



*COMMONWEALTH of VIRGINIA*

**DEPARTMENT OF LABOR AND INDUSTRY**

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**AGENDA**

**SAFETY AND HEALTH CODES BOARD**

**PUBLIC HEARING**

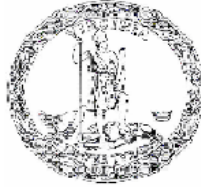
**State Corporation Commission  
1300 East Main Street, Court Room A, Second Floor  
Richmond, Virginia**

**Thursday, November 20, 2008**

**10:00 a.m.**

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- I. Call to Order
  
- II. Item for Discussion:  
  
16 VAC 25-95, Proposed Regulation: Medical Services and First Aid Standards for General Industry and 16 VAC 25-177, Medical Services and First Aid Standards for the Construction Industry
  
- III. Opportunity for Public Comment on the Proposed Amendments
  
- IV. Adjournment



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**AGENDA**

**SAFETY AND HEALTH CODES BOARD**

**MEETING**

**State Corporation Commission  
1300 East Main Street, Court Room A  
Second Floor  
Richmond, Virginia**

**Thursday, November 20, 2008**

**10:00 a.m.**

**Following Public Hearing which begins at 10:00 a.m.**

1. Call to Order
2. Approval of Agenda
3. Approval of Minutes of February 28, 2008 Meeting

4. Opportunity for the Public to Address the Board on the issues pending before the Board today or on any other topic 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) Proposed Regulation: Amendment to 16 VAC 25-50, Boiler and Pressure Vessel Rules and Regulations;

b) Final Regulation: Reverse Signal Operation Safety Procedures:

Regulation to Amend Reverse Signal Operation Safety Procedures Dealing with Vehicular Equipment, Motor Vehicles, Material Handling Equipment and Motor Vehicle Equipment in Existing Standards: 16 VAC 25-90-1910.269; 16 VAC 25-175-1926.601; 16 VAC 25-175-602 and 16 VAC 25-175-952; and 16 VAC 25-97, Revised Regulation to Establish Reverse Signal Operation Safety Requirements for Vehicles, Machinery and Equipment for General Industry and the Construction Industry;

6. **New Business**

a) Notice of Periodic Review of Certain Regulations

b) Final Regulation: 16 VAC 25-30, Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits and Permit Fees

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

8. Items of Interest from Members of the Board

9. Meeting Adjournment



COMMONWEALTH of VIRGINIA  
DEPARTMENT OF LABOR AND INDUSTRY

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**VIRGINIA SAFETY AND HEALTH CODES BOARD  
PUBLIC HEARING  
BRIEFING PACKAGE  
NOVEMBER 20, 2008**

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**16 VAC 25-95, Proposed Regulation to Amend the Medical Services and  
First Aid Standards for General Industry, §1910.151(b);**

**16 VAC 25-177, Proposed Regulation to Amend the Medical Services and  
First Aid Standards for the Construction Industry, §1926.50(c)**

**I. Action Requested.**

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to consider for adoption as a proposed regulation of the Board these proposed amendments to the medical services and first aid standards for general industry, §1910.151(b), and the construction industry, §1926.50(c), pursuant to Va. Code §40.1-22(5).

**II. Summary of the Proposed Regulations.**

The VOSH Program seeks the amendment of medical services and first aid standards for general industry, §1910.151(b), and the construction industry, §1926.50(c), to require employers to train employee(s) to render first aid and cardio pulmonary resuscitation (CPR) when employees are exposed to occupational hazards which could result in serious physical harm or death. Worksites covered by the current regulations that do not contain occupational hazards which could result in serious physical harm or death will be exempted from first aid and CPR requirements

under the proposed regulation.

Under the proposed regulations employers with employees in job classifications or exposed to workplace hazards that could result in serious physical harm or death would be required to have at each job site and for each work shift at least one employee trained in first aid and CPR.

The following boxes highlight the differences between the existing standards on this issue:

**The General Industry Standard for Medical and First Aid**

**Section 1910.151(b) provides:**

“In the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid. Adequate first aid supplies shall be readily available.”

**The Construction Industry Standard for Medical Services and First Aid  
Section 1926.50(c) provides:**

“In the absence of an infirmary, clinic, hospital or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person who has a valid certificate in first aid training from the U. S. Bureau of Mines, the American Red Cross, or equivalent training that can be verified by documentary evidence, shall be available at the worksite to render first aid.”

Other issues that are addressed in the proposed language include:

- A. Allowing an employer to make written arrangements with another contractor/employer on the same job site to provide designated employees to serve as first aid responders, to lessen the cost of compliance with the standard;
- B. Clarifying that employers of mobile work crews (i.e., crews that travel to more than one worksite per day) of two or more employees that assign employees to travel to worksites or engage in work activities that could potentially expose those employees to serious physical harm or death shall either:
  - 1. Assure that at least one employee on the mobile crew is designated and adequately trained to render immediate first aid and CPR during all workshifts; or
  - 2. Make written arrangements with another contractor/employer on the same job site to provide designated employees to serve as first aid responders.
- C. Clarifying that employers of individual mobile employees (i.e., an employee who travels alone to more than one worksite per day), that assign employees to travel to worksites or engage in work activities that could potentially expose those employees to serious

physical harm or death shall either:

1. Assure that the mobile employee is adequately trained to self-administer first aid;
2. Make written arrangements with another contractor/employer on the same job site to provide designated employees to serve as first aid responders; or
3. Assure that their employees have access to a communication system that will allow them to immediately request medical assistance through a 911 emergency call or comparable communication system.

### **III. Basis, Purpose and Impact of the Proposed Rulemaking.**

#### **A. Basis for Proposed Action.**

##### **1. Existing Federal Identical Standards Are Insufficient.**

The existing general industry and construction first aid standards do not assure that adequate first aid attention for employees will be provided in certain hazardous occupations. It should be noted that based on long years of injury and illness rates, the Construction Industry, in toto, is considered by OSHA to be a high hazard industry. Also, the existing general industry standard is overly inclusive in that it requires first aid training in certain occupational settings where there is no occupational exposure to hazards that could cause serious physical harm or death, such as in an office setting.

These federal identical standards do not include a requirement for training to include CPR as well as first aid; nor do they clearly state that designated first aid providers will be available at each work location and work shift. The current standards could potentially allow an employer to opt to physically move an employee who had suffered a head or spinal injury by transporting them to a medical facility in an area where emergency medical responders were not available within the prescribed 3 to 4 minute time limit, in lieu of having a trained first aid responder present.

In addition, both existing standards are confusing as written and difficult for the VOSH Program to enforce. The standards do not define the terms “near proximity” and “reasonably accessible,” which have been formally interpreted by federal OSHA to mean a 3 to 4 minute response time for life threatening injuries and up to 15 minutes for non-life threatening injuries.

According to statistics from the Department of Emergency Medical Services (EMS) for 2003, EMS providers arrived at the scene of 522,345 calls with an average response time of approximately 12 minutes. Approximately 72 % of all reported calls were provided in less than 10 minutes, and approximately 87 % of all reported calls were provided in less than 15 minutes.

The response time for emergency responders will vary widely around the state and is dependant upon factors as whether the establishment or worksite is in an urban or rural location, and whether the medical/emergency response facility is staffed 24 hours a day. This response time is further impacted by such variables as traffic congestion, road construction and weather. Therefore, injured employees are unlikely to receive timely, reliable and consistent first aid CPR response to injuries suffered on the job especially in cases of life threatening injuries under current regulatory requirements and actual response times.

During calendar year 2005, out of a total of 3,379 inspections conducted by the VOSH Program, 17 violations of §1910.151(b) in General Industry and 424 violations of §1926.50(c) in the Construction Industry for a total of 541 first aid violations. A total of 16 % of all VOSH inspections received first aid violations under the current regulations).

DOLI does not have the capability to provide statistics to indicate what percentage of the remaining 2,838 VOSH inspections that did not receive first aid violations were indeed located in close enough proximity to medical facilities to assure a 3 to 4 minute response time. However, based on the above EMS figures, the Department believes that most establishments and sites in Virginia cannot meet the 3 to 4 minute requirement under the current regulations.

Finally, from an enforcement standpoint, the VOSH Program is faced under the current regulations with having to determine and document whether an infirmary, clinic or hospital is, or would have been, accessible within the required 3 to 4 minutes, often by going to such lengths as having to drive from the inspection site to the facility and trying to realistically estimate the impact of the above mentioned variables at the time of the injury.

2. Similar Requirements Exist in Other Specific Standards.

a.. General Industry Standards.

**Logging** Industry employers must assure that all logging employees receive first aid and CPR training - §1910.266(i)(7);

**Electric Power Generation, Transmission and Distribution** Industry employers must assure that trained first aid and CPR providers are present for field work and fixed work locations - §1910.269(b)(1);

Employers engaged in **Welding, Cutting and Brazing** must assure that first aid can be rendered to an injured employee until medical attention can be provided - §1910.252(c)(13);

**Telecommunications** Industry employers must assure that employees are trained in first aid CPR - §1910.268(c)(3);



Employers with a **Temporary Labor Camp** must assure that a trained first aid and CPR provider is present at the camp - §1910.142(k)(2);

**Commercial Dive Operation** employers must assure that all dive team members are trained in first aid and CPR - §1910.410(a)(3).

b. Construction Industry Standards.

**Power Generation and Distribution** employers must assure that employees are trained in first aid and CPR - §1926.950(e)(1)(ii);

Employers involved in **Underground Construction, Caissons, Cofferdams and Compressed Air** must provide a first aid station at each project (see §1926.803(b)(7));

3. Board Authorization and Mandate.

The Safety and Health Codes Board is authorized to regulate occupational safety and health under Title 40.1-22(5) of the *Code of Virginia* 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 this same statutory section, the Board is further mandated:

“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.”

4. Public Comment / Inquiry.

The Notice of Intended Regulatory Action (NOIRA) was approved by the Board for this action at its March 7, 2006, regular meeting. The associated

30-day public comment period extended from October 16, 2006, through November 16, 2006.

**Commenter 1: Gregory Stull, Health & Safety Specialist, Air Products & Chemicals, Inc. (e-mail inquiry)**

1. Mr. Stull made the following inquiry about the NOIRA:

“I am seeking clarification as to the intended application of the new regulation concerning "Medical Services and First Aid". If this new regulation is intended to cover all "general industry" is there a minimum on site employee requirement? The reason I ask is the company I represent has several "one man" facilities located in Virginia. The facilities are not manned on a daily basis. These facilities are located on our customers sites and we rely on the emergency services of these customers. Our company has several policies and standards that cover lone workers. This includes a "call out" systems that is activated when the employee is on site. It is time based and can be manually activated in the event our employee becomes incapacitated or injured. Any clarification you can offer on this matter would be greatly appreciated.”

**Agency Response:**

The language in the proposed amendments address the issue of “one man facilities” by providing the employer with the option of either training the employee in first aid, making written arrangements with other employers or contractors at the worksite to provide first aid and CPR, or assuring that their employee has access to a communication system that will allow them to immediately request medical assistance through a 911 emergency call or comparable communication system.

This issue is particularly problematic from a regulatory standpoint. The optimal solution for assuring prompt delivery of first aid and CPR services, and the one presented in the proposed regulations, is the presence of a trained individual at the worksite. However, it is the nature of these “one man facilities” that they often work alone or in remote areas. Obviously a single employee cannot administer CPR to himself or treat certain other injuries or illnesses. However, an individual trained in first aid can self-administer first aid to serious cuts resulting in loss of blood, wrap or set a broken bone, apply a tourniquet, etc. The rationale for giving employers the above options is a recognition of the difficulties posed in providing safety protections for one man facilities, and an attempt to provide some regulatory flexibility to such employers.

