



**COMMONWEALTH of VIRGINIA**  
**DEPARTMENT OF LABOR AND INDUSTRY**

**C. Ray Davenport**  
COMMISSIONER

Main Street Centre  
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**AGENDA**

**SAFETY AND HEALTH CODES BOARD**

**PUBLIC HEARING**

**Main Street Centre  
600 East Main Street  
12<sup>th</sup> Floor Conference Room - South  
Richmond, Virginia**

**Thursday, July 27, 2017**

**10:00 a.m.**

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1. Call to Order
2. Items for Discussion:
  - a) 16VAC 25-50, Proposed Regulatory Action to Amend Boiler and Pressure Vessel Rules and Regulations
3. Opportunity for Public Comment on the Proposed Amendments
4. Comments from the Department
5. Adjournment



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**VIRGINIA SAFETY AND HEALTH CODES BOARD**

**PUBLIC HEARING BRIEFING PACKAGE**

**July 27, 2017**  
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**Proposed Regulatory Action to Amend  
16 VAC 25-50, Boiler and Pressure Vessel Rules and Regulations**

**I. Action Requested**

The Boiler Safety Compliance Program of the Virginia Department of Labor and Industry requests the Safety and Health Codes Board to consider for adoption, as a proposed regulation of the Board amendments to 16 VAC 25-50, Boiler and Pressure Vessel Rules and Regulations, pursuant to the Virginia Administrative Process Act, §2.2-4007.01.

**II. Summary of the Proposed Amendments**

The Boiler Safety Compliance Program seeks to amend the Boiler and Pressure Vessel Rules and Regulations by defining additional terms for improved clarity. The terms defined, which appear in 16VAC25-50-10, include the following: "ANSI/ASME CSD-1"; "API-510"; ASME B31.1"; "ASME Code"; "Current edition of the ASME code"; and "National Fire Protection Association No. 85". Amendments also include updating to the most recent editions of the following "Forms" and "Documents Incorporated by Reference" (DIBR), as listed below:

**Forms (16VAC 25-50)**

Form R-1, Report of Repair, National Board Inspection Code NB-66 (~~rev. 2012~~) (rev.13, 6/25/15)

Form R-2, Report of Alteration, National Board Inspection Code (~~eff. 1/1/99~~) NB-229 (rev.7 11/12/15)

Form R-3, Report of Parts Fabricated By Welding, National Board Inspection Code ~~(eff. 1/1/99)~~  
NB-230 (Rev.3 9/24/15)

Form R-4, Report Supplementary Sheet, National Board Inspection Code ~~(eff. 1/1/99)~~ NB-231  
(9/23/15).

**Documents Incorporated by Reference (16VAC 25-50)**

1. ~~2007~~ 2015 Boiler and Pressure Vessel Code, ASME Code, American Society of Mechanical Engineers;
2. ~~National Board Bylaws, national Board of boiler and Pressure Vessel Inspectors, August 8, 1996~~ August 12, 2015;
- 3.2 ANSI/NB 23, ~~2007~~ 2015 National Board Inspection Code, National Board of Boiler and Pressure Vessel Inspectors;
- 4.3. ASME Code B 31.1, ASME Code for Pressure Piping, American National Standards Institute, ~~2007~~ 2014;
- 5.4. NFPA 85 Boiler and Combustion Systems Hazards, ~~2001 Edition~~ 2015 Edition, National Fire Protection Association;
- 6.5. Part CG (General), Part CW (Steam and Waterside Control) and Part CF (Combustion Side Control) Flame Safeguard of ANSI/ASME CSD-1, Controls and Safety Devices for Automatically Fired Boilers, ~~2009~~ 2012, American Society of Mechanical Engineers; and
- 7.6. API 510, Pressure Vessel Inspection Code, Maintenance Inspection, Rating, Repair and Alteration, ~~Ninth Edition~~ Tenth Edition, ~~June 2006~~ May 2014, American Petroleum Institute.

**III. Basis and Purpose of Intended Regulatory Action**

**A. Basis**

The Safety and Health Codes Board is authorized by Title 40.1-51.6.A. of the *Code of Virginia* to:

“...formulate definitions, rules, regulations and standards which shall be designed for the protection of human life and property from the unsafe or dangerous construction, installation, inspection, operation, maintenance and repair of boilers and pressure vessels in this Commonwealth.”

**B. Purpose**

The purpose of the proposed regulatory action is to define additional terms for clarity and conform to the most current editions of the ASME, NBIC, and NFPA safety and inspection codes, as noted in Section II of this briefing package.

**IV. Impact on Employers, Employees and the Department**

**A. Impact on Employers**

For the most part, there would be little impact on employers as a result of the American Society Mechanical Engineers (ASME), National Board Inspection Code (NBIC), and National Fire Protection Association (NFPA) code updates. Companies that utilize the ASME or NBIC codes for construction or repair are already required to have and work to the current editions of these codes, therefore, there is no financial burden for them to purchase the most recent editions. The major change would be the requirement in the NBIC for signage and metering for CO<sub>2</sub> tank installations.

**B. Impact on Employees**

No negative impact is anticipated on employees as a result of the proposed regulatory changes. For employees working in, and citizens visiting, the restaurant, fast food, and convenience store industry utilizing CO<sub>2</sub> tanks for beverage dispensers, there will be additional safety added by the requirement for CO<sub>2</sub> metering/alarms.

**C. Impact on the Department of Labor and Industry**

Any impact on the Department would be minimal because the Department already has copies of, and already follows, the most recent editions of the NBIC and ASME when performing reviews of manufacturers and repair shops. As noted in subsection IV.A., above, such firms are required to use the most recent code edition.

**V. Comments**

The Boiler Safety Compliance Program of the Virginia Department of Labor and Industry received no comments during the August 8, 2016 through September 7, 2016, NOIRA 30-day public comment period. A public hearing was held on September 13, 2016 and no comments were received. A public comment period will open on July 24, 2017 and close on September 22, 2017.

**Contact Person:**

Mr. Ed Hilton  
Director, Boiler Safety Compliance  
(804) 786-3262  
[Ed.Hilton@doli.virginia.gov](mailto:Ed.Hilton@doli.virginia.gov)

### **RECOMMENDED ACTION**

The Boiler Safety Compliance Program recommends that the Safety and Health Codes Board adopt the amendments to 16 VAC 25-50, Boiler and Pressure Rules and Regulation as a proposed regulation of the Board, as authorized by §40.1-51.6.

The Department also recommends that the Board state in any motion it may make to amend this regulation that it will receive, consider and respond to petitions by any interested person with respect to reconsideration or revision of this or any other regulation.

**16 VAC 25-50, Proposed Regulation to Amend the Boiler and Pressure Vessel  
Rules and Regulations**

As Adopted by the  
Safety and Health Codes Board

Date: \_\_\_\_\_



**SAFETY AND HEALTH CODES BOARD**  
**Updating Documents Incorporated by Reference**

Part I  
Definitions

**16VAC25-50-10. Definitions.**

The following words and terms when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise:

"Act" means the Boiler and Pressure Vessel Safety Act, Chapter 3.1 (§ 40.1-51.5 et seq.) of Title 40.1 of the Code of Virginia.

"Alteration" means any change in the item described on the original Manufacturers' Data Report which affects the pressure containing capability of the boiler or pressure vessel. Non-physical changes, such as an increase in the maximum allowable working pressure (internal or external) or design temperature of a boiler or pressure vessel, shall be considered an alteration. A reduction in minimum temperature such that additional mechanical tests are required shall also be considered an alteration.

"ANSI/ASME CSD-1" means ASME CSD-1-2012, Controls and Safety Devices for Automatically Fired Boilers, 2012 Edition, American Society of Mechanical Engineers.

"API-510" means API-510, Pressure Vessel Inspection Code: In-Service Inspection, Rating, Repair, and Alteration, Tenth Edition, May 2014, American Petroleum Institute.

"Approved" means acceptable to the board, commissioner or chief inspector as applicable.

"ASME B31.1" means ASME B31.1-2014, Power Piping, an International Piping Code, The American Society of Mechanical Engineers.

"ASME Code" means the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers approved and adopted by the governing council of such society and approved and adopted by the board.

"Authorized inspection agency" means one of the following:

- a. A department or division established by a state, commonwealth or municipality of the United States, or a province of Canada, which has adopted one or more sections of ASME Code and whose inspectors hold valid commissions with the National Board of Boiler and Pressure Vessel Inspectors; or equivalent qualifications as defined and set forth in 16VAC25-50-50 and 16VAC25-50-70;

- b. An inspection agency of an insurance company which is authorized (licensed) to write boiler and pressure vessel insurance in those jurisdictions which have examined the agency's inspectors to represent such jurisdictions as is evident by the issuance of a valid certificate of competency to the inspector;
- c. An owner-user inspection agency as defined in this section; or
- d. A contract fee inspector.

"Board" means the Virginia Safety and Health Codes Board.

"Boiler" means a closed vessel in which water is heated, steam is generated, steam is superheated, or any combination of them, under pressure or vacuum for use externally to itself by the direct application of heat. The term "boiler" shall include fired units for heating or vaporizing liquids other than water where these units are separate from processing systems and are complete within themselves.

"Certificate of competency" means a certificate issued by the commissioner to a person who has passed the prescribed examination as provided in 16VAC25-50-50. See §§ 40.1-51.9 and 40.1-51:9:1 of the Act.

"Certificate inspection" means an inspection, the report of which is used by the chief inspector to decide whether or not a certificate, as provided for in § 40.1-51.10 of the Act may be issued. This certificate inspection shall be an internal inspection when required; otherwise, it shall be as complete an inspection as possible.

"Chief inspector" means the chief boiler and pressure vessel inspector of the Commonwealth.

"Commission, National Board" means the commission issued by the National Board to a holder of a Certificate of Competency for the purpose of conducting inspections in the Commonwealth in accordance with this chapter. The employer must submit the inspector's application to the National Board for a commission.

"Commissioner" means the Commissioner of the Department of Labor and Industry.

"Commonwealth inspector" means any agent appointed by the commissioner under the provisions of § 40.1-51.9 of the Act.

"Condemned boiler or pressure vessel" means a boiler or pressure vessel that has been inspected and declared unsafe for use or disqualified by legal requirements and to which a stamping or marking designating its condemnation has been applied by the chief or commonwealth inspector.



"Current edition of the ASME code" means the 2015 edition, which has been adopted by the Safety and Health Code Board.

"Department" means the Department of Labor and Industry.

"Division" means the Boiler Safety Enforcement Division of the Department of Labor and Industry.

"Electric boiler" means a boiler in which the source of heat is electricity.

"Examining board" means persons appointed by the chief inspector to monitor examinations of inspectors.

"Existing installation" means and includes any boiler or pressure vessel constructed, installed, placed in operation or contracted for before July 1, 1974.

"External inspection" means an inspection of the exterior of the boiler or pressure vessel and its appliances when the item is in operation.

"Heating boiler" means a steam or vapor boiler operating at pressures not exceeding 15 psig, or a hot water boiler operating at pressures not exceeding 160 psig or temperature not exceeding 250°F at or near the boiler outlet.

"High-pressure, high-temperature water boiler" means a water boiler operating at pressures exceeding 160 psig or temperatures exceeding 250°F at or near the boiler outlet.

"Hobby boiler" means a steam boiler which serves no commercial purpose and is used solely for hobby or display and operated solely for the enjoyment of the owner.

"Hot water supply boiler" means a boiler furnishing hot water to be used externally to itself at pressures not exceeding 160 psig or temperatures not exceeding 250°F at or near the boiler outlet, with the exception of boilers which are directly fired by oil, gas or electricity where none of the following limitations are exceeded:

- a. Heat input of 200,000 BTU per hour;
- b. Water temperature of 210°F; or
- c. Nominal water containing capacity of 120 gallons.

"Hot water supply storage tanks" means those heated by steam or any other indirect means where any one of the following limitations are exceeded:

- a. Heat input of 200,000 BTU per hour;

b. Water temperature of 210°F; or

c. Nominal water containing capacity of 120 gallons.

"Inspection certificate" means a certificate issued by the chief inspector for the operation of a boiler or pressure vessel.

"Inspector" means the chief inspector, commonwealth inspector or special inspector.

"Internal inspection" means a complete examination of the internal and external surfaces of a boiler or pressure vessel and its appliances while it is shut down and manhole plates, handhole plates or other inspection openings removed.

"Lap seam crack" means a failure in a lap joint extending parallel to the longitudinal joint and located either between or adjacent to rivet holes.

"Miniature boiler" means any boiler which does not exceed any one of the following limits:

a. 16 inches inside diameter of shell;

b. 20 square feet heating surface;

c. 5 cubic feet gross volume, exclusive of casing and insulation; or

d. 100 psig maximum allowable working pressure.

"National Board" means the National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Avenue, Columbus, OH 43229, whose membership is composed of the chief inspectors of government jurisdictions who are charged with the enforcement of the provisions of the ASME Code.

"National Board Inspection Code" means ~~the manual for boiler and pressure vessel inspectors published by the National Board. Copies of this code may be obtained from the National Board~~ NB-23, the National Board Inspection Code, 2015 Edition, The National Board of Boiler and Pressure Vessel Inspectors.

"New boiler or pressure vessel installation" means all boilers or pressure vessels constructed, installed, placed in operation or contracted for after July 1, 1974.

"NFPA" means the National Fire Protection Association.

"National Fire Protection Association No. 85" means NFPA® 85, Boiler and Combustion Systems Hazards Code, 2015 Edition, National Fire Protection Association.

"Nonstandard boiler or pressure vessel" means a boiler or pressure vessel that does not bear the stamp of Commonwealth of Virginia, the ASME Code stamp or the National Board stamp when applicable.

"Owner or user" means any person, partnership, firm or corporation who is legally responsible for the safe operation of a boiler or pressure vessel within the Commonwealth.

"Owner-user inspection agency" means any person, partnership, firm or corporation registered with the chief inspector and approved by the board as being legally responsible for inspecting pressure vessels which they operate in this Commonwealth.

"Portable boiler" means an internally fired boiler which is primarily intended for temporary location and whose construction and usage permit it to be readily moved from one location to another.

"Power boiler" means a boiler in which steam or other vapor is generated at a pressure of more than 15 psig.

"Pressure vessel" means a vessel in which the pressure is obtained from an external source, or by the application of heat from an indirect source, or from a direct source, other than those boilers defined in Part I (16VAC25-50-10 et seq.) of this chapter.

"PSIG" means pounds per square inch gauge.

"R Certificate of Authorization" means an authorization issued by the National Board for the repair and alteration of boilers and pressure vessels.

"Reinstalled boiler or pressure vessel" means a boiler or pressure vessel removed from its original setting and reinstalled at the same location or at a new location.

"Repair" means work necessary to return a boiler or pressure vessel to a safe and satisfactory operating condition, provided there is no deviation from the original design.

"Secondhand boiler or pressure vessel" means a boiler or pressure vessel which has changed both location and ownership since the last certificate inspection.

"Special inspector" means an inspector holding a Virginia Certificate of Competency, and who is regularly employed by an insurance company authorized (licensed) to write boiler and pressure vessel insurance in this Commonwealth, an inspector continuously employed by any company operating pressure vessels in this Commonwealth used or to be used by the company, or a contract fee inspector.

"Standard boiler or pressure vessel" means a boiler or pressure vessel which bears the stamp of the Commonwealth of Virginia, the ASME Code stamp and the National Board stamp when applicable.

"Underwriters' Laboratories" means Underwriters' Laboratories, Inc., 333 Pfingsten Road, Northbrook, Illinois 60062, which is a nonprofit, independent organization testing for public safety. It maintains and operates laboratories for the examination and testing of devices, systems, and materials to determine their relation to life, fire, casualty hazards and crime prevention.

"VR Certificate of Authorization" means an authorization issued by the National Board for the repair of pressure relief valves.

"Water heater" means a vessel used to supply: (i) potable hot water; or (ii) both space heat and potable water in combination which is directly heated by the combustion of fuels, electricity, or any other source and withdrawn for use external to the system at pressures not to exceed 160 psi or temperatures of 210°F. This term also includes fired storage water heaters defined by the Virginia Uniform Statewide Building Code as a "water heater."

#### **16VAC25-50-15. Effective date of certain requirements of the regulation.**

The applicable requirements of the sections and subsections listed below shall not be enforced until April 1, 1999. On or after April 1, 1999, all sections and subsections of the published regulation shall be enforceable:

1. Subsection C of 16VAC25-50-70 regarding endorsement requirements for inspecting repairs or alterations;
2. 16VAC25-50-250 regarding endorsement requirements for inspecting repairs or alterations;
3. Subdivision F 11 of 16VAC25-50-360 regarding repairs conducted by holders of a "VR" stamp;
4. Subsection G of 16VAC25-50-370 regarding repairs conducted by holders of a "VR" stamp;
5. Subdivision E 2 of 16VAC25-50-380 regarding repairs conducted by holders of a "VR" stamp; and
6. Subsections A, B, and C of 16VAC25-50-480 regarding endorsement requirements for conducting and inspecting repairs or alterations.

Part II  
Administration

**16VAC25-50-20. Minimum construction standards for boilers and pressure vessels.**

A. Boilers and pressure vessels to be installed for operation in this Commonwealth shall be designed, constructed, inspected, stamped and installed in accordance with the applicable ASME Code including all addenda and applicable code case(s), other international construction standards which are acceptable to the chief inspector, and this chapter.

B. Boilers and pressure vessels shall bear the National Board stamping, except cast iron boilers and UM vessels. A copy of the Manufacturers' Data Report, signed by the manufacturer's representative and the National Board commissioned inspector, shall be filed by the owner or user with the chief inspector prior to its operation in the Commonwealth.

C. Pressure piping -- (including welded piping) -- Piping external to power boilers extending from the boiler to the first stop valve of a single boiler, and to the second stop valve in a battery of two or more boilers is subject to the requirements of the current edition of ASME Code, Section I, and the design, fabrication, installation and testing of the valves and piping shall be in conformity with the applicable paragraphs of the current edition of ASME Code. Applicable ASME data report forms for this piping shall be furnished by the owner to the chief inspector. Construction rules for materials, design, fabrication, installation and testing both for the boiler external piping and the power piping beyond the valve or valves required by the current edition of ASME Code, Section I, are referenced in ASME B31.1, Power piping, and the ASME Code.

D. Boilers and pressure vessels brought into the Commonwealth and not meeting ASME Code requirements shall not be operated unless the owner/user is granted a variance in accordance with § 40.1-51.19 of the Act.

The request for variance shall include all documentation related to the boiler or pressure vessel that will provide evidence of equivalent fabrication standards, i.e., design specification, calculations, material specifications, detailed construction drawings, fabrication and inspection procedures and qualification records, examination, inspection and test records, and any available manufacturers' data report.

In order to facilitate such a variance approval, the submission of documentation, in the English language and in current U.S. standard units of measure would be helpful. The following list of documents, while not all inclusive, would be useful in providing evidence of safety equivalent to ASME Code construction:

1. List of materials used for each pressure part;
  
2. The design calculations to determine the maximum allowable working pressure in accordance with the ASME Code, applicable section, edition and addenda;

3. The design code used and the source of stress values for the materials used in the design calculations;
4. The welding procedures used and the qualification records for each procedure;
5. The material identification for each type of welding material used;
6. The performance qualification records for each welder or welding operator used in the construction of the boiler or pressure vessel;
7. The extent of any nondestructive examination (NDE) performed and the qualification records of NDE operators;
8. Record of final pressure test signed by a third party inspector;
9. Name and organization of the third party inspection agency;
10. A certification from a licensed professional engineer stating that the boiler or pressure vessel has been constructed to a standard providing equivalent safety to that of the ASME Code. A signature, date and seal of the certifying engineer is required;
11. Where applicable, a matrix of differences between the actual construction of the boiler or pressure vessel for which a variance is requested and a similar boiler or pressure vessel that is ASME eCode stamped; and
12. Where applicable, a letter from an insurance company stating that it will insure the boiler or pressure vessel.

After notification of a violation of these rules and regulations, an owner/user desiring a variance shall submit a request for variance within 30 days.

The chief inspector shall respond to any request for a variance within 30 days of receipt of all required documentation, and shall submit a recommendation to the commissioner, who will make the decision on the variance.

E. Before secondhand equipment is installed, application for permission to install shall be filed by the owner or user with the chief inspector and approval obtained.

F. Electric boilers, subject to the requirements of the Act and this chapter, shall bear the Underwriters' Laboratories label on the completed unit or assembly by the manufacturer. This label shall be in addition to the code symbol stamping requirements of the ASME Code and the National Board.

**16VAC25-50-30. Frequency of inspections of boilers and pressure vessels.**

A. Power boilers and high-pressure, high-temperature water boilers shall receive an annual internal inspection for certification. Such boilers shall also receive, where possible, an annual external inspection, given while under representative operating conditions.

B. Heating boilers shall receive a certificate inspection biennially.

1. Steam boilers shall receive an internal inspection where construction permits.

2. Water boilers shall receive an external inspection with an internal inspection at the discretion of the inspector where construction permits.

C. Except as provided for in subsection E of this section, pressure vessels subject to internal corrosion shall receive a certificate inspection biennially. This inspection shall be an internal inspection conducted at the discretion of the inspector where construction permits.

D. Except as provided for in subsection E of this section, pressure vessels not subject to internal corrosion shall receive a certificate inspection biennially. This inspection shall be an external inspection, with an internal inspection conducted at the discretion of the inspector where construction permits.

E. Pressure vessels that are under the supervision of an authorized owner-user inspection agency shall be inspected at intervals in a manner as agreed upon between the Commissioner and that agency.

F. Boiler and pressure vessel components of nuclear power plants, that are included in the Act, shall be inspected as provided by the ASME Code, Section XI.

G. Based upon documentation of such actual service conditions by the owner or user of the operating equipment, the Commissioner may permit variations in the inspection requirements as provided in the Act.

**16VAC25-50-40. Notification of inspection.**

A. Certificate inspections shall be scheduled in accordance with the frequency established in § 40.1-51.10 of the Act and at a time mutually agreeable to the inspector and owner or user.

B. External inspections may be performed by the inspector during normal working hours and without prior notification.

C. When, as a result of external inspection or determination by other objective means, it is the inspector's opinion that continued operation of the boiler or pressure vessel constitutes a menace to public safety, the inspector may require an internal inspection or an appropriate pressure test to evaluate conditions. In these instances the owner or user shall prepare the

boiler or pressure vessel for an internal inspection or appropriate pressure test as the inspector designates.

**16VAC25-50-50. Examination for an inspector's certificate of competency.**

A. Examination for an inspector's certificate of competency in accordance with the requirements of § 40.1-51.9 of the Code of Virginia shall be held at the office of the commissioner or at any other location selected by the commissioner, four times each year, on the first Wednesday and Thursday of March, June, September and December.

B. An applicant for an examination shall have a minimum of five credit points accumulated under the following subdivisions:

1. Education (1 credit minimum, 4 credits maximum)

Category	Credit Points
a. Technical Training in Boiler and Pressure Vessel Inspection (1 pt. maximum)  Includes any of the following:  Continuing Education: Having completed and received a passing grade in a training course in at least one of the following (or related) subjects: quality assurance, engineering, fabrication methods, nondestructive examination or inspection. The training course(s) may be a correspondence course or conducted in a classroom.  Coded Courses: Completion of a course on knowledge, understanding and general structure of the National Board Inspection Code OR other codes or related standards, as applicable.  Other Courses: Completion of a course on procedures and techniques of auditing, and/or basic inspection methods.	1
b. Technical Curriculum:  Includes any of the following:  A diploma from an accredited technical school,  Power Engineering certificate,  Accredited Trade Certificate in such skills as a welder, boilermaker, mechanic, steam fitter, machinist or millwright,  Evidence of completion of a military or merchant marine training course in the area of marine or stationary boilers or pressure vessels.	2
c. College/University  Includes any of the following:	3



Associate's Degree in science, mathematics or engineering  
 Bachelor's Degree in Science or Mathematics

d. College/University 4  
 Bachelor's Degree in engineering

2. Experience (1 credit minimum, 4 credits maximum)

Credit as shown for each full year's technical experience associated with boilers and pressure vessels in the categories listed below.

Category	Credit Points/ Each full year of experience
a. Engineering, design.	1
b. Manufacturing, including fabrication methods or processes in either shop or field.	1
c. Responsible charge in the operation of boilers exceeding 50,000 pounds of steam per hour total capacity.	1
d. Perform repair, alteration or maintenance of boilers or pressure vessels.	1
e. Quality control system related to boiler or pressure vessel manufacturing, repair or alteration in either shop or field.	1
f. Inspection of boilers and pressure vessels either inservice or during construction including either shop or field.	1
g. A Nondestructive Examination Level II examiner of boilers and pressure vessels.	1

C. Applications for examination shall be in writing on a form furnished by the commissioner stating the education of the applicant, a list of his employers, his period of employment and position held with each employer.

D. Applications containing willful falsifications or untruthful statements shall be rejected.

E. If the applicant's education and experience are acceptable to the examining board, he shall be given a written examination dealing with the construction, installation, operation, maintenance and repair of boilers and pressure vessels and their appurtenances, and the applicant shall be accepted or rejected on the merits of this examination.

F. If the applicant passes the written examination, a certificate of competency may be issued by the commissioner, when the inspector is employed by an authorized inspection agency as defined in 16VAC25-50-10.

G. After 90 days, an applicant who fails to pass the examination will be permitted to take another written examination and his acceptance or rejection will be determined on the basis of this examination. Applicants who fail to obtain a passing grade on the examination after three attempts shall not be permitted to take the examination for at least one year following the last attempt.

**16VAC25-50-60. Examination fees.**

A fee of \$50 will be charged for each applicant taking the examination for a certificate of competency. In the event an applicant fails the examination, the applicant may be re-examined within one year of the initial test date without additional charge. Checks or money orders for examination fees shall be made payable to the Treasurer of Virginia and sent to the chief inspector.

**16VAC25-50-70. Certificate of competency and identification card.**

A. Upon request and subject to subsection B of this section, a certificate of competency and an identification card shall be issued by the commissioner to:

1. An inspector who is employed full time by a governmental authority having an authorized inspection agency as defined in 16VAC25-50-10.
2. An inspector who is employed by an insurance company which is authorized (licensed) to write boiler and pressure vessel insurance in this Commonwealth.
3. An inspector who is employed by a company which operates unfired pressure vessels in Virginia and has a valid owner-user inspection agency agreement as provided in 16VAC25-50-120.
4. A contract fee inspector.

B. The applicant must pass the examination as set forth in 16VAC25-50-50 and pay the application fee of \$50; or hold a valid commission or certificate of competency from a state that has a standard of examination substantially equal to that of Virginia, and a valid commission and identification card issued by the National Board.

C. Requests for a certificate of competency, identification card and endorsements shall be completed on forms provided by the chief inspector and shall be accompanied by, when applicable, a facsimile of the applicant's commission, certificate of competency and identification cards, named above, and a processing fee of \$20 payable to the Treasurer of Virginia. An endorsement of the Virginia identification card is required for inspecting repairs or alterations. Inspectors holding a valid "A" or "B" national qualification or passing a written examination given by the department shall apply on forms provided by the chief inspector.

