every ten hours of operating time, whichever comes first.
 - (b) Pulleys on the aerial with cracks or pieces broken out of rims shall be replaced.
 - (c) Cables showing evidence of damage or wear shall be replaced.
 - (d) Rungs or rails that have been subjected to unusual impact shall be tested before usage.
- (6) The automotive fire apparatus used in conjunction with aerial ladders shall be designed and used according to the following:
- (a) Ground jacks or outriggers shall be deployed before an aerial ladder is put into operation.
 - (b) Ground plates shall be deployed under the outriggers or jacks at all times.
 - (c) Hand, airbrakes, and spring brakes for fifth wheel shall be set whenever an aerial ladder is in operation.
 - (d) In addition to ground jack supports and outriggers, wheel blocks shall be used whenever the aerial 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 shall be put under jacks and outriggers when operating on ice or snow.
- (7) Annual testing of metal aerial ladders shall follow the recommendations of the current National Fire Protection Association Standard.
- (a) The aerial ladder, as well as the support section of the apparatus which supports the turntable, shall be nondestructively tested by a certified testing agency every five years.
 - (b) After any accident that causes structural damage, the test in (a) shall be performed and all defects detected shall be corrected before the apparatus is returned to service.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-04509, filed 5/10/96, effective 1/1/97.]

WAC 296-305-04511 Elevated platforms.

- (1) Elevated platform system design requirements:
 - (a) The platform shall have a minimum floor area of fourteen square feet.
 - (b) The platform shall be provided with a guard railing. The guard railing shall be 42 to 45 inches high on all sides.
 - (c) The railing shall be constructed so that there is no opening below it greater than 19 inches.
 - (d) There shall be two gates below the top railing, each of which shall be provided with suitable safety latches.
 - (e) A kick plate not less than four inches high shall be provided around the floor of the platform.
 - (f) Drain openings shall be provided to prevent water accumulation on the platform.
 - (g) A heat-protective shield shall be provided on the platform for the protection of the operator.
 - (h) Hydraulic or pneumatic systems shall have a minimum bursting strength of at least four times the operating pressure for which the system is designed.
 - (i) The basic structural elements of the hydraulic or articulating boom shall have a safety factor of three.
 - (j) Each hydraulic or pneumatic system for the boom shall be equipped with a pilot operated check valve or other appropriate device to prevent free fall in the event of hydraulic failure.
- (2) Requirements related to the controlling of elevated platforms:
 - (a) A control or device shall be provided at both the lower control station and the platform control station to allow either operator to completely deactivate the platform controls.
 - (b) During the deactivation of the platform controls, the lower controls shall remain operable.
 - (c) A plate shall be located at the platform control unit or units listing the following information:
 - (i) Model and serial number of the manufacturer;
 - (ii) Rated capacity of the platform;
 - (iii) Operating pressure of the hydraulic or pneumatic systems or both;
 - (iv) Caution or restriction of operation or both; and
 - (v) Control instructions.
 - (vi) This plate shall be clearly visible to the operator at the lower control position.
 - (d) There shall be an operator at the lower controls at all times while the fire fighter is in the bucket.
 - (e) The operator at the lower controls shall make certain the fire fighter on the platform is secured by his life belt, or equivalent, before raising the platform.
- (3) Testing of elevated platforms and related apparatus shall be conducted annually.
 - (a) Testing of elevated platforms and related apparatus shall be in accordance with NFPA, Standard for Testing Fire Department Aerial Ladders 1914, 1991 edition.

WAC 296-305-04511 (Cont.)

- (b) It is recommended that the boom section as well as the support section of the apparatus which supports the turntable should 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 detected shall be corrected before the apparatus is returned to service.
 - (d) Elevated platform testing shall follow recommendations of the current National Fire Code.
 - (e) Fire apparatus elevated platforms shall be positioned for the greatest stability feasible at the fire scene.
- (4) A two-way voice communication system shall be installed between the platform and the lower control station.
- (5) Automotive apparatus used in conjunction with elevated platforms shall be used in accordance with the following:
- (a) Hand or air brakes shall be set before the platform is operated.
 - (b) Jacks or outriggers shall be used if the platform is to be elevated.
 - (c) Wheel blocks shall also be used when the platform is in operation unless the type of apparatus is one that has wheels that lift off the ground when the jacks or outriggers are engaged.
 - (d) Ground plates shall be used under the outriggers or jacks.
 - (e) Sand shall be put under jacks and outriggers when operating on ice or snow.
 - (f) When working on or near energized electrical lines, the fire department shall develop operational procedures for observing the following minimum working clearances:
 - (i) For lines rated 50 kv or below, the minimum clearance shall be ten feet.
 - (ii) For lines rated over 50 kv, the minimum clearance shall be ten feet plus 0.4 inch for each 1 kv.
 - (iii) For low voltage lines (operating at 750 volts or less), the work shall be performed in a manner to prevent the fire fighters contacting the energized conductor.
- (6) Appliances mounted on elevated platforms. Platform mounted monitors shall be operated in accordance with the manufacturer's instructions.

*Additional References:**WAC 296-24-880.*

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-04511, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-04511, filed 5/10/96, effective 1/1/97.]

WAC 296-305-05001 Emergency fireground operations-Structural.