**Commenter 2: Donald L. Hall, President, Virginia Automobile Dealer's Association (VADA)**

1. Mr. Hall stated that the VADA is very proud of their safety record in their dealership operations as a whole and in their service departments specifically and has been very active in promoting worker safety. VADA and its members do not disagree with the general principal of improving already safe workplaces. However, VADA is very concerned the proposed changes will have unintentioned and costly consequences for Virginia motor vehicle dealers.

**Agency Response:**

While some VADA members will have employees already trained in first aid and CPR, some employers would have to incur the additional cost of securing such training if their worksite is classified as one where employees are exposed to occupational hazards which could result in serious physical harm or death.

2. Mr. Hall stated the following:

“Motor vehicle dealer service departments are not hazardous occupations under existing federal or Virginia regulations. See 16 VAC 15-30-10, et seq.”

**Agency Response:**

The Department's VOSH Program has not, through regulation or statute, defined the term “hazardous occupations”. VOSH does use federal OSHA's annual determination of what are the highest hazard industries based on reported national injury and illness data. This data is used for statewide general industry inspection targeting purposes.

The regulation cited by the commenter, 16 VAC 15-30-10, et seq., is promulgated by the Commissioner of Labor and Industry for the enforcement of child labor laws in the Commonwealth and has applicability to child labor only. This child labor regulation is **not** part of the body of statutes and regulation that is applicable to occupational safety and health enforcement in the Commonwealth by VOSH. All occupational safety and health standards, rules and regulations for Virginia's OSHA State Plan are required to be promulgated by the Safety and Health Codes Board which is the mandated rulemaking body (*see Code of Virginia §40.1-22*).

3. Mr. Hall stated the following:

“...(Y)our Department has taken the enforcement position that motor vehicle service departments are highly hazardous

occupations and that first aid and CPR training is required. The apparent basis for this position is the Department's publication of a list which includes automobile mechanics among the most hazardous occupations in Virginia. See Most Hazardous Occupations, Virginia, 2000, <http://www.doli.virginia.gov/whatwedo/enforcement/mosthaz.htm> (Oct. 11, 2006). Publication of a list by your Department is not an appropriate basis for this classification. Where neither federal agencies nor state agencies have found auto dealer occupations to be hazardous, such a designation by your (D)epartment requires specific rulemaking. We are concerned that your proposal is simply a bootstrap to a list that was never developed in formal rulemaking. Identifying motor vehicle dealer occupations as hazardous cannot be done without a formal rulemaking designating such dealer occupations to be hazardous.”

#### **Agency Response:**

The commenter's assertion that the Department has assumed that motor vehicle service departments are highly hazardous occupations is in error. Our website listing of the most hazardous occupations, simply notes the occupations with the greatest number of fatalities in the Commonwealth that year for general informational purposes. It has not been used in determining our emphasis programs or general inspection program priorities. Nor has it been used to date as a method to compile a list of hazardous occupations.

In regard to the statement of there has been no state agency finding auto dealer occupations to be hazardous, any such determination, for the purposes of occupational safety and health, would be solely the responsibility of DOLI and OSHA.

A review of fatal and catastrophic accidents for the period 1996 to 2006 involving mechanics (not limited to VADA members or auto dealerships as a whole) and auto and truck dealerships revealed the following descriptions of the accidents:

- \* An employee at a truck dealership was killed while using a forklift when it overturned.
- \* A driver was killed while attempting to off load a full-sized pickup truck from a tractor trailer full of vehicles. The victim became caught between the truck door and the cab post.
- \* A mechanic at a truck repair shop was killed while looking for the part number on an air bag for brakes underneath a tractor trailer. The driver went to move the trailer and ran over the victim.
- \* A mechanic was killed while attempting to install wooden blocks under the belly pan of a bulldozer when the hydraulic system failed, causing the bulldozer to fall on the victim.

- \* Three employees were killed at auto repair shop while welding near a 275 gallon fuel oil tank.
- \* Two mechanics in an auto repair shop were killed while working in a pit changing a fuel pump on a van when some of the fuel was ignited by an unidentified ignition source.
- \* Mechanic killed when elevated bulldozer he was working on fell on him.
- \* Mechanic killed at auto repair shop was repairing a gasoline tank on a van when the gasoline fumes were apparently ignited by an LPG gas heater, resulting in a fire and explosion.
- \* Three employees serious injured at automotive garage when employees used gasoline as accelerant to start a rubbish fire.
- \* Auto dealership employee killed while working on a sign from an aerial lift when the lift contacted an overhead high voltage line.
- \* Mechanic killed when he was backed over by a dump truck after servicing the vehicle

As a point of clarification, upon identification of a certain specific hazardous procedures or occupations, such as pick-up truck bed spray-in liners, they may be then specifically targeted and inspected under national or local emphasis programs either (or both federal OSHA and VOSH). This may indeed be done without requirements of formal rulemaking.

4. Mr. Hall stated the following:

“...VADA is very concerned that the Department’s proposed extension of the §1910.151 standard to ‘employees in hazardous occupations’ and to worksites containing job classifications or workplace hazards that would ‘expose employees to serious physical harm or death’ will have unintended and costly consequences for Virginia motor vehicle dealers.”

**Agency Response:**

All general industry occupations, including those such as auto mechanics, auto body repairmen, general office workers, parts clerks, sales staff, customer service associates, and building maintenance personnel are already covered by the §1910.151 standard and have been so covered since the § 1910.151 standard’s initial inception by federal OSHA for its then direct enforcement in 1974 (*See 39 Fed Reg 33466*). One impact of the proposed regulation would be that worksites covered by the current regulations that do not contain occupational hazards which could result in serious physical harm or death will be exempted from first aid and CPR requirements under the proposed regulation.

5. Mr. Hall stated the following:

“We question the necessity of the proposal.....VADA members....generally have business locations in metropolitan and more populous areas. These dealerships enjoy ready access to emergency services, should an incident occur.”.....Many dealers have personnel trained in first aid and CPR on staff. However, a regulation that imposes additional designated first aid and CPR responders to be on duty at all times to an industry that is located where timely emergency service is nearly universal will be highly burdensome and a potentially serious personnel problem.

**Agency Response:**

VOSH concurs that many dealerships have personnel trained in first aid and CPR. However, such training presently by individuals is voluntary and done out of personal responsibility and for the intrinsic humanitarian value of having such skills. Therefore the incidence of such training across the general industry workforce is self-selective and does not provide the assurance of uniform availability and coverage (assuming adequate skill level and refreshers) that the proposed regulatory amendments will provide. As demonstrated by statistics provided by the Department of Emergency Services and discussed above in the Basis for Proposed Action section.

According to statistics from the Department of Emergency Medical Services (EMS) for 2003, EMS providers arrived at the scene of 522,345 calls with an average response time of approximately 12 minutes. Approximately 72 % of all reported calls were provided in less than 10 minutes, and approximately 87 % of all reported calls were provided in less than 15 minutes.

The response time for emergency responders will vary widely around the state and is dependant upon factors as whether the establishment or worksite is in an urban or rural location, and whether the medical/emergency response facility is staffed 24 hours a day. This response time is further impacted by such variables as traffic congestion, road construction and weather. Therefore, injured employees are unlikely to receive timely, reliable and consistent first aid CPR response to injuries suffered on the job especially in cases of life threatening injuries under current regulatory requirements and actual response times.

6. Mr. Hall stated the following:

“We ask that any proposed rulemaking proceeding eliminate motor vehicle dealers from consideration”

### **Agency Response:**

The comments offered by VADA fail to provide a substantive argument for exempting automotive dealerships from the proposed regulatory amendments. There does not appear to be a rationale to provide less protection to auto dealership employees than would be provided to similarly situated employees in other industries.

#### **B. Purpose.**

The purpose of the proposed changes is to provide additional first aid/CPR services to employees in hazardous occupations in construction and general industry and providing employers with some flexibility to make arrangements for first aid/CPR services on individual work sites. Current regulations do not require CPR training for designated first aid providers, and the proposed regulations would correct this oversight. The proposed regulations will also exclude certain low hazard industries and employers from the requirement to provide first aid and CPR training. In addition, the proposed changes will also clarify requirements for employers of mobile crews and individual mobile employees.

#### **C. Impact on Employers.**

Employers covered by the proposed regulation would be required to have at each job site and for each work shift at least one employee trained in first aid and CPR. While many employers in construction and general industry already assure that some employees are trained in first aid and CPR, some employers would have to incur the additional cost of securing such training. As an example, the Central Virginia Chapter of the American Red Cross currently charges \$38.00 for adult first aid training and \$41.00 for adult CPR training.

Costs associated with compliance with the proposed regulation will be lessened by the specific language in the proposal that allows an employer to make written arrangements with another contractor/employer on the same job site to provide designated employees to serve as first aid responders.

Costs associated with the current regulation will be eliminated for low hazard employers who will be excluded from coverage. The current regulation is interpreted by federal OSHA to require low hazard employers to provide first aid if no medical assistance can be provided within 15 minutes by EMS or other personnel. As previously noted in the aforementioned EMS statistics, approximately 13% of all responses by EMS personnel exceeded 15 minutes.

As Virginia Employment Commission 2005 statistics demonstrate (see chart), there are a significant number of employers who will now be exempt from the current

regulations because they are in low hazard industries and likely have no job classification or worksite hazards that pose a threat of serious physical harm or death. These sectors include<sup>1</sup>:

<u>Sector</u>	<u>Number of establishments</u>
Information	3,991
Financial Activities	20,120
Professional and Business Services	41,574
Leisure and Hospitality	16,438
Public Administration	<u>3,918</u>
	86,041

These approximately 86,000 establishments are approximately 40 % of all industries that would be otherwise impacted by unamended regulations. The Department believes that the majority of General Industry employers that were cited under the current regulations would also be covered by the proposed regulatory amendments.

However, it should be noted that within a particular industry that is normally considered to be low hazard, there may be some specific worksites or portions of establishments that have job classifications or workplace hazards that could trigger application of the proposed regulations (e.g., a large department store that has service personnel who deal directly with customers who would not be exposed to serious or life threatening hazards, may also have warehouse personnel who operate forklifts who are exposed to such hazards; a large grocery or supermarket have retail clerks who would not be covered by the proposed regulations, but may have forklift operators, or other employees that use potentially dangerous equipment such as a meat slicing machine).

Other issues that are addressed in the proposed language include:

1. Allowing an employer to make written arrangements with another contractor/employer on the same job site to provide designated employees to serve as first aid responders, to lessen the cost of compliance with the standard;
2. Clarifying that only worksites containing job classifications or workplace hazards that would expose employees to serious physical harm or death would be required to provide immediate access to first aid and CPR;
3. Clarifying that employers of mobile work crews (i.e. crews that travel to more

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<sup>1</sup>Any of the listed industries that did have job classifications or worksite hazards that pose a threat of serious physical harm or death, would be covered by the proposed regulation.



than one worksite per day) of two or more employees that assign employees to travel to worksites or engage in work activities that could potentially expose those employees to serious physical harm or death shall either:

- a. Assure that at least one employee on the mobile crew is designated and adequately trained to render immediate first aid and CPR during all workshifts; or
  - b. Make written arrangements with another contractor/employer on the same job site to provide designated employees to serve as first aid responders.
4. Clarifying that employers of individual mobile employees (i.e. an employee who travels alone to more than one worksite per day) that assign employees to travel to worksites or engage in work activities that could potentially expose those employees to serious physical harm or death shall either:
- a. Assure that the mobile employee and adequately trained to self-administer first aid;
  - b. Make written arrangements with another contractor/employer on the same job site to provide designated employees to serve as first aid responders; or
  - c. Assure that their employee has access to a communication system that will allow them to immediately request medical assistance through a 911 emergency call or comparable communication system.

**D. Impact on Employees.**

Construction and General Industry employees in covered industries across the state would benefit from the immediate presence of trained first aid/CPR responders at their work locations.