D. The Virginia valid identification card shall be returned to the chief inspector when the certificate holder is no longer employed by the organization employing him at the time that the

certificate was issued or, in the case of a self-employed contract fee inspector, has ceased inspection activities.

E. Each person holding a valid Virginia certificate of competency and who conducts inspections as provided by the Act shall apply to the chief inspector on forms provided by the chief inspector and obtain an identification card biennially, not later than June 30 of the year in which the card is due for renewal. A processing fee of \$20 for each card, payable to the Treasurer of Virginia, shall accompany the application.

F. An inspector's certificate of competency may be suspended by the chief inspector after due investigation and recommendation by the commissioner, for incompetence or untrustworthiness of the holder of the certificate, or for willful falsification of any matter or statement contained in his application, or in a report of any inspection made by him. Written notice of any suspension shall be given by the chief inspector to the inspector and his employer. Persons whose certificate of competency has been suspended shall be entitled to an appeal to the board as provided for in the act and to be present in person or to be represented by counsel at the hearing of the appeal.

**16VAC25-50-80. Inspectors to have no other interests.**

Inspectors shall not engage in the sale of any article or device relating to boilers, pressure vessels or their appurtenances. Contract fee inspectors shall not have a direct financial interest in any repairs conducted on boilers, pressure vessels, or their appurtenances which they inspect.

**16VAC25-50-90. Inspection reports to be submitted by special inspectors.**

A. Special inspectors shall submit first inspection reports to the chief inspector on Form BPV-5 for each boiler and pressure vessel subject to registration and inspection in this Commonwealth.

B. Except as provided in subsection E of this section, subsequent inspections of both standard and nonstandard boilers and pressure vessels shall be reported on Forms NB-6 and NB-7 of the National Board Inspection Code or Commonwealth Form BPV 6-7.

C. Inspection reports, as required in subsections A and B of this section, shall be submitted within 30 days from date of inspection.

D. When hazardous conditions are found in a boiler or pressure vessel which would present an immediate threat to life or property, the owner or user shall immediately take action to correct the hazardous conditions or remove the object from service. The inspector shall notify the office of the chief inspector immediately by telephone followed by a written report. A complete and thorough inspection shall be conducted to evaluate the hazardous conditions and to make recommendations for necessary corrective measures. The boiler or pressure vessel shall not be returned to service until it has been restored to a safe operating condition under the requirements of this chapter.

E. Owner-user inspection agencies may report subsequent inspections of both standard and nonstandard pressure vessels on Form NB-7 or at their option, upon forms approved by the board. The report shall be filed as provided in 16VAC25-50-120.

**16VAC25-50-100. Insurance companies and contract fee inspectors to notify Chief Inspector of contractual changes.**

All insurance companies shall notify the Chief Inspector, within 30 days, of all boilers or pressure vessels on which insurance is written, cancelled, not renewed, or suspended because of unsafe conditions.

All contract fee inspectors shall notify the Chief Inspector, within 30 days, of all boilers or pressure vessels on which they contract to provide inspection services.

**16VAC25-50-110. Special inspectors to notify Chief Inspector of unsafe boilers and pressure vessels.**

If, upon inspection, a special inspector finds a boiler or pressure vessel to be unsafe for initial or further operation, he shall promptly notify the owner or user, stating what repairs or other corrective measures are required to bring the object into compliance with this chapter. Unless the owner or user agrees to make the repairs or adopt such other corrective measures promptly, the special inspector shall immediately notify the chief inspector. Until corrections have been made no further operation of the boiler or pressure vessel involved shall be permitted. If an inspection certificate for the object is required and is in force, it shall be suspended by the chief inspector. When necessary repairs have been made or corrective actions have been taken and the boiler or pressure vessel is determined to be safe to operate by the inspector, the chief inspector shall be notified. At that time a certificate of inspection, where applicable, may be issued.

**16VAC25-50-120. Owner-user inspection agency.**

A. Any person, firm, partnership or corporation operating pressure vessels in this Commonwealth may seek approval and registration as an owner-user inspection agency by filing an application with the chief inspector on forms prescribed and available from the department, and request approval by the board. Each application shall be accompanied by a bond in the penal sum of \$5,000 which shall continue to be valid during the time the approval and registration of the company as an owner-user inspection agency is in effect.

B. The application and registration shall show the name of the agency and its principal address in this Commonwealth, and the name and address of the person or persons having supervision over inspections made by the agency. Changes in supervisory personnel shall be reported to the chief inspector within 30 days after any change.

C. Each owner-user inspection agency as required by the provisions of the Act and this chapter shall:

1. Maintain its own inspection group under the supervision of one or more individuals who have independent authority to effect resolution of technical problems or procedures;
2. Conduct inspections of boilers or unfired pressure vessels, not exempt by the Act, utilizing only qualified inspection personnel, certified pursuant to 16VAC25-50-50, 16VAC25-50-60 and 16VAC25-50-70; in the case of unfired pressure vessels which are covered by the American Petroleum Institute Code API-510, and are in use in the petroleum or chemical process industries, the owner-user inspection agency may, at its option, inspect and maintain such vessels by the API-510 code;
3. Retain on file at the location where the equipment is inspected a true record or copy of the report of the latest of each inspection signed by the inspector who made the inspection;
4. Execute and deliver to the owner or user (management) a true report of each inspection together with appropriate requirements or recommendations that result from the inspections;
5. Promptly notify the chief inspector of any boiler or unfired pressure vessel which does not meet the requirements of safe operating conditions;
6. Maintain inspection records which will include a list of each boiler or unfired pressure vessel covered by the Act, showing a serial number and an abbreviated description as may be necessary for identification; the date of last inspection of each unit and approximate date for the next inspection, arrived at by applying the appropriate rules to all data available at the time the inspection record is compiled (re: frequency and type of inspection, see 16VAC25-50-30). This inspection record shall be readily available for examination by the chief inspector or his authorized representative during normal business hours; and
7. File a statement annually, on a date mutually agreed upon, with the chief inspector. This statement shall be signed by the individual having supervision over the inspections made during the period covered. The statement shall include the number of vessels, covered by the Act, inspected during the year and certifying that each inspection was conducted pursuant to the inspection requirements provided for by the Act and in a format acceptable to the chief inspector. The annual statement shall be accompanied by a filing fee in accordance with the schedule in § 40.1-51.11:1 of the Act as follows:
  - a. For statements covering not more than 25 vessels—\$7 per vessel;
  - b. For statements covering more than 25 vessels but less than 101 vessels—\$200;
  - c. For statements covering more than 100 but less than 501 vessels—\$400; and
  - d. For statements covering more than 500 vessels—\$800.

**16VAC25-50-130. Defective conditions disclosed at time of external inspection.**

If, upon an external inspection, there is evidence of a leak or crack, sufficient covering of the boiler or pressure vessel shall be removed to permit the inspector to satisfactorily determine the safety of the boiler or pressure vessel. If the covering cannot be removed at that time, the inspector may order the operation of the boiler or pressure vessel stopped until the covering can be removed and proper examination made.

**16VAC25-50-140. Owner or user to notify chief inspector of accident.**

When an accident occurs which renders a boiler or pressure vessel inoperative, the owner or user shall immediately notify the chief inspector, and the authorized inspector shall submit a detailed report of the accident. In case of a serious accident, as in a personal injury or an explosion, notice shall be given immediately by telephone, telegraph, facsimile or messenger, and neither the boiler or pressure vessel, nor any parts of it, shall be removed or disturbed before an inspection has been made by the inspector, except for the purpose of conserving human life and limiting consequential damage.

**16VAC25-50-150. Inspection certificate and inspection fees.**

A. Upon the inspection and determination that a boiler or pressure vessel is suitable and conforms to this chapter, the owner or user shall remit the payment for an inspection certificate in one of the following forms and amounts for each item required to be inspected under the Act.

1. Payment of \$20 may be sent from the owner or user to the chief inspector by check, credit card or money order. Payment of inspection certificate fees should be made payable to the Treasurer of Virginia; or
2. Payment may be presented to a special inspector, where the inspector is authorized to collect and forward such fees on the department's behalf. The commissioner may authorize special inspectors to collect and forward to the chief inspector \$16 for each inspection certificate. Pursuant to § 40.1-51.10:1 of the Code of Virginia, special inspectors may charge owners or users a fee not exceeding \$4.00 for collecting and forwarding inspection certificate fees.

An inspection certificate will not be issued to the owner or user until payment is received by either the department or, if previously authorized, by a special inspector. A fee of \$10 will be charged for each reprint of an inspection certificate.

B. The chief inspector may extend an inspection certificate for up to three additional months beyond a two month grace period following the expiration of a certificate. Such extension is subject to a satisfactory external inspection of the boiler or pressure vessel and receipt of a fee of \$20 for each month of extension.

C. When the chief inspector determines that no contract fee inspectors are available to inspect a regulated uninsured boiler or pressure vessel in a timely manner, a commonwealth

inspector may be directed to conduct a certification inspection. Contract fee inspection service shall be determined unavailable where (i) at least two contract fee inspectors contacted will not agree to provide inspection services to the owner or user within at least 21 days from the request and (ii) the owner's or user's inspection certificate will expire within that same period.

The following rates per inspected object, in addition to inspection certificate fees, shall apply for certification inspections conducted by a commonwealth inspector:

1. Power boilers and high pressure, high temperature water boilers	\$135
2. Heating boilers	\$70
3. Pressure vessels	\$50

D. The review of a manufacturer's or repair organization's facility for the purpose of national accreditation will be performed by the chief inspector or his qualified designee for an additional fee of \$1,000 per review or survey.

E. The owner or user who causes a boiler or pressure vessel to be operated without a valid certificate shall be subject to the penalty as provided for in § 40.1-51.12 of the Act.

F. Inspection certificates are not required for unfired pressure vessels inspected by an authorized owner-user inspection agency. However, the agency shall keep on file in its office in the establishment where the equipment is located a true record or copy of the report of the latest of each inspection signed by the inspector who made the inspection.

**16VAC25-50-160. Validity of inspection certificate.**

An inspection certificate, issued in accordance with Part II, 16VAC25-50-150, shall be valid until expiration unless some defect or condition affecting the safety of the boiler or pressure vessel is disclosed. The certificate issued for a boiler or pressure vessel inspected by an inspection agency of an insurance company shall be valid only if the boiler or pressure vessel for which it was issued continues to be insured by an insurance company authorized (licensed) to write boiler and pressure vessel insurance in this Commonwealth.

**16VAC25-50-170. Restamping boilers and pressure vessels.**

When the stamping on a boiler or pressure vessel becomes indistinct, the inspector shall instruct the owner or user to have it restamped. Request for permission to restamp the boiler or pressure vessel shall be made to the chief inspector and proof of the original stamping shall accompany the request. The chief inspector may grant the authorization. Restamping authorized by the chief inspector shall be done only in the presence of an inspector, and shall be identical with the original stamping, except that it will not be required to restamp the ASME Code Symbol. Notice of completion of restamping shall be filed with the chief inspector by the inspector who witnessed the stamping on the boiler or pressure vessel, together with facsimile of the stamping applied.

**16VAC25-50-180. Penalty for operation of unsafe boilers and pressure vessels.**

If, upon inspection, a boiler or pressure vessel is found to be unsafe to operate, the inspector shall notify the chief inspector as required in Part II, 16VAC25-50-110, and the inspection certificate shall be suspended by the chief inspector. Any person, firm, partnership or corporation causing a boiler or pressure vessel to continue to be operated shall be subject to the penalty provided in the Act.

**16VAC25-50-190. Condemned boilers and pressure vessels.**

A. Any boiler or pressure vessel having been inspected and declared unsafe by the chief inspector or commonwealth inspector shall be stamped by the inspector with the letters "XXX" on both sides of the postal abbreviation of this Commonwealth, as shown by the following facsimile, which will designate a condemned boiler or pressure vessel:

XXX VA XXX

B. Any person, firm, partnership, or corporation using or offering for sale a condemned boiler or pressure vessel for operation within this Commonwealth shall be subject to the penalties provided by the Act.

**16VAC25-50-200. Reinstallation of standard boilers or pressure vessels.**

If a standard boiler or pressure vessel located in this Commonwealth is to be moved to another location for temporary use or repair, application shall be made by the owner or user to the chief inspector for permission to reinstall the boiler or pressure vessel.

**16VAC25-50-210. Installation or reinstallation of nonstandard boilers or pressure vessels.**

A. Installation and operation of nonstandard boilers and pressure vessels in the Commonwealth is prohibited without permission from the commissioner.

B. A nonstandard boiler or pressure vessel which is moved outside the boundaries of the Commonwealth cannot be reinstalled in the Commonwealth without the owner or user securing permission from the commissioner.

**16VAC25-50-220. Installation of used or secondhand boilers or pressure vessels.**

Before a used or secondhand boiler or pressure vessel can be shipped for the purpose of installation in this Commonwealth, an inspection must be made by an inspector qualified by an examination equal to that required by this Commonwealth or by an inspector holding a valid National Board commission. Data submitted by the inspector shall be filed by the owner or user of the boiler or pressure vessel with the chief inspector for his approval. Boilers and pressure vessels when installed in this Commonwealth shall be equipped with fittings and appliances that comply with this chapter for new installations.



**16VAC25-50-230. Reinstalled boiler or pressure vessel.**

When a boiler or pressure vessel is moved and reinstalled, the attached fittings and appliances shall comply with this chapter for new installations.

**16VAC25-50-240. Factor of safety for existing installations.**

Any inspector may increase the factor of safety on any existing installation if the condition of the boiler or pressure vessel warrants it. If the owner or user does not concur with the inspector's decision, the owner or user may appeal to the commissioner who may request a joint inspection by the chief inspector or the commonwealth inspector and the special inspector. The chief inspector shall make a report to the commissioner and the commissioner shall make the final decision, based upon the data contained in the inspector's reports. The decision of the commissioner may be appealed to the board pursuant to § 40.1-51.16 of the Code of Virginia.

**16VAC25-50-250. Repairs or alterations.**

When repairs or alterations are to be made, permission shall be obtained from an inspector with an appropriate endorsement, and the repairs shall be done in accordance with the National Board Inspection Code and this chapter.

**16VAC25-50-260. Removal of safety appliances.**

A. No person shall attempt to remove or do any work on any safety appliance prescribed by this chapter while a boiler or pressure vessel is in operation, except as provided in applicable sections of the current edition of ASME Code. Should any of these appliances be removed for repair during an outage of a boiler or pressure vessel, they must be reinstalled and in proper working order before the object is again placed in service.

B. No person shall load the safety valve or valves in any manner to maintain a working pressure in excess of that stated on the inspection certificate.

**16VAC25-50-270. Review fees.**

Reviews and emergency inspections other than certificate inspections conducted by the chief inspector or commonwealth inspectors, including but not limited to consultations, data reviews, engineering evaluations, or quality control reviews, shall be billed at the following rates:

- |                                    |   |
|------------------------------------|---|
| 1. For one-half day of four hours  | \$100 plus expenses, including travel and lodging |
| 2. For one full day of eight hours | \$200 plus expenses, including travel and lodging |

**16VAC25-50-280. Requirements for new installations.**

A. No boiler or pressure vessel shall be installed in this Commonwealth unless it has been constructed, inspected and stamped as provided in Part II, 16VAC25-50-20 except:

1. Those exempt by the Act;
2. Those outlined in Part II, 16VAC25-50-20 D; and
3. Those existing boilers and pressure vessels which are to be reinstalled.

B. All new boiler and pressure vessel installations, including reinstalled and secondhand boilers and pressure vessels, shall be installed in accordance with the requirements of the current edition of ASME Code and this chapter.

C. A boiler or pressure vessel constructed equivalent to ASME Code standards, or having the standard stamping of another state that has adopted a standard of construction equivalent to the standard of this Commonwealth, may be accepted by the chief inspector. The person desiring to install the boiler or pressure vessel shall make application for the installation prior to construction and shall file the Manufacturers' Data Report for the boiler or pressure vessel with the chief inspector following construction and prior to installation.

D. The stamping shall not be concealed by insulation or paint and shall be exposed at all times unless a suitable record is kept of the location of the stamping so that it may be readily uncovered at any time this may be desired.

**16VAC25-50-290. Application of Commonwealth serial numbers.**

A. Upon completion of the installation of a new boiler or pressure vessel or at the time of the initial certificate inspection of an existing installation each boiler or pressure vessel shall be stamped with a serial number of the Commonwealth, consisting of the postal abbreviation for the Commonwealth and a unique series of numbers not less than 3/16-inch in height and arranged as follows:

VA 0000

B. All cast iron, low-pressure heating boilers shall have securely attached to the front of the boiler a metallic tag of not less than one inch in height, which shall have the serial number of the Commonwealth stamped on it.

C. All pressure vessels constructed of cast iron, or of a material of such thickness or type that it should not be stamped, shall have securely attached a metallic tag not less than one inch in height, which shall have the serial number of the Commonwealth stamped on it.

**16VAC25-50-300. Return loop connection.**

The return water connections to all low-pressure, steam heating boilers supplying a gravity return heating system shall be arranged to form a loop so that the water cannot be forced out of

the boiler below the safe water level. This connection, known as a "return pipe loop connection," is shown in the current edition of ASME Code, Section IV.

**16VAC25-50-310. Ladders, platforms, and runways.**

Where valves and other appurtenances require frequent manipulation and are located so that they cannot be reached or operated from the floor, a platform or other safe means of operation shall be provided. If a platform or runway is used it shall be at least 24 inches wide and be provided with standard handrails and toeboards and have at least seven feet six inches head room. All runways shall have at least two means of exit, each exit to be remotely located from the other and connected to a permanent stairway or inclined ladder leading to the floor level, or an alternate means of escape or exit as may be practical for the specific installation.

**16VAC25-50-320. Exit from boiler room.**

All boiler rooms exceeding 500 square feet floor area and containing one or more boilers having a fuel burning capacity of 1,000,000 BTU per hour, or equivalent electrical heat input, shall have at least two means of exit. Each exit shall be remotely located from the other. Each elevation in a boiler room shall have two means of exit, each remotely located from the other.

**16VAC25-50-330. Operation.**

The current edition of the ASME Code, Section VII, Recommended Rules for Care of Power Boilers, and the current edition of the ASME Code, Section VI, Recommended Rules for Care of Heating Boilers, shall be used as a guide for proper and safe operating practices.

**16VAC25-50-340. Burner controls and safety devices.**

Fired burner installations shall conform to the requirements of the following nationally recognized standards: the American Gas Association, Underwriters Laboratories, Part CG (General), Part CW (Steam and Waterside Control) of ANSI/ASME-CSD-1 or National Fire Protection Association (NFPA) No. 85 series as applicable.

**16VAC25-50-350. Repairs and renewals of boiler fittings and appliances.**

Whenever repairs are made to fittings or appliances or it becomes necessary to replace them, the repairs or replacements shall comply with the requirements of the ASME Code or the National Board Inspection Code.

Part III  
Existing Installations

**16VAC25-50-360. Power and high-pressure, high-temperature water boilers.**

A. Age limit of existing boilers.

1. The age limit of any boiler of nonstandard construction, installed before July 1, 1974, other than one having a riveted, longitudinal lap joint, shall be 30 years; however, any boiler passing a thorough internal and external inspection, and not displaying any leakage or distress under a hydrostatic pressure test of 1-1/2 times the allowable working pressure held for at least 30 minutes, may be continued in operation without reduction in working pressure. The age limit of any boiler having riveted, longitudinal, lap joints and operating at a pressure in excess of 50 psig shall be 20 years. This type of boiler, when removed from an existing setting, shall not be reinstalled for a pressure in excess of 15 psig. A reasonable time for replacement, not to exceed one year, may be given at the discretion of the chief inspector.

2. The shell or drum of a boiler in which a typical lap seam crack is discovered along a longitudinal riveted joint for either butt or lap joints shall be permanently removed from service.

3. The age limit of boilers of standard construction, installed before July 1, 1974, shall be determined from the results of a thorough internal and external inspection by an authorized inspector and the application of an appropriate pressure test. Hydrostatic test pressure shall be 1-1/2 times the allowable working pressure and maintained for 30 minutes. The boiler may be continued in service at the same working pressure provided there is no evidence of leakage or distress under these test conditions.

4. The minimum temperature of the water used for the hydrostatic test of low-pressure boilers and pressure vessels shall be 60°F. The minimum temperature of the water used for the hydrostatic test of power boilers shall be 70°F or ambient whichever is greater.

B. The maximum allowable working pressure for standard boilers shall be determined in accordance with the applicable provisions of the edition of the ASME Code under which they were constructed and stamped.

C. 1. The maximum allowable working pressure on the shell of a nonstandard boiler shall be determined by the strength of the weakest section of the structure, computed from the thickness of the plate, the tensile strength of the plate, the efficiency of the longitudinal joint or tube ligaments, the inside diameter of the weakest course and the factor of safety allowed by this chapter.

$$\frac{TStE}{RFS} = \text{Maximum allowable working pressure, psi}$$

where:

TS = ultimate tensile strength of shell plates, psi

t = minimum thickness of shell plate, in weakest course, inches

E = efficiency of longitudinal joint:

For tube ligaments, E shall be determined by the rules in the ASME Code, Section I.

For riveted joints, E shall be determined by the rules in the applicable edition of the ASME Code. For seamless construction, E shall be considered 100%.

R = inside radius of the weakest course of the shell, in inches

FS = factor of safety permitted.

2. Tensile strength. When the tensile strength of steel or wrought iron shell plates is not known, it shall be taken as 55,000 psi.

3. Crushing strength of mild steel. The resistance to crushing of mild steel shall be taken at 95,000 psi of cross-sectional area.

4. Strength of rivets in shear. When computing the ultimate strength of rivets in shear, the following values, in pounds per square inch, of the cross-sectional area of the rivet shank shall be used.

	PSI
Iron rivets in single shear	38,000
iron rivets in double shear	76,000
Steel rivets in single shear	44,000
Steel rivets in double shear	88,000

When the diameter of the rivet holes in the longitudinal joints of a boiler is not known, the diameter and cross-sectional area of rivets, after driving, may be selected from Table 1, or as ascertained by cutting out one rivet in the body of the joint.

TABLE 1 SIZES OF RIVETS BASED ON PLATE THICKNESS (in inches)	
Plate of Thickness	Rivet Diameter after Driving
1/4	11/16
9/32	11/16
5/16	3/4
11/32	3/4
3/8	13/16
13/32	13/16
7/16	15/16
15/32	15/16
1/2	15/16
9/16	1-1/16
5/8	1-1/16

5. Factors of safety. The following factors of safety shall be increased by the inspector if the condition and safety of the boiler demand it:

a. The lowest factor of safety permissible on existing installations shall be 4.5 for vessels built prior to January 1, 1999. For vessels built on or after January 1, 1999, the factor of safety may be 4.0. Horizontal-return-tubular boilers having continuous longitudinal lap seams more than 12 feet in length, shall have a factor of safety of eight. When this type of boiler is removed from its existing setting, it shall not be reinstalled for pressures in excess of 15 psig.

b. Reinstalled or secondhand boilers shall have a minimum factor of safety of six when the longitudinal seams are of lap-riveted construction, and a minimum factor of safety of five when the longitudinal seams are of butt-strap and double-strap construction.

D. Cast-iron headers and mud drums. The maximum allowable working pressure on a water tube boiler, the tubes of which are secured to cast iron or malleable-iron headers, or which have cast iron mud drums, shall not exceed 160 psig.

E. Pressure on cast iron boilers. The maximum allowable working pressure for any cast iron boiler, except hot water boilers, shall be 15 psig.

F. Safety valves.

1. The use of weighted-lever safety valves, or safety valves having either the seat or disk of cast iron, shall be prohibited. Valves of this type shall be replaced by direct, spring-loaded, pop-type valves that conform to the requirements of the current edition of the ASME Code, Section I.

2. Each boiler shall have at least one safety valve and, if it has more than 500 square feet of water-heating surface or an electric power input of more than 500 kilowatts, it shall have two or more safety valves.

3. The valve or valves shall be connected to the boiler, independent of any other steam connection, and attached as close as possible to the boiler without unnecessary intervening pipe or fittings. Where alteration is required to conform to this requirement, the chief inspector shall allow the owner or user reasonable time in which to complete the work.

4. No valves of any description shall be placed between the safety valve and the boiler nor on the escape pipe, if used, between the safety valve and the atmosphere, except as provided by applicable sections of the current edition of the ASME Code. When an escape pipe is used, it shall be at least full size of the safety-valve discharge and fitted with an open drain to prevent water lodging in the upper part of the safety valve or escape pipe. When an elbow is placed on a safety valve escape pipe, it shall be located close to the safety-valve outlet or the escape pipe shall be anchored and supported

securely. All safety valve discharges shall be located or piped as not to endanger persons working in the area.

5. The safety-valve capacity of each boiler shall be so that the safety valve or valves will discharge all the steam that can be generated by the boiler without allowing the pressure to rise more than 6.0% above the highest pressure to which any valve is set, and in no case to more than 6.0% above the maximum allowable working pressure.

6. One or more safety valves on every boiler shall be set at or below the maximum allowable working pressure. The remaining valves may be set within a range of 3.0% above the maximum allowable working pressure, but the range of setting of all the safety valves on a boiler shall not exceed 10% of the highest pressure to which any valve is set.

7. When two or more boilers, operating at different pressures and safety valve settings, are interconnected, the lower pressure boilers or interconnected piping shall be equipped with safety valves of sufficient capacity to prevent overpressure, considering the maximum generating capacity of all boilers.

8. In those cases where the boiler is supplied with feedwater directly from water mains without the use of feeding apparatus (not to include return traps), no safety valve shall be set at a pressure higher than 94% of the lowest pressure obtained in the supply main feeding the boiler.

9. The relieving capacity of the safety valves on any boiler shall be checked by one of the three following methods and, if found to be insufficient, additional valves shall be provided:

a. By making an accumulation test, which consists of shutting off all other steam-discharge outlets from the boiler and forcing the fires to the maximum. The safety-valve capacity shall be sufficient to prevent a rise of pressure in excess of 6.0% of the maximum allowable working pressure. This method shall not be used on a boiler with a superheater or reheater.

b. By measuring the maximum amount of fuel that can be burned and computing the corresponding evaporative capacity (steam-generating capacity) upon the basis of the heating value of this fuel. These computations shall be made as outlined in the appendix of the current edition of the ASME Code, Section I.

c. By measuring the maximum amount of feedwater that can be evaporated.

When either of the methods (b or c) outlined in this subdivision is employed, the sum of the safety-valve capacities shall be equal to or greater than the maximum evaporative capacity (maximum steam-generating capacity) of the boiler.

10. The relieving capacity of safety valves for forced-flow steam generators shall be in accordance with the requirements of the current edition of the ASME Code, Section I.

11. Safety valves and safety relief valves requiring repair shall be replaced with a new valve or repaired by the original manufacturer, its authorized representative or the holder of a "VR" Stamp.