- (1) The fire department shall establish an incident command system (ICS) with written guidelines applying to all members involved in emergency operations. All members involved in emergency operations shall be familiar with the ICS system. Personnel shall be trained and qualified by their department in the incident command system prior to taking a supervisory role at an emergency scene.
- (2) At an emergency incident, 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 an emergency incident, the incident commander shall have the responsibility to:
 - (a) Assume and confirm command and take an effective command position.
 - (b) Perform situation evaluation that includes risk assessment.
 - (c) Initiate, maintain, and control incident communication.
 - (d) Develop an overall strategy and attack plan and assign units to operations.
 - (e) Develop an effective incident organization by managing resources, maintaining an effective span of control, and maintaining direct supervision over the entire incident by creating geographical and/or functional areas as appropriate for the scope and size of the incident.
 - (f) Review, evaluate, and revise the operational plan as required.
 - (g) Continue, transfer, and terminate command.
- (5) The fire department shall develop a risk management policy that can be implemented into the function of incident command and 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 to save property in as safe a manner as dictated by the situation.
- (6) The fire department shall establish written procedures and guidelines for tracking all members operating at an emergency incident.
- (7) The incident command system shall provide for control of access to hazardous areas of the incident scene by department members.
- (8) Fire fighters operating in hazardous areas at emergency structural fire incidents shall operate in teams of two or more.

Team members operating in hazardous areas shall be in communication with each other through visual, audible, physical, safety guide rope, or electronic means, or by other means in order to coordinate their activities. Team members shall be in close proximity to each other to provide assistance in case of emergency.

WAC 296-305-05001 (Cont.)

- (9) The fire department shall provide personnel for the rescue of members operating at emergency incidents as the need arises.
- (10) Before beginning interior structural fire fighting operations, the incident commander must evaluate the situation and risks to operating teams.
- (a) Except as provided in WAC 296-305-05001(11), fire fighters must not engage in interior structural fire fighting in the absence of at least two standby fire fighters.
 - (b) All standby fire fighters must be fully equipped with the appropriate protective clothing, protective equipment and SCBA.
 - (c) Standby members must remain aware of the status of fire fighters in the hazardous area.
 - (d) Standby members must remain in positive communication with the entry team(s), in full protective clothing the SCBA donned in the standby mode.
 - (e) Standby members may be permitted to perform other duties outside the hazardous area, provided constant communication is maintained between a standby member and the entry team(s), and provided that those duties will not interfere with the standby members' ability to participate in a rescue as appropriate.
 - (f) Early consideration should be given to providing one or more rapid intervention teams commensurate with the needs of the situation.
- (11) In the "initial stage" of a structure fire-incident where only one team is operating in the hazardous area, where additional resources can reasonably be expected, and where exceptional circumstances indicate that immediate action may be necessary to prevent or mitigate the loss of life or serious injury to citizenry or fire fighters, at least one additional fire fighter must be assigned to stand by outside the hazardous area where the team is operating.
- (a) The standby fire fighter must remain aware of the status of fire fighters in the hazardous area.
 - (b) The standby fire fighter must remain in positive communication with the entry team, in full protective clothing with SCBA donned in the standby mode.
 - (c) The standby fire fighter may be permitted to perform other duties outside the hazardous area, provided constant communications is maintained with the team in the hazardous area, and provided that those duties will not interfere with his or her ability to initiate a rescue as appropriate.
 - (d) Once additional resources have arrived on the scene, the incident must no longer be considered in its initial stage and all the requirements of WAC 296-305-05001(10) must be met.
- Note: Nothing in this section shall prevent activities which may reasonably be taken by members first on the scene to determine the nature and extent of fire involvement.*
- (12) 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.

WAC 296-305-05001 (Cont.)

- (13) Officers at emergency scenes shall maintain an awareness of the physical 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.
- (14) Wildfire suppression personal protective clothing/equipment shall not be utilized for interior attacks on structures.
- (15) Teams in the hazardous area shall have positive communication capabilities with the incident command structure. Incident radio communication capabilities within the incident command structure shall include monitoring of incident-assigned frequencies (including mutual aid radio frequencies).
- (16) Prior to overhaul, buildings shall be surveyed for possible safety and health hazards. Fire fighters shall be informed of hazards observed during the survey.
- (17) 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.
- (18) Flootation devices shall be made available to fire fighters at incidents where drowning is a possibility. This is not intended to include pools and hot tubs.
- (19) Fire fighters shall not cut the electrical drip loop providing power to the structure nor pull the electrical meter.
- (20) Traffic cones or other traffic control devices shall be utilized when vehicular traffic hazards exist at an emergency operation.

[Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14), § 296-305-05001, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05001, filed 5/10/96, effective 1/1/97.]

WAC 296-305-05003 Confined space rescue operations.

- (1) Fire departments shall comply with chapter 296-62 WAC, Part M for their own confined spaces.
- (2) Fire departments which have been contracted as an outside rescue service provider shall also comply with Part M and in particular the specific provisions of WAC 296-62-14150(2) which requires authorized entrant training and rescue practices from the host's actual permit spaces or representative permit spaces.
- (3) Fire departments which have responded or will respond to calls to perform rescue from a noncontracted permit-required confined space are required to have each member of a rescue team practice making permit space rescues at least every 12 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.
- (4) During an actual rescue response, written and/or verbally recorded hazard sizeup will be allowed in lieu of the written permit requirements in WAC 296-62-14507 and 296-62-14509 and shall be completed prior to any entry. This sizeup shall include at a minimum:
 - (a) Recognition and declaration of the situation as a confined space incident.
 - (b) Denial of entry to unprotected persons.