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

No significant regulatory or fiscal impact is anticipated on the Department beyond the cost of promulgating this regulation.

Contact Person:

Mr. Jay Withrow  
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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 the proposed regulation to amend the medical services and first aid

standards for general industry, 16 VAC 25-95, and the construction industry, 16 VAC 25-177, to require employers to train employee(s) to render first aid and cardio pulmonary resuscitation (CPR), when employees are exposed to occupational hazards which could result in serious physical harm or death.

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 at any time with respect to reconsideration or revision of this or any other regulation.

Medical Services and First Aid Standards for General Industry

(a) A. The employer shall ensure the ready availability of medical personnel for advice and consultation on matters of plant health.

(b) B. ~~In the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a~~ A person or persons shall be designated by the employer and adequately trained to render immediate first aid and cardio pulmonary resuscitation (CPR) during all workshifts on worksites containing job classifications or workplace hazards that could potentially expose employees to serious physical harm or death. The designated person or persons shall have a valid, current certificate in first aid and CPR training from the U. S. Bureau of Mines, the American Red Cross, the National Safety Council, or equivalent training that can be verified by documentary evidence, and shall be available at the worksite to render first aid and CPR to injured or ill employees. Adequate first aid supplies shall be readily available.

C. Covered employers are permitted to make written arrangements with and reasonably rely on another contractor or employer on the same job site or establishment to provide designated employees to serve as first aid and CPR responders for employees of the covered employer.

D. Employers of mobile work crews (i.e., crews that travel to more than one worksite per day) of two or more employees that assign employees to travel to worksites or engage in work activities that could potentially expose those employees to serious physical harm or death shall either:

1. assure that at least one employee on the mobile crew is designated and adequately trained to render immediate first aid and CPR during all workshifts; or
2. comply with section C. above.

E. Employers of individual mobile employees (i.e. an employee who travels alone to more than one worksite per day) that assign employees to travel to worksites or engage in work activities that could potentially expose those employees to serious physical harm or death shall either:

1. assure that the mobile employee is adequately trained to self-administer first aid;
2. comply with section C. above; or
3. assure that their employee has access to a communication system that will allow them to immediately request medical assistance through a 911 emergency call or comparable communication system.

F. Sections A. through E. of this regulation do not apply to worksites that do not contain job classifications or workplace hazards that expose employees to serious physical harm or death.

G Adequate first aid supplies shall be readily available.

~~(e)~~ H. Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

Medical Services and First Aid Standards for the Construction Industry

~~(a)~~ A. The employer shall insure the availability of medical personnel for advice and consultation on matters of occupational health.

~~(b)~~ B. Provisions shall be made prior to commencement of the project for prompt medical attention in case of serious injury.

~~(c)~~ C. ~~In the absence of an infirmary, clinic, hospital or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees,~~

~~a~~ A person or persons shall be designated by the employer and adequately trained to render immediate first aid and cardio pulmonary resuscitation (CPR) during all workshifts on worksites containing job classifications or workplace hazards that could potentially expose employees to serious physical harm or death. The designated person or persons shall have a person who has a valid, current certificate in first aid and CPR training from the U. S. Bureau of Mines, the American Red Cross, the National Safety Council, or equivalent training that can be verified by documentary evidence, and shall be available at the worksite to render first aid and CPR to injured or ill employees.

D. Covered employers are permitted to make written arrangements with and reasonably rely on another contractor or employer on the same job site or establishment to provide designated employees to serve as first aid and CPR responders for employees of the covered employer.

E. Employers of mobile work crews (i.e., crews that travel to more than one worksite per day) of two or more employees that assign employees to travel to worksites or engage in work activities that could potentially expose those employees to serious physical harm or death shall either:

1. assure that at least one employee on the mobile crew is designated and adequately trained to render immediate first aid and CPR during all workshifts; or
2. comply with section D. above.

F. Employers of individual mobile employees (i.e. an employee who travels alone to more than one worksite per day) that assign employees to travel to worksites or engage in work activities that could potentially expose those employees to serious physical harm or death shall either:

1. assure that the mobile employee is adequately trained to self-administer first aid;
2. comply with section D. above; or
3. assure that their employee has access to a communication system that will allow them to immediately request medical assistance through a 911 emergency call or comparable communication system.

G. Sections A. through F. of this regulation do not apply to worksites that do not contain job classifications or workplace hazards that expose employees to serious physical harm or death.

~~(d)(1)~~ H. First aid supplies shall be easily accessible when required. Adequate first aid supplies shall be readily available.

~~(2)~~ I. The contents of the first aid kit shall be placed in a weatherproof container with individual sealed packages for each type of item, and shall be checked by the employer before being sent out on each job and at least weekly on each job to ensure that the expended items are replaced.

~~(e)~~ J. — Proper equipment for prompt transportation of the injured person to a physician or hospital, or a A communication system for contacting necessary ambulance service, shall be provided.

~~(f)~~ K. In areas where 911 is not available, the telephone numbers of the physicians, hospitals, or ambulances shall be conspicuously posted.

~~(g)~~ L. Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.



*COMMONWEALTH of VIRGINIA*

DEPARTMENT OF LABOR AND INDUSTRY

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**VIRGINIA SAFETY AND HEALTH CODES BOARD  
BRIEFING PACKAGE  
NOVEMBER 20, 2008**

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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 that the Safety and Health Codes Board consider for adoption as a proposed regulation of the Board, amendments to 16 VAC 25-50, Boiler and Pressure Vessel Rules and Regulations.

**II. Summary of the Proposed Regulation.**

The Boiler Safety Compliance Program seeks to amend the Boiler and Pressure Vessel Rules and Regulations. The proposal addresses the following suggested amendments:

1. In Paragraph A of 16 VAC 25-50-150, add a fee of \$10.00 for the reprinting of a certificate to cover direct administrative costs, i.e., printing, mailing and employee's work-related time.
2. In Paragraph D of 16 VAC 25-50-150, Inspection Certificate and Inspection Fees, revise fees from "\$800" to "\$1000" to reflect cost of living adjustment;



3. In 16 VAC 25-50-360, Paragraph C.5.a., the Factors of safety are modified for vessels and a dual standard is established. Prior to January 1, 1999, the Factor of Safety remains 4.5. Vessels built on or after this date would have a lower factor of safety of 4.0. This revision is necessary to conform to current International Boiler and Pressure Vessel Code.
4. In 16 VAC 25-50-380, paragraph B.3., Factors of safety are modified for vessels and a dual standard is established. Prior to January 1, 1999, the Factor of Safety remains 4.0. Vessels built on or after this date have a lower factor of safety of 3.5. This revision is necessary to conform to current International Boiler and Pressure Vessel Code.
5. In Paragraph A of 16 VAC 25-50-430, change "1.5" to "1.25" for the maximum allowable working pressure for a hydrostatic pressure test, when applied to boilers or pressure vessels. The revision is necessary to conform to current International Boiler and Pressure Vessel Code;
6. Delete last two sentences of Paragraph D of 16 VAC 25-50-480, which reads as follows: "A seal weld is a tube-to-tubesheet weld used to supplement an expanded tube joint to ensure leak tightness. Seal welds on carbon steel (P-1) tube joints made by qualified welders will not require an inspection nor a Form R-1."
7. Delete the term "welded" from Form R-1, Report of Repairs to conform to current forms;
8. Incorporation by reference of the most recent edition (2006) of B31.1, ASME Code for Pressure Piping, American National Standards Institute;
9. Incorporation by reference of the most recent edition (2006) of API510 as listed in the National Board Inspection Code;
10. Incorporation by reference of the most recent edition (2006) of CSD-1 and related section on maintenance that includes revised inspector's checklist;
11. Incorporation by reference of the most recent edition (2007) of the National Board Inspection Code (NBIC); and
12. Incorporation by reference of the most recent edition (2007) of the International Boiler and Pressure Vessel Code, including sections XII and VIII, Div 2.

### **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 conform to the most current editions of ASME and National Board safety and inspection codes, as noted in Section II of this briefing package, as well as in-house administrative fee adjustments to cover increased costs of doing business.

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

#### **A. Impact on Employers.**

The non-fee related changes are necessary to update the regulations to the current editions of ASME and National Board safety and inspection codes which are incorporated by reference.

The increase in fees will affect a number of the approximately 50 “R” Stamp holders in the Commonwealth that have their reviews performed by the Department. During calendar years 2006 and 2007, the Department performed 15 and 14 such inspections, respectively. For the current year, 13 inspections have been performed so far with an additional two anticipated by year end for a total of 15.

The increased cost to these employers who request a review is \$200 once in a three-year period (reviews are performed every three years). This will increase the total cost for the review to \$1,000. The last time the review fee was increased to address the additional costs of doing business was in the 1999 Edition of the Boiler Rules and Regulations. The other alternative employers would have is have the review performed by the National Board which charges \$3,000 for the review.

**B. Impact on Employees.**

The proposed regulation will provide both increased protection of human life (both employee safety and public safety) as well as property from the unsafe or dangerous construction, installation, inspection, operation, and repair of boilers and pressure vessels in the Commonwealth of Virginia.

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

The Department anticipates no additional fiscal impact beyond the cost to promulgate the revisions to the regulation. All revenue from boiler fees is deposited directly into the state general fund. None of the funding stays with the Department.

**V. Comments.**

The Boiler Safety Compliance Program of the Virginia Department of Labor and Industry received the following comments:

**Commenter 1: Mr. Mark Anderson, American Boiler Inspection Services, Inc., June 30, 2008**

Comment 1: Mr. Anderson stated that he would support the DOLI proposed changes, with the exception of the change to charge \$10 for a replacement Certificate. He felt that \$10 would not “come close to covering the DOLI time to process the request and then to bill and process the payment of \$10.” Instead, Mr. Anderson suggested a charge of \$20.

**Agency Response:**

The fees the Department charges are based upon state law which requires that we recoup no more than our actual costs. While the original certificate fee is \$20, these costs reflect the time required to process the inspection report and generate and mail the invoice. While the Department presently does not charge for a duplicate Certificate of Inspection, we feel that a \$10 fee represents the cost to the Department of generating a duplicate certificate.

Comment 2: “Increase the DOLI inspection fees listed in 16 VAC 25-50-250, paragraph C, section a) from \$135 to \$150; b) from \$70 to \$100, and section c) from \$50 to \$100.” He stated that “these rates more accurately reflect the true cost of the inspections and of the cost of living adjustment.”

**Agency Response:**

The inspection fees of the Department reflect what are determined to be our actual costs. The Department does not perform a large number of inspections annually, and generally only when requested by the owner. While it is not possible to break out the total actual direct and indirect costs of an inspection performed within a

day of enforcement activity, the inspection fees requested approximates what the Department estimates is the real cost.

Comment 3: “Allow DOLI to authorize Insurance and Contract Fee Inspectors to perform compliance inspections of objects when the certificates of inspection have lapsed for a minimum period specified by DOLI. Cost of the inspection to the Owner/User would not exceed the DOLI inspection fees listed in 16 VAC 25-50-250, paragraph C. The lists of these objects with lapsed certificates to be inspected would be provided to the inspection companies by DOLI.”

Comment 4: “Allow DOLI to authorize “Special Inspectors” to visit locations with unregistered boilers or pressure vessels to perform the first inspection and register the units with DOLI. The cost of the inspection to the Owner/User would be a maximum of the DOLI specified fee in 16 VAC 25-50-250, paragraph C to be paid to the “Authorized Inspection Agency”, or possibly for free.”

**Agency Response to Comments 3 and 4:**

The Department does not believe that a regulatory amendment is necessary, as the Commissioner of the Department of Labor and Industry already has the authority to appoint state inspectors. Although DOLI has no interest at this time in pursuing this possibility, it is one option that the Department may use in the future.