#### G. Boiler feeding.

1. Each boiler shall have a feed supply which will permit it to be fed at any time while under pressure.

2. A boiler having more than 500 square feet of water-heating surface shall have at least two means of feeding, one of which shall be an approved feed pump or injector. A source of feed directly from water mains at a pressure 6.0% greater than the set pressure of the safety valve with the highest setting may be considered one of the means. As provided in the current edition of the ASME Code, Section I, boilers fired by gaseous, liquid or solid fuel in suspension may be equipped with a single means of feeding water provided means are furnished for the immediate shutoff of heat input if the water feed is interrupted.

3. The feedwater shall be introduced into the boiler in a manner so that it will not be discharged close to riveted joints of shell or furnace sheets, or directly against surfaces exposed to products of combustion, or to direct radiation from the fire.

4. The feed piping to the boiler shall be provided with a check valve near the boiler and a valve or cock between the check valve and the boiler. When two or more boilers are fed from a common source, there shall also be a valve on the branch to each boiler between the check valve and source of supply. Whenever a globe valve is used on feed piping, the inlet shall be under the disk of the valve.

5. In all cases where returns are fed back to the boiler by gravity, there shall be a check valve and stop valve in each return line, the stop valve to be placed between the boiler and the check valve, and both shall be located as close to the boiler as is practicable. No stop valves shall be placed in the supply and return pipe connections of a single boiler installation.

6. Where deaerating heaters are not employed, the temperature of the feedwater shall not be less than 120°F to avoid the possibility of setting up localized stress. Where deaerating heaters are employed, the minimum feedwater temperature shall not be less than 215°F so that dissolved gases may be thoroughly released.

#### H. Water level indicators.

1. Each boiler shall have at least one water gauge glass installed and located so that the lowest visible part of the water glass shall be at least two inches above the lowest permissible water level, at which level there will be no danger of overheating any part of the boiler when in operation at that level; except as provided by the current edition of the ASME Code.



2. No outlet connections (except for damper regulator, feedwater regulator, low-water fuel cutout, drain, steam gauges, or such apparatus that does not permit the escape of an appreciable amount of steam or water from it) shall be placed on the piping that connects the water column to the boiler. The water column shall be provided with a valved drain of at least 3/4 inch pipe size; the drain is to be piped to a safe location.

3. When the direct reading of gauge glass water level is not readily visible to the operator in his working area dependable indirect indications shall be provided utilizing remote level indicators or equipment to transmit the gauge glass image. When remote level indication is provided for the operator instead of the gauge glass, the minimum level reference shall be clearly marked.

#### I. Steam gauges.

1. Each steam boiler shall have a steam gauge, with dial range not less than 1-1/2 times the maximum allowable working pressure, connected to the steam space or to the steam connection to the water column. The steam gauge shall be connected to a siphon or equivalent device of sufficient capacity to keep the gauge tube filled with water and arranged so that the gauge cannot be shut off from the boiler except by a cock with a tee or lever handle placed in the pipe near the gauge. The handle of the cock shall be parallel to the pipe in which it is located when the cock is open.

2. When a steam gauge connection longer than eight feet becomes necessary, a shutoff valve may be used near the boiler provided the valve is of the outside-screw-and-yoke type and is locked open. The line shall be of ample size with provision for free blowing.

3. Each boiler shall be provided with a test gauge connection and suitable valving for the exclusive purpose of attaching a test gauge so that the accuracy of the boiler steam gauge may be ascertained while the boiler is in operation.

#### J. Stop valves.

1. Except for a single-boiler, prime-mover installation, each steam outlet from a boiler (except safety valve and water column connections) shall be fitted with a stop valve located as close as practicable to the boiler.

2. In a single-boiler, prime-mover installation the steam stop valve may be omitted provided the prime-mover throttle valve is equipped with an indicator to show whether the valve is open or closed and is designed to withstand the required hydrostatic pressure test of the boiler.

3. When a stop valve is so located that water can accumulate, ample drains shall be provided. The drainage shall be piped to a safe location and shall not be discharged on the top of the boiler or its setting.

4. When boilers provided with manholes are connected to a common steam main, the steam connection from each boiler shall be fitted with two stop valves having an ample free-blow drain between them. The discharge of the drain shall be visible to the operator and shall be piped clear of the boiler setting. The stop valves shall consist preferably of one automatic nonreturn valve (set next to the boiler) and a second valve of the outside-screw-and-yoke type.

K. Blowoff connection.

1. The construction of the setting around each blowoff pipe shall permit free expansion and contraction. Careful attention shall be given to the problem of sealing these setting openings without restricting the movement of the blowoff piping.

2. All blowoff piping, when exposed to furnace heat, shall be protected by firebrick or other heat-resisting material constructed so that the piping may be inspected.

3. Each boiler shall have a blowoff pipe, fitted with a valve or cock, in direct connection with the lowest water space. Cocks shall be of the gland or guard type and suitable for the pressure allowed. The use of globe valves shall not be permitted. Where the maximum allowable working pressure exceeds 100 psig, each blowoff pipe shall be provided with two valves or a valve and cock; however only one valve need be provided for forced-flow steam generators with no fixed steam and waterline; high-temperature water boilers and those used for traction or portable purposes with less than 100 gallons normal water content.

4. Blowoff piping shall comply with the requirements of the current edition of the ASME Code, Section I, and ASME B31.1, from the boiler to the valve or valves, and shall be run full size without use of reducers or bushings. All piping shall be steel. Galvanized steel pipe and fittings shall not be used for blowoff piping.

5. All fittings between the boiler and blowoff valve shall be of steel. In case of renewal of blowoff pipe or fittings, they shall be installed in accordance with this chapter for new installations.

L. Repairs and renewals of boiler fittings and appliances. Whenever repairs are made to fittings or appliances or it becomes necessary to replace them, such repairs or replacements shall comply with the requirements for new installations.

M. Each automatically fired steam boiler or system of commonly connected steam boilers shall have at least one steam pressure control device that will shut off the fuel supply to each boiler or system of commonly connected boilers when the steam pressure reaches a preset maximum operating pressure. In addition, each individual automatically fired steam boiler shall have a high steam pressure limit control that will prevent generation of steam pressure in excess of the maximum allowable working pressure.

N. Conditions not covered by this chapter. All cases not specifically covered by this chapter shall be treated as new installations pursuant to 16VAC25-50-280 or may be referred to the chief inspector for instructions concerning the requirements.

**16VAC25-50-370. Heating boilers.**

A. Standard boilers. The maximum allowable working pressure of standard boilers shall in no case exceed the pressure indicated by the manufacturer's identification stamped or cast on the boiler or on a plate secured to it.

B. Nonstandard riveted boilers. The maximum allowable working pressure on the shell of a nonstandard riveted heating boiler shall be determined in accordance with 16VAC25-50-360 C covering existing installations, power boilers, except that in no case shall the maximum allowable working pressure of a steam heating boiler exceed 15 psig, or a hot water boiler exceed 160 psig or 250°F temperature.

C. Nonstandard welded boilers. The maximum allowable working pressure of a nonstandard steel or wrought iron heating boiler of welded construction shall not exceed 15 psig for steam. For other than steam service, the maximum allowable working pressure shall be calculated in accordance with the ASME Code, Section IV.

D. Nonstandard cast iron boilers.

1. The maximum allowable working pressure of a nonstandard boiler composed principally of cast iron shall not exceed 15 psig for steam service or 30 psig for hot water service.

2. The maximum allowable working pressure of a nonstandard boiler having cast iron shell or heads and steel or wrought iron tubes shall not exceed 15 psig for steam service or 30 psig for hot water service.

E. Safety valves.

1. Each steam boiler must have one or more officially rated (ASME Code stamped and National Board rated) safety valves of the spring pop type adjusted to discharge at a pressure not to exceed 15 psig. Seals shall be attached in a manner to prevent the valve from being taken apart without breaking the seal. The safety valves shall be arranged so that they cannot be reset to relieve at a higher pressure than the maximum allowable working pressure of the boiler. A body drain connection below seat level shall be provided by the manufacturer and this drain shall not be plugged during or after field installation. For valves exceeding two inch pipe size, the drain hole or holes shall be tapped not less than 3/8 inch pipe size. For valves less than two inches, the drain hole shall not be less than 1/4 inch in diameter.

2. No safety valve for a steam boiler shall be smaller than 3/4 inch unless the boiler and radiating surfaces consist of a self-contained unit. No safety valve shall be larger than 4-

1/2 inches. The inlet opening shall have an inside diameter equal to, or greater than, the seat diameter.

3. The minimum relieving capacity of the valve or valves shall be governed by the capacity marking on the boiler.

4. The minimum valve capacity in pounds per hour shall be the greater of that determined by dividing the maximum BTU output at the boiler nozzle obtained by the firing of any fuel for which the unit is installed by 1,000; or shall be determined on the basis of the pounds of steam generated per hour per square foot of boiler heating surface as given in Table 2. When operating conditions require it a greater relieving capacity shall be provided. In every case, the requirements of subdivision 5 of this subsection shall be met.

TABLE 2

Minimum Pounds of Steam Per Hour Per Square Foot of Heating Surface

	Fire Tube Boilers	Water Tube Boilers
<b>Boiler Heating Surface:</b>		
Hand fired	5	6
Stoker fired	7	8
Oil, gas, or pulverized fuel fired	8	10
<b>Waterwall Heating Surface:</b>		
Hand fired	8	8
Stoker fired	10	12
Oil, gas, or pulverized fuel fired	14	16

NOTES:

When a boiler is fired only by a gas giving a heat value of not in excess of 200 BTU per cubic foot, the minimum safety valve or safety relief valve relieving capacity may be based on the value given for handfired boilers **above in Table 2.**

The minimum safety valve or safety relief valve relieving capacity for electric boilers shall be 3-1/2 pounds per hour per kilowatt input.

For heating surface determination see the current edition of the ASME Code, Section IV.

5. The safety valve capacity for each steam boiler shall be such that with the fuel burning equipment operating at maximum capacity, the pressure cannot rise more than five psig above the maximum allowable working pressure.

6. When operating conditions are changed, or additional boiler surface is installed, the valve capacity shall be increased, if necessary, to meet the new conditions and be in accordance with subdivisions 4 and 5 of this subsection. When additional valves are required, they may be installed on the outlet piping provided there is no intervening valve.

7. If there is any doubt as to the capacity of the safety valve, an accumulation test shall be run (see the current edition of the ASME Code, Section VI).

8. No valve of any description shall be placed between the safety valve and the boiler, nor on the discharge pipe between the safety valve and the atmosphere. The discharge pipe shall be at least full size and be fitted with an open drain to prevent water lodging in the upper part of the safety valve or in the discharge pipe. When an elbow is placed on the safety valve discharge pipe, it shall be located close to the safety valve outlet or the discharge pipe shall be securely anchored and supported. All safety valve discharges shall be so located or piped as not to endanger persons working in the area.

#### F. Safety relief valve requirements for hot water boilers.

1. Each hot water boiler shall have one or more officially rated (ASME Code stamped and National Board rated) safety relief valves set to relieve at or below the maximum allowable working pressure of the boiler. Safety relief valves officially rated as to capacity shall have pop action when tested by steam. When more than one safety relief valve is used on hot water boilers, the additional valve or valves shall be officially rated and shall be set within a range not to exceed six psig above the maximum allowable working pressure of the boiler up to and including 60 psig and 5.0% for those having a maximum allowable working pressure exceeding 60 psig. Safety relief valves shall be spring loaded. Safety relief valves shall be so arranged that they cannot be reset at a higher pressure than the maximum permitted by this paragraph.

2. No materials liable to fail due to deterioration or vulcanization when subject to saturated steam temperature corresponding to capacity test pressure shall be used for any part.

3. No safety relief valve shall be smaller than 3/4 inch nor larger than 4-1/2 inches standard pipe size, except that boilers having a heat input not greater than 15,000 BTU per hour may be equipped with a safety relief valve of 1/2 inch standard pipe size. The inlet opening shall have an inside diameter approximately equal to, or greater than, the seat diameter. In no case shall the minimum opening through any part of the valve be less than 1/2 inch diameter or its equivalent area.

4. The required steam relieving capacity, in pounds per hour, of the pressure relieving device or devices on a boiler shall be the greater of that determined by dividing the

maximum output in BTU at the boiler outlet obtained by the firing of any fuel for which the unit is installed by 1,000, or on the basis of pounds of steam generated per hour per square foot of boiler heating surface as given in Table 2. When necessary a greater relieving capacity of valves shall be provided. In every case, the requirements of subsection F 6 of this section shall be met.

5. When operating conditions are changed, or additional boiler heating surface is installed, the valve capacity shall be increased, if necessary, to meet the new conditions and shall be in accordance with subdivision F 6 of this section. The additional valves required, on account of changed conditions, may be installed on the outlet piping provided there is no intervening valve.

6. Safety relief valve capacity for each boiler shall be so that, with the fuel burning equipment installed and operated at maximum capacity the pressure cannot rise more than 6 psig above the maximum allowable working pressure for pressure up to and including 60 psig and 5.0% of maximum allowable working pressures over 60 psig.

7. If there is any doubt as to the capacity of the safety relief valve, an accumulation test shall be run (see the current edition of the ASME Code, Section VI).

8. No valve of any description shall be placed between the safety relief valve and the boiler, nor on the discharge pipe between the safety relief valve and the atmosphere. The discharge pipe shall be at least full size and fitted with an open drain to prevent water lodging in the upper part of the safety relief valve or in the discharge pipe. When an elbow is placed on the safety relief valve discharge pipe, it shall be located close to the safety relief valve outlet or the discharge pipe shall be securely anchored and supported. All safety relief valve discharges shall be so located or piped as not to endanger persons working in the area.

G. Valve replacement and repair. Safety valves and safety relief valves requiring repair shall be replaced with a new valve or repaired by the original manufacturer, its authorized representative, or the holder of a "VR" Stamp.

H. Pressure relieving devices. Boilers and fired storage water heaters except those exempted by the Act shall be equipped with pressure relieving devices in accordance with the requirements of the current edition of the ASME Code, Section IV.

I. Instruments, fittings and control requirements. Instruments, fittings and controls for each boiler installation shall comply with the requirements of the current edition of the ASME Code, Section IV.

J. Low water fuel cutoff.

1. Each automatically fired hot water heating boiler with heat input greater than 400,000 BTU's per hour shall have an automatic low water fuel cutoff which has been designed for hot water service, located so as to stop the fuel supply automatically when the

surface of the water falls to the level established in subdivision 2 of this subsection (also see ASME Code, Section IV).

2. As there is no normal waterline to be maintained in a hot water heating boiler, any location of the low water fuel cutoff above the lowest safe permissible water level established by the boiler manufacturer is satisfactory.

3. A coil type boiler or a water tube boiler with heat input greater than 400,000 BTU's per hour requiring forced circulation, to prevent overheating of the coils or tubes, shall have a flow sensing device installed in the outlet piping, instead of the low water fuel cutoff required in subdivision 1 of this subsection to stop the fuel supply automatically when the circulating flow is interrupted.

#### K. Steam gauges.

1. Each steam boiler shall have a steam gauge connected to its steam space, its water column, or its steam connection, by means of a siphon or equivalent device exterior to the boiler. The siphon shall be of sufficient capacity to keep the gauge tube filled with water and arranged so that the gauge cannot be shut off from the boiler except by a cock.

2. The range of the scale on the dial of a steam boiler pressure gauge shall be not less than 30 psig nor more than 60 psig. The gauge shall be provided with effective stops for the indicating pointer at the zero point and at the maximum pressure point. The travel of the pointer from 0 to full scale 30 psig shall be at least three inches.

#### L. Pressure or altitude gauges.

1. Each hot water boiler shall have a pressure or altitude gauge connected to it or to its flow connection in a manner so that it cannot be shut off from the boiler except by a cock with tee or lever handle placed on the pipe near the gauge. The handle of the cock shall be parallel to the pipe in which it is located when the cock is open.

2. The range of the scale on the dial of the pressure or altitude gauge shall be not less than 1-1/2 times nor more than three times the maximum allowable working pressure. The gauge shall be provided with effective stops for the indicating pointer at the 0 point and at the maximum pressure point.

3. Piping or tubing for pressure or altitude gauge connections shall be of nonferrous metal when smaller than one inch pipe size.

M. Thermometers. Each hot water boiler shall have a thermometer located and connected so that it shall be easily readable when observing the water pressure or altitude gauge. The thermometer shall be located so that it will at all times indicate the temperature in degrees Fahrenheit of the water in the boiler at or near the outlet.

N. Water gauge glasses.

1. Each steam boiler shall have one or more water gauge glasses attached to the water column or boiler by means of valved fittings. The lower fitting shall be provided with a drain valve of the straightaway type with opening not less than 1/4 inch diameter to facilitate cleaning. Gauge glass replacement shall be possible while the boiler is under pressure.
2. Transparent material, other than glass, may be used for the water gauge provided that the material has proved suitable for the pressure, temperature and corrosive conditions encountered in service.

O. Stop valves and check valves.

1. If a boiler can be closed off from the heating system by closing a steam stop valve, there shall be a check valve in the condensate return line between the boiler and the system.
2. If any part of a heating system can be closed off from the remainder of the system by closing a steam stop valve, there shall be a check valve in the condensate return pipe from that part of the system.

P. Feedwater connections.

1. Feedwater, make-up water, or water treatment shall be introduced into a boiler through the return piping system or through an independent feedwater connection which does not discharge against parts of the boiler exposed to direct radiant heat from the fire. Feedwater, make-up, or water treatment shall not be introduced through openings or connections provided for inspection or cleaning, safety valve, safety relief valve, surface blowoff, water column, water gauge glass, pressure gauge or temperature gauge.
2. Feedwater piping shall be provided with a check valve near the boiler and a stop valve or cock between the check valve and the boiler or return pipe system.

Q. Return pump. Each boiler equipped with a condensate return pump, where practicable, shall be provided with a water level control arranged to maintain the water level in the boiler automatically within the range of the gauge glass.

R. Repairs and renewals of boiler fittings and appliances. Whenever repairs are made to fittings or appliances, or it becomes necessary to replace them, the repairs or replacements shall comply with the requirements for new installations.

S. Conditions not covered by this chapter. Any case not specifically covered by this chapter shall be treated as a new boiler or pressure vessel installation pursuant to 16VAC25-50-280 or may be referred to the chief inspector for instructions concerning the requirements.



## 16VAC25-50-380. Pressure vessels.

A. Maximum allowable working pressure for standard pressure vessels. The maximum allowable working pressure for standard pressure vessels shall be determined in accordance with the applicable provisions of the edition of the ASME Code or API-ASME code under which they were constructed and stamped. The maximum allowable working pressure shall not be increased to a greater pressure than shown on the manufacturers nameplate stamping and data report.

B. Maximum allowable working pressure for nonstandard pressure vessels.

1. For internal pressure. The maximum allowable working pressure on the shell of a nonstandard pressure vessel shall be determined by the strength of the weakest course computed from the thickness of the plate, the tensile strength of the plate, the efficiency of the longitudinal joint, the inside diameter of the weakest course and the factor set by this chapter.

$$\frac{TStE}{RFS} = \text{maximum allowable working pressure, psi}$$

where:

TS = ultimate tensile strength of shell plate, psi. When the tensile strength of the steel plate is not known, it shall be taken as 55,000 psi for temperatures not exceeding 700°F.

t = minimum thickness of shell plate of weakest course, inches,

E = efficiency of longitudinal joint depending upon construction. Use the following values:

For riveted joints -- calculated riveted efficiency;

For fusion-welded joints:

Single lap weld	40%
Double lap weld	50%
Single butt weld	60%
Double butt weld	70%
Forge weld	70%
Brazed steel	80%

R = inside radius of weakest course of shell, inches, provided the thickness does not exceed 10% of the radius. If the thickness is over 10% of the radius, the outer radius shall be used.

FS = factor of safety allowed by this chapter.

2. For external pressure. The maximum allowable working pressure for cylindrical nonstandard pressure vessels subjected to external or collapsing pressure shall be determined by the rules in the ASME Code, Section VIII, Division 1.

3. Factors of safety. The minimum factor of safety shall in no case be less than 3.5 for vessels built on or after January 1, 1999. For vessels built prior to January 1, 1999, the minimum factor of safety shall in no case be less than 4.0. The factor of safety may be increased when deemed necessary by the inspector to insure the operation of the vessel within safe limits. The condition of the vessel and the particular service of which it is subject will be the determining factors.

4. The maximum allowable working pressure permitted for formed heads under pressure shall be determined by using the appropriate formulas from the ASME Code, Section VIII, Division 1, and the tensile strength and factors of safety given in subdivisions 1 and 3 of this subsection.

C. Inspection of inaccessible parts. Where in the opinion of the inspector, as the result of conditions disclosed at the time of inspection, it is advisable to remove the interior or exterior lining, covering, or brickwork to expose certain parts of the vessel not normally visible, the owner or user shall remove the materials to permit proper inspection and to establish construction details. Metal thickness shall be determined utilizing appropriate equipment including drilling if necessary.

D. Pressure relief devices. Pressure relief devices for each pressure vessel installation, not exempt by the Act, shall comply with the requirements of the ASME Code, Section VIII.

E. Safety appliances.

1. Each pressure vessel shall be protected by safety and relief valves and indicating and controlling devices which will insure its safe operation. These valves and devices shall be constructed, located and installed so that they cannot readily be rendered inoperative. The relieving capacity of the safety valves shall prevent a rise of pressure in the vessel of more than 10% above the maximum allowable working pressure, taking into account the effect of static head. Safety valve discharges shall be located or piped so as not to endanger persons working in the area.

2. Safety valves and safety relief valves requiring repair shall be replaced with a new valve or repairs shall be performed by the original manufacturer, its authorized representative, or the holder of a "VR" stamp.

F. Repairs and renewals of fittings and appliances. Whenever repairs are made to fittings or appliances, or it becomes necessary to replace them, the repairs or replacements shall comply with requirements for new installations.

G. Conditions not covered by this chapter. All cases not specifically covered by this chapter shall be treated as new installations or may be referred to the chief inspector for instructions concerning the requirements.

Part IV  
General Requirements

**16VAC25-50-390. Inspection of boilers and pressure vessels.**

All boilers and pressure vessels, not exempt by the Act, shall be inspected internally and externally, as provided by this chapter, by a special inspector. The owner or user shall prepare each boiler or pressure vessel for the inspection and for appropriate pressure tests, whenever necessary. To prepare equipment for an internal inspection the following actions shall be taken as applicable:

1. Boilers

- a. Cool the boiler, furnace and setting sufficiently to prevent damage to any part;
- b. Drain and wash thoroughly internal parts to be inspected and adequately ventilate all interior surfaces;
- c. Remove manhole and handhole plates, wash out openings, drains and inspection plugs;
- d. Remove a sufficient number of grates of internally fired boilers, as required by the inspector;
- e. Remove brickwork, refractory and insulation, as required by the inspector, to determine condition of boiler, headers, tubes, furnace, structural supports, and other parts;
- f. Prevent leakage of water, steam or vapors into boiler interiors that would endanger personnel;
- g. Before opening the manhole or handhole covers and entering any parts of the steam-generating unit connected to a common header with other boilers, the nonreturn and steam stop valves must be closed, locked out and drain valves or cocks between the two valves opened. The feed and check valves must be closed, locked out and drain valves or cocks located between the two valves opened. After draining the boiler, the blowoff valves shall be closed and locked out. Blowoff lines, where practicable, shall be disconnected between pressure parts and valves. All drains and vent lines shall be opened;
- h. Prepare the pressure gauge for testing; and
- i. Comply, where applicable, with Virginia law regarding work conducted within confined spaces pursuant to Virginia Occupational Safety and Health (VOSH)

regulation 16VAC25-90-1910.146, Permit Required Confined Space for General Industry.

## 2. Pressure vessels

- a. Remove manhole and handhole plates, cleaning and inspection plugs;
- b. Clean internal surfaces and adequately ventilate all interior spaces;
- c. Isolate the unit to the extent that internal temperature, pressure and environment are not injurious to personnel and are under strict control during complete inspection;
- d. Remove linings or coverings, as required by the inspector, to determine true physical condition of the vessel and its components;
- e. Make protective and regulating controls readily accessible for inspection;
- f. Prepare the pressure gauges for testing; and
- g. Comply, where applicable, with Virginia law regarding work conducted within confined spaces pursuant to Virginia Occupational Safety and Health (VOSH) regulation 16VAC25-90-1910.146, Permit Required Confined Space for General Industry.

### **16VAC25-50-400. Boilers and pressure vessels improperly prepared for inspection.**

If a boiler or pressure vessel has not been properly prepared for an internal inspection, or if the owner or user fails to comply with the requirements for a hydrostatic test as set forth in this chapter, the inspector may decline to make the inspection or test and the inspection certificate shall be withheld until the owner or user complies with the requirements.

### **16VAC25-50-410. Removal of covering to permit inspection.**

If the boiler or pressure vessel is jacketed so that the seams of shells, drums, or domes cannot be seen, sufficient jacketing, setting wall, or other form of casing or housing shall be removed to permit reasonable inspection of the seams and so that the size of the rivets, pitch of the rivets, and other data necessary to determine the safety of the boiler or pressure vessel may be obtained, provided such information cannot be determined by other means.

The inspector shall not remove any insulation or covering and may refuse to enter boiler or equipment rooms where the inspector believes an asbestos exposure exists. To determine if an asbestos exposure may exist, the inspector may request to review the owner or user's asbestos maintenance program, where applicable, under the Virginia Occupational Safety and Health (VOSH) Program, Occupational Exposure to Asbestos, Construction Industry, Appendix G, 16VAC25-175-1926.1101.

**16VAC25-50-420. Lap-seam crack.**

The shell of a pressure vessel, in which a lapseam crack is discovered along a longitudinal riveted joint, shall be shut down immediately. If the equipment is not more than 15 years of age, a complete new course of the original thickness may be installed at the discretion of the inspector and after approval by the chief inspector. Patching is prohibited.

**16VAC25-50-430. Hydrostatic pressure tests.**

A. A hydrostatic pressure test, when applied to boilers or pressure vessels, shall not exceed 1.25 times the maximum allowable working pressure, except as provided by the current edition of the ASME Code. The pressure shall be under proper control so that in no case shall the required test pressure be exceeded by more than 2.0%.

B. See 16VAC25-50-360 A 4 for temperature limitations on particular power boiler installations.

C. When a hydrostatic test is to be applied to existing installations, the pressure shall be as follows:

1. For all cases involving the question of tightness, the pressure shall be equal to the working pressure.
2. For all cases involving the question of safety, the test pressure shall not exceed 1.25 times the maximum allowable working pressure for temperature. During such test the safety valve or valves shall be removed or each valve disk shall be held to its seat by means of a testing clamp and not by screwing down the compression screw upon the spring.

**16VAC25-50-440. Automatic low-water fuel cutoff and/or water-feeding device.**

A. Each automatically fired and unattended steam or vapor system boiler, except miniature boilers, shall be equipped with at least two automatic low-water fuel cutoffs located so as to cut off the fuel or energy supply automatically when the surface of the water falls to the lowest safe water line. Functioning of the lower of the two controls shall cause safety shutdown and lockout. The manual reset may be incorporated in the lower cutoff control. If a water-feeding device is installed, it shall be constructed so that the water inlet valves cannot feed water into the boiler through the float chamber and located so as to supply requisite feedwater. The lowest safe water line should be not lower than the lowest visible part of the water glass.