WAC 296-305-05003 (Cont.)

- (c) Assessment of all readily available confined space documentation, e.g., MSDSs, any existing permit, plans or blueprints of the space.
 - (d) Assessment of number of victim(s), locations and injury conditions.
 - (e) Discussion with witnesses, supervisor, etc.
 - (f) Assessment of any current or potential space hazards, in particular, any hazard(s) which lead to the necessary rescue.
 - (g) Determination and declaration if body recovery or victim rescue.
- (5) 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 fire fighters.
- (6) Written documentation of the rescue team's training on the fire department's confined space operating procedures, authorized entrant training, if applicable, the contracted host's confined space program. A record of each of the hazard sizeups shall be maintained for at least one year.

[Statutory Authority: RCW 49.17.010, .040, .050. 02-12-98 (Order 00-20) § 296-305-05003, filed 06/05/02, effective 08/01/02.
Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05003, filed 5/10/96, effective 1/1/97.]

WAC 296-305-05005 Rope rescue operations.

- (1) Fire departments engaged in rope rescue operations shall comply with the requirements of this section and WAC 296-305-02019.
- (2) Employees engaged in rope rescue operations shall be properly trained and qualified by the employer to perform such activities.
- (3) Employers shall establish standard operational procedures for rope rescue activities and training.
- (4) When engaged in rope activities, employees shall be provided and wear either structural fire fighting helmets and gloves, or helmets that meet ANSI Standard Z89.1, 1986 edition, Class A and B; gloves.
- (5) Records shall be maintained of inspections and repairs made to rope rescue equipment.
 - (a) Equipment shall be inspected after purchase and prior to placing in service, after each use, and at least semi-annually.
 - (b) Harnesses shall be inspected for worn or broken stitching, rivets worn out of holes, and damage from abrasion, cuts, or chemicals.
 - (c) Descending/ascending hardware shall be inspected for wear, cracks, distortion, sharp edges, and ease of operation.
 - (d) Equipment showing damage or wear that can affect employee safety, shall be either repaired prior to further use or retired.
- (6) The manufacturer's recommended shelf life of rescue ropes shall be followed. If no shelf life is specified, ropes greater than six years old, whether used or not, shall be taken out of service or destroyed.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05005, filed 5/10/96, effective 1/1/97.]

WAC 296-305-05007 Trench rescue operations.

- (1) Fire departments that engage in trench rescue operations shall adopt and maintain a written response program that addresses training and procedures to follow in emergency life threatening situations.
- (2) Employees that directly engage in trench rescue operations shall be trained or shall be under the direct supervision of person(s) with adequate training in trench and excavation hazard recognition, equipment use and operational techniques.

[Statutory Authority: RCW 49.17.040, 99-05-080 (Order 98-14), § 296-305-05007, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05007, filed 5/10/96, effective 1/1/97.]

WAC 296-305-05009 Watercraft rescue operations.

- (1) If a manufacturer's specifications are such that an engineer is required for the operation of a vessel, then one shall be provided.
- (2) 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.
- (3) Watercraft load capabilities shall not exceed the manufacturer's specifications.
- (4) Each fire department shall determine the function of their watercraft; as fire fighting, rescue, or both.
- (5) 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.
- (6) 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.
- (7) The operator (pilot) of the watercraft is responsible for its safe operation.
- (8) Training for all personnel shall represent the intent of the employer and physical characteristics of the vessel involved and shall be included in the employer's accident prevention program.
 - (a) All assigned personnel shall be trained in safe operation of watercraft and the operations the craft is intended to perform.
 - (b) All employees involved in water rescue shall be trained in water rescue techniques and wear Coast Guard approved personal flotation devices, Type III, minimum.

Exception: Employees working below deck or in enclosed cabins.

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

[Statutory Authority: RCW 49.17.040, 99-05-080 (Order 98-14), § 296-305-05009, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05009, filed 5/10/96, effective 1/1/97.]

WAC 296-305-05011 Hazardous materials operations.

Fire departments engaged in emergency response to releases of hazardous substances shall comply with chapter 296-824 WAC, Emergency Response to Hazardous Substance Releases.

[Statutory Authority: RCW 49.17.010, .040, .050. 02-20-034 (Order 02-21), § 296-305-05011, filed 09/24/02, effective 10/01/02. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05011, filed 5/10/96, effective 1/1/97.]

WAC 296-305-05013 Aircraft rescue and fire fighting.

Fire departments that engage in aircraft rescue and fire fighting operations shall review NFPA, Manual for Aircraft Rescue and Fire Fighting Operations 402M, 1991 edition.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05013, filed 5/10/96, effective 1/1/97.]

WAC 296-305-05501 Fire training.