Comment 5: Set the minimum insurance limits for all Contract Fee Inspectors to be the same limit amounts, regardless of business size.

**Agency Response:**

The specific insurance requirements for the Contract Fee Inspection Companies are set out in the *Code of Virginia* and are not addressed in regulations promulgated by the Board. Any such statutory change would require an act of the General Assembly.

Comment 6: Allow Inspection companies to be invoiced by DOLI for the inspections performed by that Inspection Company, allow the Inspection Company to collect DOLI Certificate fees and forward to DOLI as specified in 16 VAC 25-50-150, paragraph A, section 2. Speeding DOLI’s processing time and reducing DOLI’s invoicing and collection efforts.

**Agency Response:**

“Your suggestion that the Department invoice owners for inspections performed by Contract Fee Inspection Companies or conversely, have the Contact Fee Inspection Companies collect the certificate fees for the Department is not technically or economically feasible at this time. As you are aware, the Department uses software written by a third party to track inspections, prepare

invoices, and print certificates. There are certain protocols as to how this information is input into the software over which the Department has no control. Enhancements to this software, if agreeable to the vendor, would be costly and be of little benefit to the Department. Regardless, given the current budgetary situation, the Department sees little possibility of additional funding for this purpose in the foreseeable future.

**Commenter 2: Mr. Kurt D. Crist, Tidewater Immediate Inspections, Inc., July 7, 2008**

Comment 1: Mr. Crist asked the Department to increase the inspection fees to conform with today's rates:

UPV \$80.00  
External Boiler Inspection \$100.00 (this includes water heaters)  
Internal Boiler Inspections \$150.00

Mr. Crist added that an increase in inspection fees "...would be in line with the insurance regulations in place and gasoline prices today since this business requires a lot of vehicular travel that is not currently compensated for."

**Agency Response:**

The inspection fees of the Department reflect what are determined to be our actual costs. The Department does not perform a large number of inspections annually, and generally only when requested by the owner. While it is not possible to break out the total actual direct and indirect costs of an inspection performed within a day of enforcement activity, the inspection fees requested approximates what the Department estimates is the real cost.

Comment 2: Mr. Crist suggested that the Department "...make the insurance required by contract fee inspectors realistic, not by how many objects..." He expressed concerns about only his inspecting 100 boilers in schools or other "high profile places" and the possibility of an accident. He questioned how the Department would explain to the parents of the school children that he [Mr. Crist] was only required to carry a low amount of insurance because he didn't inspect the required amount of objects to increase the value of their child.

**Agency Response:**

The specific insurance requirements for the Contract Fee Inspection Companies are set out in a separate regulation, 16 VAC 25-55-20, Financial Requirements, and, therefore, cannot be addressed in the Boiler and Pressure Vessel Rules and Regulation amendments under consideration in this action. It should be noted, however, that Mr. Crist has no regulatory maximum on the amount of insurance coverage he may carry. There is only a regulatory minimum dollar floor level requirement.

Comment 3: Mr. Crist requested that “inspection companies be allowed to visit locations with unregistered objects without [inspection companies] being penalized for reporting them to DOLI.” He complained that once his company turns them in, they call a different company to perform their inspection service.

**Agency Response:**

While the Department may send an inspector to a location based on information provided by your company, the DOLI inspector does not inform the owner at that location of the source of this information. However, it is reasonable to believe that most companies might possibly make an informed guess as to why the Department visited shortly after your company was there. The Department takes issue with Mr. Crist’s use of the term “penalized” as this scenario does not actually decrease his customer base and would impact all of his competitors as well.

**Commenter 3: Mr. Jim Mannion, Valley Boiler Inspection, July 8, 2008**

Mr. Mannion stated that he is in agreement with most of the Department’s proposed changes with the following additions:

Comment 1: “If the fee charged for National Board reviews is to be raised due to cost of living, the fees charged for inspection of objects should also be raised for the same reason. With today’s costs I would recommend fees of \$200.00 for power boilers, \$125.00 for heating boilers, and \$100.00 for pressure vessels.”

**Agency Response:**

The inspection fees of the Department reflect what are determined to be our actual costs. The Department does not perform a large number of inspections annually, and generally only when requested by the owner. While it is not possible to break out the total actual direct and indirect costs of an inspection performed within a day of enforcement activity, the inspection fees requested approximates what the Department estimates is the real cost.

Comment 2: The Department’s certificate inspection fees should once again be collected by inspection companies, similar to the past decal program. This fee could be collected at the time of inspection and forwarded to DOLI with inspection reports. This program would eliminate a large amount of clerical work for DOLI, including complaints from owners wondering why they have received a second invoice. It would be a simpler, more economical program for DOLI, owners, users, and inspection companies.

**Agency Response:**

Your suggestion that the Contract Fee Inspection Companies collect the certificate fees for the Department is not technically or economically feasible at this time.

As you are aware, the Department uses software written and maintained by a third party to track inspections, prepare invoices, and print certificates. There are certain protocols as to how this information is input into the software over which we have no control. Such enhancements to this software, if indeed agreeable to the vendor, would be costly and seen by the Department as being of little benefit to the Department. Regardless, given the current state budgetary situation, the Department sees little possibility of additional funding for this purpose in the foreseeable future.

Comment 3: “Another improvement to the program would be for the Department to authorize inspection companies to inspect overdue and unregistered objects and collect fees set by DOLI. As you know, there is large percentage of objects that are not being inspected. When I contact these owners regarding inspecting their equipment the most common response I get is that they will have it inspected when somebody with authority forces them to. As a former Boiler Safety Division employee I am well aware that 2 Deputy Inspectors will never be able to clear up all of the overdue objects or find all of the many unregistered objects in the Commonwealth. Authorizing inspection companies to perform this work would definitely reduce the number of overdue objects and unregistered objects and also DOLI’s work load.”

**Agency Response:**

Your recommendation that Insurance Company and Contract Fee Inspection Company inspectors be authorized by the Department to perform inspection of overdue objects and find unregistered objects is interesting and may have merit. The Department does not believe that it requires a change in the rules, as the Commissioner of the Department already has the authority to appoint state inspectors. While there is no interest at this time in pursuing this possibility, it is one option that the Department may consider for use in the future.

**VI. Technological Feasibility.**

The proposed amendments are technologically feasible for implementation by both the Department and the regulated community.

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## **RECOMMENDED ACTION**

The Boiler Safety Compliance Program recommends that the Safety and Health Codes Board adopt the attached draft proposed language for the amendment 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 at any time with respect to reconsideration or revision of this or any other regulation which has been adopted in accordance with the Administrative Process Act.



**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: \_\_\_\_\_



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 \$10.00 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 ~~\$800~~ \$1000 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.

**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 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 Section I of the ASME Code for Power Boilers. 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
$\frac{1}{4}$	$\frac{11}{16}$
$\frac{9}{32}$	$\frac{11}{16}$
$\frac{5}{16}$	$\frac{3}{4}$
$\frac{11}{32}$	$\frac{3}{4}$
$\frac{3}{8}$	$\frac{13}{16}$
$\frac{13}{32}$	$\frac{13}{16}$
$\frac{7}{16}$	$\frac{15}{16}$
$\frac{15}{32}$	$\frac{15}{16}$
$\frac{1}{2}$	$\frac{15}{16}$
$\frac{9}{16}$	$1-\frac{1}{16}$
$\frac{5}{8}$	$1-\frac{1}{16}$

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 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 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 fuel. These computations shall be made as outlined in the appendix 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 Section I of the ASME Boiler Code.

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 ASME Power Boiler 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 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 ASME Code, Section I, and ANSI 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.

16VAC25-50-380. 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 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.

$$\frac{TS t E}{RFS} = \text{maximum allowable working pressure, psi}$$

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 Section VIII, Division 1, of the ASME Code.

3. Factors of safety. The minimum factor of safety shall in no case be less than ~~four~~ 3.5 for ~~existing installations~~ 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 Section VIII, Division 1, ASME Code 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 ASME Pressure Vessel 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.

16VAC25-50-430. Hydrostatic pressure tests.

A. A hydrostatic pressure test, when applied to boilers or pressure vessels, shall not exceed ~~1½~~ 1.25 times the maximum allowable working pressure, except as provided by 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 16 VAC25-50-360 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 be equal to 1½ 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.

16VAC25-50-480. 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. ~~A seal weld is a tube to tubesheet weld used to supplement an expanded tube joint to ensure leak tightness. Seal welds on carbon steel (P-1) tube joints made by qualified welders will not require an inspection nor a Form R-1.~~

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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.

## **FORMS**

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

Form R-1, Report of ~~Welded~~ Repair, National Board Inspection Code (eff. 1/1/99).

Form R-2, Report of Alteration, National Board Inspection Code (eff. 1/1/99).

Form R-3, Report of Parts Fabricated By Welding, National Board Inspection Code (eff. 1/1/99).

Form R-4, Report Supplementary Sheet, National Board Inspection Code (eff. 1/1/99).

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**

~~2004~~ 2007 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, ~~2004~~ 2007 National Board Inspection Code, National Board of Boiler and Pressure Vessel Inspectors.

ASME B 31.1, ASME Code for Pressure Piping, American National Standards Institute, ~~1998~~ 2006.

NFPA 85 Boiler and Combustion Systems Hazards, 2001 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, ~~1998~~ 2006, 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, ~~Sixth Edition, June 1989~~ Seventh Edition, June 2006, American Petroleum Institute.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF LABOR AND INDUSTRY

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VIRGINIA SAFETY AND HEALTH CODES BOARD

BRIEFING PACKAGE

FOR November 20, 2008

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Final Regulation to Amend Reverse Signal Operation Safety Procedures Dealing with Vehicular Equipment, Motor Vehicles, Material Handling Equipment and Motor Vehicle Equipment in Existing Standards: 16 VAC 25-90-1910.269; 16 VAC 25-175- 1926.601; 16 VAC 25-175-1926.602 and 16 VAC 25-175-1926.952;

and

Final Regulation to Establish Reverse Signal Operation Safety Requirements for Vehicles, Machinery and Equipment for General Industry and the Construction Industry, 16 VAC 25-97.

**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 amendments pursuant to Va. Code §40.1-22(5):

**A.** Amend the following Part 1910 General Industry and Part 1926 Construction Industry standards governing the reverse signal operation safety procedures for off-road motor vehicles and vehicular or mechanical equipment:

- §1910.269(p)(1)(ii) - Vehicular Equipment for Electric Power Generation, Transmission and Distribution
- §1926.601(b) - Motor Vehicles
- §1926.602(a)(9)(ii) - Material Handling Equipment



§1926.952(a)(3) - Mechanical Equipment, Power Transmission and Distribution;

- B. Establish new reverse signal operation safety procedures for all vehicles, machinery and equipment with an obstructed view to the rear in General Industry and the Construction Industry, 16 VAC 25-97.

## II. Summary of Rulemaking Process.

- A. Notice of Intended Regulatory Action (NOIRA) was adopted by Board on March 7, 2006. The NOIRA was published on September 4, 2006, with 30-day comment period ending October 4, 2006. No comments were received.

Next, the Board adopted proposed regulatory language on December 6, 2006. The proposed regulation was published on August 20, 2007, with a 60-day comment period ending on October 19, 2007. No comments were received. A public hearing was held by the Board on October 18, 2007. No comments were received.