B. The fuel cutoff or water feeding device shall be attached directly to a boiler or in the tapped openings available for attaching a water glass directly to a boiler, provided the connections are made to the boiler with nonferrous tees or Y's not less than 1/2-inch pipe size between the boiler and the water glass so that the water glass is attached directly and as close as possible to the boiler; the run of the tee or Y shall take the water glass fittings, and the side outlet or branch of the tee or Y shall take the fuel cutoff or water feeding device. The ends of all nipples shall be reamed to full-size diameter.

C. Fuel cutoffs and water feeding devices embodying a separate chamber shall have a vertical drain pipe and a blowoff valve not less than 3/4-inch pipe size, located at the lowest point in the water equalizing pipe connections so that the chamber and the equalizing pipe can be flushed and the device tested.

D. A forced circulation coil or water tube type boiler, with a heat input greater than 400,000 BTU's per hour shall have a flow sensing device installed to cut off the fuel supply at a minimum water circulation flow rate in the boiler. The boiler manufacturer's specifications for the safe minimum flow rate, setting, and location of the flow sensing device shall be utilized.

#### **16VAC25-50-445. Pressure control devices.**

Each automatically fired steam boiler or system of commonly connected steam boilers shall have at least one steam pressure control device that will shut off the fuel supply to each boiler or system of commonly connected boilers when the steam pressure reaches a preset maximum operating pressure. In addition, each individual automatically fired steam boiler shall have a high steam pressure limit control with a manual reset that will prevent generation of steam pressure in excess of the maximum allowable working pressure and can cause safety shutdown and lockout.

#### **16VAC25-50-450. Pressure-reducing valves.**

A. Where pressure-reducing valves are used, one or more relief or safety valves shall be provided on the low-pressure side of the reducing valve when the piping or equipment on the low-pressure side does not meet the requirements for the full initial pressure. Proper protection shall be provided to prevent injury or damage caused by the escaping fluid from the discharge of relief or safety valves if vented to the atmosphere. The combined discharge capacity of the relief or safety valves shall be such that the pressure rating of the lower pressure piping or equipment shall not be exceeded in case the reducing valve sticks open.

B. The use of hand-controlled bypasses around reducing valves is permissible. If a bypass is used around the reducing valve, the safety valve required on the low pressure side shall be sufficient capacity to relieve all the fluid that can pass through the bypass without overpressuring the low pressure side.

C. A pressure gauge shall be installed on the low-pressure side of a reducing valve.

#### **16VAC25-50-460. Blowoff equipment.**

A. The blowdown from a boiler or boilers that enters a sewer system or blowdown which is considered a hazard to life or property shall pass through blowoff equipment that will reduce pressure and temperature as required below.

B. The temperature of the water leaving the blowoff equipment shall not exceed 140°F.

C. The pressure of the blowdown leaving any type of blowoff equipment shall not exceed 5.0 psig.

D. The blowoff piping and fittings between the boiler and the blowoff tank shall comply with the current edition of the ASME Code, Section I, and ASME B31.1.

E. All materials used in the fabrication of boiler blowoff equipment shall comply with the current edition of the ASME Code, Section II.

F. All blowoff equipment shall be fitted with openings to facilitate cleaning and inspection.

G. Blowoff equipment which conforms to the provisions set forth in the National Board publication, "Boiler Blowoff Equipment", shall meet the requirements of this section.

**16VAC25-50-470. Location of discharge piping outlets.**

The discharge of safety valves, blowoff pipes and other outlets shall be located so as to prevent injury to personnel.

**16VAC25-50-480. Repairs and alterations.**

A. Prior to any repair, the owner or user shall notify a special inspector with the appropriate endorsement for direction or advice, or both, regarding the method and extent of repair.

B. Repairs to boilers and pressure vessels shall be done in accordance with the National Board Inspection Code by holders of an "R" Certificate of Authorization. The completed repairs shall be reviewed by and found acceptable to the inspector or the same inspection agency who authorized the repair.

C. Alterations to boilers and pressure vessels shall be performed by an organization holding an appropriate ASME or "R" Certificate of Authorization and shall be in accordance with the National Board Inspection Code.

D. All repairs and alterations, except seal welds as defined in this subsection, shall be reported on the applicable Report of Welded Repair or Alteration form. The completed form including proper certification shall be forwarded to the chief inspector by the organization performing the repair or alteration.

E. The completed forms for routine repairs, as the term is defined in the National Board Inspection Code, need not be forwarded to the chief inspector.

#### **16VAC25-50-490. Supports.**

Each boiler and pressure vessel shall be supported by masonry or structural supports of sufficient strength and rigidity to safely support the boiler or pressure vessel and its contents. There shall be no excessive vibration in the boiler, pressure vessel, or their connected piping or fittings.

#### **16VAC25-50-500. Boiler door latches.**

A. A water tube boiler shall have the firing doors of the inward-opening type, unless such doors are provided with substantial and effective latching or fastening devices or otherwise so constructed as to prevent them, when closed, from being blown open by pressure on the furnace side.

B. These latches or fastenings shall be of the positive self-locking type. Friction contacts, latches, or bolts actuated by springs shall not be used. The foregoing requirements for latches or fastenings shall not apply to coal openings of downdraft or similar furnaces.

C. All other doors, except explosion doors, not used in the firing of the boiler, may be provided with bolts or fastenings instead of self-locking latching devices.

D. Explosion doors, if used and if located in the setting walls within seven feet of the firing floor or operating platform, shall be provided with substantial deflectors to divert the blast.

#### **16VAC25-50-510. Clearance.**

When boilers are replaced or new boilers are installed in either existing or new buildings, a minimum clearance of two feet on all service sides shall be provided. Boilers and pressure vessels having manholes shall have five feet clearance from the manhole opening and any wall, ceiling or piping that will prevent a person from entering the boiler or vessel. All boilers and pressure vessels shall be located so that adequate space will be provided for the proper operation of the boilers and pressure vessels and their appurtenances, for the inspection of all surfaces, tubes, waterwalls, economizers, piping, valves and other equipment, and for their necessary maintenance and repair and replacement of tubes.

#### **16VAC25-50-520. Ladders and runways.**

When necessary for safety, there shall be a steel runway or platform of standard construction installed across the tops of adjacent boilers or pressure vessels or at some other convenient level for the purpose of affording safe access. All runways shall have at least two means of exit each to be remotely located from the other.



**16VAC25-50-530. Air and ventilation requirements.**

A permanent source of outside air shall be provided for each boiler room to permit satisfactory combustion of the fuel as well as proper ventilation of the boiler room under normal operating conditions.

A. The total requirements of the burners for all fired pressure vessels in the boiler room must be used to determine the louver sizes whether fired by coal, oil or gas; however, the minimum net free louvered area must not be less than one square foot. The following table or formula shall be used to determine the net louvered area in square feet:

Input BTU Per Hour	Required Air Cu. Ft./Min.	Min. Net Louvered Area Sq. Ft.
500,000	125	1.0
1,000,000	250	1.0
2,000,000	500	1.6
3,000,000	750	2.5
4,000,000	1,000	3.3
5,000,000	1,250	4.1
6,000,000	1,500	5.0
7,000,000	1,750	5.8
8,000,000	2,000	6.6
9,000,000	2,250	7.5
10,000,000	2,500	8.3

$$\frac{(\text{BTU per hour} - 100) \times 1.5}{60} \div 300 = \text{Min Net Area Req. Sq. Ft.}$$

B. When mechanical ventilation is used instead of subsection A of this section, the supply of combustion and ventilation air to the boiler room and the firing device shall be interlocked with the fan so the firing device will not operate with the fan off. The velocity of the air through the ventilating fan shall not exceed 500 feet per minute and the total air delivered shall be equal to or greater than shown in this section.

**16VAC25-50-540. Jacketed kettles and miniatures boilers.**

Jacketed kettles and miniature boilers are acceptable for installation if constructed and stamped in accordance with Section I, IV, or VIII, Division 1, of the current edition of the ASME Code and registered with the National Board.

**16VAC25-50-550. Fuel burning apparatus and systems (flame safeguard).**

Fuel burning apparatus and systems shall be equipped with regulating and protective controls in accordance with applicable standards of the American Gas Association, Underwriters Laboratories, ANSI/ASME-CSD-1, or National Fire Protection Association (NFPA) No. 85 Series, or equivalent recognized standards.

**16VAC25-50-560. Inspection of secondhand or used boilers or pressure vessels.**

Inspections of secondhand or used boilers or pressure vessels made by the Chief Inspector or a Commonwealth Inspector shall be charged for in accordance with § 40.1-51.15 of the Act.

**16VAC25-50-570. Conditions not covered by this chapter.**

For any condition not covered by this chapter, the applicable provisions of the National Board Inspection Code or the ASME code shall apply.

**FORMS (16VAC25-50)**

R 1 Form, Report of Welded \_\_\_\_\_ Repair or \_\_\_\_\_ Alteration, CVR1 Rev 1.0.

Form R-1, Report of Repair, National Board Inspection Code, NB-66 (~~rev. 2012~~) (rev.13 6/25/15).

Form R-2, Report of Alteration, National Board Inspection Code (~~eff. 1/1/99~~) NB-229 (rev.7 11/12/15).

Form R-3, Report of Parts Fabricated By Welding, National Board Inspection Code (~~eff. 1/1/99~~) NB-230 (Rev.3 9/24/15).

Form R-4, Report Supplementary Sheet, National Board Inspection Code (~~eff. 1/1/99~~) NB-231 (9/23/15).

BPV-5, Boiler or Pressure Vessel Data Report- First Internal Inspection (eff. 1/1/99).

BPV-6, Boiler - Fired Pressure Vessel - Report of Inspection (eff. 1/1/99).

**DOCUMENTS INCORPORATED BY REFERENCE (16VAC25-50)**

~~2007~~ 2015 Boiler and Pressure Vessel Code, ASME Code, American Society of Mechanical Engineers.

~~National Board Bylaws, National Board of Boiler and Pressure Vessel Inspectors, August 8, 1996.~~

ANSI/NB 23, ~~2007~~ 2015 National Board Inspection Code, National Board of Boiler and Pressure Vessel Inspectors.

ASME B31.1, ASME Code for Power Piping, American National Standards Institute, ~~2007~~ 2014.

NFPA 85 Boiler and Combustion Systems Hazards, ~~2001 Edition~~ 2015 Edition, National Fire Protection Association.

Part CG (General), Part CW (Steam and Waterside Control) and Part CF (Combustion Side Control) Flame Safeguard of ANSI/ASME CSD-1, Controls and Safety Devices for Automatically Fired Boilers, ~~2009~~ 2012, American Society of Mechanical Engineers.

"Boiler Blowoff Equipment," National Board of Boiler and Pressure Vessel Inspectors, Rules and Recommendations for the Design and Construction of Boiler Blowoff Systems, 1991.

API510, Pressure Vessel Inspection Code, Maintenance Inspection, Rating, Repair and Alteration, ~~Ninth Edition, June 2006~~ Tenth Edition, May 2014, American Petroleum Institute.



# *COMMONWEALTH of VIRGINIA*

## **DEPARTMENT OF LABOR AND INDUSTRY**

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COMMISSIONER

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### **AGENDA**

#### **SAFETY AND HEALTH CODES BOARD**

**Main Street Centre  
600 East Main Street  
12<sup>th</sup> Floor Conference Room - South  
Richmond, Virginia**

**Thursday, July 27, 2017**

**10:00 a.m.**

1. Call to Order
2. Approval of Agenda
3. Approval of Minutes for Board Meeting of February 16, 2017
4. Election
5. Opportunity for the Public to Address the Board on these issues pending before the Board today or on any other topics that may be of concern to the Board or within the scope of authority of the Board.

*This will be the only opportunity for public comment at this meeting. Please limit remarks to 5 minutes in consideration of others wishing to address the Board.*

5. **Old Business**

- a) 16VAC25-60, Final Regulation for the Administrative Regulation for the VOSH Program (Enforcement of VDOT's MUTCD; Clarification of Anti-retaliation Safeguards for Public Sector Employees, etc.)

*Presenter – Jay Withrow*

- b) 16VAC 25-200, Final Regulation for Virginia Voluntary Protection Program (VPP)

*Presenter – Jay Withrow*

6. **New Business**

- a) Report on Periodic Review of Certain Existing Regulations:

- 1) 16VAC25-20, Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fees;
- 2) 16VAC25-30, Regulations for Asbestos Emissions Standards for Demolition and Renovation Construction Activities and the Disposal of Asbestos-Containing Construction Waste – Incorporation By Reference, 40 CFR 61.140 through 61.156;
- 3) 16VAC25-40, Standard for Boiler and Pressure Vessel Operator Certification;
- 4) 16VAC25-70, Virginia Confined Space Standard for the Telecommunications Industry; and
- 5) 16VAC25-97, Reverse Signal Procedures – General Industry – Vehicles/Equipment Not Covered by Existing Standards

*Presenter – Holly Raney*

7. Items of Interest from the Department of Labor and Industry

8. Items of Interest from Members of the Board

9. Meeting Adjournment

**DRAFT  
SAFETY AND HEALTH CODES BOARD  
MEETING MINUTES  
THURSDAY, FEBRUARY 16, 2017**

- BOARD MEMBERS PRESENT:** Mr. Jerome Brooks  
Mr. Lou Cernak, Jr., Vice Chair  
Mr. John Fulton  
Mr. Chris Gordon  
Ms. Anna Jolly  
Mr. Courtney Malveaux  
Mr. David Martinez  
Mr. Travis Parsons  
Mr. Chuck Stiff, Chair
- BOARD MEMBERS ABSENT:** Mr. Kenneth Richardson, II  
Ms. Milagro Rodriguez,  
Mr. Tommy Thurston
- STAFF PRESENT:** Mr. C. Ray Davenport, Commissioner of Dept. of Labor & Industry  
Mr. Bill Burge, Assistant Commissioner  
Mr. Jay Withrow, Director, Legal Support, BLS, VPP, ORA, OPP & OWP  
Mr. Ron Graham, Director, VOSH Health Compliance  
Ms. Jennifer Rose, Director, VOSH Safety Compliance  
Mr. Ed Hilton, Director, Boiler Safety Compliance Management  
Mr. John Crisanti, Manager, Office of Policy and Planning  
Ms. Holly Raney, Regulatory Coordinator  
Ms. Regina Cobb, Senior Management Analyst  
Ms. Deonna Hargrove, Richmond Regional Health Director  
Mr. Dave Beville, Safety/Health Compliance Officer Apprentice  
Ms. Monica Vanney, DHRM
- OTHERS PRESENT:** Ms. Lisa Wright, Court Reporter, Chandler & Halasz, Stenographic Court Reporters  
Ms. Beverly Crandell, Safety Program Coordinator, Tidewater Community College  
Joshua E. Laws, Esq., Assistant Attorney General, OAG

**PUBLIC HEARING**

Board Chair, Mr. Chuck Stiff, called the Public Hearing to order at 10 a.m. A quorum was present. He explained that the sole purpose of the hearing is for the Board members to receive comments from the public regarding 16VAC25-60, et seq., Administrative Regulation for Virginia Occupational Safety and Health (VOSH) Program, Miscellaneous Changes and 16VAC 25-200, Proposed Regulation for the Virginia Voluntary Protection Program (VPP).

There were no comments for the public.

Mr. Jay Withrow, of the Virginia Department of Labor and Industry, addressed the Board concerning the proposed Virginia Voluntary Protection Program (VPP) regulations. He stated that when the Board adopted the proposed regulation, there had been a question about the term “nested contractors” for which he now has a definition which will be included in the regulation. He explained that, although there is no specific definition in the VPP Manual or other sources for “nested contractors”, guidance was found in federal OSHA documents. He continued by stating that, in discussing injury and illness data requirements for contractors at VPP sites, “nested contractors” are supervised by host site management and are regularly intermingled with the owner’s employees, are under direct supervision by management, and if there’s doubt about the classification of the contractor, staff should consult contract specifications. Mr. Withrow also called the Board’s attention to another term which is used and already defined in the VPP regulations – “applicable contractor”- who are treated differently than a regular outside contractor because they spend a lot more time at the site, they work at least a thousand hours in any calendar quarter within the last 12 months, and they have to give the same kinds of protections to their employee as the VPP site does.

Mr. Withrow called the Board’s attention to an omission in the proposed regulation – Merit site, which is a worksite that has a very good safety and health management system, they’ve gone through all of the preparation for VPP, but they have to take a few additional steps before they can meet the Star level. He explained that the omission involves a provision that says that merit sites must have three years’ worth of injury and illness rates that are below the national average for the particular industry. Although the Department calculates those rates, Merit sites do not have to be below the industry average while they are still a Merit site, but they will need to establish concrete goals for reducing the rates within two years.

Mr. Stiff adjourned the Public Hearing at 10:10 a.m.

## **BOARD MEETING**

### **ORDERING OF AGENDA**

Mr. Stiff called the Board meeting to order at 10:10 a.m. A quorum was present.

Mr. Stiff requested a motion to approve the Agenda. A motion to accept the Agenda was made and properly seconded. The Agenda was approved, as submitted, and the motion was carried by unanimous voice vote.

### **APPROVAL OF MINUTES**

Mr. Stiff asked the Board for a motion to approve the Minutes from the September 13, 2016, Board meeting. A motion was made to include a correction appearing on p.3, paragraph 3, where the word “hour” was omitted. The motion was properly seconded. The Minutes were approved, as amended, by unanimous voice vote.

### **PUBLIC COMMENTS**

Mr. Stiff opened the floor for comments from the public, however, there were no comments.

## **OLD BUSINESS**

### ***16VAC25-50, Boiler and Pressure Vessel Rules and Regulations; Amendment***

Mr. Ed Hilton, Director, Boiler Safety Compliance for the Department, began by requesting the Board to consider for adoption as a proposed regulation amendments to 16VAC25-50, Boiler and Pressure Vessel Rules and Regulations.

He informed the Board that the Boiler Safety Compliance Program seeks to amend the Boiler and Pressure Vessel Rules and Regulations by updating several boiler and pressure vessel -related "Forms" and "Documents Incorporated by Reference" to their most recent editions.

He explained that the Board is authorized by § 40.1-51.6.A of the *Code of Virginia*, and that the purpose of the proposed regulatory action is to conform to the most current editions of the American Society of Mechanical Engineers (ASME), National Board Inspection Code (NBIC), and the National Fire Protection Association (NFPA) safety and inspection codes.

With respect to impact on employers, employees and the Department, Mr. Hilton explained that these updates would cause little impact on employers because companies utilizing the codes are already required to have and work to the current code editions and, therefore, there would be no financial burden for employers to purchase the most recent editions of the codes. He did add that a major change would be the requirement in the NBIC for signage and metering for CO<sub>2</sub> tank installations.

A motion to accept the Department's recommendation to adopt these proposed amendments to 16VAC25-50 was properly made and seconded. The motion was approved unanimously by voice vote.

### ***16VAC25-60, et seq., Proposed Amendments to the Administrative Regulation for the Virginia Occupational Safety and Health (VOSH) Program; Issuance of Penalties to State and Local Government Employers***

Mr. Withrow began by requesting that the Board consider for adoption, as a proposed regulation of the Board, language to amend 16 VAC25-60, et seq., Administrative Regulation for the VOSH Program, State and Local Government Penalties.

He explained that, since the Board has already heard most of this information before during the Notice of Intended Regulatory Action (NOIRA), he was not going to repeat much of the information. He informed the Board of the comment period following the NOIRA and that no public comments were received.

He provided a little background information which included the fact that the Department had been unsuccessful when it first introduced legislation in 2007 expressing a need for penalties in certain situations. He stated that in 2016, the General Assembly passed the statute. He stated that the intention of the legislation was to address things, such as willful, repeated, failure to abate situations, and situations where a serious violation resulted in a fatal accident or where the department determined that a violation was high-gravity serious. He added that the Department is not proposing to issue serious violation penalties for non-high gravity serious violations and for other-than-serious violations, which are normally recordkeeping situations or written program-type situations.



He explained that the purpose of the regulation is to establish procedures for application of penalties for state and local government employers in accordance with §40.1-2.1 of the Code of Virginia.

Mr. Withrow estimated that the total impact on employer is approximately \$346,500 in penalties. He stated that a small number of willful and repeat violations are issued on average per year and that they can carry a penalty of up to \$70,000. He informed the Board that approximately five percent of the Department's serious violations are classified as high gravity. He added that employees benefit in that penalties are a good deterrent to encourage state and local government employers to address issues before they get bad. He stated that no significant impact on the Department is anticipated.

Mr. Withrow then called the Board's attention to the changes in the regulation which he highlighted in yellow.

Mr. Malveaux asked why the proposed regulation deals with just high gravity and above penalties and not recordkeeping and other low gravity. Mr. Withrow responded that the Department was uncertain about the kind of reception the proposal would receive in the General Assembly, so the Department focused on the need, which was the fatal accidents and catastrophes, something conservative and reasonable.

Mr. Martinez expressed concern that a fatality has to happen before there is a penalty. Mr. Withrow explained that the Department issues violations for everything, but we will not issue penalties for all serious violations. Employers will be made aware that if a particular situation happens again, such as someone gets injured, the employer will be looking at really significant penalties as well. He added that penalties have a deterrent effect. He then explained the contest process for state agencies.

A motion to accept the Department's recommendation to consider for adoption the proposed amendments to 16VAC25-60 was made and properly seconded. The motion was approved unanimously by voice vote.

## **NEW BUSINESS**

### ***Clarification of Employer's Continuing Obligation to Make and Maintain an Accurate Record of Each Recordable Injury and Illness; Final Rule***

Mr. Jay Withrow requested the Safety and Health Codes Board to consider for adoption federal OSHA's Final Rule for the Clarification of Employer's Continuing Obligation to Make and Maintain an Accurate Record of Each Recordable Injury and Illness, as published on December 19, 2016 in 81 FR 91792.

Mr. Withrow explained that this is basically a regulation federal OSHA adopted to deal with the Volks decision in the Court of Appeals for the District of Columbia. He continued by stating that OSHA has for a long time interpreted the recordkeeping regulation to require employers to not only record the injuries and injuries that occur, which they are required to do within seven days of the incident occurring, but if they find out beyond the seven days about an incident occurring, employers are required to record the injury or illness in their recordkeeping records. He added that the violation continues every day that the employer fails to update the records. Employers must record every recordable injury or illness on the OSHA 300 Log, throughout the five-year retention period.

Mr. Withrow informed the Board that OSHA does not see this amendment as having any significant impact on employers because this change is simply to clarify the employers' obligations under recordkeeping regulations. The amendments do not require employers to do anything new or in addition to what they were already required by OSHA to do. He stated that employees benefit from accurate and well-maintained injury and illness records which can be used by employees and by consultants and companies to track where hazards are resulting in injuries and illnesses so that these hazards can be corrected to prevent injuries and illnesses. Adoption of this clarification does not impact the Department because its policy is the same as OSHA's. The change provides clarity, reduces confusion over the issue.

Mr. Withrow stated that there is no associated cost with the regulation because OSHA is really not changing what employers are required to do. He stated that the regulation is technologically and economically feasible because there are no new requirements for employers and no additional compliance costs have been imposed.

Mr. Withrow added that when it comes to recordkeeping regulations, the VOSH program is not allowed to differ from OSHA.

A motion to accept the Department's recommendation to adopt this clarification with a proposed effective date of May 15, 2017, was made and properly seconded. The motion was approved unanimously by voice vote.

#### ***Walking-Working Surfaces and Personal Protective Equipment (Fall Protection); Final Rule***

Ms. Jennifer Rose, Director of Occupational Safety Compliance for the Department, requested the Board to consider for adoption federal OSHA's Final Rule for Walking-Working Surfaces and Personal Protective Equipment (Fall Protection Systems) and Other Related Provisions, as published on November 18, 2016 in 81 FR 82494.

Ms. Rose explained that the final rule updates the requirements in all of the general industry walking-working surfaces, including but not limited to, floors, ladders, stairways, runways, dockboards, roofs, scaffolds, and elevated work surfaces and walkways. The revised final rule adds requirements on the design, performance, and use of personal fall protection systems in Part 1910, Subpart I-Personal Protective Equipment.

Next, Ms. Rose summarized some of the changes and new requirements which included: inspection of walking-working surfaces; updated scaffold requirements; rope descent systems and certification of anchorages; phase-in of ladder safety systems or personal fall arrest systems on fixed ladders; fall protection flexibility; phase-out of the "qualified climber" exception in outdoor advertising; training; and personal fall protection system performance and use requirements.

She then described walking-working surface hazards that can cause slips, trips, and falls and affected industries, and the number of fatalities and injuries resulting from walking-working surface hazards.

Ms. Rose explained that the purpose of the revised final rule is to update the outdated general industry standard and to significantly reduce the number of worker deaths and injuries that occur each year due to these hazards. She listed numerous ways in which the revised final rule will benefit employers and employees.

With respect to the final rule's impact on the Department, Ms. Rose informed the Board that, since VOSH is already enforcing the existing standard, it is anticipated that any impact on the Department resulting from the adoption of this amended final rule will be negligible.

Ms. Rose stated that the revised final rule will increase consistency between the general industry and construction Scaffolds, Fall Protection, and Stairway and Ladder Standards which will make compliance easier for employers who conduct operations in both industry sectors. Also, the revised final rule updates requirements to reflect advances in technology and to make them consistent with more recent OSHA standards and national consensus standards.

Ms. Rose discussed estimated costs and benefits of the revised final rule, and stated that the revised final rule is technologically and economically feasible. Next, she informed the Board of the implementation/compliance schedule of the revised final rule.

A motion to accept the Department's recommendation to adopt this revised final rule, with an effective date of May 15, 2017, was made and properly seconded. The motion was approved unanimously by voice vote.

***Occupational Exposure to Beryllium, Parts 1910, 1915, and 1926; Final Rule; and Other Related Provisions***

Mr. Ron Graham, Director of Occupational Health Compliance for the Department, began by requesting the Board to consider for adoption federal OSHA's Final Rule for the Occupational Exposure to Beryllium, Parts 1910, 1915, and 1926, and Other Related Provisions, as published in 82 FR 2470 on January 9, 2017.

Mr. Graham gave a general summary of Beryllium which is a strong, lightweight metal used in the aerospace, electronics, energy, telecommunications, medical, and defense industries. He stated that the metal is highly toxic when beryllium-containing materials are processed in a way that releases airborne beryllium dust, fumes, or mist into the air in the workplace. This can be then inhaled by workers, potentially damaging their lungs and increasing their risk of developing chronic beryllium disease (CBD) or lung cancer.

He described the key provisions which reduce the permissible exposure limit (PEL) for beryllium from 2.0 micrograms ( $\mu\text{g}/\text{m}^3$ ) to 0.2 micrograms ( $\mu\text{g}/\text{m}^3$ ) as an 8-hour time-weighted average. He informed the Board of other provisions to protect employees, such as requirements for exposure assessment; methods of controlling exposure; respiratory protection; personal protective clothing and equipment; housekeeping; medical surveillance; hazard communication; and recordkeeping.

He added that OSHA issued three separate standard covering general industry, shipyards, and construction, and noted the affected industries.