- (1) All members who engage in emergency operations shall be trained commensurate with their duties and responsibilities. Training shall be as frequent as necessary to ensure that members can perform their assigned duties in a safe and competent manner but shall not be less than the frequencies specified in this standard. Minimum training shall be as specified in this part.
- (2) Live structural-fire training: Prior to being permitted to participate in live structure-fire training evolutions, the student shall have received adequate training in safety, protective breathing apparatus, fire hose, nozzles and fire streams, ladders, and rescue as defined by the employer.
 - (a) Strict safety practices shall be applied to all structures selected for live fire training evolutions.
 - (b) In preparation for live training, an inspection of acquired buildings 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.
 - (c) Removal or neutralization of materials of all hazardous storage and conditions within the structure shall be accomplished.
 - (i) Closed containers and highly combustible materials shall be removed.
 - (ii) Oil tanks and similar closed vessels that cannot easily be removed shall be vented sufficiently to eliminate an explosion or overpressure rupture.
 - (iii) Any hazardous or combustible atmosphere within the tank or other vessel shall be rendered inert.
 - (iv) Hazards potentially dangerous to participants such as floor openings, missing stair tread and rails, and other such hazards shall be repaired or made inaccessible.
 - (d) If applicable, floors, railings and stairs shall be made safe. Special attention shall be given to potential chimney hazards.
 - (e) Debris hindering the access or egress of fire fighters shall be removed before continuing further operations.
 - (f) Buildings that cannot be made safe as required by this section shall not be utilized for interior live fire training.

Note: The water supply for any individual live fire training evolution should be assessed based on the extent of the evolution, size and structure of the building and contents to be involved, method of attack to be employed, protection of exposures and reserves for potential contingencies. Separate sources should be used for supply to attack and backup lines.

- (g) Prior to conducting actual live fire training evolutions, a preburn briefing shall be conducted for all participants.
 - (i) All evolutions shall be discussed and assignments shall be made for all crews participating in the training sessions.
 - (ii) All participants shall have a knowledge and familiarity with the layout of the building.

WAC 296-305-05501 (Cont.)

- (h) A safety officer shall be appointed for all live fire training evolutions.
 - (i) One person shall be designated to control the materials being burned and to ignite the training fire in the presence and under the direction of the safety officer. This person shall not be a student and shall wear full protective clothing, including SCBA.
 - (j) Unidentified materials such as debris which may burn in unanticipated ways, react violently, or create environmental hazards, shall not be used in live fire training evolutions.
 - (k) Each participant in a coordinated interior live fire training evolution shall be equipped with full protective clothing and SCBA. All participants shall be inspected by the safety officer to insure all protective clothing and SCBA are being properly worn prior to entry into a live fire training evolution.
- (l) All instructors shall be deemed qualified to deliver structural fire fighting training by the employer. The instructor-student ratio shall not be greater than one to five.
- (m) Officers shall make a head count both when entering and exiting a building during an actual attack.
 - (n) Supervisors at the training evolution shall maintain an awareness of the condition of members operating within the span of their control. They shall ensure adequate steps are taken to provide for the safety and health of the participants and relief or reassignment of fatigued persons.
- (3) Fire fighters shall be trained in the function, donning and doffing, care, use, inspection, maintenance and limitations of the equipment assigned to them or available for their use.
- (4) When fire fighters are engaged in training above the ten-foot level where use of life lines or similar activities are to be undertaken, a safety net shall be erected or other approved secondary means of fall protection such as recommended in chapter 296-155 WAC, Part C-1, Fall restraint and fall arrest, shall be used in lieu of nets.
- (5) During wet training exercises, hose meeting the 250 pound annual hose test shall be used.
- (6) Training shall be provided to fire fighters and officers in order that they will be knowledgeable in the identification and handling of asbestos containing materials likely to be encountered during a fire response. [Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05501, filed 5/10/96, effective 1/1/97.]

WAC 296-305-05503 Summary of training requirements.

- (1) Training on noise must conform to chapter 296-817 WAC, Hearing loss prevention (noise), and WAC 296-305-02005.
- (2) Training on medical procedures shall conform to WAC 296-305-02501.
- (3) Training on respiratory equipment shall conform to chapter 296-842 WAC, Respiratory protection, and WAC 296-305-04001.
- (4) Training on employee right-to-know procedures shall conform to WAC 296-800-170, chemical hazard communication program.
- (5) Training on overhaul procedures and operations shall conform to WAC 296-305-05001.

WAC 296-305-05503 (Cont.)

- (6) Training on wildland fires shall conform to WAC 296-305-07001 through 296-305-07019.
- (7) Training on confined space entry and/or rescue shall conform to chapter 296-62 WAC, Part M, Permit-required confined spaces and WAC 296-305-05003.
- (8) Live fire training in structures shall conform to NFPA 1403 and this section.
- (9) The employer shall provide training and education for all members commensurate with those duties and functions that members are expected to perform. Such training and education shall be provided to members before they perform emergency activities. Fire service leaders and training instructors shall be provided with training and education which is more comprehensive than that provided to the general membership of the fire department.
- (10) The employer shall assure that training and education is conducted frequently enough to assure that each member is able to perform the member's assigned duties and functions satisfactorily and in a safe manner so as not to endanger members or other employees. All members shall be provided with training at least annually. In addition, members who are expected to perform interior structural fire fighting shall be provided with an education session or training at least quarterly.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-03-093 (Order 04-41), § 296-305-05503, filed 01/18/05, effective 03/01/05. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 03-11-060 (Order 02-16), § 296-305-05003, filed 05/19/03, effective 08/01/03. Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-05503, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05503, 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) 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. 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.

WAC 296-305-06001 (Cont.)

- (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 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 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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06001, filed 5/10/96, effective 1/1/97. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-06001, filed 11/30/83; Order 77-20, § 296-305-06001, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

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.
- (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 fire fighters 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.

WAC 296-305-06003 (Cont.)