After the close of the 60-day comment period, the Department received requests from the following individuals for an additional opportunity to comment (*see requests and Department responses attached in Appendix*):

Listed in alphabetical order:

P. Dale Bennett, Virginia Trucking Association  
J. R. (Randy) Bush, Virginia Forest Products Association  
Terry Pruitt, Precon Construction Company, Precon Marine, Inc., Precon Development Corporation  
Mark Singer, Virginia Utility & Heavy Contractors Council (two letters and Department responses)  
Steve Vermillion, Associated General Contractors of Virginia

At its' meeting on February 28, 2008, the Board approved the publication of an additional 30-day comment period, which was published from April 14 to May 14, 2008. No comments were received through Virginia's Regulatory Town Hall. **Comments were submitted directly to the VOSH Program, and are addressed in section V., below.** The Department held a meeting on April 16, 2008, with interested parties representing employer and employee interests from the construction and general industries. **The results of the April 16<sup>th</sup> meeting are summarized in section VI., below.**

At its' meeting on July 10, 2008, the Board adopted a **revised** proposed regulation and approved the publication of an additional 30-day comment period pursuant to Va. Code §§40.1-22(5), and 2.2-4007.03, which was published from September 29 to October 29, 2008. **The results of the 30 day comment period are summarized in section VII., below.**

### **III. Summary of the Final Regulations.**

#### **Construction Standards**

The VOSH Program seeks the amendment of reverse signal operation safety procedures in standards for the construction industry in §§1926.601(b)(4), 1926.602(a)(9)(ii), and 1926.952(a)(3); and to establish a comprehensive reverse signal operation procedures regulation for all construction vehicles, machinery and equipment with an obstructed view to the rear, whether for operation in off-road work zones or over the road transportation or hauling.

The following boxes highlight the differences between the existing standards on this issue:

§1926.601(b)(4): “No employer shall use any motor vehicle equipment having an obstructed view to the rear unless:

- (i)The vehicle has a reverse signal alarm audible above the surrounding noise level or;
- (ii)The vehicle is backed up only when an observer signals that it is safe to do so.”

§1926.602(a)(9)(ii): “No employer shall permit earthmoving or compacting equipment which has an obstructed view to the rear to be used in reverse gear unless the equipment has in operation a reverse signal alarm distinguishable from the surrounding noise level or an employee signals that it is safe to do so.”

§1926.952(a)(3): “No employer shall use any motor vehicle equipment having an obstructed view to the rear unless:

- (i)The vehicle has a reverse signal alarm audible above the surrounding noise level or;
- (ii)The vehicle is backed up only when an observer signals that it is safe to do so.”

#### **General Industry Standard**

The VOSH Program seeks the amendment of the reverse signal operation safety procedures for the Electric Power Generation, Transmission and Distribution standard for general industry contained in §1910.269(p)(1)(ii); and to establish a comprehensive reverse signal operation safety procedures regulation for all general industry vehicles or equipment with an obstructed view to the rear, whether for operation in off-road work zones or over the road transportation or hauling.

The following box highlights the existing standard on this issue:

§1910.269(p)(1)(ii): “No vehicular equipment having an obstructed view to the rear may be operated on off-highway jobsites where any employee is exposed to the hazards created by the moving vehicle unless:

- (i)The vehicle has a reverse signal alarm audible above the surrounding noise level, or;
- (ii)The vehicle is backed up only when a designated employee signals that it is safe to do so.”

The **original** proposed regulation provides additional protection for employees by requiring the following for all vehicles, machinery and equipment in construction and general industry with an obstructed view to the rear, whether for operation in off-road work zones or over the road transportation or hauling:

The back-up alarm requirements in the current regulations at 1910.269(p)(1)(ii), 1926.601(b), 1926.602(a)(9)(ii), 1926.952(a)(3), will be deleted, and the regulated community is referred to the new comprehensive proposed regulation at:

Reverse Signal Operation Safety Requirements for Motor Vehicles, Machinery and Equipment in General Industry and the Construction Industry, 16 VAC 25-97

The new comprehensive proposed regulation at 16 VAC 25-97 will provide that construction and general industry vehicles, machinery and equipment (hereafter referred to as covered vehicles), whether for operation in off-road work zones or over the road transportation or hauling, shall not be operated in reverse unless the vehicle has a reverse signal alarm audible above the surrounding noise level and the vehicle is backed up only when a designated observer or ground guide signals that it is safe to do so. The proposed regulation provides a definition of the phrase “obstructed view to the rear.”

While engaged in signaling activities, designated signalers/ground guides must have no other assigned duties, must not be distracted by such things as personal cellular phones or headsets and must be provided with and wear high visibility/reflective warning garments. No driver of a covered vehicle will travel in reverse unless they maintain constant visual contact with the designated signaler/ground guide. If visual contact is lost, the driver must immediately stop the vehicle until visual contact is regained and a positive indication is received from the signaler/ground guide that backup operations can proceed.

Prior to permitting an employee to engage in any covered activity, the employer shall ensure that each driver of a covered vehicle and each designated signaler/ground guide is trained in the requirements of this section. Refresher training shall be provided by the employer for any driver of a covered vehicle or any designated signaler/ground guide when the driver or designated signaler has been observed to violate the requirements of this section or involved in an accident or near miss accident; or has received an evaluation that reveals that the driver or designated signaler/ground guide is not operating in a safe manner.

Covered vehicles with video or similar technological capability to provide the driver with a full view behind the vehicle are exempt from the requirement to have a designated signaler/ground guide.

Covered vehicles are exempt from the requirement to have a designated signaler/ground guide if the driver visually determines from outside the vehicle that no employees are in the backing zone and that it is reasonable to expect that no employees will enter the backing zone during reverse operation of the vehicle.

Covered vehicles that were not equipped with a reverse-signal alarm upon manufacture or were not later retrofitted with an alarm are exempt from having a reverse signal alarm audible above the surrounding noise level, but must still comply with other requirements in the proposed regulation.

To the extent that any federal Department of Transportation (DOT) regulation applies to covered vehicles conflicts with this section, the DOT regulation will take precedence.

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

**A. Basis for Final Action.**

1. Existing Federal Identical Standards Are Insufficient

**Construction**

A review of VOSH fatal accident investigations from 1992 to September 30, 2007 (**updated since December 6, 2006 Board meeting**), found 19 fatal vehicle or equipment accidents in construction work zones where employees were struck:

**Number of fatalities Type of vehicle**

11	dump truck
<u>8</u>	1 each: cement truck, fuel truck, pavement planer, vacuum truck, bobcat, tandem truck, trackhoe and other-unspecified.
Total	19

While in some cases it was found that reverse signal alarms were not operational, many accidents occurred even with operational reverse signal alarms. In a situation where an existing standard appears to be applicable, VOSH is often faced with the difficulty of having to document whether a reverse signal alarm was audible over the surrounding construction noise at the time of the accident. This can be problematic at best, since exact accident conditions cannot be recreated. In at least two cases, an employee operating as the signaler was struck by the vehicle when the driver lost sight of the employee while backing-up.

Fatal accidents also occurred to employees engaged in their own work unrelated to such vehicles or equipment where they apparently became desensitized to the familiar and repeated sounds of reverse signal alarms and other construction noise in the work zone.

In addition, the existing standards are limited in their scope and do not apply to all construction vehicles or equipment with an obstructed view to the rear. For instance, §1926.601(b)(4) only applies to motor vehicles on an off-highway jobsite not open to public traffic, and specifically does not apply to earthmoving equipment covered by §1926.602(a)(9)(ii). Neither regulation covers compactors or “skid-steer” equipment.

In VOSH investigations of a back-up accidents involving vehicles or equipment not covered by the previously cited standards, the only enforcement tool available is the use of §40.1-51.1.A. This statutory provision, used in the absence of an applicable regulatory standard, is more commonly referred to as the “general duty clause.” It provides, in part, that:

“It shall be the duty of every employer to furnish to each of his employees safe employment and a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees....”

This general wording does not specifically mention hazards associated with vehicles or equipment or any other specific situation. Therefore, according to case law VOSH must document that the hazard in question was “recognized” either through industry recognition (e.g. a national consensus standard), employer recognition (e.g. a company safety rule, or the existence of an operator’s manual for the vehicle), or common sense recognition.

A concern with the use of the general duty clause is that it does not always result in consistent application of safety rules. This occurs as the use of the clause is often fact specific and dependent on a particular industry’s national consensus standard, or employer work rule or equipment operator’s manual.

Another issue regarding the general duty clause is that the statute has been interpreted in case law to only apply to “serious” violations, i.e., those that would cause “death or serious physical harm”. It cannot be used to eliminate “other-than-serious” hazards before they can become serious in nature.

## **General Industry**

The requirements of §1910.269(p)(1)(ii) do not provide adequate protection for employees under the Electric Power Generation, Transmission and Distribution standard and provide no coverage at all for all other areas in general industry.

A review of VOSH fatal accident investigations from 1992 to September, 2007 (**updated since December 6, 2006 Board meeting**), found nine fatal accidents in general industry work zones where employees were struck:

<u>Number of fatalities</u>	<u>Type of vehicle</u>
3	logging vehicles
1	garbage trucks
1	fuel truck
3	tractor-trailer trucks
1	fork lift
1	dump truck
<u>1</u>	vehicle not specified

Total 11

As with the accident history in construction, general industry also had cases where it was found that reverse signal alarms were not operational, but other accidents occurred even with operational reverse signal alarms. Again, as in construction, general industry fatal accidents often occurred to employees who were engaged in their own work who apparently became de-sensitized to the sound of reverse signal alarms and other sounds in the work zone.

In addition, the standard is limited in its scope and does not apply to all general industry vehicles or equipment with an obstructed view to the rear. Section 1910.269(p)(1)(ii) only applies to motor vehicles in the electric power generation, transmission and distribution industry. When VOSH investigates a back-up accident involving a vehicle not covered by the above Part 1910 standard, the only enforcement tool available is the use of §40.1-51.1.A., referred to as the “general duty clause.” The same concerns regarding the use of the statute in the Construction Industry apply to its use in the General Industry sector as well.

2. Board Authorization and Mandate

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 VOSH 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.”

**Va. Code §2.2-4007.03.B. provides:**

**“If an agency wishes to change a proposed regulation before adopting it as a final regulation, it may choose to publish a revised proposed regulation, provided the latter is subject to a public comment period of at least 30 additional days and the agency complies in all other respects with this section.”**

**Va. Code § 2.2-4007.06 provides:**

**“If one or more changes with substantial impact are made to a proposed regulation from the time that it is published as a proposed regulation to the time it is published as a final regulation, any person may petition the agency within 30 days from the publication of the final regulation to request an opportunity for oral and written submittals on the changes to the regulation. If the agency receives requests from at least 25 persons for an opportunity to submit oral and written comments on the changes to the regulation, the agency shall (i) suspend the regulatory process for 30 days to solicit additional public comment and (ii) file notice of the additional 30-day public comment period with the Registrar of Regulations, unless the agency determines that the changes made are minor or inconsequential in their impact. The comment period, if any, shall begin on the date of publication of the notice in the Register. Agency denial of petitions for a comment period on changes to the regulation shall be subject to judicial review.”**

**B. Purpose.**

The purpose of the final regulation is to provide more comprehensive protection to employees in construction and general industry work areas exposed to vehicular, machinery and equipment traffic covered by the aforementioned standards and to provide the same degree of protection to employees in similar working conditions where vehicles, machinery and equipment with obstructed views to the rear are not otherwise covered by current regulations. The final regulation will apply to all covered vehicles, machinery and equipment in both construction and general industry, whether during operations in off-road work zones or over the road transportation or hauling.