He informed the Board that the purpose of this revised regulation is to reduce the number of fatalities and illnesses occurring among employees exposed to beryllium.

Mr. Graham discussed the impact of this revised regulation on employers and the resulting protections for employees. He stated that any impact on the Department resulting from adoption of this regulation will be negligible and would be related to additional staff training.

Next, he detailed benefits of the regulation and costs and benefits. He stated that the revised final rule would cost annually approximately \$2 million in Virginia, with approximately \$13million in net benefits.

He explained that the revised regulation is technologically and economically feasible, and he pointed out the implementation/compliance schedule.

A motion to accept the Department's recommendation to adopt this revised regulation, with an effective date of May 15, 2017, was made and properly seconded. The motion was approved unanimously by voice vote.

### ***Occupational Exposure to Respirable Crystalline Silica, Parts 1910, 1915, and 1926; Correcting Amendment***

Mr. Ron Graham, Director of the Occupational Health Compliance for the Department of Labor and Industry, requested the Board to consider for adoption federal OSHA's Correction to the Final Rule on the Occupational Exposure to Crystalline Silica, Parts 1910, 1915, and 1926 and Other Related Standards, as published on September 1, 2016 in 81 FR 69272.

Mr. Graham explained that when federal OSHA published its final rule for the Occupational Exposure to Respirable Crystalline Silica on March 25, 2016 ( §81 FR 16285), it contained typographical errors in the formulas for the permissible exposure limitable its (PELs) in the pre-2016 final rule. He called the Board's attention to an omitted division symbol in the formulas, and the entries for "Silica: Crystalline Quartz" in the headings of various tables. He added that the final rule retained the pre-2016 PELs for respirable crystalline silica in §1910.1000, Table Z-3; §1915.1000, Table Z, and in §1926.55, Appendix A, and added footnotes to clarify that these PELs apply to any sectors or operations where the new PEL of 50 ug/m<sup>3</sup> is not in effect. The pre-2016 PELs apply to operations that are not covered by the new standards.

Mr. Graham stated that no impact is anticipated on employers, employees nor the Department from the adoption of this Correcting Amendment.

A motion to accept the Department's recommendation to adopt the correcting amendment, with an effective date of May 15, 2016, was properly made and seconded. The motion was approved unanimously by voice vote.

### ***Notice of Periodic Review of Certain Existing Regulations***

Ms. Holly Raney, Regulatory Coordinator for the Department of Labor and Industry, requested authorization to proceed with the periodic review process of regulations, pursuant to §2.2-4017 of the Code of Virginia and Executive Order 17 (2014). The regulations for review are as follows:

1. 16VAC25-20, Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fees

2. 16VAC25-30, Regulations for Asbestos Emissions Standards for Demolition and Renovation Construction Activities and the Disposal of Asbestos-Containing Construction Waste – Incorporation by Reference, 40 CFR 61.140 through 61.156;
3. 16VAC25-40, Standard for Boiler and Pressure Vessel Operator Certification; and
4. 16VAC25-70, Virginia Confined Space Standard for the Telecommunications Industry; and
5. 16VAC25-97, Reverse Signal Procedures – General Industry – Vehicles/Equipment Not Covered by Existing Standards

Ms. Raney explained that, following the Board’s approval, the periodic review process begins with publication of a Notice of Periodic Review in the Virginia Register, which begins a public comment period of at least 21 days, but not longer than 90 days. She concluded by informing the Board that the Department of Labor & Industry will post a report on the Regulatory Town Hall website indicating for each regulation whether the regulation would be either retained “as is”, repealed or amended.

Ms. Raney concluded by recommended that the Board approve the publication of a Notice of Periodic Review in the Virginia Register for the five regulations mentioned.

A motion to accept the Department’s recommendation was properly made and seconded. The recommendation was approved unanimously by voice vote.

#### **Items of Interest from the Department of Labor and Industry**

Commissioner Ray Davenport began by responding to an earlier question from Mr. Parsons concerning OSHA’s maximum penalties of OSHA by stating that the Department is in the process of coming into compliance with federal OSHA. He stated that the maximum penalties increased in August of 2015. Since the Department’s increase is contained in Code section, as is the case in many states, we have a code change which has been working its way through the General Assembly.

Commissioner Davenport continued by stating that there are two identical bills that were proposed. Both Senate Bill 1542, which contained the penalties in the Code sections, as required by the federal increase in the maximum penalties, and House Bill 1883 have passed and the Department anticipates that they will be signed by Governor McAuliffe.

Commissioner Davenport then informed the Board that Gov. McAuliffe had introduced an increase in funding for the Agency for additional staffing resources to the Agency, for VPP, consultation, trainers, as well as six of the twelve unfunded compliance officers positions that would have amounted to more than \$1.5 million; however, that was stripped from the final version of the Senate’s budget. A good portion of it was also stripped out of the final version of the House budget. There was about \$270,000 left in the budget. Commissioner Davenport added that there has been support from business, community and labor for this funding, and hopefully it will come through.

Commissioner Davenport responded to Ms. Jolly’s question concerning any additional information since the federal government placed Beryllium on hold. He responded that since there is no U.S. Secretary of Labor or an Assistant Secretary at this time, it is unclear what may happen.

With respect to Goodyear, Commissioner Davenport informed the Board that the Department issued a pre-citation settlement agreement for the fourth fatality which closed the fourth fatality and some of the violations that had not yet been cited. He added that there were a number of other contested cases

that had been cited previously with the three previous fatalities in the comprehensive inspections that have been settled as well or will be settled. He stated that part of the agreement will result in initial penalties of \$1.75 million to Goodyear at the Danville facility, \$1 million of which will be paid by Goodyear to the Commonwealth. Goodyear will retain \$375,000 to abate hazards in the facility and \$375,000 to use toward achieving VPP status.

Ms. Jolly asked about the number of fatalities in the state in 2016. Commissioner answered that there were 43 last year and unfortunately, there have been two this year. Mr. Parson asked about the rate, but Commissioner Davenport was uncertain about the overall rate.

Lastly, he thanked the Board for their time commitments.

#### **Items of Interest from the Department or from the Board**

There were no items of interest from the Board.

#### **Adjournment**

There being no further business, a motion was properly made and seconded to adjourn the meeting. The motion was carried unanimously by voice vote. The meeting adjourned at 11:45 a.m.



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF LABOR AND INDUSTRY

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### VIRGINIA SAFETY AND HEALTH CODES BOARD

#### Briefing Package

July 27, 2017

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#### **Final Regulation to Amend 16VAC-25-60, *et seq.*, Administrative Regulation for the Virginia Occupational Safety and Health (VOSH) Program, Miscellaneous Changes**

#### **I. Action Requested**

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to consider for adoption, as a **final** regulation of the Board, the following VOSH proposal to amend the Administrative Regulation for the VOSH Program, 16VAC25-60, *et seq.*

#### **II. Summary of the Rulemaking Process.**

A Notice of Intended Regulatory Action (NOIRA) was adopted by the Board on October 29, 2015. The NOIRA was published on December 28, 2015, with a 30-day comment period ending on January 27, 2016. No comments were received.

The Board adopted proposed regulatory language on March 3, 2016. The proposed regulation was published on November 28, 2016, with a 60-day comment period ending on February 17, 2017. A public hearing was held by the Board on February 16, 2017. No comments were received.

#### **III. Summary of Final Regulation.**

The final regulation addresses certain issues in regard to the Administrative Regulation of the VOSH Program:

- Allows VOSH to enforce the requirements of the Virginia Department of Transportation (VDOT) Work Area Protection Manual in lieu of the federal Manual on Uniform Traffic Control Devices, i.e., Part VI of the MUTCD, 1988 Edition, Revision 3, or Part VI of the MUTCD, Millennium Edition, in any contract for construction, repair, or maintenance between either the Commonwealth or one of its local governments and an employer, where such contract stipulates employer compliance with the VDOT Work Area Protection Manual.

Although the federal MUTCD has been adopted by OSHA and VOSH in §§1926.200 through 1926.202, a significant amount of the language provisions therein are merely recommended and non-compulsory, i.e., the terms “should” or “may” are used rather than the mandatory “must” or “shall” for desired activities and procedures, and are therefore not enforceable in a compliance setting. To mitigate this problem, VDOT has adopted its own Work Area Protection Manual which contains fewer instances of the use of the terms “should” and “may”. VDOT routinely specifies language in its contracts with employers that requires specific employer compliance with the VDOT Work Area Protection Manual.

- Clarifies anti-retaliation safeguards for public sector employees, *16VAC25-60-30*. Allowing Commonwealth’s Attorney to act on behalf of the Commissioner for public sector employers, *16VAC25-60-30.F*.
- Allows the Commissioner to petition the Cabinet Secretary and then the Executive regarding resolution of anti-retaliation violations with a state agency, *16VAC25-60-30.G*.
- Clarifies Virginia Freedom of Information Act requirements in regard to the Voluntary Protection Program, *16VAC25-60-90*.
- Changes section title(s) to reflect recent terminology changes in occupational discrimination or anti-retaliation cases, *16VAC25-60-110*.
- Clarifies that the Commissioner can request penalties or fines for occupational discrimination or anti-retaliation cases at the litigation stage, *16VAC25-60-110*.
- Updates ARM section Title to reflect naming change with regard to the Commissioner's authority to issue administrative subpoenas, *16VAC25-60-245*.
- Clarifies that the “burden of proof” in VOSH court cases is by a “preponderance of the evidence”, *16VAC25-60-260*.
- Clarifies that the burden for proving an affirmative defense to a citation lies with the employer, *16VAC25-60-260*.

#### IV. **Basis, Purpose and Impact of the Final Rulemaking.**

##### A. **Basis.**

The Safety and Health Codes Board is authorized by Title 40.1-22(5) to:



“... adopt, alter, amend, or repeal rules and regulations to further, protect and promote the safety and health of employees in places of employment over which it has jurisdiction and to effect compliance with the federal OSH Act of 1970...as may be necessary to carry out its functions established under this title.”

“In making such rules and regulations to protect the occupational safety and health of employees, the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence that no employee will suffer material impairment of health or functional capacity.”

“However, such standards shall be at least as stringent as the standards promulgated by the federal OSH Act of 1970 (P.L.91-596). In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experiences gained under this and other health and safety laws.”

**B. Purpose**

The purpose of amending the Administrative Regulation is to make certain substantive, procedural and to clarify changes that reflect current VOSH policy:

1. The amendment to 16VAC25-60-130 allows VOSH to enforce the Virginia Department of Transportation (VDOT) Work Area Protection Manual in lieu of the federal Manual on Uniform Traffic Control Devices (Part VI of the MUTCD, 1988 Edition, Revision 3, or Part VI of the MUTCD, Millennium Edition) in any contract for construction, repair or maintenance between either the Commonwealth or one of its local governments and an employer, when such contract provides that the parties assure compliance with the VDOT Work Area Protection Manual. A housekeeping change to renumber all paragraphs in §§16VAC25-60-120 through 16VAC25-60-150 correctly is also included.
2. The amendment to 16VAC25-60-30.D clarifies whistleblower anti-retaliation safeguards for public sector employees other than the Commonwealth and its agencies, e.g., political subdivisions such as city and county governments.

The VOSH ARM defines the term "public employer" in §16VAC25-60-10 as:

*"Public employer"* means the Commonwealth of Virginia, including its agencies, authorities, or instrumentalities or any political subdivision or public body.

The current wording of §16VAC25-60-30.D applies §40.1-51.2:2.A of the *Code of Virginia* to all public employers, i.e., both state and local government, but states that the Commissioner shall not bring an action in Circuit Court for a violation involving a public employer. This language appears to conflict with paragraph §16VAC25-60-30.E's comprehensive application of §40.1-51.2:2. of the *Code of Virginia* to political subdivisions or public bodies, which allows the Commissioner to litigate such a violation in Circuit Court.

Prior to proposing this amendment, it has been the Department's position that the right of the Commissioner to litigate a violation against a political subdivision or public body in §16VAC25-60-30.E, takes precedence over §16VAC25-60-30.D, because paragraph E. is the more specific provision in that it specifically applies §40.1-51.2:2 to a subset of the broader category of the term "public employer". The final regulation will eliminate this conflict.

3. The amendment to 16VAC25-60-30.E applies §40.1-7 of the *Code of Virginia* to public employers other than the Commonwealth and its agencies, which will allow Commonwealth's Attorneys to act on behalf of the Commissioner in certain situations involving those public sector employers.

Section 16VAC25-60-30.E provides that the following sections of the Code of Virginia apply to public employers other than the Commonwealth and its agencies:

- a. §40.1-49.4.F - Commissioner's authority to seek injunctive relief in certain situations.
- b. Commissioner's authority to obtain administrative search warrants under §§40.1-49.9 through -49.12 of the *Code of Virginia*.

4. The amendment to 16VAC25-60-30.G clarifies that when seeking to resolve whistleblower anti-retaliation cases involving the Commonwealth and its agencies, the Commissioner will petition the appropriate state official in a manner similar to that specified in 16VAC25-60-300.B, which outlines the process for resolving failure to abate issues involving the Commonwealth and its agencies.

Section 16VAC25-60-300.B provides:

"B. Whenever the Commonwealth or any of its agencies fails to abate a violation within the time provided in an appropriate final order, the Commissioner of Labor and Industry shall normally petition for redress as follows: For violations in the Department of Law, to the Attorney General; for violations in the Office of the Lieutenant Governor, to the Lieutenant Governor; for violations otherwise in the executive branch, to the appropriate cabinet secretary; for violations in the State Corporation Commission, to a judge of the commission; for violations in the Department of Workers'

Compensation, to the Chairman of the Workers' Compensation Commission; for violations in the legislative branch of government, to the Chairman of the Senate Committee on Commerce and Labor; for violations in the judicial branch, to the chief judge of the circuit court or to the Chief Justice of the Supreme Court. Where the violation cannot be timely resolved by this petition, the commissioner shall bring the matter to the Governor for resolution.”

5. The amendment to 16VAC25-60-90 clarifying Virginia Freedom of Information Act (FOIA) requirements in regard to the Voluntary Protection Program, §40.1-49.13 of the *Code of Virginia*. The final regulation tracks federal OSHA's requirements under the federal Freedom of Information Act provisions for the federal VPP and provides that the following documents are releasable pursuant to an FOIA request:

- Participant applications and amendments;
- Onsite evaluation reports;
- Annual self-evaluations;
- Agency staff correspondence containing recommendations to the Commissioner;
- Approval letters; and
- Notifications to compliance staff removing the participants from the general inspection list, related formal correspondence.

It is the Department's intent to treat FOIA requests for VPP documents in the same manner as requests for VOSH compliance documents, by complying with the Virginia FOIA statutory requirements as well as Va. Code §40.1-11<sup>1</sup>, and legal precedent.

Examples of information that would not be released in response to an FOIA request include employee interview statements (see 16VAC25-60-90.E.1 and Va. Code §40.1-11); employee medical and personnel records (see 16VAC25-60-90.E.3 and Va. Code §40.1-11); and information contained in VPP files the disclosure of which would jeopardize the safety or security of persons or buildings/facilities at VPP sites (see Va. Code 2.2-3705.2(14)).

6. The amendment to 16VAC25-60-110 specifies that occupational safety and health anti-discrimination cases will also be referred to as "whistleblower" cases. This terminology change reflects changes implemented by federal OSHA to refer to employees who allege discriminatory or retaliatory practices by an employer when the employees have engaged in activities protected by §11(c) of the OSH Act of 1970, as "whistleblowers".

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<sup>1</sup> § 40.1-11. Using or revealing information gathered. Neither the Commissioner nor any employee of the Department shall make use of or reveal any information or statistics gathered from any person, company or corporation for any purposes other than those of this title.

7. The amendment to 16VAC25-60-110 clarifies that the Commissioner may request penalties that would be paid to the employee for occupational whistleblower discrimination or anti-retaliation cases at the litigation stage pursuant to §40.1-51.2:2.

Section 40.1-51.2:1 prohibits employers from discriminating against employees who have exercised their safety and health rights under Title 40.1. Section 40.1-51.2:2.A<sup>2</sup> provides that the Commissioner shall bring an action in Circuit Court when it is determined that a violation of 40.1-51.2:1 has occurred and attempts at conciliation have failed. Section §40.1-51.2:2.A further provides that the court "...shall have jurisdiction, for cause shown, to restrain violations and order appropriate relief...."

The amendment clarifies that the court's authority to "...restrain violations and order appropriate relief" includes the ability to issue penalties or fines to the employer which would be payable to the employee.

8. The amendment to 16VAC25-60-245 clarifies that the Commissioner's authority in Subdivision 4 of § 40.1-6 of the Code of Virginia to take and preserve testimony, examine witnesses and administer oath constitutes an administrative subpoena power.
9. The amendment to 16VAC25-60-260 clarifies that the Commissioner's burden of proving the basis for a VOSH citation, penalty and order of abatement is by a "preponderance of the evidence". While the Virginia Court of Appeals has ruled that the burden of proof for the Commissioner in a VOSH case is by a preponderance of the evidence (*Nat'l Coll. of Bus. & Tech., Inc. v. Davenport*, 57 Va. App. 677, 685, 705 S.E. 2d 519, 523 (2011)), the issue has not been definitively ruled on by the Virginia Supreme Court.
10. The amendment to 16VAC25-60-260 clarifies that the burden for proving an affirmative defense to a citation lies with the defendant. While it is generally accepted in case law that the burden for proving an affirmative defense to an OSHA/VOSH citation lies with the

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Footnote:

<sup>2</sup> Section §40.1-51.2:2.A of the *Code of Virginia* contains several provisions:

- The right of an employee who believes he or she has been discriminated against to file a complaint with the Commissioner of Labor and Industry.
- The complaint must be filed within 60 days after such violation occurs.
- Failure to file the complaint within 60 days bars the employee from seeking relief under §40.1-51.2:2.
- The Commissioner is authorized to conduct investigations of timely complaints received.
- If the Commissioner determines that a violation of the statute has occurred, settlement must be attempted.
- If voluntary settlement cannot be reached, the Commissioner will file litigation in Circuit Court.
- The Court has jurisdiction to "restrain violations and order appropriate relief, including rehiring or reinstatement of the employee to his former position with back pay plus interest at a rate not to exceed eight percent per annum."

employer, it is not conclusively so. For instance the Fourth Circuit Court of Appeals has ruled that the burden of proving unforeseeable and unpreventable employee misconduct lies with the government (Ocean Electric Corp. v. Sec of Labor, 594 F. 2d 396 (4<sup>th</sup> Cir. 1979);

and L.R. Willson & Sons, Inc. v. Occupational Safety and Health Review Comm'n, 134 F. 3d 1235 (4<sup>th</sup> Cir.), cert denied, 525 U. S. 962 (1998). While the Virginia Court of Appeals has ruled that the burden of proof on the issue of employee misconduct lies with the employer in Virginia (Magco of Maryland, Inc., v. Barr, 33 Va. App. 78, 531 S. E. 2d 614 (2000)), the issue has not been definitively ruled on by the Virginia Supreme Court.

**C. Impact on Employers**

Employer impact is discussed by item number listing from Section B. above:

Item 1. The amendment to 16VAC25-60-130, which allows VOSH to enforce the Virginia Department of Transportation (VDOT) Work Area Protection Manual in lieu of the federal Manual on Uniform Traffic Control Devices in certain situations, will subject employers to the potential for VOSH citations and penalties should they violate requirements in the Manual. However, by the terms of the regulation, such violations and penalties will only be issued in situations where the employer violates a contract freely and voluntarily entered into with a public sector body. Since such an employer is bound contractually to comply with the VDOT Work Area Protection Manual and incur the costs associated with compliance, the final regulation will place no additional financial burden on the employer for compliance with the VDOT requirements.

Items 2. - 6. No additional impacts on employers are anticipated.

Item 7. Employers could accrue increased costs in cases where the Commissioner files a complaint in Circuit Court alleging that an employer discriminated against a whistleblower employee should the Commissioner request and the Court grant additional penalties or fines under its authority to restrain violations and order appropriate relief. The fiscal impact is very limited as VOSH whistleblower court cases average less than one per year.

Items 8. - 10. No additional impacts on employers are anticipated.

**D. Impact on Employees**

Employees should be provided with additional safety and health protections in construction work zones as the amendment to 16VAC25-60-130 will permit VOSH to enforce the VDOT Work Area Protection Manual in certain situations in lieu of enforcing 1926.200 through 1926.202 which incorporate by reference Part VI of the Manual of Uniform Traffic Control Devices (MUTCD), 1988 Edition, Revision 3, or Part VI of the MUTCD, Millennium Edition.

Employees should benefit from the amendment to 16VAC25-60-110 that clarifies that the Commissioner may request penalties or fines that would be paid to the employee for occupational whistleblower discrimination or anti-retaliation cases at the litigation stage pursuant to §40.1-51.2:2. Although litigated cases are infrequent, the possibility that a court could restrain violations by adding additional fines or penalties should serve to deter discriminatory conduct by employers.

**E. Impact on the Department of Labor and Industry.**

Other than training DOLI employees on the changes to the regulation, no additional fiscal or other programmatic impacts are anticipated for the Department if the final regulation is adopted.

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## **RECOMMENDED ACTION**

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board consider for adoption, as a final regulation of the Board, the attached final amendments to 16VAC25-60, *et seq.*, Administrative Regulation for the Virginia Occupational Safety and Health (VOSH) Program, Miscellaneous Changes, in accordance with the authority of the Board under §40.1-22(5) and the requirements of the Administrative Process Act §2.2-4000, *et seq.*

The Department also recommends that the Board state in any motion it may make that it will receive, consider, and respond to petitions by any interested person with respect to reconsideration or revision of any regulation under the purview of the Board.

**16VAC25-60, *et seq.*, Administrative Regulation for the  
Virginia Occupational Safety and Health (VOSH) Program, Miscellaneous Changes**

As Adopted by the  
Safety and Health Codes Board

Date: \_\_\_\_\_



VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Effective Date: \_\_\_\_\_

**16VAC25-60, *et seq.*, Administrative Regulation for the  
Virginia Occupational Safety and Health (VOSH) Program**



**Part II**  
**General Provisions**

....

**16VAC25-60-30. Applicability to public employers.**

A. All occupational safety and health standards adopted by the board shall apply to public employers and their employees in the same manner as to private employers.

B. All sections of this chapter shall apply to public employers and their employees. Where specific procedures are set out for the public sector, such procedures shall take precedence.

C. The following portions of Title 40.1 of the Code of Virginia shall apply to public employers: §§ 40.1-10, 40.1-49.4 A(1), 40.1-49.8, 40.1-51, 40.1-51.1, 40.1-51.2, 40.1-51.2:1, 40.1-51.3, 40.1-51.3:2, and 40.1-51.4:2.

D. Section 40.1-51.2:2 A of the Code of Virginia shall apply to public employers the Commonwealth and its agencies except that the commissioner shall not bring action in circuit court in the event that a voluntary agreement cannot be obtained.

E. Sections 40.1-7, 40.1-49.4 F, 40.1-49.9, 40.1-49.10, 40.1-49.11, 40.1-49.12, and 40.1-51.2:2 of the Code of Virginia shall apply to public employers other than the Commonwealth and its agencies.

F. If the commissioner determines that an imminent danger situation, as defined in § 40.1-49.4 F of the Code of Virginia, exists for an employee of the Commonwealth or one of its agencies, and if the employer does not abate that imminent danger immediately upon request, the Commissioner of Labor and Industry shall forthwith petition the governor to direct that the imminent danger be abated.

G. If the commissioner is unable to obtain a voluntary agreement to resolve a violation of § 40.1-51.2:1 of the Code of Virginia by the Commonwealth or one of its agencies, the Commissioner of Labor and Industry shall petition for redress in the same manner as provided in this chapter 16VAC25-60-300.B.

....

**16VAC25-60-90. Release of information and disclosure pursuant to requests under the Virginia Freedom of Information Act and subpoenas.**

A. Pursuant to the Virginia Freedom of Information Act (FOIA) and with the exceptions stated in subsections B through H of this section, employers, employees and their representatives shall have access to information gathered in the course of an inspection.

B. Interview statements of employers, owners, operators, agents, or employees given to the commissioner pursuant to § 40.1-49.8 of the Code of Virginia are confidential. Pursuant to the requirements set forth in § 40.1-11 of the Code of Virginia, individuals shall have the right to request a copy of their own interview statements.

C. All file documents contained in case files which are under investigation, and where a citation has not been issued, are not disclosable until:

1. The decision has been made not to issue citations; or
2. Six months has lapsed following the occurrence of an alleged violation.

D. Issued citations, orders of abatement and proposed penalties are public documents and are releasable upon a written request. All other file documents in cases where a citation has been issued are not disclosable until the case is a final order of the commissioner or the court, except that once a copy of file documents in a contested case has been provided to legal counsel for the employer in response to a request for discovery, or to a third party in response to a subpoena duces tecum, such documents shall be releasable upon a written request, subject to the exclusions in this regulation and the Virginia Freedom of Information Act.

E. Information required to be kept confidential by law shall not be disclosed by the commissioner or by any employee of the department. In particular, the following specific information is deemed to be nondisclosable:

1. The identity of and statements of an employee or employee representative who has complained of hazardous conditions to the commissioner;
2. The identities of employers, owners, operators, agents or employees interviewed during inspections and their interview statements;
3. Employee medical and personnel records obtained during VOSH inspections. Such records may be released to the employee or his duly authorized representative upon a written, and endorsed request; and

4. Employer trade secrets, commercial, and financial data.

F. The commissioner may decline to disclose a document that is excluded from the disclosure requirements of the Virginia FOIA, particularly documents and evidence related to criminal investigations, writings protected by the attorney-client privilege, documents compiled for use in litigation and personnel records.

G. An effective program of investigation and conciliation of complaints of discrimination requires confidentiality. Accordingly, disclosure of records of such complaints, investigations, and conciliations will be presumed to not serve the purposes of Title 40.1 of the Code of Virginia, except for statistical and other general information that does not reveal the identities of particular employers or employees.

H. All information gathered through participation in consultation services or training programs of the department shall be withheld from disclosure except for statistical data which does not identify individual employers.

I. All information gathered through participation in voluntary protection programs of the department pursuant to §40.1-49.13 of the Code of Virginia shall be withheld from disclosure except for statistical data which does not identify individual employers and the following:

1. Participant applications and amendments, onsite evaluation reports, and annual self-evaluations;

2. Agency staff correspondence containing recommendations to the Commissioner, approval letters, notifications to compliance staff removing the participants from the general inspection list, and related formal correspondence.

I-J. The commissioner, in response to a subpoena, order, or other demand of a court or other authority in connection with a proceeding to which the department is not a party, shall not disclose any information or produce any material acquired as part of the performance of his official duties or because of his official status without the approval of the Commissioner of Labor and Industry.

J-K. The commissioner shall disclose information and statistics gathered pursuant to the enforcement of Virginia's occupational safety and health laws, standards, and regulations where it has been determined that such a disclosure will serve to promote the safety, health, and welfare of employees. Any person requesting disclosure of such information and statistics should include in his written request any information that will aid the commissioner in this determination.