- (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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06003, filed 5/10/96, effective 1/1/97. Statutory Authority: Chapter 49.17 RCW. 88-14-108 (Order 88-11), § 296-305-06003, filed 7/6/88. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-06003, filed 11/30/83; Order 77-20, § 296-305-06003, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-06005 Ground ladders. This section establishes the minimum requirements for the construction, care and use of the common types of ladders used in fire combat.

- (1) Ladder locks or pawls on extension ladders shall be so fastened or secured to the beams that vibration and use will not cause loosening of bolts and nuts.
 - (a) Pawls or ladder locks shall be so constructed that the hook portion of the pawl that engages the rung shall have sufficient bearing surface or area to prevent the hook from cutting into rungs when engaged.
 - (b) Such hooks shall be properly finished to eliminate sharp edges and points.
- (2) Staypoles or tormenters shall be furnished on all extension ladders extending over forty feet. Staypole or tormenters spikes shall not project beyond the butt of the ladder when nested.
- (3) All ladders shall be stored in a manner to provide ease of access for inspection, and to prevent danger of accident when withdrawing them for use.
- (4) Fire fighters 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 fire fighters shall be permitted to climb and descend ground ladders with the fly in to assure secure footing.

WAC 296-305-06005 (Cont.)

- (5) All ladders regardless of type shall be inspected thoroughly after each use. Records shall be kept of the inspections and repairs.
- (6) The following metal ladder components shall be checked:
 - (a) Rungs for welds, damage or weakness caused by overloading or bumping against other objects, looseness and cracks, etc.
 - (b) Beams for welds, rivets and bolts, signs of strain or metal fatigue, and deformation from heat or overloading.
 - (c) Bolts and rivets for tightness.
 - (d) Butt spurs for excessive wear or other defects.
 - (e) Halyards for the same defects listed for wood ladder halyards and cable halyards, for fraying or breaking.
 - (f) Heat sensor label, when provided, for change indicating heat exposure.
- (7) The following wood ladder components shall be checked:
 - (a) Bolts for snugness and tightness without crushing the wood.
 - (b) 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 this chapter, prior to further use.
 - (c) Protective varnish finish for damage or wear, at least once a month and redone annually or at such frequency as specified by the manufacturer. If the protective finish becomes charred or blistered, the ladder shall be removed from service and service tested as specified in this chapter, prior to further use.
- (8) Methods of fastening ladder halyards, either of wire or fibrous material, shall be in a manner that the connection is stronger than the halyard.
- (9) Any defect noted in above visual inspection shall be corrected prior to testing.
- (10) Every portable ladder shall be tested following the correction of defects disclosed by the visual inspections.
- (11) New ground ladders purchased after the effective date of this chapter shall be constructed and certified in accordance with the requirements of NFPA Standard 1931, 1994 edition.
- (12) All fireground ladders shall be inspected and maintained in accordance with the requirements of the 1994 edition of NFPA 1932. When metal ground ladders are tested, they shall be tested in accordance with the strength service testing procedures of the 1984 edition of NFPA 1932.
 - (a) Extension ladders that were constructed prior to the adoption of the 1984 edition of NFPA 1931, may, when tested in accordance with this chapter, be tested with a minimum test load of 400 pounds and a preload of 300 pounds. Ladders tested under this exception shall be used with a maximum load limit of 500 pound distributed or 400 pound concentrated. Ladders shall be tested in the configuration they are used.

WAC 296-305-06005 (Cont.)

- (b) Additional requirements for wooden ground ladders; whenever any wood ground ladder has been exposed or is suspected of having been exposed to direct flame contact the ladder shall be service tested as specified in section 5-2 of NFPA Standard 1932, 1984 edition.

Note 1: Hardness testing and eddy current NDE testing is not required in the fire department annual maintenance inspection unless the individual ladder has been subjected to a high heat exposure which could have annealed the metal and diminished the structural integrity. The ladder manufacturer's recommendations should be followed with respect to hardness and eddy current testing.

Note 2 Testing should follow the recommended procedures taught by Washington State Fire Protection Bureau.

Additional references:

Chapter 296-24 WAC, Part J-1 and WAC 296-800-290.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-06005, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14), § 296-305-06005, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06005, filed 5/10/96, effective 1/1/97. Statutory Authority: Chapter 49.17 RCW. 88-14-108 (Order 88-11), § 296-305-06005, filed 7/6/88. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-06005, filed 11/30/83; Order 77-20, § 296-305-06005, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-06007 Electrical.

- (1) Temporary lighting with the use of 110 - 120 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 with 12-3 conductors with SO or SJ jackets or equivalent.
 - (b) Electrical cords shall have weather tight bodies and caps, 20 amp rated at 120 VAC with appropriately sized plugs and sockets.
 - (c) Temporary lights that are used in moist, damp, and/or other hazardous locations shall be approved for the purpose.
 - (d) Temporary lights shall be constructed so that water cannot enter or accumulate in wireways, lampholders or other electrical parts.
 - (e) Temporary lights that are used in moist and/or other hazardous locations shall have 120 VAC single-phase 15 and/or 20 amp in-line resettable ground fault circuit interrupters.
 - (f) Temporary lights shall be equipped with a handle and be insulated from heat and possible electrical shock.
 - (g) Temporary lights shall not be suspended by their electrical cords unless cords and lights are designed and labeled for this means of suspension.