### C. Impact on Employers.

Under the **original** proposed regulation, employers would be required to train both drivers of covered vehicles, machinery and equipment and designated employee signalers/ground guides on the requirements of the amended and new regulations. Some costs to employers would be associated with the training required under the standard. Other issues that were added to the proposed regulation to provide employers with flexibility to achieve safe vehicle back-up operations include:

- \* Covered vehicles with video or similar technological capability to provide the driver with a full view behind the vehicle can be operated in reverse without a designated employee signaler/ground guide.
- \* Under the **original** proposed regulation, covered vehicles could be exempted from using a designated employee signaler/ground guide if it has a reverse signal alarm audible above surrounding noise and the driver visually determines from outside the vehicle that no employees are in the backing zone and that it is reasonable to expect that no employees will enter the backing zone during reverse operations. **In the final regulation, the VOSH Program is recommending that the option allowing the driver to visually determine from outside the vehicle that no employee is in the backing zone, be replaced with language based on 1910.266(f)(2)(v) of the Logging Standard which provides:**

**“Before starting or moving any machine, the operator shall determine that no employee is in the path of the machine.”**

- \* Under the **original** proposed regulation, covered vehicles that were not equipped with a reverse-signal alarm upon manufacture or later retrofitted with an alarm are exempt from the reverse signal alarm requirement if they either use a designated employee signaler/ground guide, or if the driver visually determines from outside the vehicle that no employees are in the backing zone and that it is reasonable to expect that no employees will enter the backing zone during back-up. **In the final regulation, the VOSH Program is recommending that the option allowing the driver to visually determine from outside the vehicle that no employee is in the backing zone, be replaced with language based on 1910.266(f)(2)(v) of the Logging Standard which provides:**

**“Before starting or moving any machine, the operator shall determine that no employee is in the path of the machine.”**

- \* To the extent that any federal Department of Transportation (DOT) regulation applying to covered vehicles conflicts with any proposed regulation adopted by the Board, the DOT regulation would preempt any Board regulation in accordance with Va. Code §40.1-1, which provides in part that:



“...however, nothing in the occupational safety and health provisions of this title or regulations adopted hereunder shall apply to working conditions of employees or duties of employers with respect to which the Federal Occupational Safety and Health Act of 1970 does not apply by virtue of § 4 (b) (1) of the federal act.”

[NOTE: Section 4(b)(1) of the OSH Act provides that “Nothing in this Act shall apply to working conditions of employees with respect to which other Federal agencies...exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health.”]

The Department plans to prepare and make available to employers a free training program that could be used to meet the training requirements contained in the **final** regulation. Based on information received during the additional 30 day comment period from April 14 to May 14, 2008, commenters for the construction industry indicated that current rate of pay is \$20 per hour for operators, plus fringes (if we assume a 25% rate for fringes, the total compensation rate is \$25 per hour); and \$15 per hour, plus fringes, for laborers (if we assume a 25% rate for fringes, the total compensation rate is \$18.75 per hour). The Department estimates that training on the **final** regulation would take between 30-60 minutes. Costs for operators would range from \$17.50 to \$25.00 per operator and from \$9.38 to \$18.75 per laborer.

**D. Impact on Employees.**

Construction and general industry employees across the state would benefit from increased safety requirements from vehicular, machinery and equipment back-up operations. A significant reduction in employee deaths attributed to covered vehicles is anticipated. Employees that are drivers of covered vehicles or designated signalers/ground guides will have to receive training on the requirements of the final regulation.

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

The Department would have to designate and train personnel on the requirements of the **final** regulation. The Department plans to prepare and make available to employers a free training program that could be used to meet the training requirements contained in the final regulation. The cost to place an interactive training module on the Department’s website is approximately \$1,000 per year.

**V. Comments.**

A Notice of Intended Regulatory Action (NOIRA) was adopted by Board on March 7, 2006. The NOIRA was published on September 4, 2006, with 30-day comment period ending October 4, 2006. No comments were received.

The Board adopted proposed regulatory language on December 6, 2006. The proposed regulation was published on August 20, 2007, with a 60-day comment period ending on October 19, 2007. No comments were received. A public hearing was held by the Board on October 18, 2007. No comments were received.

After the close of the 60-day comment period, the Department received requests from five individuals for an additional opportunity to comment. At its meeting on February 28, 2008, the Board approved the publication of an additional 30-day comment period, which was published from April 14 to May 14, 2008. No comments were received through Virginia's Regulatory Town Hall. The following comments were submitted directly to the VOSH Program:

**Commenter 1: April 14, 2008      James R. Leaman, President, Virginia AFL-CIO**

Mr. Leaman wrote in support of the proposed regulation commenting that the 29 reverse operation fatalities in the last 13 years – an average of 2 or more per year – was an unacceptably high number. He also noted that the free training program to be provided by the Department should alleviate some costs associated with the regulation.

**Agency Response:** None.

**Commenter 2: April 17, 2008      Will Karbach, Branch Highways, Inc.**

Mr. Karbach wrote in opposition to parts of the regulation commenting that the requirement to have a designated observer/ground guide could result in additional injuries because the environment in which his company works could result in the observer, despite the best of training, could become distracted or complacent and become a victim himself.

He also commented that the requirement to have a designated observer/ground guide could result in increased expense and provided an example:

“On one particular project we currently have in operation, there are 52 people and 30 pieces of construction equipment, not including those of our subcontractors. If we were to have observers for each piece of equipment, it would result in a 58% increase in labor costs. With weekly payroll across the company of over \$150k, I estimate that this would equate to an additional \$4+million in payroll per year, not including insurance and taxes.”

Finally, he commented that on a macroeconomic level there must several hundred thousand pieces of equipment that could be covered by the proposed regulation and did not think there would be enough people in the labor market to provide designated observers/ground guides for each piece of equipment.

**Agency Response:**

Many commenters raised concerns that the requirement to have a designated observer/ground guide could result in additional injuries to the designated observers/ground guides and the added

expense to employers of having to provide a designated observer/ground guide for each piece of covered equipment.

#### Department Response Related to the Revised Proposed Regulation

The Department held a meeting with interested parties on April 16, 2008 (see section VIII for summary), and is proposing to the Board the following substantive change to address the above concerns:

- The revised proposed regulation would require that no covered vehicle operate in reverse unless:
  1. The covered vehicle has a reverse signal alarm audible above the surrounding noise level, and
    - 2.a. The covered vehicle is ***operated in reverse*** ~~backed-up~~ only when a designated observer or ground guide signals that it is safe to do so; ***or***

***2.b. Before operating the covered vehicle in reverse, the driver visually determines that no employee is in the path of the covered vehicle.***

The above underlined language added in section 2b is based on 1910.266(f)(2)(v) of the Logging Standard which provides:

**“Before starting or moving any machine, the operator shall determine that no employee is in the path of the machine.”**

The change is being recommended to the Board to address potential cost issues associated with the exemption from use of a designated observer/ground guide that would have allowed drivers to get out of the vehicle to determine that no employees are in the backing zone and that it is reasonable to expect that no employees will enter the backing zone. The change would also provide a level of consistency by providing drivers of covered vehicles in construction and general industry the same reverse operation option as provided drivers in the logging industry.

This change would also help to address situations like a driver pulling into a large shipping terminal and having to back-up to a loading dock – the change would allow the driver as he pulls in to determine that no employees are in the back-up area and then continue with back-up without having to get out of the vehicle. Finally, the Department also considered concerns expressed at the April 16<sup>th</sup> meeting by construction contractors that significant costs could be incurred by the delays on large road building projects where a constant flow of dump trucks could result in each driver having to stop his vehicle, exit the cab to check for employees in the back-up zone, re-enter the cab and proceed with reverse operations for hundreds of yards.

#### Department Response Related to the Original Proposed Regulation

With regard to the **original** proposed regulation, the Department does not believe that hundreds or thousands of new "designated observer/ground guides" would have to be hired to comply with the

regulation. We believe that most employers who currently do not use "designated observer/ground guides" would have taken advantage of the exemption that enables the driver to operate in reverse without a "designated observer/ground guide":

"if the driver visually determines from outside the vehicle that no employees are in the backing zone and that it is reasonable to expect that no employees will enter the backing zone during reverse operation of the vehicle."

For those employers that send delivery/trade trucks out with only one person, as noted above, those employers/drivers can take advantage of the exemption. If the single employee drives onto a worksite with other employers working in the area and chooses to request, as many do currently, assistance from an employee of another contractor on site to act as the "designated observer/ground guide," there is nothing in the proposed regulation to prohibit that practice. The employer of the driver would not be required to hire or train a "designated observer/ground guide" just to accompany their single driver, nor would it be that employer's responsibility to train the other contractor's "designated observer/ground guide."

What the Department wants to accomplish with the proposed regulation is to change current behaviors that cause these deaths and debilitating accidents. Without exception, every reverse signal operation fatality involves the driver either not knowing anyone is in the back-up zone or losing site of someone he knows is in the back-up zone and proceeding anyway. Under the current regulations, as long as a covered vehicle has a functioning back-up alarm, the burden of avoiding an accident is placed squarely on the shoulders of the pedestrians in the traffic area. No real safety responsibility is placed on the driver while operating the vehicle other than to make sure the back-up alarm is working. A driver can back-up without even checking his side mirrors under the current regulations. The revised proposed regulation will place a positive responsibility on the driver to either keep the designated observer/ground guide in sight at all times during reverse operations, or in the absence of a designated observer/ground guide, to visually determine that no one is in the back-up zone prior to beginning reverse operations of the vehicle.

**Commenter 3: April 17, 2008      Russell Quesenberry, Safety Administrator, S. W. Rodgers, Inc.**

Mr. Quesenberry wrote in opposition to parts of the regulation expressing concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide in the construction industry could result in additional injuries to the designated observers/ground guides:

"I foresee employers using labor class employees for this task and this being a boring job thus creating an even more hazardous situation by having an employee at or near the rear of every machine being operated in reverse. I see more accidents when the designated observer would be the person run over because we put them in harms way. Everyone in the construction business knows where you have large machinery working and backing, you keep personnel away, not assign them to work in this hazardous location. What would be the distance for the designated spotter to be effective in backing the equipment safely but not be too close to be in danger themselves? About the issue of becoming complacent to

the sound of a back up alarm, this person is going to listen to one all day and soon learn to tune it out, just like a chiming clock in a house. I agree every piece of equipment should have a back up alarm and not as worded by OSHA "with an obstructed view to the rear. What does not have an obstructed view to the rear? The human body has an obstructed view to the rear. Let's use a common sense approach to this problem and use the general duty clause to enforce "that we all have to provide a safe work place. We install back up alarms and maintain them on anything that goes in reverse. This also could save a few kids, mailboxes and trash cans from parents in automobiles. Next we educate the public and continue to educate and remind our employees just what that beep beep beep really means."

With regard to a general industry setting, Mr. Quesenberry commented:

"My concern here is only places of business open to the public. When you mix shoppers and browsers with heavy equipment such as forklifts and large floor polishers, then a designated spotter would be a good idea or as most of the places do, barricade off the area while the equipment is in use. Here you have a mix of people who may not have any idea what that beep beep beep means. They may think it is the cash register scanner. Also public places mean children. Children are not allowed on construction sites nor usually found wandering around a shop or warehouse. This would be my suggestion; if the area is open to the public then a designated spotter is required or the area of equipment operation is barricaded or signed and closed to the public, but isn't this about what we are doing already?"

**Agency Response:** See the Department's response to Commenter 2's concern that the requirement to have a designated observer/ground guide could result in additional injuries.

With regard to what constitutes an obstructed view to the rear, the proposed regulation provides the following definition for that term and is based on a federal OSHA's interpretation on the same issue:

"The phrase "obstructed view to the rear" means anything that interferes with the overall view of the operator of the vehicle to the rear of the vehicle at ground level, and includes, but is not limited to, such obstacles as any part of the vehicle (e.g., structural members); its load (e.g., gravel, dirt, machinery parts); its height relative to ground level viewing; damage to windows or side mirrors, etc., used for rearview movement of the vehicle; restricted visibility due to weather conditions (e.g., heavy fog, heavy snow); or work being done after dark without proper lighting.

A number of Commenters may be under the impression that because a vehicle has a reverse signal alarm, it automatically would be considered to have an obstructed view to the rear and be covered by the proposed regulation. That is not the case. The following additional guidance has already been provided by Department personnel in interpreting the language of the proposed regulation:

"...will a Lowe's truck delivering a refrigerator to a model home under construction be covered?"