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**16VAC25-60-110. Whistleblower discrimination; Discrimination; discharge or retaliation; remedy for retaliation.**

A. In carrying out his duties under § 40.1-51.2:2 of the Code of Virginia, the commissioner shall consider case law, regulations, and formal policies of federal OSHA. An employee's engagement in activities protected by Title 40.1 does not automatically render him immune from discharge or discipline for legitimate reasons. Termination or other disciplinary action may be taken for a combination of reasons, involving both discriminatory and nondiscriminatory motivations. In such a case, a violation of § 40.1-51.2:1 of the Code of Virginia has occurred if the protected activity was a substantial reason for the action, or if the discharge or other adverse action would not have taken place "but for" engagement in protected activity.

Employee whistleblower activities, protected by § 40.1-51.2:1 of the Code of Virginia include, but are not limited to:

1. Making any complaint to his employer or any other person under or related to the safety and health provisions of Title 40.1 of the Code of Virginia;
2. Instituting or causing to be instituted any proceeding under or related to the safety and health provisions of Title 40.1 of the Code of Virginia;
3. Testifying or intending to testify in any proceeding under or related to the safety and health provisions of Title 40.1 of the Code of Virginia;
4. Cooperating with or providing information to the commissioner during a worksite inspection; or
5. Exercising on his own behalf or on behalf of any other employee any right afforded by the safety and health provisions of Title 40.1 of the Code of Virginia.

Discharge or discipline of an employee who has refused to complete an assigned task because of a reasonable fear of injury or death will be considered retaliatory only if the employee has sought abatement of the hazard from the employer and the statutory procedures for securing abatement would not have provided timely protection. The condition causing the employee's apprehension of death or injury must be of such a nature that a reasonable person, under the circumstances then confronting the employee, would conclude that there is a real danger of death or serious injury and that there is insufficient time, due to the urgency of the situation, to eliminate the danger through resort to regular statutory enforcement. In addition, in such circumstances, the employee, where

possible, must also have sought from his employer, and been unable to obtain, an abatement of the dangerous condition.

Disciplinary measures taken by employers solely in response to employee refusal to comply with appropriate safety rules and regulations shall not be regarded as retaliatory action prohibited by § 40.1-51.2:1 of the Code of Virginia.

B. A complaint pursuant to § 40.1-51.2:2 of the Code of Virginia may be filed by the employee himself or anyone authorized to act in his behalf.

The investigation of the commissioner shall include an opportunity for the employer to furnish the commissioner with any information relevant to the complaint.

An attempt by an employee to withdraw a previously filed complaint shall not automatically terminate the investigation of the commissioner. Although a voluntary and uncoerced request from the employee that his complaint be withdrawn shall receive due consideration, it shall be the decision of the commissioner whether further action is necessary to enforce the statute.

The filing of a retaliation complaint with the commissioner shall not preclude the pursuit of a remedy through other channels. Where appropriate, the commissioner may postpone his investigation or defer to the outcome of other proceedings.

C. Section 40.1-51.2:2.A provides that the Commissioner shall bring an action in Circuit Court when it is determined that a violation of 40.1-51.2:1 has occurred and attempts at conciliating a voluntary agreement could not be obtained. Section §40.1-51.2:2.A further provides that the court "...shall have jurisdiction, for cause shown, to restrain violations and order appropriate relief..." The court's authority to "restrain violations and order appropriate relief" includes the ability to issue penalties or fines to the employer which would be payable to the employee. In determining the appropriate level of penalties or fines, the court may look to §§40.1-49.4.G, H, I and J.

**Part III**  
**Occupational Safety and Health Standards**

**16VAC25-60-120. General industry standards.**

**A.** The occupational safety or health standards adopted as rules or regulations by the board either directly or by reference, from 29 CFR Part 1910 shall apply by their own terms to all employers and employees at places of employment covered by the Virginia State Plan for Occupational Safety and Health.

**B.** The employer shall comply with the manufacturer's specifications and limitations applicable to the operation, training, use, installation, inspection, testing, repair and maintenance of all machinery, vehicles, tools, materials and equipment, unless specifically superseded by a more stringent corresponding requirement in 29 CFR Part 1910. The use of any machinery, vehicle, tool, material or equipment that is not in compliance with any applicable requirement of the manufacturer is prohibited, and shall either be identified by the employer as unsafe by tagging or locking the controls to render them inoperable or be physically removed from its place of use or operation.

**16VAC25-60-130. Construction industry standards.**

**A.** The occupational safety or health standards adopted as rules or regulations by the Virginia Safety and Health Codes Board either directly, or by reference, from 29 CFR Part 1926 shall apply by their own terms to all employers and employees engaged in either construction work or construction related activities covered by the Virginia State Plan for Occupational Safety and Health.

**B.** The employer shall comply with the manufacturer's specifications and limitations applicable to the operation, training, use, installation, inspection, testing, repair and maintenance of all machinery, vehicles, tools, materials and equipment, unless specifically superseded by a more stringent corresponding requirement in 29 CFR Part 1926. The use of any machinery, vehicle, tool, material or equipment that is not in compliance with any applicable requirement of the manufacturer is prohibited, and shall either be identified by the employer as unsafe by tagging or locking the controls to render them inoperable or be physically removed from its place of use or operation.

**1-C.** For the purposes of the applicability of such Part 1926 standards, the key criteria utilized to make such a decision shall be the activities taking place at the worksite, not the primary business of the employer. Construction work shall generally include any building, altering, repairing, improving, demolishing, painting or decorating any structure, building, highway, or roadway; and any draining, dredging, excavation, grading or similar work upon real property. Construction also generally includes work performed in traditional construction trades such as carpentry, roofing, masonry work, plumbing, trenching and excavating, tunneling, and electrical work. Construction does not include maintenance, alteration or repair of mechanical devices, machinery, or equipment, even when the mechanical device, machinery or equipment is part of a pre-existing structure.

**D.** The employer shall comply with the Virginia Department of Transportation (VDOT) Work Area Protection Manual in lieu of the federal Manual on Uniform Traffic Control Devices (Part VI of the MUTCD, 1988 Edition, Revision 3, or Part VI of the MUTCD, Millennium Edition - referenced in 1926.200 through 1926.202), when working under any contract for construction, repair or maintenance between the employer and the Commonwealth, its agencies, authorities, or instrumentalities, or any political subdivision or public body; when such contract stipulates employer compliance with the VDOT Work Area Protection Manual in effect at the time of contractual agreement.

**2-E.** Certain standards of 29 CFR Part 1910 have been determined by federal OSHA to be applicable to construction and have been adopted for this application by the board.

**3-F.** The standards adopted from 29 CFR Part 1910.19 and 29 CFR Part 1910.20 containing respectively, special provisions regarding air contaminants and requirements concerning access to employee exposure and medical records shall apply to construction work as well as general industry.



**16VAC25-60-140. Agriculture standards.**

**A.** The occupational safety or health standards adopted as rules or regulations by the board either directly, or by reference, from 29 CFR Part 1910 and 29 CFR Part 1928 shall apply by their own terms to all employers and employees engaged in either agriculture or agriculture related activities covered by the Virginia State Plan for Occupational Safety and Health.

**B.** For the purposes of applicability of such Part 1910 and Part 1928 standards, the key criteria utilized to make a decision shall be the activities taking place at the worksite, not the primary business of the employer. Agricultural operations shall generally include any operation involved in the growing or harvesting of crops or the raising of livestock or poultry, or activities integrally related to agriculture, conducted by a farmer or agricultural employer on sites such as farms, ranches, orchards, dairy farms or similar establishments. Agricultural operations do not include construction work as described in subdivision 1 of 16VAC25-60-130, nor does it include operations or activities substantially similar to those that occur in a general industry setting and are therefore not unique and integrally related to agriculture.

**C.** The employer shall comply with the manufacturer's specifications and limitations applicable to the operation, training, use, installation, inspection, testing, repair and maintenance of all machinery, vehicles, tools, materials and equipment, unless specifically superseded by a more stringent corresponding requirement in 29 CFR Part 1910 or 29 CFR Part 1928. The use of any machinery, vehicle, tool, material or equipment that is not in compliance with any applicable requirement of the manufacturer is prohibited, and shall either be identified by the employer as unsafe by tagging or locking the controls to render them inoperable or be physically removed from its place of use or operation.

**16VAC25-60-150. Maritime standards.**

**A.** The occupational safety or health standards adopted as rules or regulations by the board either directly, or by reference, from 29 CFR Part 1915, 29 CFR Part 1917, 29 CFR Part 1918 and 29 CFR Part 1919 shall apply by their own terms to all public sector employers and employees engaged in maritime related activities covered by the Virginia State Plan for Occupational Safety and Health.

**B.** The employer shall comply with the manufacturer's specifications and limitations applicable to the operation, training, use, installation, inspection, testing, repair and maintenance of all machinery, vehicles, tools, materials and equipment, unless specifically superseded by a more stringent corresponding requirement in Part 1915, 1917, 1918 or 1919. The use of any machinery, vehicle, tool, material or equipment that is not in compliance with any applicable requirement of the manufacturer is prohibited, and shall either be identified by the employer as unsafe by tagging or locking the controls to render them inoperable or be physically removed from its place of use or operation.

....

**Part V**  
**Inspections**

**16VAC25-60-245. Use of Administrative Subpoenas to take and preserve testimony, examine witnesses and administer oaths.**

A. Subdivision 4 of § 40.1-6 of the Code of Virginia authorizes the commissioner, in the discharge of his duties, to take and preserve testimony, examine witnesses and administer oaths. In accordance with subdivision 5 of § 40.1-6 of the Code of Virginia, the Commissioner of Labor and Industry may appoint such representatives as are necessary to carry out the functions outlined in subdivision 4 of § 40.1-6 of the Code of Virginia. Such appointments shall be made in writing; identify the individual being appointed, the length of appointment, and the method of withdrawal of such appointment; and specify what duties are being prescribed.

B. The oath shall be administered by the commissioner's appointed representative to the witness as follows: "Do you swear or affirm to tell the truth."

C. Testimony given under oath shall be recorded by a court reporter.

D. Questioning of employers, owners, operators, agents or employees under oath shall be in private in accordance with subdivision 2 of § 40.1-49.8 of the Code of Virginia.

E. An employer's refusal to make an owner, operator, agent or employee available to the commissioner for examination under this section shall be considered a refusal to consent to the commissioner's inspection authority under § 40.1-49.8 of the Code of Virginia. Upon such refusal the commissioner may seek an administrative search warrant in accordance with the provisions contained in §§ 40.1-49.9 through 40.1-49.12 of the Code of Virginia, and obtain an order from the appropriate judge commanding the employer to make the subject owner, operator, agent or employee available for examination at a specified location by a date and time certain.

F. In accordance with § 40.1-10 of the Code of Virginia, if any person who may be sworn to give testimony shall willfully fail or refuse to answer any legal and proper question propounded to him concerning the subject of the examination under § 40.1-6 of the Code of Virginia, he shall be guilty of a misdemeanor. Such person, upon conviction thereof, shall be fined not exceeding \$100 nor less than \$25 or imprisoned in jail not exceeding 90 days or both. Any such refusal on the part of any person to comply with this section may be referred by the Commissioner of Labor and Industry to the appropriate attorney for the Commonwealth for prosecution.

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## **Part VI Citation and Penalty**

### **16VAC25-60-260. Issuance of citation and proposed penalty.**

A. Each citation shall be in writing and describe with particularity the nature of the violation or violations, including a reference to the appropriate safety or health provision of Title 40.1 of the Code of Virginia or the appropriate rule, regulation, or standard. In addition, the citation must fix a reasonable time for abatement of the violation. The citation will contain substantially the following: "NOTICE: This citation will become a final order of the commissioner unless contested within fifteen working days from the date of receipt by the employer." The citation may be delivered to the employer or his agent by the commissioner or may be sent by certified mail or by personal service to an officer or agent of the employer or to the registered agent if the employer is a corporation.

1. No citation may be issued after the expiration of six months following the occurrence of any alleged violation. The six-month time frame is deemed to be tolled on the date the citation is issued by the commissioner, without regard for when the citation is received by the employer. For purposes of calculating the six-month time frame for citation issuance, the following requirements shall apply:

a. The six-month time frame begins to run on the day after the incident or event occurred or notice was received by the commissioner (as specified below), in accordance with § 1-210 A of the Code of Virginia. The word "month" shall be construed to mean one calendar month in accordance with § 1-223 of the Code of Virginia.

b. An alleged violation is deemed to have "occurred" on the day it was initially created by commission or omission on the part of the creating employer, and every day thereafter that it remains in existence uncorrected.

c. Notwithstanding subdivision 1 b of this subsection, if an employer fails to notify the commissioner of any work-related incident resulting in a fatality or in the in-patient hospitalization of three or more persons within eight hours of such occurrence as required by § 40.1-51.1 D of the Code of Virginia, the six-month time frame shall not be deemed to commence until the commissioner receives actual notice of the incident.

d. Notwithstanding subdivision 1 b of this subsection, if the commissioner is first notified of a work-related incident resulting in an injury or illness to an employee(s) through receipt of an Employer's Accident Report (EAR) form from the Virginia Workers' Compensation Commission as provided in § 65.2-900 of the Code of Virginia, the six-month time frame shall not be deemed to commence until the commissioner actually receives the EAR form.

e. Notwithstanding subdivision 1 b of this subsection, if the commissioner is first notified of a work-related hazard, or incident resulting in an injury or illness to an employee(s), through receipt of a complaint in accordance with 16VAC25-60-100 or referral, the six-month time frame shall not be deemed to commence until the commissioner actually receives the complaint or referral.

B. A citation issued under subsection A to an employer who violates any VOSH law, standard, rule or regulation shall be vacated if such employer demonstrates that:

1. Employees of such employer have been provided with the proper training and equipment to prevent such a violation;
2. Work rules designed to prevent such a violation have been established and adequately communicated to employees by such employer and have been effectively enforced when such a violation has been discovered;
3. The failure of employees to observe work rules led to the violation; and
4. Reasonable steps have been taken by such employer to discover any such violation.

C. For the purposes of subsection B only, the term "employee" shall not include any officer, management official or supervisor having direction, management control or custody of any place of employment which was the subject of the violative condition cited.

D. The penalties as set forth in § 40.1-49.4 of the Code of Virginia shall also apply to violations relating to the requirements for record keeping, reports or other documents filed or required to be maintained and to posting requirements.

E. In determining the amount of the proposed penalty for a violation the commissioner will ordinarily be guided by the system of penalty adjustment set forth in the VOSH Field Operations Manual. In any event the commissioner shall consider the gravity of the violation, the size of the business, the good faith of the employer, and the employer's history of previous violations.

F. On multi-employer worksites for all covered industries, citations shall normally be issued to an employer whose employee is exposed to an occupational hazard (the exposing employer). Additionally, the following employers shall normally be cited, whether or not their own employees are exposed:

1. The employer who actually creates the hazard (the creating employer);
2. The employer who is either:

a. Responsible, by contract or through actual practice, for safety and health conditions on the entire worksite, and has the authority for ensuring that the hazardous condition is corrected (the controlling employer); or

b. Responsible, by contract or through actual practice, for safety and health conditions for a specific area of the worksite, or specific work practice, or specific phase of a construction project, and has the authority for ensuring that the hazardous condition is corrected (the controlling employer); or

3. The employer who has the responsibility for actually correcting the hazard (the correcting employer).

G. A citation issued under subsection F of this section to an exposing employer who violates any VOSH law, standard, rule or regulation shall be vacated if such employer demonstrates that:

1. The employer did not create the hazard;

2. The employer did not have the responsibility or the authority to have the hazard corrected;

3. The employer did not have the ability to correct or remove the hazard;

4. The employer can demonstrate that the creating, the controlling and/or the correcting employers, as appropriate, have been specifically notified of the hazards to which his employees were exposed;

5. The employer has instructed his employees to recognize the hazard and, where necessary, informed them how to avoid the dangers associated with it;

6. Where feasible, an exposing employer must have taken appropriate alternative means of protecting employees from the hazard; and

7. When extreme circumstances justify it, the exposing employer shall have removed his employees from the job.

**H. The Commissioner's burden of proving the basis for a VOSH citation, penalty or order of abatement is by a preponderance of the evidence.**

**I. The burden of proof in establishing an affirmative defense to a VOSH citation resides with the employer.**



**COMMONWEALTH of VIRGINIA**  
**DEPARTMENT OF LABOR AND INDUSTRY**

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**VIRGINIA SAFETY AND HEALTH CODES BOARD**

**BRIEFING PACKAGE FOR**

**July 27, 2017**

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**Final Regulation on Virginia Voluntary Protection Programs (VPP), 16VAC25-200**

**I. Action Requested**

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to consider for adoption as a final regulation of the Board the attached 16VAC25-200, Virginia Voluntary Protection Programs (VPP).

**II. Summary of the Rulemaking Process.**

A Notice of Intended Regulatory Action (NOIRA) was adopted by the Board on October 29, 2015. The NOIRA was published on December 28, 2015, with a 30-day comment period ending on January 27, 2016. No comments were received.

The Board adopted proposed regulatory language on March 3, 2016.

At the March 3, 2016 meeting, the Board requested staff to research the term "nested contractor" which is referenced in 16VAC25-200-50.D.4, Application requirements:

4. Nested contractors, such as contracted maintenance workers, and temporary employees who are supervised by host site management and governed by the site's safety and health management system are entitled to the same workplace protections as host employees; and are therefore included in the host site's injury and illness rates.

The proposed regulation was published on December 12, 2016, with a 60-day comment period ending on February 17, 2017. A public hearing was held by the Board on February 16, 2017. No comments were received from the public.

Scope, Purpose and Applicability Issue:

During regulatory review process, the Department of Planning and Budget suggested that the Department review §16VAC25-200-10, Scope, Purpose and Applicability, with the Registrar of Regulations to assure that the section only contains “regulatory” subject matter language in accordance with §1VAC7-10-40.C:

C. Pursuant to §30-150 of the Code of Virginia, the registrar may omit from publication in the Virginia Register of Regulations or inclusion in the Virginia Administrative Code (i) effective date clauses, (ii) severability clauses, (iii) purpose statements, and (iv) provisions that are nonregulatory in nature, such as a defined word, term, or phrase that is not used in the regulatory text.

Other issues identified by the Registrar of Regulations include:

- Substitution of “Department” for “Agency”
- Substitution of “Chapter” for “Regulation”
- Substitution of “commissioner” for “Commissioner”
- Removal of duplicative text
- Definitions for “Challenge” and “VOSH” were added
- The definition of “Small Business” was deleted since the term is not used in the regulation.
- Movement of some language from the definition section to the body of the regulations
- The term “participant” was substituted for the terms “company” and “site” in a number of places

NOTE: Changes made at the request of the Registrar of Regulations and by the Office of the Attorney General are highlighted in yellow.

Nested Contractor Issue:

At the February 16, 2017 public hearing the Board was briefed by Department staff on nested contractors. The VPP Policies and Procedures Manual does not specifically define the term “nested contractor”. However, in discussing injury and illness data requirements for contractors, the OSHA guidance states:

“Nested contractors . . . are supervised by host site management”, and “are regularly intermingled with the owner’s employees and under direct supervision by management. If in doubt, consult contract specifications.”

Further guidance is provided in a discussion of injury and illness data requirements:

“Nested contractors (such as contracted maintenance workers) and temporary employees who are supervised by host site management are governed by the host’s



safety and health management system and are, therefore, included in the host's rates."

Staff proposed the following definition which is incorporated in the final regulation:

"Nested contractor" means a contractor whose employees are supervised by the applicant or participant and are regularly intermingled with the host site's employees.

Virginia Administrative Process Act Issue:

The proposed regulation contained the following language in §§16VAC25-200-10. C.2, and -200-110.C.8:

2. Because Virginia VPP is a voluntary program, the Commissioner's final decision to accept or reject an application, or suspend or terminate a company's participation in VPP, or to take any other action contemplated by this regulation or §40.1-49.13 of the Code of Virginia, is not subject to the provisions of the Virginia Administrative Process Act, Va. Code §2.2-4000 through 2.2-4032 of the Code of Virginia.

During regulatory review process, the Office of the Attorney General informed the Department that the above language was not consistent with the Virginia Administrative Process Act and would have to be removed from the final regulation.

Changes Recommended by the Department

- Definitions for "Applicant", "Commissioner of Labor and Industry", and "Participant" were added
- The term "employer" was substituted in a number of places for "company" since the VPP regulation will apply to state and local government agencies

NOTE: Changes recommended by the Department and in response to Board requests are highlighted in gray.

**III. Summary of Intended Regulatory Action**

On March 19, 2015, the Virginia General Assembly approved the adoption of §40.1-49.13 of the *Code of Virginia* (see Attachment 1), which codified the VOSH Voluntary Protection Program (VPP). Subsection B. of §40.1-49.13 requires the Safety and Health Codes Board to adopt a VPP regulation and provides for the following:

- B. "The Safety and Health Codes Board shall adopt definitions, rules, regulations, and standards necessary for the operation of the Voluntary Protection Program in a manner that will promote safe and healthy workplaces throughout the Commonwealth. The standards for the VPP shall include the following requirements for VPP participation:

1. Upper management leadership and active and meaningful employee involvement;
2. Systematic assessment of occupational hazards;
3. Comprehensive hazard prevention, mitigation, and control programs;
4. Employee safety and health training; and
5. Safety and health program evaluation."

Subsection B. of §40.1-49.13 also provides that current participants may continue as such, but on and after July 1, 2016, their continued participation is conditional upon complying with the standards for participation ultimately adopted by the Safety and Health Codes Board.

The final regulation addresses the following issues:

- Definitions
- Categories of participation (Star, Merit, Challenge, etc.);
- Ways to participate (site-based in both general industry and construction, mobile workforce, VPP corporate);
- Application requirements;
- Comprehensive safety and health management system requirements;
- Certification and re-certification processes;
- On-site evaluations;
- Annual submissions;
- Other participation requirements;
- Enforcement activity at VPP sites; and
- Withdrawal or termination

#### **IV. Basis, Purpose and Impact of the Final Rulemaking**

##### **A. Basis**

In Virginia, the Voluntary Protection Program was instituted in 1996 and is patterned after federal OSHA's VPP, which was originally created in 1982. The VOSH Program adopted VPP as a component of DOLI's larger mission to "...make Virginia a better place in which to work, live and conduct business...by promoting safe, healthful workplaces, best employment practices..." An employer's membership in VPP is recognized as the nation's and Virginia's highest award that can be bestowed by a government agency to an employer for excellence in occupational safety and health management systems.

The traditional site-based VPP has two levels of participation, Star worksite and Merit worksite. Star participants are a select group of worksites that have designed and implemented outstanding safety and health programs, including full and meaningful employee involvement. Merit participants are those that have demonstrated the

potential and willingness to achieve Star status and are implementing planned actions to fully meet the VPP Star requirements.

VPP also encompasses the following programs which provide interested employers and employees the opportunity to develop and implement exemplary safety and health management systems:

- Challenge – where employers guided by Challenge Administrators through a three stage process, which can prepare an employer to achieve VPP Star status;
- Site-based Construction – for long term construction sites;
- Mobile Workforce – for employers that move from site to site; and
- Corporate - designed for corporate applicants.

On March 19, 2015, the Virginia General Assembly approved the amendment of the *Code of Virginia* by adding §40.1-49.13, which codifies the VPP.

**B. Purpose**

The purpose of the final regulation is to adopt those definitions, rules, regulations, and standards required by §40.1-49.13 of the *Code of Virginia*, and necessary for the operation of the Virginia VPP in a manner that will promote and recognize employer implementation of exceptional safety and health management systems throughout the Commonwealth. Historically, employer adoption of the VPP concepts has consistently resulted in injury and illness rates 50 % or more below that of the employer’s industry as a whole.

**C. Impact on Employers**

VPP is a voluntary program so there is no negative impact on Virginia’s employers that are not program participants. Program participants do incur costs associated with developing and implementing safety and health management systems that often exceed current requirements in VOSH laws, standards and regulations. However, the costs are incurred on a voluntary basis.

Employers that take proactive steps to improve safety and health protections for employees can realize significant savings and avoided costs associated with workplace injuries and illnesses. In 2015, the National Safety Council reported that the average cost of a medically consulted occupational injury in 2013 was \$42,000.<sup>1</sup> In 2013, the Washington Post reported that the average net profit margin for all U.S. companies was 8.2 percent<sup>2</sup>. **With a net profit margin of 8.2%, a business needs to generate \$512,195 in new revenues to simply pay for the costs of that single injury.**

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<sup>1</sup> [http://www.nsc.org/Membership%20Site%20Document%20Library/2015%20Injury%20Facts/NSC\\_InjuryFacts2015Ed.pdf](http://www.nsc.org/Membership%20Site%20Document%20Library/2015%20Injury%20Facts/NSC_InjuryFacts2015Ed.pdf)

<sup>2</sup> [https://www.washingtonpost.com/business/on-small-business/why-small-businesses-are-better-off-now-than-before-the-recession--in-one-chart/2014/04/23/f501aad2-ca54-11e3-93eb-6c0037dde2ad\\_story.html](https://www.washingtonpost.com/business/on-small-business/why-small-businesses-are-better-off-now-than-before-the-recession--in-one-chart/2014/04/23/f501aad2-ca54-11e3-93eb-6c0037dde2ad_story.html)

In 2015, the National Safety Council reported that in 2012 Virginia Workers' Compensation payments totaled 913.8 million dollars<sup>3</sup>. A recent study indicates that Workers' Compensation payments only cover approximately 21% of the cost of workplace injuries<sup>4</sup>. If Virginia's workers' compensation payout in 2012 of 913.8 million dollars represents only 21% of the cost, **the total impact of compensated injuries in 2012 in Virginia was 4.351 billion dollars.**

That same study found that approximately 50% of the cost of workplace accidents is born by the employee and his/her family, so of the estimated 4.351 billion cost to Virginia in 2012, **approximately 2.175 billion dollars was born by Virginia workers and their families.**

The Department tracks injury and illness rates for each VPP site on an annual basis. Virginia VPP participating worksites average approximately 60% lower injury and illness rates than their non-participating counterparts in their respective industries. Virginia VPP helps employers identify and correct occupational hazards in a proactive and cooperative approach that will reduce or eliminate debilitating injuries, illnesses and fatal accidents suffered by Virginia's employees. Nationally, VPP sites' recordable injury and illness rates for VPP sites have averaged 50% below that of other worksites in their industry.

VPP Star sites regularly report decreased bottom line expenditures, which are associated with both drastically reduced injury and illness rates, and improved productivity and employee morale. Reducing private sector employer costs associated with injuries, illnesses and fatal accidents enhances a company's economic viability and competitiveness, and increases available capital for reinvestment, expansion and new hiring.

Virginia VPP worksites have demonstrated over many years that VPP participation will:

- substantially reduce workplace injuries and illnesses;
- reduce workers' compensation costs;
- result in a more highly trained and experienced workforce;
- improve productivity; and
- promote competitiveness in the marketplace.