WAC 296-305-06007 (Cont.)

- (h) 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 damp or hazardous locations.
- (a) Bodies and caps shall be weather tight, 20 amp rated at 120 VAC.
 - (b) Cords on cord reels that do not exceed 150 feet in length shall be SO or SJ type jackets or equivalent.
 - (c) Cords that exceed 150 feet in length on reels, shall have 10-3 conductors.
 - (d) Cord reels that are not permanently mounted on a vehicle shall be insulated from the ground when in use.
- (3) Twelve volt portable type hand lanterns shall be constructed of molded composition or other type approved for the purpose.
- (a) Portable hand lanterns used in moist and/or other hazardous locations 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; and
 - (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.

WAC 296-305-06007 (Cont.)*Additional references:*

Article 250 National Electrical Code. Chapter 296-24 WAC, Part L and WAC 296-800-280.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-06007, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.040. 99-05-080 (Order 98-14), § 296-305-06007, filed 02/17/99, effective 06/01/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06007, filed 5/10/96, effective 1/1/97. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-06007, filed 11/30/83; Order 77-20, § 296-305-06007, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-06501 Requirements for fire station facilities.

WAC 296-305-06501 through 296-305-06519 pertain to all fire department facilities as defined in WAC 296-305-01005.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06501, filed 5/10/96, effective 1/1/97. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-06501, filed 11/30/83; Order 77-20, § 296-305-06501, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

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 station or new addition to an existing fire station, shall incorporate sliding poles or slides in their design or construction.
- (4) The requirements of chapter 296-24 WAC, Part B-2, Window washing, 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.
- (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.

WAC 296-305-06503 (Cont.)

- (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.
- (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.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-06503, filed 05/09/01, effective 09/01/01. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06503, filed 5/10/96, effective 1/1/97. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-06503, filed 11/30/83; Order 77-20, § 296-305-06503, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

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 shall not be allowed in any kitchen, living, sleeping, or personal hygiene 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.

WAC 296-305-06505 (Cont.)

- (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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06505, filed 5/10/96, effective 1/1/97. Statutory Authority: Chapter 49.17 RCW. 88-14-108 (Order 88-11), § 296-305-06505, filed 7/6/88. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-06505, filed 11/30/83; Order 77-20, § 296-305-06505, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

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 detectors.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06507, filed 5/10/96, effective 1/1/97. Statutory Authority: Chapter 49.17 RCW. 88-14-108 (Order 88-11), § 296-305-06507, filed 7/6/88; Order 77-20, § 296-305-06507, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-06509 Apparatus areas.

- (1) Three feet of clearance shall be maintained around apparatus parked within the station where the station's width permits.
- (2) All fire stations built after December 17, 1977, shall have a minimum of three feet of clearance around the apparatus, which shall be maintained free of any storage or obstruction.
- (3) The station's apparatus floors shall be kept free of grease, oil, water and tripping hazards.
- (4) Floors shall have slip-resistant surfaces on areas where personnel would normally mount or dismount apparatus.
- (5) No Class I or Class II flammable liquids shall be used for cleaning purposes to remove grease or dirt from apparatus.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06509, filed 5/10/96, effective 1/1/97. Statutory Authority: Chapter 49.17 RCW. 88-14-108 (Order 88-11), § 296-305-06509, filed 7/6/88. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-06509, filed 11/30/83; Order 77-20, § 296-305-06509, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-06511 Indoor air quality.

Air quality shall be consistent with WAC 296-62-075 through 296-62-07515, Air 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 fire fighter 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.

WAC 296-305-06511 (Cont.)

- (4) All 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.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-06511, filed 05/09/01, effective 09/01/01.
Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06511, filed 5/10/96, effective 1/1/97;
Order 77-20, § 296-305-06511, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-06513 Refueling areas.

- (1) Refueling pumps, if installed, shall be in accordance with the provisions of the Uniform Fire Code and WAC 296-24-33015.
- (2) Dispensing of Class 1 liquids shall be as required in the Uniform 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.”

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06513, filed 5/10/96, effective 1/1/97;
Order 77-20, § 296-305-06513, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

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.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-305-06515, filed 05/09/01, effective 09/01/01.
Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06515, filed 5/10/96, effective 1/1/97;
Order 77-20, § 296-305-06515, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

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 fire fighters who may be operating a charged hose line on the fire escape.
 - (f) Rappelling anchors shall be engineered to support 4500 pounds per person supported by the anchor.
 - (g) Rappelling anchors shall be readily identifiable.
 - (h) Rappelling anchors shall be certified by a structural engineer.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06517, filed 5/10/96, effective 1/1/97. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-06517, filed 11/30/83; Order 77-20, § 296-305-06517, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

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, 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.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 04-14-028 (Order 01-12), § 296-305-06519, filed 06/19/04, effective 01/01/05. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-06519, 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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07001, filed 5/10/96, effective 1/1/97. Statutory Authority: Chapter 49.17 RCW. 88-14-108 (Order 88-11), § 296-305-07001, filed 7/6/88. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-07001, filed 11/30/83; Order 77-20, § 296-305-07001, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-07003 Personal protective clothing and equipment for wildland fire fighting.

- (1) Protective apparel and equipment for wildland fire fighters shall be designed to provide thermal protection for the fire fighters 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
 - (d) Goggles

NFPA Standard Protective Clothing and Equipment for Wildland Fire fighting 1977, 1993 edition shall serve as a guideline for determining performance characteristics of this clothing.