**Response:** Although I have seen different types and sizes of Lowes' trucks, any delivery truck operated on behalf of an employer will be covered under the proposal if there is no access to look out a rear window of the vehicle, as the dangers present are the same. If the vehicle is essentially a pick-up truck or flatbed with a refrigerator sitting in the back, and the cargo is completely blocking the rear window of the truck thereby creating a blind spot, then that would constitute an obstructed view to the rear and the truck would be covered by the proposed regulation.”

"What about pick-up trucks with shells?"

**Response:** With the exceptions noted in the definition for "obstructed view to the rear" such as "damaged windows", as long as the shell has a front and rear window that are not obstructed and they allow the driver to look directly out the rear window of the truck, then the truck would not have an obstructed view to the rear and would not be covered by the proposed regulation.”

“You asked whether forklifts, pick-up trucks, cars, vans, tractor-trailers and powered industrial trucks are covered by the proposed regulation.

**Response:** Generally, any truck where the driver can see directly behind the vehicle at ground level by looking through a rear view mirror, or by turning around and looking out the rear window/opening would not be considered to have an obstructed view to the rear. Of the examples you posed, the proposed regulation would not generally apply to fork lifts, pick-up trucks, cars, certain vans, etc., as long as they did not have an “obstructed view to the rear” as defined in the regulation and currently by OSHA. As noted in the regulation, there are certain exceptions to this general rule (e.g. damage to windows/mirrors, restricted visibility due to weather conditions or work being done after dark without proper lighting).

On the other hand, certain tractor trailers pulling a large enclosed trailer, and vans with no or blocked/obstructed back windows, would be covered because they would be considered to have an obstructed view to the rear.“

**Commenter 4: April 18, 2008      Camella Megatiotis, FSAI**

Mr. Megatiotis wrote in opposition to parts of the regulation expressing concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide in the construction industry could result in additional injuries to the designated observers/ground guides:

“I fully support the decision to have backup alarms on none highway use equipment but to require a spotter? I feel this will create a bigger problem. Spotters behind every piece of equipment on a project site would mean additional personal on the ground. I believe you would see an increase of persons being injured on construction sites if this change occurs.”

**Agency Response:** See the Department’s response to Commenter 2’s concern that the requirement to have a designated observer/ground guide could result in additional injuries.

**Commenter 5: April 22, 2008**

**William A. McClellan, Jr., Pinnacle Construction & Development Corporation**

Mr. McLellan wrote in opposition to parts of the regulation expressing the concern that the regulation is an over-reaction to the 15 [construction] fatalities cited from 1992 through 2005:

“Reviewing fatality statistics in the U. S.:

- There were an estimated 6,289,000 car accidents in the US in 1999 resulting in about 3.4 million injuries and 41,611 people killed.
- The total number of people killed in highway crashes in 2001 was 42,116, compared to 41,945 in 2000.
- An average of 114 people dies each day in car crashes in the U.S.
- On average, 90 people are killed every year in the U.S. by lightning.

The number of accidents potentially affected by the proposed changes to the reverse signal operation requirements is minimal. Also, as we understand the proposal, it could be interpreted to require the assignment of an observer to each piece of equipment on the job site. We feel this is an unfair burden to place on the industry and respectfully request the proposal be dropped.”

**Agency Response:** Overall, there have been 29 reverse signal operation fatal accidents in Virginia from 1992 to 2007 (20 in construction and 9 in general industry).

The statistics quoted by Mr. McClellan in support of his contention that the proposed regulation should be dropped cannot be relevantly compared to the VOSH reverse signal operation fatality statistics, unless he can provide a way to correlate the two sets of data. For instance, there are obviously exponentially more people exposed to car accidents on a daily or yearly basis in the United States, resulting in many more injuries and fatalities, than there are workers exposed to vehicles operating in reverse with an obstructed view to the rear in Virginia for either time period. The injury and fatality statistics for are not comparable unless you can develop some sort of rate of accidents or fatalities per so many people exposed.

Mr. McClellan also expressed concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide in the construction industry could result in increased expenses for employers. See the Department’s response to Commenter 2.

**Commenter 6: April 22, 2008**

**Mike Weakley, Safety Manager, Marvin V. Templeton & Sons, Inc.**

Mr. Weakley wrote in opposition to parts of the regulation expressing concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide in the construction industry could result in additional injuries, and Commenter 3 with regard to what constitutes an obstructed view to the rear:

“It seems to me that as written this proposal would require Rollers (including asphalt rollers) and Rubber tire loaders (including skid steer loaders) that would be classified as "covered vehicles" to meet all of the requirements of this proposal. That would mean that they would either need to be equipped with cameras ( this is not cost effective and would be a maintenance nightmare in a lot of applications) or have a trained spotter ( not very safe or cheap when this equipment by back only a few feet at a time and may back several hundred times a shift) or the operator would have to get out of or down from the equipment to insure that no one would get in the path of the equipment a day ( same note as for a spotter, unless you are the person getting in and out or off and on the equipment several times a day increasing the chance of slip, trip and fall as well as back and other injuries). This proposal needs to be taken back to the table and reviewed as for all "covered vehicles" and their possible job functions so that it can be determined both what is reasonable and what is safe, remembering that putting a trained spotter on the ground may put another person in harms way. This would be especially true if it required placing a spotter which would be an additional person in a work zone. This would be just one more potential person for an errant vehicle to run into.”

**Agency Response:** See the Department’s response to Commenter 3 on the issue of what constitutes an obstructed view to the rear. Rollers would typically not be considered to have an obstructed view to the rear because the operator can normally turn his head and look behind his vehicle through an opening in his cab – in fact many rollers don’t even have a cab, so there could be no obstruction that could interfere with the driver’s ability to look behind the vehicle as he was traveling in reverse. Rubber tire loaders as well normally have a glass enclosed cab that allows the driver to turn his head and look out the rear view window, so such vehicles would not normally be considered to have an obstructed view to the rear. Skid steer loaders, depending on the design, may or may not be considered to have an obstructed view to the rear, depending on the location of the drivers seat and any rear view window that the driver can look out of.

See the Department’s response to Commenter 2’s concern that the requirement to have a designated observer/ground guide could result in additional injuries.

**Commenter 7: April 25, 2008      D. S. Kemp, Training Director, JAC, Joint  
Apprenticeship & Training Program, Operating  
Engineers, Local No. 147**

Mr. Kemp wrote in support of the proposed regulation commenting that:

“As operating engineers we drive and operate commercial trucks and heavy equipment on construction sites and industrial plants all across the state. We are in support of the ... Regulation...as proposed. We feel that this will give employees a more healthful and safe work environment and will be cost effective for the employers.

**Agency Response:** None.



**Commenter 8: May 9, 2008 John Roland, Director of Engineering and Environmental Affairs, Virginia Asphalt Association**

Mr. Roland wrote in opposition to parts of the regulation expressing concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide could result in increased injuries to employees and expense to employers:

“Our industry is, as I'm sure you know, heavily involved in highway transportation with extensive activities within work zones involving numerous vehicles that must back up many times in the paving and road construction process. The new rule if imposed will create a number of logistics problems not to mention the added cost of having trained spotters or watchers involved in every backing operation (It is impractical and potentially unsafe to have vehicle drivers step out of the vehicle and look each time the vehicle backs up). The cost of building and maintaining Va.'s roads has dramatically increased over the last few years with what has happened to the cost of fuel and liquid asphalt as well as other materials. This regulation requiring both an alarm system and a spotter will be very costly to implement. Since the spotter can not have other responsibilities while performing the required safety task and given the number of backing operations typical on paving sites, there will basically have to be at least one additional paid employee hired to perform the spotter task on each job. Additional people in the work zone also creates its own set of potential hazards to those individuals.

It's hard to argue against proposals that address employee safety as our industry views that as a top priority of concern. The fact is that backing operations do have a history of causing accidents and it is probably important to do something in this area. Several suggestions to consider as an alternative to the current proposal which we believe might be more cost effective are listed below:

1. Require "sound sequencing" alarm systems that allows the warning device to change pitch or character periodically so that workers don't become accustomed to hearing the same warning sound over and over again and basically not react to the repetitive noise in the work zone.
2. Beef up training requirements for personnel in work zones to help increase awareness of the hazards involved.

**Agency Response:** See the Department's response to Commenter 2's concern that the requirement to have a designated observer/ground guide could result in increased expenses to employers.

See the Department's response to Commenter 2's concern that the requirement to have a designated observer/ground guide could result in additional injuries.

With regard to Mr. Roland's suggestion that an alternative approach could involve "sound sequencing" of alarm systems (e.g., changing the pitch or character of the alarm sound

periodically), the Department agrees that alarms designed in that fashion could help to avoid the hazard of employees becoming so accustomed to the sound of reverse signal alarms that they ignore or “tune them out.” However, because such a proposal would involve a product (alarms) which are distributed in interstate commerce, the Board would have to comply with Va. Code §40.1-22(5), which states in part:

“Such standards when applicable to products distributed in interstate commerce shall be the same as federal standards unless deviations are required by compelling local conditions and do not unduly burden interstate commerce.”

With regard to Mr. Roland’s suggestion that an alternative approach could involve better training requirements for personnel in work zones, the original proposed regulation does include training requirements for drivers and designated observers/ground guides. The Department is also recommending that additional training provisions be added to the revised proposed regulation for personnel in work zones (see section VIII, below). Finally, the Department plans to prepare and make available to employers a training program that could be used to meet the training requirements contained in the proposed regulation. The availability of a free training program should help to alleviate some cost concerns.

**Commenter 9: May 9, 2008 Jim Patterson, F. G. Pruitt, Inc.**

Mr. Patterson wrote in opposition to parts of the regulation expressing concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide in the construction industry could result in additional injuries and expense, and Commenter 3 with regard to what constitutes an obstructed view to the rear:

“Currently all of our equipment utilizes back up alarms per regulation. We do not employ spotters except in specific situations where they are needed or required. We purposely limit or exclude employees from being on the ground in areas where heavy equipment is operating unless their presence is a fundamental part of the work. This new regulation would in essence require us to double our work force and introduce employees into dangerous places they previously did not need to be.

There is a portion of the regulation that says if you do not have spotters, the employee can disembark the vehicle and look for themselves. Please consider just one example of a large earth mover (scraper). The operator may back this machine 150 times or more in a given day. He normally works in an area where no employee is on the ground. He is strapped in 10' off of the ground. He would be required to stop the machine, lower all implements, remove his seatbelt, climb 10' down (often in wet or muddy conditions), walk approximately 100' one way and then reverse this entire procedure getting back on. The employee would never be able to physically stand this, it would not be safe and the production he would lose would cause huge economic impacts. Mobile vehicles such as delivery trucks and dump trucks would all be required to have 2 people in the vehicle under this regulation. Again, lacking two people, all of the above adverse conditions would still be in effect even for these vehicles.

The regulation allows for video monitoring. Our equipment does not employ this technology. Furthermore much of our fleet has open cabs subject to weather and vandalism. This is a costly and impractical solution for our type work.

The regulation states localities will not be particularly affected. Counties such as Henrico County who maintain their roads will incur all of the above costs and undue hardships. How can it state there is no effect? VDOT will also be impacted. Given the current condition of Virginia roads and our budget problems, we must question where the money will come from to pay for implementing this regulation.

The regulation states there are no other options, yet it does not mention, detail or provide any method or steps taken to arrive at this statement.

The above only represents only a small part of the adverse impact of this regulation as written. We encourage you to carefully consider these impacts. Setting aside the economic impacts, if we knowingly pass regulations which put employees in danger, there is something terribly wrong with the system. We support safety and have a long track record to back this up. We agree becoming complacent when it comes to safety can lead to accidents. We agree and would support any and all additional training as mentioned in this regulation. We would encourage you to consider pushing this training before we change something that may not be broken.