VPP is available to private and public sector employers of all sizes. For example, it includes the Dominion Power North Anna nuclear facility, which has almost 1,000 employees as well as Veritiv-Lynchburg with approximately ten employees. A small sample of other participants in the Virginia VPP include: Delta Airlines, Miller Coors,

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<sup>3</sup> The National Safety Council reports that in 2012, \$61.9 billion dollars, including benefits under deductible provisions was paid out under state workers' compensation.  
[http://www.nsc.org/Membership%20Site%20Document%20Library/2015%20Injury%20Facts/NSC\\_InjuryFacts2015Ed.pdf](http://www.nsc.org/Membership%20Site%20Document%20Library/2015%20Injury%20Facts/NSC_InjuryFacts2015Ed.pdf)

<sup>4</sup> Adding Inequality to Injury: The Costs of Failing to Protect Workers on the Job, OSHA; <https://www.dol.gov/oshareport/20150304-inequality.pdf>; Leigh JP, Marcin JP. Workers' compensation benefits and shifting costs for occupational injury and illness. Journal of Occupational and Environmental Medicine 2012;54:445-450

Raytheon, Eastman Chemical Company, and International Paper.

Virginia was the first VPP in the country to recognize state correctional institutions as VPP members – Augusta and Lunenburg Correctional Facilities of the Virginia Department of Corrections (VADOC). Both facilities have consistently incurred lower workers' compensation costs than other comparable Virginia Department of Corrections (VADOC) sites and have significantly lower injury and illness rates than the national rates for correctional facilities.

VADOC, a participant in the VPP program since 2001, estimates that the Commonwealth saved approximately \$1.5 million at Lunenburg Correctional Center (LCC) between 2002 and 2006. VADOC further estimates that since 2001, based on a 2009 comparative analysis, the five other medium security dormitory-design Virginia correctional centers achieved similar results in VPP to that of LCC. The potential savings may have been approximately \$3 million in direct (insured) costs and \$10.4 million in indirect costs, for a total savings of \$13.4 million. With the program's continued expansion into other state facilities, the Commonwealth could expect increased savings. Other state agencies, as well as local governments, could also experience these benefits from participating in VPP.

Virginia's VPP has recognized a total of 67 Star worksites since the program began in 1996. Currently, there are a total of 42 active Star and 1 active Merit sites providing exceptional worksite safety and health protections for more than 11,000 employees through Virginia's VPP. [*Virginia Capitol Connections, Winter 2015, p.12*]. The number of Star worksites in the program fluctuates for a variety of reasons, including a site's withdrawal because injury and illness rates become too high; a business gets downgraded; a site is purchased by another company; or a business site closes.

Virginia VPP sites host VPP Best Practices Days which annually provide occupational safety and health training and education to current and prospective VPP members, state and local government entities, as well as other selected invitees. Recent subjects covered include:

- electrical safety;
- lockout/tagout protection;
- workplace violence and active shooter scenarios;
- ergonomics;
- fall protection in general industry;
- machine guarding;
- safety and health wellness fairs; and
- forklift safety.

**D. Impact on Employees**

VPP participation benefits employees by enhancing workplace safety and health practices; reducing workplace injuries and illnesses and the associated workers' compensation and medical costs; and improving employee morale.

VPP participation encourages active employee involvement in safety and health, which can lead to higher quality production, increased productivity and better general housekeeping. Employee suggestions translate into improved efficiency and other exceptional business metrics. [*Virginia Capitol Connections, Winter 2015, p. 13*]

The Virginia VPP tracks injury and illness rates at each VPP site on an annual basis. Virginia VPP participating worksites average over 50 % lower injury and illness rates than their counterparts in their respective industries.

**E. Impact on the Department of Labor and Industry**

Expanding Virginia's VPP will promote safer and healthier work places in Virginia by using a proactive, cooperative approach between employers, employees and Virginia government, rather than a punitive one. The Department benefits from this cooperative relationship by having exemplary sites to lead and guide other employers to improve their occupational safety and health performance.

Once a site has qualified and successfully submitted an application for consideration in the VPP Star program, final approval requires an intensive weeklong onsite evaluation by a VOSH VPP team. Final approval is determined by DOLI's Commissioner. VPP participants are exempt from regular VOSH programmed compliance inspections while they maintain their VPP status. Each VPP member site is required to be re-certified by an onsite evaluation team of safety and health professionals every 3-4 years to remain in VPP.

Adopting a regulation for the operation of VPP and establishing a formal and permanent structure for VPP will also assist DOLI in its pursuit of several bold initiatives it hopes will greatly enhance safety and health protections for Virginia's workers.

First, DOLI is using VPP staffing resources to work cooperatively with the Virginia Associated General Contractors (AGC) to establish a pilot strategic partnership, known as Virginia BEST (**B**uilding **E**xcellence in **S**afety and **H**ealth **T**raining) to encourage and recognize construction contractors who voluntarily implement extensive safety and health management systems to benefit construction workers. Virginia BEST is a modified version of the Challenge concept where employers are guided by Challenge Administrators through a three stage process to achieving exemplary safety and health management systems.

Second, DOLI is developing a pilot strategic partnership with the Virginia Department of Corrections (VADOC) to substantially increase VADOC participation in VPP. The VADOC partnership will use Challenge concepts as well.

Finally, DOLI is working to expand the scope of VPP by implementing a Virginia unique version of the OSHA Challenge Program which would establish three levels of participation for employers wishing to enhance their safety and health management systems.

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### **RECOMMENDED ACTION**

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board consider for adoption as a final regulation of the Board, the attached draft of 16VAC25-200, Virginia Voluntary Protection Programs in accordance with the authority of the Board under §40.1-22(5) and the requirements of the Administrative Process Act §2.2-4000, *et seq.*

The Department also recommends that the Board state in any motion it may make that it will receive, consider, and respond to petitions by any interested person with respect to reconsideration or revision of any regulation under the purview of the Board.



**VIRGINIA ACTS OF ASSEMBLY -- 2015 SESSION**

**CHAPTER 339**

*An Act to amend the Code of Virginia by adding a section numbered 40.1-49.13, relating to Safety and Health Codes Board; establishment of a Voluntary Protection Program.*

[H 1768]

Approved March 19, 2015

**Be it enacted by the General Assembly of Virginia:**

**1. That the Code of Virginia is amended by adding a section numbered 40.1-49.13 as follows:**

**§ 40.1-49.13. Voluntary Protection Program.**

*A. As used in this section:*

*"Model system" means an exemplary, voluntarily implemented worker safety and health management system that (i) implements comprehensive safety and health programs that exceed basic compliance with occupational safety and health laws and regulations and (ii) meets the VPP standards adopted by the Safety and Health Codes Board pursuant to subsection B.*

*"Voluntary Protection Program" or "VPP" means a program under which the Commissioner recognizes and partners with workplaces in which a model system has been implemented.*

*B. The Safety and Health Codes Board shall adopt definitions, rules, regulations, and standards necessary for the operation of the Voluntary Protection Program in a manner that will promote safe and healthy workplaces throughout the Commonwealth. The standards for the VPP shall include the following requirements for VPP participation:*

- 1. Upper management leadership and active and meaningful employee involvement;*
- 2. Systematic assessment of occupational hazards;*
- 3. Comprehensive hazard prevention, mitigation, and control programs;*
- 4. Employee safety and health training; and*
- 5. Safety and health program evaluation.*

*C. Applications for participation in the VPP shall be submitted by the workplace's management. Applications shall include documentation establishing to the satisfaction of the Commissioner that the employer meets all standards for VPP participation.*

*D. The Department shall provide for onsite evaluations by VPP evaluation teams of each workplace that has applied to participate in the VPP to determine that the applicant's workplace complies with the standards for VPP participation.*

*E. A workplace's continued participation in the VPP shall be conditioned on compliance with the standards for VPP participation, as determined by periodic onsite evaluations by VPP evaluation teams.*

*F. During periods in which a workplace is a participant in the VPP, the workplace shall be exempt from inspections or investigations under § 40.1-49.4; however, this exception shall not apply to inspections or investigations of the workplace arising from complaints, referrals, fatalities, catastrophes, nonfatal accidents, or significant toxic chemical releases.*

**2. That any workplace that was a participant in the uncodified voluntary protection program conducted by the Department of Labor and Industry prior to July 1, 2015, may continue as a participant in the Voluntary Protection Program established pursuant to § 40.1-49.13 of the Code of Virginia, as created by this act. On and after July 1, 2016, the continued participation by such a workplace in the Voluntary Protection Program shall be conditioned upon the workplace's compliance with the standards for participation in the Voluntary Protection Program adopted by the Safety and Health Codes Board pursuant to subsection B of § 40.1-49.13.**

**16VAC25-200, Final Regulation on  
Virginia Voluntary Protection Programs**



As Adopted by the  
Safety and Health Codes Board

Date: \_\_\_\_\_

VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

Effective Date: \_\_\_\_\_

16VAC25-200

**16VAC25-200-10. Scope, purpose, and applicability Voluntary Participation Protection Program.**

**A. Scope.**

In accordance with the requirements of §40.1-49.13 of the *Code of Virginia*, this regulation establishes requirements for Virginia Occupational Safety and Health (VOSH) Voluntary Protection Programs (VPP) as established by the Commissioner and based on the following principles:

**1.A.** Participation in VPP is strictly voluntary. The applicant who wishes to participate freely submits information to VOSH on its safety and health management system and opens itself to agencydepartment review.

**2.B.** VPP emphasizes trust and cooperation between VOSH, the employer, employees, and employee representatives and is complementary to the agencydepartment's enforcement activity, but does not take its place. This partnership enables the agencydepartment to remove participating sites from programmed inspection lists., allowing it to focus inspection resources on establishments in greater need of agencydepartment oversight and intervention. However, VOSH will continue to investigate valid employee safety and health complaints, referrals, fatalities, accidents, and other significant events at VPP participant sites, in accordance with VOSH enforcement procedures.

**3.C.** VPP participants develop and implement a systems approach to effectively identify, evaluate, prevent, and control occupational hazards so that injuries and illnesses to employees are prevented. ~~Participants are often on the leading edge of hazard prevention methods and technology, and serve as models of safety and health excellence, demonstrating the benefits of a systems approach to worker protection.~~

**4.D.** VPP participants are selected based on their written safety and health management system, the effective implementation of this system over time, and their performance in meeting VPP requirements. Not all worksites are appropriate candidates for VPP. At qualifying sites, all personnel are involved in the effort to maintain rigorous, detailed attention to safety and health. VPP participants often mentor other worksites interested in improving safety and health, participate in safety and health outreach and training initiatives, share best practices and promote excellence in safety and health in their industries and communities.

**5.E.** VPP participants must demonstrate continuous improvement in the operation and impact of their safety and health management systems. Annual VPP self-evaluations help participant's measure success, identify areas needing improvement, and determine needed changes. VOSH on-site evaluation teams verify this improvement.

**6.F.** Participation in VPP does not diminish employee and employer rights and responsibilities under VOSH laws, standards and regulations.

**7.G.** The provisions of this regulationchapter are intended to provide solely for the safety, health and welfare of employees and the benefits thereof shall not run to any applicant, participant or any other

person nor shall a third party have any right of action for breach of any provision of this regulationchapter except as otherwise specifically provided herein.

8.H. Nothing in this regulationchapter shall be construed to in any way limit the Commissionercommissioner's discretion to use agencydepartment personnel and resources in accordance with the powers and duties as set forth in Title 40.1 of the *Code of Virginia*.

**B. Purpose.**

This regulation establishes requirements necessary for the operation of Virginia Voluntary Protection Programs in a manner that will promote safe and healthy workplaces throughout the Commonwealth. The elements for VPP shall include the following requirements for participation:

1. Upper management leadership and active and meaningful employee involvement;
2. Systematic assessment of occupational hazards;
3. Comprehensive hazard prevention, mitigation, and control programs;
4. Employee safety and health training;
5. Safety and health program evaluation.

[SUBSECTION B. IS DUPLICATIVE OF 16VAC25-200-60.A]

**C. Applicability.**

1. This regulation applies to Virginia employers and employees that volunteer to participate in Virginia VPP.
2. Because Virginia VPP is a voluntary program, the Commissioner's final decision to accept or reject an application, or suspend or terminate a company's participation in VPP, or to take any other action contemplated by this regulation or §40.1-49.13 of the *Code of Virginia*, is not subject to the provisions of the Virginia Administrative Process Act, Va. Code §2.2-4000 through 2.2-4032 of the *Code of Virginia*.

[SUBSECTION C. IS DUPLICATIVE OF 16VAC25-200-60.A]

**16VAC25-200-20. Definitions.**

"~~1-Year~~One-Year Conditional Goal" means a target for correcting deficiencies in safety and health management system elements or sub-elements identified by VOSH during the on-site evaluation of a Star participant. Such deficiencies, which indicate that a participant no longer fully meets Star requirements, must be corrected within 90 days, and the participant must then operate at the Star level for 1 year, for the conditional status to be lifted. Failure to meet this requirement will result in termination from VPP.

"One-Year Conditional Goal" definition will be resorted alphabetically.

[LANGUAGE IN SECOND SENTENCE MOVED TO 16VAC25-200-80.D.2]

"90-Day Item" means compliance related issues that must be corrected within a maximum of 90 days, with effective protection provided to employees in the interim.

"Annual Evaluation" means a participant's yearly self-assessment to gauge the effectiveness of all required VPP elements and any other elements of the safety and health management system.

"Annual Submission" means a document written by a participant and submitted to the Department on or before the 15<sup>th</sup> of February each year, consisting of the following information: Updated names and addresses, the participant's and applicable contractors' injury and illness case numbers and rates, average annual employment and hours worked for the previous calendar year, a copy of the most recent annual evaluation of the safety and health management system, descriptions of significant changes or events, progress made on the previous year's recommendations, Merit or ~~One-Year Cc~~ conditional goals (if applicable), and any success stories.

"Applicable Contractor" means a contractor whose employees worked at least 1,000 hours for the participant in any calendar quarter within the last 12 months and are not directly supervised by the applicant ~~/ or~~ participant.

"Applicant" means an employer that has submitted an application for one of the Voluntary Protection Programs specified in 16VAC25-200-40 which has been accepted, but has not yet been approved for participation. Depending on the context used in this chapter, an employer's application may concern one or more locations or sites.

"Challenge" means a voluntary protection program that provides participating employers and workers a three stage process to work with their designated Challenge Administrators to develop and improve their safety and health management program. VOSH-approved volunteer third party Challenge Administrators collaborate with participating employers to improve their safety and health management programs through mentoring, training and progress tracking.

"Challenge Administrator" means selected individuals in organizations such as corporations, state agencies or non-profit associations that have met VOSH VPP criteria including, dedicated resources ~~/ or~~ to administer the Challenge program for their worksites ~~/ or~~ members or other organizations' worksites ~~/ or~~ members. Administrators are involved in the application and review processes. In certain situations as specified by the ~~C~~ Commissioner, VOSH can serve as a Challenge Administrator.

"Commissioner" means the Commissioner of Labor and Industry or his designees.

"Commissioner of Labor and Industry" means only the individual who is Commissioner of Labor and Industry.

"Contract Employees" means workers who are employed by a company that provides services under contract to the VPP applicant or participant, usually at the VPP applicant's or participant's worksite.

"Days Away, Restricted, ~~and/~~ or Transfer Case Incidence Rate (DART rate)" means the rate of all injuries and illnesses resulting in days away from work, restricted work activity, ~~and/~~ or job transfer. This rate is calculated for a worksite for a specified period of time, usually one to three years.

"Department" means the Department of Labor and Industry.

"Mentoring" means the assistance that a VPP participant provides to another company/employer to improve that site's safety and health management system or prepare it for VPP application or participation.

"Merit Goal" means a target for improving one or more deficient safety and health management system elements for a participant approved to the Merit program. A Merit goal must be met in order for a site to achieve Star status.

"Merit Program" means a program designed for worksites that have demonstrated the potential and commitment to achieve Star quality, but that need to further improve their safety and health management system. A worksite may be designated as Merit when, during an initial Star certification review, the VOSH review team determines that not all Star requirements are being fully met. In the case of a Merit designation, the participant must complete specified Merit goals in order to achieve Star status and continue in VPP. "Merit" is not a participation level that can be applied for.

"Misclassification" means when an employer improperly classifies a worker as an independent contractor who should in fact be an employee.

"Model system" means an exemplary, voluntarily implemented worker safety and health management system that (i) implements comprehensive safety and health programs that exceed basic compliance with occupational safety and health laws and regulations and (ii) meets the VPP standards adopted by the Safety and Health Codes Board pursuant to this regulation requirements of this chapter.

"Nested contractor" means a contractor whose employees are supervised by the applicant or participant and are regularly intermingled with the host participant's employees.

"On-site Assistance Visit" means a visit to an applicant or participant site by agency/department personnel or other non-enforcement personnel, to offer assistance, including help with their application, conduct a records review, and/or make general observations about the site's safety and health management system.

"On-site Evaluation" means a visit to an applicant or participant site by a VOSH on-site evaluation team to determine whether the site qualifies to participate, continue participation, or advance within VPP.

"On-site Evaluation Report" means a document written by the VOSH on-site evaluation team and consisting of the site report. This document contains the team's assessment of the safety and health management system and the team's recommendation regarding approval of the applicant or re-approval of the participant in VPP.

"On-site Evaluation Team" means an interdisciplinary group of VOSH professionals and private industry volunteers who conduct on-site evaluations. The team normally consists of a team leader, a backup team leader, safety and health specialists, and other specialists as appropriate.

"Participant" means an employer that has submitted an application and been approved for one of the Voluntary Protection Programs specified in 16VAC25-200-40. Depending on the context used in this chapter, a "participant" may have one or more active physical locations or sites.

"Private Industry Volunteer (PIV)" means a volunteer from a VPP site or corporation, knowledgeable in safety and health management system assessment, formally trained in the policies and procedures of VPP, and determined by VOSH to be qualified to perform as a team member on a VPP on-site evaluation.

"Recommendations" means suggested improvements noted by the on-site evaluation team that are not requirements for VPP participation but that would enhance the effectiveness of the site's safety and health management system. Compliance with VOSH standards is a requirement, not a recommendation.

"Safety and Health Management System" means a method of preventing worker fatalities, injuries and illnesses through the ongoing planning, implementation, integration, and control of four interdependent elements: management leadership and employee involvement, worksite analysis, hazard prevention and control, and safety and health training.

~~"Small Business" means a company having no more than 250 employees at any one facility, and no more than 500 employees nationwide.~~

[THE TERM "SMALL BUSINESS" IS NOT USED IN THIS CHAPTER.]

"Star Program" means the program within VPP designed for participants whose safety and health management systems operate in a highly effective, self-sufficient manner and meet all VPP requirements. Star is the highest level of VPP participation.

"Temporary Employee" means an employee hired on a non-permanent basis by the applicant ~~or~~ participant site.

"Total Case Incidence Rate (TCIR)" means a number that represents the total recordable injuries and illnesses per 100 full-time employees, calculated for a worksite for a specified period of time (usually one to three years).

"Voluntary Protection Programs" or "VPP" means voluntary programs under which the ~~C~~ commissioner recognizes and partners with workplaces in which a model system has been implemented.

"Voluntary Protection Program Participants' Association (VPPPA)" means a nonprofit 501(c) (3) organization whose members are involved in VPP. The mission of the VPPPA is to promote safety, health, and environmental excellence through cooperative efforts among employees, management, and government.

~~"VOSH" means the Virginia Occupational and Safety Health program of the Department of Labor and Industry.~~

### **16VAC25-200-30. Categories of participation.**

A. Categories of participation may include, but are not limited to:

1. Site-based fixed worksites and long term construction sites, including traditional Star and Merit designations;
2. Challenge participants where employers are guided by Challenge Administrators through a three stage process, which can prepare an ~~company~~ employer to achieve VPP Star status;

3. Mobile workforce participants where employers often work as subcontractors and move from site to site;
4. Corporate participants that have adopted VPP on a large scale.

B. Levels of recognition:

1. Star Worksite status recognizes the safety and health excellence of worksites where workers are successfully protected from fatality, injury, and illness by the implementation of comprehensive and effective workplace safety and health management systems. These worksites are self-sufficient in identifying and controlling workplace hazards.
2. Merit Worksite status recognizes worksites that have good safety and health management systems and that show the willingness, commitment, and ability to achieve site-specific goals that will qualify them for Star participation.
  - a. If the on-site evaluation team recommends participation in the Merit program, the site must then complete a set of goals in order to maintain Merit status and qualify for the Star Program.
  - b. Merit goals must address Star requirements not presently in place or aspects of the safety and health management system that are not up to Star quality.
  - c. Methods for improving the safety and health management system that will address identified problem areas must be included in Merit goals.
  - d. Correction of a specific hazardous condition must be a 90-day item, not a Merit goal. However, when a safety and health management system deficiency underlies a specific hazardous condition, then corrections to the system must be included as Merit goals.
  - e. Reducing a 3-year TCIR or DART rate to below the national average is not by itself an appropriate Merit goal. Corrections to safety and health management system deficiencies underlying the high rate must be included in the Merit goals.
  - f. Merit worksites are given a three year conditional goal of achieving Star status. A participant must meet Star rate requirements within the first two years of its Merit participation. This is to afford an additional year's experience, for a total of no more than three years to gain Star approval.
  - g. A Merit participant qualifies for Star when it has met its Merit goals, Star rate requirements, and when all other safety and health elements and sub-elements are operating at Star quality.
  - h. A Merit participant may qualify for the Star Program before the end of its Merit term if the participant meets all conditions in g., above.
3. Challenge recognizes three stages of accomplishment as specified in 16VAC25-200-40.B.

C. Nothing in this regulation chapter shall be construed to prohibit the Commissioner from establishing programs that are site-specific, company-wide, statewide, or any combination thereof.



## 16VAC25-200-40. Ways to participate.

- A. Site-based fixed participation is directed at the owners and site officials who control site operations and have ultimate responsibility for assuring safe and healthful working conditions of:
1. Private-sector fixed worksites in general industry;
  2. Construction worksites or projects that will have been in operation for at least 12 months at the projected time of approval and that expect to continue in operation for at least an additional 12 months;
  3. State and local government sector fixed worksites;
  4. Resident contractors at participating VPP sites for the contractors' operations at those VPP sites;
  5. Resident contractors at non-participating sites for the contractors' operations at those sites, so long as the resident contractors are part of a larger organization approved to participate under the corporate option.
- B. Challenge provides participating employers and workers an avenue to work with designated Challenge Administrators to develop and/or improve their safety and health management system. Challenge participants do not generally receive exemptions from VOSH programmed inspections, although it is within the Commissioner's discretion to design programs that permit exemption from programmed inspections for successful Stage 3 applicants.

Challenge Administrators collaborate with participating employers to improve their safety and health management programs in three stages through mentoring, training and progress tracking:

1. Stage 1 - Assess, Learn, and Develop. Challenge participants learn the elements necessary to develop and implement an effective safety and health management program; assess performance of existing safety and health programs and policies; provide training to management and workers; and develop strategies, programs, and policies.
  2. Stage 2 - Implement, Track, and Control. Challenge participants complete and implement policies and programs developed in Stage 1; continue to enhance and develop their safety and health management program; implement and improve their safety and health management program; and begin to incorporate policies for contractor and special trade contractor safety and health management program requirements.
  3. Stage 3 - Reassess, Monitor, and Improve. Challenge participants monitor, reassess, and continuously improve their safety and health management program. Challenge participants who complete Stage 3 have a safety and health management system sufficiently advanced for the participant to begin the application process for VPP Star certification.
- C. Mobile workforce companies typically function as contractors or subcontractors which may or may not have the authority for safety and health for an entire worksite; and for those companies that have employees that move site-to-site, such as a specialty trade contractor or repair and maintenance company, regardless of size or length and duration of the project or service.
- D. VPP corporate is designed for corporate applicants, who demonstrate a strong commitment to employee safety and health and VPP. These applicants, typically large corporations or state or local

government agencies, have adopted VPP on a large scale for protecting the safety and health of their employees. VPP corporate applicants must have established standardized corporate-level safety and health management systems that are effectively implemented organization-wide, as well as internal audit and screening processes that evaluate their facilities for safety and health performance.

#### **16VAC25-200-50. Application requirements.**

##### **A. Term of Participation.**

1. There is no time limit to the term of participation in Star, as long as a site continues to meet all Star requirements and to maintain Star quality.
2. Fixed-site construction participation ceases with the completion of the construction project.
3. There is no time limit to the term of participation for Mobile Worksite, Corporate or Challenge site as long as the participant continues to meet all applicable requirements and maintain quality systems.

##### **B. Injury and Illness History Requirements.**

1. Injury and illness history is evaluated using a 3-year total case incident rate (TCIR) and a 3-year day away, restricted, and or transfer case incident rate (DART rate). The 3-year TCIR and DART rates must be compared to the published Bureau of Labor Statistics (BLS) national average for the five-digit or six-digit North American Industrial Classification System (NAICS) code for the industry in which the applicant is classified. The BLS publishes NAICS industry averages two years after data is collected. For example, in calendar year 2016, calendar year 2014 national averages will be available and used for comparison.
2. Both the 3-year TCIR and the 3-year DART rate must be below one of the three most recently published BLS national averages for the specific NAICS code.
3. Some smaller worksites may be eligible to use the alternate rate calculation as provided for in VOSH written procedures.

##### **C. VOSH Inspection History.**

1. The applicant must not have been issued final VOSH citations related to a fatality in the preceding three-year period prior to application submission. In the event that the company/employer elects to contest a citation related to a VOSH fatality, the company/employer may not submit a VPP application until such time as all fatality-related citations have been successfully contested become a final order of the Commissioner of Labor and Industry.
2. If VOSH has inspected an applicant site in the 36 months preceding the application, the inspection, abatement, and any other history of interaction with VOSH must indicate good faith attempts by the employer to improve safety and health at the site. This includes verification of correction of all serious violations. In addition, the existence of any of the following at the site precludes the site's participation in VPP:
  - a. Open enforcement investigations;
  - b. Pending or open contested citations or notices under appeal at the time of application;

- c. Affirmed willful or anti-discrimination whistleblower violations under §40.1-51.2:1 of the *Code of Virginia* during the 36 months prior to application;
- d. Documented instances of misclassification of employees during the 36 months prior to application;
- e. Unresolved, outstanding enforcement actions, such as long term abatement agreements or contests.

D. Contract Worker Coverage.

1. Workers for applicable contractors must be provided with safety and health protection equal in quality to that provided to participant employees.
2. All contractors, whether regularly involved in routine site operations or engaged in temporary projects such as construction or repair, must follow the safety and health rules of the host site.
3. VPP participants must have in place a documented oversight and management system covering applicable contractors to:
  - a. Ensure that safety and health considerations are addressed during the process of selecting contractors and when contractors are on-site;
  - b. Ensure that contractors follow site safety rules;
  - c. Include provisions for timely identification, correction, and tracking of uncontrolled hazards in contractor work areas;
  - d. Include a provision for removing a contractor or contractor's employees from the site for safety or health violations.
4. Nested contractors, such as contracted maintenance workers, and temporary employees who are supervised by host site management and governed by the site's safety and health management system are entitled to the same workplace protections as host employees; and are therefore included in the host site's injury and illness rates.
5. Site management must maintain copies of the TCIR and DART rate data for all applicable contractors based on hours worked at the site. Sites must report all applicable contractors' TCIR and DART rate data to VOSH annually.
6. Managers, supervisors, and non-supervisory employees of contract employers must be made aware of:
  - a. The hazards they may encounter while on the site;
  - b. How to recognize hazardous conditions and the signs and symptoms of workplace-related illnesses and injuries;
  - c. The implemented hazard controls, including safe work procedures;

d. Emergency procedures.