- (2) As a minimum, members shall wear provided leather lace-up boots of sturdy construction which shall extend upward a minimum of 8 inches above the top of the sole, which 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.
- (4) Wildland protective clothing shall comply with this standard within two years of the effective date of this chapter.
- (5) Personnel operating Type 1 or Type 2 engines assigned to structural protection will carry structural protective clothing on their assigned apparatus.
- (6) Wildland personnel protective clothing shall not be used for interior structural fire fighting.
- (7) Persons provided fire shelters shall be trained in their use and shall receive refresher training at least annually.
- (8) Personnel wearing full structural fire fighting 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.

WAC 296-305-07003 (Cont.)

- (9) Fire departments shall establish written procedures for the care, use, maintenance, and retirement criteria for protective equipment in conjunction with the manufacturers' recommendations.
- (10) Fire departments shall establish written procedures for the use of protective clothing and protective equipment while performing fire fighting activities.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07003, filed 5/10/96, effective 1/1/97. Statutory Authority: Chapter 49.17 RCW. 88-14-108 (Order 88-11), § 296-305-07003, filed 7/6/88. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-07003, filed 11/30/83; Order 77-20, § 296-305-07003, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-07005 Respiratory protection for wildland fire fighters.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07005, filed 5/10/96, effective 1/1/97. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-07005, filed 11/30/83; Order 77-20, § 296-305-07005, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-07007 Wildland personnel accountability.

- (1) Wildland fire fighters 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 fire fighting task (examples would include, but are not limited to, scout, safety officer, or watch person).
- (3) Wildland fire fighters shall work in teams of two or more while working on or near the fire line of an active fire unless they are in visual or voice contact with an officer.
- (4) On initial attack fires, the incident commander shall:
- (a) Maintain the name and location of all personnel on the incident.
 - (b) On extended attack fires, ensure the maintenance of the name and location of all personnel within their unit, division, or branch.
 - (c) Transfer/confirm personnel and unit information to the appropriate incident command section (ICS) command staff as soon as possible.
 - (d) Ensure that personnel and unit information is recorded in the command post as soon as possible.
- (5) When a fire “blows up” or makes a run that crosses planned control lines, officers shall conduct an accounting of all personnel assigned to fire suppression and report any missing personnel to the incident commander.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07007, filed 5/10/96, effective 1/1/97. Statutory Authority: RCW 49.17.040 and 49.17.050. 83-24-013 (Order 83-34), § 296-305-07007, filed 11/30/83; Order 77-20, § 296-305-07007, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-07009 Apparatus standards for wildland fire fighting.

This section applies to wildland fire apparatus meeting the NIIMS 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. See Appendix D for equipment types.

WAC 296-305-07009 (Cont.)

- (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 fire fighting 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 296-305-07011.
 - (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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07009, filed 5/10/96, effective 1/1/97; Order 77-20, § 296-305-07009, filed 10/18/77 and Emergency Order 77-24, filed 11/17/77, effective 12/17/77.]

WAC 296-305-07011 Occupant restraints and enclosures for wildland fire fighting.

- (1) While in motion, the driver and passengers in the cab shall wear seatbelts.
- (2) Seatbelts shall comply with U.S. Department of Transportation, Part 49 CFR, 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 1500 pounds per person or a 4:1 safety factor.
 - (b) Safety lanyard lengths shall not allow for the fire fighter to reach the ground.

WAC 296-305-07011 (Cont.)

- (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 5400 pounds.
- (6) The structural components for wildland vehicle enclosures shall be constructed of metal tubing not less than 1 inch in diameter, capable of supporting a minimum of 1500 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 1500 pounds dead weight.
- (10) Fire fighters while actively fighting a fire in the mobile attack mode shall remain in a three-sided enclosure and use a safety lanyard. When actively fighting a fire in the mobile attack mode, fire fighters shall remain in a four-sided enclosure but the use of a lanyard is optional and should follow the fire department's operating procedures.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07011, filed 5/10/96, effective 1/1/97.]

WAC 296-305-07013 Equipment for wildland fire fighting.

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 can not 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) Wildland fire fighters 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 protect the vulnerable areas of the legs. 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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07013, filed 5/10/96, effective 1/1/97.]

WAC 296-305-07015 Aircraft operations for fighting wildland fires.

- (1) Whenever fixed wing and rotary wing aircraft are being utilized on an incident, personnel trained in air operations management shall be assigned 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 officer and the appropriate ground officer.
- (5) Personnel assigned to ride in rotary wing aircraft shall be briefed in the correct approach, riding and off-loading procedures for the particular type of aircraft.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07015, filed 5/10/96, effective 1/1/97.]

WAC 296-305-07017 First-aid for wildland fire fighters.

- (1) At all wildland fires, members shall be provided with a minimum of one quart per two-hour time period 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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07017, filed 5/10/96, effective 1/1/97.]

WAC 296-305-07019 Training for wildland fire fighting.

- (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 actions taken on fires prior to the fire meeting the definition of a “wildland fire.”
- (3) Suppression personnel assigned to a wildland fire shall be trained to a NWCG Fire Fighter 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 fire fighting 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).

WAC 296-305-07019 (Cont.)

- (6) All suppression personnel shall annually review the Standard Operating Safety Procedures. See Appendix D.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-07019, 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,

WAC 296-305-08000 (Cont.)