E. Assurances.

1. Applicants must understand and agree, through assurances, to fulfill program requirements for participation in VPP.
2. Applicants must assure that:
  - a. The applicant will comply with VOSH laws, standards, and regulations, and will correct in a timely manner all hazards discovered through self-inspections, employee notification, accident investigations, a VOSH on-site review, process hazard reviews, annual evaluations, or any other means. The applicant will provide effective interim protection as necessary.
  - b. Site deficiencies related to compliance with VOSH requirements and identified during the VOSH on-site review will be corrected within 90 days, with interim protection provided to employees.
  - c. Site employees support the VPP application.
  - d. VPP elements are in place, and the requirements of the elements will be met and maintained.
  - e. Employees, including newly hired employees and contract employees when they reach the site, will have the VPP explained to them, including employee rights under the program and VOSH laws, standards and regulations.
  - f. Employees performing safety and health duties as part of the applicant's safety and health management system will be protected from discriminatory actions resulting from their carrying out such duties. See §40.1-51.2:1 of the *Code of Virginia*.
  - g. Employees will have access to the results of self-inspections, accident investigations, and other safety and health management system data upon request. At unionized sites, this requirement may be met through the employee representative's access to these results.
  - h. The information listed below will be maintained and available for VOSH review to determine initial and continued approval to the VPP:
    - (1) Written safety and health management system;
    - (2) Any aAgreements between management and the collective bargaining agent(s) concerning safety and health;
    - (3) Any Dedata necessary to evaluate the achievement of individual Merit or 1One-Year Conditional goals.
  - i. On or before the 15<sup>th</sup> of February each year, each participating site must submit its annual evaluation to the Department.
  - j. Whenever significant organizational, ownership, union, or operational changes occur, such as but not limited to a change in management, corporate takeover, merger, or consolidation, a new statement of commitment signed by both management and any authorized collective bargaining

agents, as appropriate will be provided to VOSH within 60 days of the effective date of the **aforementioned significant** changes.

3. The applicant must demonstrate a willingness to follow through on all assurances.
4. Employees must be aware of the recourse available to them if management fails to fulfill any of these assurances. This may include rescinding their support of VPP participation or exercising the right to file a VOSH complaint.

F. Pre-Application Assistance.

1. **AgencyDepartment** personnel may conduct **onsite assistance** visits of a prospective applicant's site to offer assistance in the application process or before scheduling the on-site evaluation to obtain additional information or clarification of information provided in the application.
2. Pre-application assistance may also include referrals to the VPP mentoring program, Virginia VPP Best Practices training sessions, VPPPA conferences, and VPPPA application workshops.

G. Application Receipt and Review.

1. The **Commissioner** shall establish written procedures to address requirements concerning receipt and review of application contents, including but not limited to the comprehensive safety and health management system requirements outlined in 16VAC25-200-60.
2. If, upon review, the application is considered incomplete, the Department shall notify the applicant by letter, noting the missing elements and requesting that the missing information be submitted within 90 days. If the additional information is not provided within that time, the application must be returned to the applicant. Applications can be resubmitted at any time.
3. If it is clear that the applicant cannot qualify for VPP, the **agencydepartment** must ask the applicant to withdraw the application within 30 days. If the application is not withdrawn, the application will be returned with a letter indicating the reasons the application was denied.
4. An applicant may withdraw the application by notifying the Department. The withdrawal is effective on the date the notification is received. The original application must be returned to the applicant. If the application had already been accepted, the **agencydepartment** must retain a working copy for one year, for use in responding to questions that may arise.

**16VAC25-200-60. Comprehensive safety and health management system requirements.**

- A. The elements for VPP shall include the following requirements for VPP participation:
1. Upper management leadership and active and meaningful employee involvement;
  2. Systematic assessment of occupational hazards;
  3. Comprehensive hazard prevention, mitigation, and control programs;
  4. Employee safety and health training;

5. Safety and health program evaluation.

B. The Commissioner shall establish written procedures to address applicant and participant requirements concerning the elements and sub-elements appropriate to the program:

1. Management commitment;
2. VPP commitment;
3. Employee involvement;
4. Contract worker coverage;
5. Safety and health management system evaluation;
6. Worksite analysis;
7. Baseline and comprehensive safety and industrial hygiene hazard analysis;
8. Hazard analysis of routine jobs, tasks and processes;
9. Hazard analysis of significant changes;
10. Pre-use analysis;
11. Documentation and use of hazard analysis;
12. Routine self-inspections;
13. Hazard reporting system for employees;
14. Industrial hygiene (IH) program;
  - a. IH surveys;
  - b. Sampling strategy:
  - c. Sampling results;
  - d. Documentation;
  - e. Communication;
  - f. Use of results;
  - g. IH expertise;
  - h. Procedures; and
  - i. Use of contractors for IH surveys;
15. Analysis of injury, illness and near-hit incidents;
16. Trend analysis;
17. Hazard prevention and control;
18. Certified professional resources;
19. Hazard elimination and control methods;
  - a. Engineering;
  - b. Administrative;
  - c. Work practices; and
  - d. PPE;
20. Hazard control programs;
21. Compliance with applicable Virginia unique occupational safety and health regulations;
22. Occupational health care program;
23. Preventative maintenance of equipment;
24. Tracking of hazard correction;

25. Disciplinary system;
26. Emergency preparedness and response; and
27. Safety and health training.

**16VAC25-200-70. Certification process.**

A. Evaluation periods.

The Commissioner shall establish written procedures to set time periods and scheduling requirements for on-site evaluations in response to initial applications accepted by the agency department and for recertification of participants.

B. Scheduling exceptions.

1. On-site evaluations shall be conducted earlier than normal scheduled requirements when:
  - a. Significant changes have occurred in management, processes or products that may require evaluation to ensure the site is maintaining a VPP quality safety and health management system;
  - b. VOSH has learned of significant problems at the site, such as increasing injury and illness rates, serious deficiencies described in the site's annual evaluation of its safety and health management system, or deficiencies discovered through VOSH enforcement activity resulting from an employee complaint, fatality, accident, or other event.

C. Decision to conduct the on-site evaluation.

1. Once an application is accepted, the agency department must:
  - a. Notify the site applicant by letter or e-mail in a timely manner that an on-site evaluation will be conducted. However, no on-site evaluation may be conducted until all prior enforcement actions have been closed.
  - b. Notify the appropriate VOSH enforcement personnel so that the site can be removed from any programmed inspection lists, effective no more than 75 days prior to the scheduled on-site review.

D. Methods of evaluation.

The three primary methods of evaluation during the certification or recertification process are document review, walkthrough, and employee interviews. Additional activities that must occur are the opening conference, daily briefings, report preparation, and closing conference. The on-site evaluation team must evaluate each element and sub-element of the safety and health management system and VPP requirements.

E. Recommendations.

At the conclusion of the on-site evaluation, the on-site evaluation team must reach a consensus to recommend to the Commissioner of Labor and Industry as to whether the site is suitable for participation or continued participation in VPP, and at what level of participation.

## 16VAC25-200-80. On-site evaluations.

### A. On-site evaluation team.

An on-site evaluation consists of a thorough evaluation of a VPP applicant's or participant's safety and health management system in order to recommend approval or re-approval. On-site evaluations are carried out by a team consisting of VOSH staff acting in a non-enforcement capacity, private industry volunteers, ~~qualified volunteer safety or health professionals from private industry,~~ and other qualified team members.

### B. On-site evaluation procedures.

The Commissioner shall establish written procedures for on-site evaluations of applicants and participants undergoing recertification. The procedures shall address issues including, but not limited to:

1. Prioritizing and scheduling on-site evaluations;
2. Inclusion of union representatives, if any, in the opening and closing conferences and the opportunity to accompany the on-site evaluation team on the site walkthrough;
3. On-site evaluation team composition, qualifications, preparation and assessment of personal protective equipment needed;
4. Opening conference subjects, review of injury and illness records, incentive programs, document review, walkthrough, review of safety and health management system elements and sub-elements, formal and informal interviews of employees, including applicable contractor employees, and closing conference subjects and recommendations;
5. Employee rights under the program and under VOSH laws, standards and regulations; and
6. Assuring that employees performing safety and health duties as part of the applicant's safety and health management system will be protected from discriminatory actions resulting from their carrying out such duties, pursuant to §40.1-51.2:1 of the *Code of Virginia*.

### C. Correction of hazards.

1. As hazards are found and discussed during the walkthrough, the on-site evaluation team must add them to a written list of the uncontrolled hazards identified. This list will be used when the team briefs site management at the end of each day on-site.
2. VOSH expects that every effort will be made by the site to correct identified hazards before the closing conference. If hazard correction cannot be accomplished before the conclusion of the on-site evaluation, the on-site evaluation team and site management must discuss and agree upon correction methods and time frames.
3. The site may be given up to a maximum of 90 days to correct uncontrolled hazards, as long as interim protection is provided. These "90-day items" must be corrected before the final on-site evaluation report can be processed. Management must provide the team leader with a signed letter



indicating how and when the correction will be made. The team leader may decide to return to the site to verify correction.

4. If, after repeated attempts to reach agreement, site management refuses to correct a situation that exposes employees to serious safety or health hazards, that situation shall be referred for enforcement action.

5. Should any identified hazard be determined to present a risk of imminent danger to life or health of an employee, **agencydepartment** personnel shall assure that its procedures for immediately removing employees from exposure to the hazard until corrected are complied with by the applicant or participant.

D. Deficiencies in the Safety and Health Management System.

Where the team detects deficiencies in the safety and health management system, even when physical hazards are not present, the on-site evaluation team must document these deficiencies as goals for correction, recommendations for improvement, or both.

1. If the system deficiency is a requirement for VPP at the Star level, it must become the subject of a goal, either Merit or One-Year Conditional.

2. A deficiency resulting in a One-Year Conditional goal indicates that a participant no longer fully meets Star requirements, must be corrected within 90 days, and the participant must then operate at the Star level for one year, for the conditional status to be lifted. Failure to meet this requirement will result in termination from VPP in accordance with the requirements of 16VAC25-200-110.C.

3. A Merit goal must be met in order for a site to achieve Star status.

**4.** Implementation of goals is mandatory for VPP participation. Time frames, interim protection, and methods of achieving goals must be discussed and agreed to with site management.

**2-5.** If improvement of the system deficiency is not necessarily a requirement for VPP, but will improve worker safety and health at the site, the improvement must be a recommendation. Implementation of recommendations is encouraged but is not mandatory for VPP participation.

E. Final Analysis of Findings.

1. When the documentation review, the walkthrough, and employee interviews have been completed, the on-site evaluation team must meet privately to review and summarize its findings before conducting the closing conference.

2. A draft of the certification or re-certification report shall be completed by the team before leaving the site. The draft report must reflect the consensus of the on-site evaluation team.

F. Closing conference.

The findings of the on-site evaluation team, including its recommendation to the **CC**ommissioner, must be presented to site management and appropriate employee representatives before the team leaves the site.

**16VAC25-200-90. Annual submissions.**

A. Annual self-assessment.

1. Participation in VPP requires each site ~~and~~ or participant to annually evaluate the effectiveness of its safety and health management system, including the effectiveness of all VPP elements and sub-elements.
2. The ~~C~~ commissioner shall establish written procedures establishing the content and reporting requirements of participant annual submissions.
3. Annual submissions are due on or before the 15<sup>th</sup> of February each year.

B. Applicable contractors.

Participants shall report on the injury and illness data for all applicable contractors.

**16VAC25-200-100. Enforcement activity at VPP sites.**

A. Types of enforcement activity.

Two types of enforcement activity trigger additional VPP assessment:

1. Unprogrammed VOSH inspections, which occur in response to all referrals, formal complaints, fatalities, and certain accidents;
2. Other incidents or events, whether or not injuries or illnesses have occurred and whether or not normal enforcement procedures apply to the situation, ~~may trigger reassessment.~~

B. Site reassessment.

VOSH may reassess the site's safety and health management system if there is reason to believe that a serious deficiency exists that would have an impact on the site's continued qualification for VPP.

C. Enforcement personnel.

The ~~C~~ commissioner shall establish written procedures describing the use of enforcement personnel during on-site evaluations and any limitations placed on their conducting an enforcement inspection at a VPP site.

D. Impact of enforcement activity.

1. If the event that triggers enforcement activity occurs during the time between application and on-site evaluation, the on-site evaluation must be postponed until the enforcement case is closed.
2. If the event that triggers enforcement activity occurs during the on-site evaluation, the on-site evaluation must cease until the enforcement case is closed.

## **16VAC25-200-110. Withdrawal, suspension or termination.**

### **A. Withdrawal.**

1. Participants may withdraw of their own accord or be asked by VOSH to withdraw from the programs.
2. Any participant may choose to withdraw voluntarily at any time.
3. VOSH shall request that a participant withdraw from VPP if it is determined that it is no longer meeting the requirements for VPP participation.
4. The Commissioner shall establish written withdrawal procedures which provide for the company's participant's formal notification to the Department, the Commissioner's acknowledgement of receipt and notification to the company participant of the status change, notification to agency department personnel of the status change, return of the company participant to the VOSH programmed inspection list and disposition of the VPP participant file.
5. The Commissioner shall establish written procedures to address a VPP participant's change of location which establishes criteria for determining whether the participant can retain its VPP status or must withdraw.
6. The Commissioner will consider the company employer's reapplication to VPP if and when eligibility requirements are met.

### **B. Suspension.**

1. Participants that experience a work-related fatality, whether an employee or contract employee, may be immediately suspended from program participation until such time as a VOSH fatality investigation can be completed.
2. The Commissioner shall establish written procedures to address a VPP participant's temporary suspension from VPP, which provides for the Department's formal notification to the participant and removal of the VPP flag or other recognition device from display until the suspension is lifted.
3. A participant's suspension will not result in the company the participant being returned to the VOSH programmed inspection list.

### **C. Termination.**

1. The Commissioner of Labor and Industry may terminate a site participant from the VPP for failure to maintain the requirements of the program (e.g., failure of a participant to meet a one-year conditional goal identified by VOSH during the on-site evaluation will result in termination from VPP).
2. In the event a fatality investigation shows substantial deficiencies in the participant's safety and health programs, such that during a normal certification audit the types of deficiencies would have

precluded the site participant from participation in the VPP, the Commissioner of Labor and Industry, at in his discretion, may terminate the site's participation in VPP.

3. In the event if a whistleblower investigation pursuant to §40.1-51.2:1 and §40.1-51.2:2 of the *Code of Virginia* shows substantial deficiencies in the participant's safety and health programs, such that during a normal certification audit the types of deficiencies would have precluded the site from participation in the VPP, the Commissioner of Labor and Industry, at in his discretion, may terminate the site's participation in VPP.

4. Under most other situations, termination should occur only when all reasonable efforts for assistance have been exhausted.

5. The Commissioner shall establish written termination procedures which provide for the Commissioner's formal notification to the participant and union representatives, an appeal process, and notification of the Commissioner of Labor and Industry's final decision.

6. If the Commissioner of Labor and Industry finds the site participant's appeal valid, the site participant may continue in VPP.

7. In the event of a final decision to terminate, the written procedures shall provide for notification to agency department personnel of the status change, return of the company participant to the VOSH programmed inspection list and disposition of the VPP participant file. If a terminated company employer wishes to pursue reinstatement, it must wait three years to reapply.

~~8. Because Virginia VPP is a voluntary program, the Commissioner's final decision to terminate a company's participation in VPP is not subject to the provisions of the Virginia Administrative Process Act, §2.2-4000 through §2.2-4032 of the *Code of Virginia*.~~



**COMMONWEALTH of VIRGINIA**  
**DEPARTMENT OF LABOR AND INDUSTRY**

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**VIRGINIA SAFETY AND HEALTH CODES BOARD**

**BRIEFING PACKAGE**

**For July 27, 2017**

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**Report of Periodic Review of Certain Existing Regulations  
Departmental Review and Findings**

**I. Background and Basis**

In accordance with the Administrative Process Act (§ 2.2-4017 of the *Code of Virginia*), Governor McAuliffe's Executive Order 17 (2014), "Development and Review of State Agency Regulations," governs the periodic review of existing regulations. This Executive Order requires that state agencies conduct a periodic review of regulations every four years. Five regulations of the Safety and Health Codes Board were identified for review in 2017:

1. 16VAC25-20, Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fees;
2. 16VAC25-30, Regulations for Asbestos Emissions Standards for Demolition and Renovation Construction Activities and the Disposal of Asbestos-Containing Construction Waste – Incorporation By Reference, 40 CFR 61.140 through 61.156;
3. 16VAC25-40, Standard for Boiler and Pressure Vessel Operator Certification;
4. 16VAC25-70, Virginia Confined Space Standard for the Telecommunications Industry;
5. 16VAC25-97, Reverse Signal Procedures – General Industry – Vehicles/Equipment Not Covered by Existing Standards.

## II. Current Status and Process

Upon the approval of the Board to proceed at the February 16, 2017 meeting, the process of periodic review by the Department of Labor and Industry (Department) began for the above-noted regulations with publication of a Notice of Periodic Review in the Virginia Register. At the February meeting, the Board approved the periodic review of these regulations, with a public comment period of the required 21 days. The public comment period began on March 20, 2017, when the Notice of Periodic Review was published, and closed on April 14, 2017. No comments were received for any of the regulations during the public comment period. Following the public comment period, Department staff reviewed the regulations and prepared recommendations for the Board's consideration at this meeting. If approved by the Board, the Department will post a report on the Virginia Regulatory Town Hall website indicating for each regulation either that (1) the Board will retain the regulation as is, or (2) the Board will begin a regulatory action to amend the regulation.

## III. Review and Analysis

Pursuant to § 2.2-4007.1 E and F of the *Code of Virginia*, the Department is obligated to evaluate the economic impact of these regulations on small business. The following factors must be considered:

- the continued need for the regulation;
- the complexity of the regulation;
- the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and
- the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation.

As required, the discussion below includes the Department's determination as to whether the regulation should be amended, repealed, or retained consistent with the stated objectives of applicable law, to minimize the economic impact of regulations on small businesses.

### A. **16VAC25-20, Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fees**

Section 40.1-22(5) of the *Code of Virginia* states that "...the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity. However, such standards shall be at least as stringent as the standards promulgated by the Federal Occupational Safety and Health Act of 1970 (P.L. 01-596)."

Section 40.1-51.20 of the *Code of Virginia* mandates that all licensed asbestos contractors shall obtain an asbestos permit, pay the appropriate fees, and notify the Department of Labor and Industry prior to commencement of each asbestos project.

This regulation establishes the notification requirements for certain asbestos projects and provides for the payment of permit fees based on the size of the asbestos project, in accordance with the mandate set forth in the *Code of Virginia*.

The Asbestos Notification, Permitting, and Fees regulation has three goals:

- Reduce the incidence of material impairment of the health of Virginians due to exposure to asbestos in the workplace or as an environmental pollutant.
- Require asbestos contractors to notify the government of asbestos projects and pay fees to cover the costs of administering the program.
- Protect the public's health, safety and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.

Notification by contractors of asbestos removal projects is necessary to monitor the potential hazards associated with such projects and to control public exposure to environmental hazards. This regulation is designed to address health hazards associated with exposure to asbestos.

**Determination:** The Asbestos Notification, Permitting, and Fees regulation protects the safety, health, and welfare of the public by monitoring asbestos removal projects to control the public exposure to the health hazards associated with such projects, and does so as the least cost to taxpayers. This regulation is not overly complex and is clearly written. There is no negative impact on the regulated community and the regulation does not overlap, duplicate, or conflict with federal or state law or regulation. As a result of this periodic review, the agency determines that the regulation has no negative economic impact on small business.

**Recommendation:** The Department recommends that this regulation be retained with no changes.

**B. 16VAC25-30, Regulations for Asbestos Emissions Standards for Demolition and Renovation Construction Activities and the Disposal of Asbestos-Containing Construction Waste – Incorporation By Reference, 40 CFR 61.140 through 61.156**

Section 40.1-22(5) of the *Code of Virginia* states that "...the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity."

Chapter 541 of the 1992 Acts of Assembly transferred regulatory authority and enforcement responsibility for demolition and removal of asbestos facilities to the Department of Labor and Industry. Sections 40.1- 51.23 through 40.1-51.39 of the *Code of Virginia* mandate that the Department of Labor and Industry enforce EPA's NESHAP regulations, 40 CFR 61.140 through 61.156.

This regulation establishes the standards for asbestos emission and disposal in demolition and construction activities by adopting the federal requirements set forth in 40 CFR 61.140 through 61.156.

The Asbestos Emissions and Disposals regulation has two goals:

- Reduce the incidence of material impairment of the health of Virginians due to exposure to asbestos in the workplace or as an environmental pollutant.
- The protection of the public's health, safety and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.

Standards related to asbestos emission and disposal of asbestos-containing construction waste are necessary to protect the public from the health hazards associated with airborne pollutants. This regulation incorporates the federal regulation 40 CFR 61-140 through 61.156 by reference and does not exceed the federal requirements.

**Determination:** The Asbestos Emissions and Disposal regulation protects the safety, health, and welfare of the public by establishing standards and controls related to hazardous air pollutants released during demolition and construction projects. These standards are required by federal law 40 CFR 61-140 through 61.156 and therefore do not exceed the state mandate. This regulation is not overly complex and is clearly written. There is no negative impact on the regulated community and the regulation does not overlap, duplicate, or conflict with federal or state law or regulation. As a result of this periodic review, the agency determines that the regulation has no negative economic impact on small business.

**Recommendation:** The Department recommends that this regulation be retained with no changes.

#### **C. 16VAC25-40, Standard for Boiler and Pressure Vessel Operator Certification**

Section 40.1-51.6 of the *Code of Virginia* authorizes the Board to "...formulate definitions, rules, regulations and standards which shall be designed for the protection of human life and property from the unsafe or dangerous construction, installation, inspection, operation, maintenance and repair of boilers and pressure vessels in this Commonwealth."

Section 15.2-910 of the *Code of Virginia* state the Board "... shall establish standards to be used in determining an applicant's ability, proficiency and qualifications" for operation of a boiler and pressure vessel.

This regulation establishes the standards for certifying boiler and pressure vessel operators, including establishing standards relating to competency examinations, exemptions, penalties, revocation of certification, and appeals.

The Standard for Boiler and Pressure Vessel Operator Certification regulation has two goals:

- To ensure statewide uniformity in the determination of the ability, proficiency and qualifications of boiler and pressure operators certified under a local government ordinance.
- To ensure the protection of the public's health, safety and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.



The regulation achieves these goals by providing uniform statewide criteria to be used by all counties, cities or towns which choose to regulate the certification of boiler and pressure vessel operators. It protects the citizens of the Commonwealth from the dangers of boiler or pressure vessels being operated in an unsafe manner or by unqualified operators.

**Determination:** The Standard for Boiler and Pressure Vessel Operator Certification regulation protects the safety, health, and welfare of the public by ensuring operators of boiler and pressure vessels are competent, proficient, and qualified. This regulation is mandated by §15.2-910 of the Code of Virginia; therefore, there are no alternatives to achieve the purpose of the regulation. This regulation is not overly complex and is clearly written. There is no negative impact on the regulated community and the regulation does not overlap, duplicate, or conflict with federal or state law or regulation. As a result of this periodic review, the agency determines that the regulation has no negative economic impact on small business.

**Recommendation:** The Department recommends that this regulation be retained with no changes.

**D. 16VAC25-70, Virginia Confined Space Standard for the Telecommunications Industry**

Section 40.1-22(5) of the *Code of Virginia* states that “...the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity. However, such standards shall be at least as stringent as the standards promulgated by the Federal Occupational Safety and Health Act of 1970 (P.L. 01-596).”

This regulation establishes the minimum protection for workers against exposure to hazardous chemicals and hazardous atmospheres when working in the telecommunications areas defined as confined spaces. The standard prescribes basic mandatory practices and procedures which employers must establish and use for employee entry into and work within confined spaces, such as requiring atmospheric testing of confined spaces prior to entry, the use of personal protective equipment, where necessary, and ventilation of the space to prevent accumulation of toxic atmospheres.

The Virginia Confined Space Standard for the Telecommunications Industry regulation has three goals:

- Reduce the incidence of material impairment of the health of Virginia workers due to workplace exposure to known hazards.
- Provide protection to telecommunication workers equal to that provided to workers in other industries.
- Protect the public’s health, safety and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.

This regulation is effective at preventing injuries and deaths of telecommunications workers who are required to enter confined spaces. As part of the inspection of any company in the telecommunications industry, the Department reviews compliance with this regulation to ensure that atmospheric testing is being conducted, spaces are ventilated to prevent accumulation of toxic atmospheres, and all necessary personal protective equipment is provided. Since the promulgation of this regulation in 1987, compliance with these requirements has increased and there have been no fatalities or serious injuries as a result of entry into telecommunication confined spaces.

**Determination:** The Virginia Confined Space Standard for the Telecommunications Industry regulation protects the safety, health, and welfare of telecommunication workers by establishing standards for using and entering confined spaces. Federal OSHA has a similar standard (§1910.268(o)) that regulates entry into telecommunications confined spaces. The Virginia regulation is at least as effective as the federal standard. This regulation is not overly complex and is clearly written. There is no negative impact on the regulated community and the regulation does not overlap, duplicate, or conflict with federal or state law or regulation. As a result of this periodic review, the agency determines that the regulation has no negative economic impact on small business.

**Recommendation:** The Department recommends that this regulation be retained with no changes.

**E. 16VAC25-97, Reverse Signal Procedures – General Industry – Vehicles/Equipment Not Covered by Existing Standards**

Section 40.1-22(5) of the *Code of Virginia* states that “...the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity. However, such standards shall be at least as stringent as the standards promulgated by the Federal Occupational Safety and Health Act of 1970 (P.L. 01-596).”

This regulation establishes standards for the use of vehicles, machinery, and equipment capable of operating in reverse with an obstructed view, such as requiring that vehicles are generally equip with reverse signal alarms, establishing guidelines for drivers and other employees, and requiring employers provide training to employees.

The Reverse Signal Procedures regulation has two goals:

- Reduce the incidence of injuries and fatalities of Virginia workers and the public due to the operation of vehicles, machinery, and equipment in reverse.
- Protect the public’s health, safety and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.

**Determination:** The Reverse Signal Procedures regulation protects the safety, health, and welfare of the public by establishing minimum safety standards for reverse signal procedures. This regulation is not overly complex and is clearly written. There is no negative impact on the regulated community and the regulation does not overlap, duplicate, or conflict with federal or state law or regulation. As a result of this periodic

review, the agency determines that the regulation has no negative economic impact on small business.

**Recommendation:** The Department recommends that this regulation be retained with no changes.

**IV. Recommended Action**

At this time, the Department of Labor and Industry recommends to the Safety and Health Codes Board that all of these regulations be retained as is. The Department requests that the Safety and Health Codes Board vote to retain these five regulations with no changes.

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