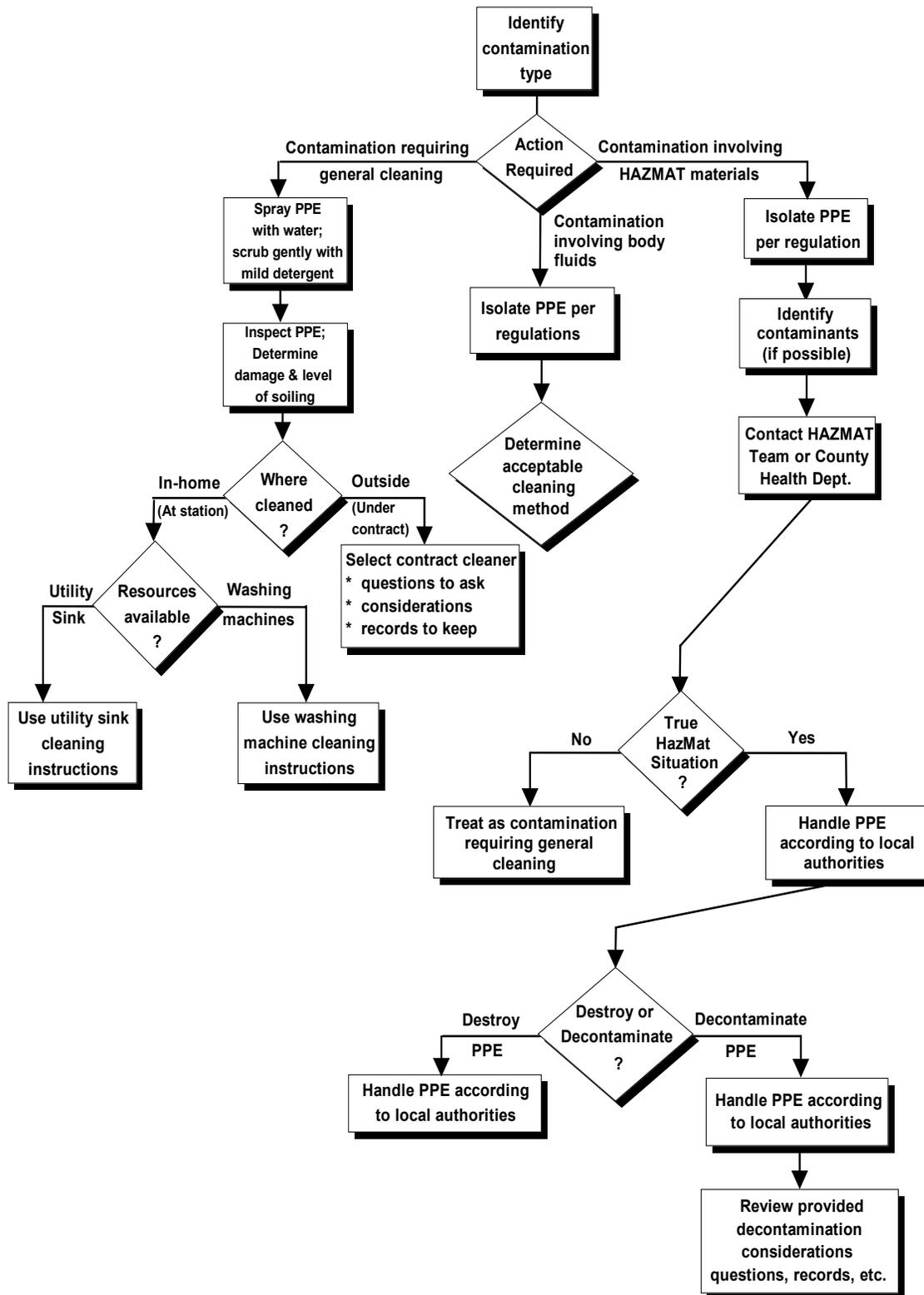
- (c) Set washing machine for normal cycle, cotton white, or similar setting.
 - (d) Machines should be programmed for a double rinse. If the machine will not automatically double rinse, a complete second cycle can be run without adding detergent or oxygenated bleach. Double rinse helps remove any residual 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 fungicidal 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.

WAC 296-305-08000 (Cont.)

- (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 Huabsch 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.

WAC 296-305-08000 (Cont.)



PPE Cleaning and Decontamination Decision-Making Process

WAC 296-305-08000 (Cont.)**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.
- (4) Visqueene should be spread on the ground in the decontamination area to control runoff.
- (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.

WAC 296-305-08000 (Cont.)

- (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.
- (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.
- (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.
- (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.

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- (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.
- (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.
- (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.
- (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.
- (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 Fire Fighting 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.

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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 Fire Fighter 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.

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18. Radio communications.
19. Incident command system.
20. Basic first-aid.
21. Hazardous materials awareness.

Appendix E--Standard apparatus operation communications.

When fire fighters 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 fire fighters:
 - (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 shining at the driver. This will indicate and immediate **STOP**

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**RIGHT OR LEFT**

Point in the desired direction with one hand and motion in a circular “come-on” gesture with the 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 hand and beam directed at the palm of the other. On **STOP**, cover the flashlight beam with the hands.

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AHEAD OR 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.

[Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-08000, filed 5/10/96, effective 1/1/97.]