#### **Agency Response:**

See the Department's response to Commenter 2's concern that the requirement to have a designated observer/ground guide could result in increased expenses to employers.

See the Department's response to Commenter 2's concern that the requirement to have a designated observer/ground guide could result in additional injuries.

See the Department's response to Commenters 3 and 6 on the issue of what constitutes an obstructed view to the rear. Mr. Patterson mentions scrapers and many of their "open cab" vehicles as vehicles they own that would be covered by the regulation. Without any photos or video to view, the Department would consider many scrapers and many open cab construction vehicles to not have an obstructed view to the rear and not be covered by the standard because the driver can see directly behind the vehicle at ground level by looking through a rear view mirror, or by turning around and looking out the rear window/opening. In addition, according to federal OSHA interpretations, vehicles with rotating cabs are not considered to have an obstructed view to the rear since the operator can rotate the cab in the direction he is traveling.

With regard to Mr. Patterson's suggestion that an alternative approach could involve better training requirements for personnel, the original proposed regulation does include training requirements for drivers and designated observers/ground guides. The Department is also recommending that additional training provisions be added to the revised proposed regulation for personnel in work zones (see section VIII, below). Finally, the Department plans to prepare and make available to employers a training program that could be used to meet the training requirements contained in the

proposed regulation. The availability of a free training program should help to alleviate some cost concerns.

**Commenter 10: May 9, 2008**      **Daniel M. Minnix, Corporate Safety Director, The Branch Group, Inc.**

Mr. Minnix wrote in opposition to parts of the regulation expressing concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide in the construction industry could result in additional injuries:

“First, on a large project it is unlikely that each equipment operator will be willing to make the determination that no employees will enter the backing zone. This being the case, if one spotter will be in the area each piece of equipment will then be required to have a spotter.

As a result, we have not introduced multiple employees into an area where there would likely have been none, and are now exposing multiple employees to a hazard that they would not have otherwise been exposed to, in effect significantly increasing our chances of a backing accident. Instead of having multiple pieces of equipment operating on a jobsite, we now have multiple pieces of equipment intertwined with multiple employees and I shutter to consider the consequences.

Our second concern relates to operator diligence. We believe that equipment operators will be come less diligent when there is a spotter present and that this casual attitude will eventually become normal behavior, thereby creating another more significant hazard.”

Mr. Minnix wrote in support of a requirement that all employees wear high visibility apparel around moving equipment.

**Agency Response:** See the Department’s response to Commenter 2’s concern that the requirement to have a designated observer/ground guide could result in additional injuries.

**Commenter 11: May 12, 2008**      **Steven C. Vermillion, Chief Executive Officer, Associated General Contractors of Virginia, Inc.**

Mr. Vermillion wrote in opposition to parts of the regulation expressing concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide in the construction industry could result in additional injuries and expense:

On behalf of the members of the Associated General Contractors of Virginia, please be advised that we are strongly opposed to the new requirement as drafted. We believe it will be extremely costly, and will not necessarily result in safer worksites. Our concerns are detailed below.

Specific Concerns

As originally proposed, we believe that additional employees would have to be added in most cases to serve as observers (one per vehicle). And if these observers are required to maintain visual contact with the operator, we are particularly concerned that they may be in more danger than would otherwise be the case. At least three of the fatalities cited as justification for the regulation were observers. We believe this change adds more people to the “danger zone” behind vehicles and will likely result in additional fatalities. This is especially true if the observer is working behind a skid steer loader, for instance.

In terms of cost, let’s just consider some numbers. First, let’s assume that this requirement will require observers for 6,000 pieces of equipment at any given time. (There are more than 30,000 registered contractors in the Commonwealth. If we assume just 10% regularly utilize equipment that would fall under these regulations, and each of these firms has two pieces of equipment that would require observers.)

Assuming the observers would be paid about the same as laborers, the cost of this proposal to Virginia employers would be more than \$14 million per year (6,000 observers times 2,000 hours times \$12.00 (\$10 hourly wage plus 20% burden for taxes and benefits). Obviously these numbers are just estimations. We actually believe that the impact may be greater, but this example demonstrates our point.

....

We are also concerned about vehicle owner-operators making deliveries to jobsites. First off, we are not certain if these individuals are even subject to VOSH regulations since they are sole proprietors with no employees. Regardless, you could have an instance where an independent operator who has not been trained makes a delivery to the jobsite and is cited for non-compliance. The controlling contractor would likely be cited, too under the multi-employer policy. Considering how the industry operates for the delivery of crushed stone from a quarry, for instance, this could be a problem. Or, for that matter, a UPS truck making a delivery at the jobsite could be subject to this requirement.

The end result could conceivably be to require the addition of employees at all possible entrances to the jobsite to turn away any drivers who have not been trained. Again, extra expense for the contractor....very little improvement in jobsite safety.

....

### Recommendation

We suggest that the proposed regulation be modified as we discussed on April 16 to provide training for operators and observers to help them operate in a safe manner. We suggest at this point that the training be optional to see if it is effective. Beyond that, we suggest that no other requirements be changed.”

**Agency Response:** See the Department’s response to Commenter 2’s concern that the requirement to have a designated observer/ground guide could result in increased expenses to employers.

See the Department's response to Commenter 2's concern that the requirement to have a designated observer/ground guide could result in additional injuries.

With regard to Mr. Vermillion's concern that vehicle owner-operators or UPS drivers making deliveries to jobsites, Mr. Vermillion is correct that there some jurisdictional issues. If the owner-operator is a sole owner of the company (not incorporated, not a partnership), and has no employees, then VOSH laws, standards and regulations do not apply. While VOSH does have a multi-employer worksite citation policy, it does not use it to enforce training provisions in regulations. So, if the sole-ownership vehicle operator/owner was not trained in the proposed regulation, VOSH would not cite the general contractor for that lack of training.

**Commenter 12: May 13, 2008      Tom Witt, Engineer Director, Virginia Transportation Construction Alliance**

Mr. Witt wrote in opposition to parts of the regulation expressing concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide in the construction industry could result in additional injuries and expenses to employers:

“On the surface VOSH's proposed language appears to be an obvious improvement to significantly reduce reverse operation incidents. However, the small but significant changes to the current language have the potential to cause more problems on the jobsite [than] it is intended to prevent.

We respectfully request that you carefully reconsider the original intent of the proposed changes and not adopt the new requirement that requires both a designated spotter and a reverse signal alarm during operation of the vehicle.

....

My members are primarily concerned with the possibility of putting additional employees at risk as well as the impact on efficiency and costs.”

**Agency Response:** See the Department's response to Commenter 2's concern that the requirement to have a designated observer/ground guide could result in additional injuries.

See the Department's response to Commenter 2's concern that the requirement to have a designated observer/ground guide could result in increased expenses to employers.

**Commenter 13: May 14, 2008      J. R. (Randy) Bush, CAE, Virginia Forest Products Association**

Mr. Bush wrote in opposition to parts of the regulation expressing concerns similar to Commenter 2 that the requirement to have a designated observer/ground guide in the construction industry could result in additional injuries and expenses to employers:

“When the initial proposal as published in the Register was reviewed, there were a number of concerns our organization identified. While the meeting of stakeholders on April 16<sup>th</sup> helped to clarify and mediate some of our concerns (*should the suggested changes generated from the April 16<sup>th</sup> meeting be implemented*), a number of them still exist.

One major concern is that a requirement for additional workers mandated to implement the use of both reverse audible signals and “ground guides” may well serve as a safety hazard in itself by exposing more individuals to potential harm. This is especially true when there may be multiple instances of “ground guides” where a number of operations may be taking place simultaneously.

While worker safety is of paramount importance, in reviewing the Reverse Signal accidents record, it appears that some of the incidents would not have been prevented even through a change in the regulation.

....

Finally, because of the potential for placing new and significant liability on equipment operators or other company employees should any of the proposed requirements be adopted, we suggest that an emphasis on safety training with regard to procedures associated with backing up vehicles covered by this section might provide equal, if not more favorable, results than simply increasing proscriptive requirements as is being proposed.”

**Agency Response:** See the Department’s response to Commenter 2’s concern that the requirement to have a designated observer/ground guide could result in increased expenses to employers.

See the Department’s response to Commenter 2’s concern that the requirement to have a designated observer/ground guide could result in additional injuries.

With regard to Mr. Witt’s suggestion that an emphasis be placed on safety training requirements for personnel, the original proposed regulation does include training requirements for drivers and designated observers/ground guides. The Department is also recommending that additional training provisions be added to the revised proposed regulation for personnel in work zones (see section VIII, below). Finally, the Department plans to prepare and make available to employers a training program that could be used to meet the training requirements contained in the proposed regulation. The availability of a free training program should help to alleviate some cost concerns.

## **VI. Meeting With Interested Parties**

The Department held a meeting on April 16, 2008, with interested parties representing employer and employee interests from the construction and general industries. The following individuals attended:

P. Dale Bennett, Virginia Trucking Association  
J. R. (Randy) Bush, Virginia Forest Products Association

Terry Pruitt, Precon Construction Company, Precon Marine, Inc., Precon Development Corporation  
Mark Singer, Virginia Utility & Heavy Contractors Council  
Steve Vermillion, Associated General Contractors of Virginia  
Jim Leaman, President VA AFL-CIO  
Dan Nix, Plumbers and Pipefitters  
Darold Kemp IUOE, Local 147, Apprenticeship  
Delegate John A. Cosgrove, Virginia House of Delegates  
Jim Patterson, F. G. Pruitt, Inc.  
Ken Olsen, Slurry Pavers, Inc.  
Tom Witt, Virginia Transportation Construction Alliance  
Tom Moline, Whitehurst Paving Co.  
J. R. Glasscock, Virginia Paving Co.  
Jim Stepahin, Heavy Construction Contractor's Association  
Scott Wynn, Branscome Richmond  
Bill Burge, Assistant Commissioner, Department of Labor and Industry  
Glenn Cox, VOSH Director, Department of Labor and Industry  
John Crisanti, Planning and Policy Manager, Department of Labor and Industry  
Jay Withrow, Director, Office of Legal Support, Department of Labor and Industry

### **Summary of Meeting**

Department staff opened the meeting with introductions and reviewed the purpose of the meeting as was outlined in more detail in an April 7<sup>th</sup> e-mail to the participants:

“Please note that the purpose of this meeting is to have an informal but thorough substantive discussion on the current wording of the proposed regulation. If you want to address the broader policy issues of whether or not there should be a regulation that is within the purview of the Board to consider and should be addressed in a formal written comment to the Board. You can also take the opportunity to express such broader policy issues/concerns to the Board in person the next time the regulation is before the Board (at the beginning of every Board meeting, anyone can address the Board on any topic related to the Boards mandate, but speaking time is usually limited to 5 minutes per speaker).

In light of the above, the approach that will be taken during the meeting is to focus on making sure the structure and wording of regulation provides increased safety protections for employees and employers over current regulations, while still being practical and cost effective for employers to implement, easy for employees, employers and Department personnel to understand, and simple for the Department to enforce.”

Also please note that if a final regulation is adopted, the Department intends to develop a sample training program that would be made available free of charge through the mail or on the Department's website for use by employers and employees. We also intend to research the possibility of posting a 15-30 minute version of the training course online so that it could be completed and a training certification form printed out by the individual once the course is completed. Any input you might have on this approach to training would be welcome at the meeting as well.”



The group then proceeded to review some revised text under consideration by the Department, which are indicated below in underlined, bold italics print:

16 VAC 25-97-10., Applicability.

This chapter shall apply to all general industry and construction industry vehicles, machinery or equipment capable of *operating traveling in reverse* and with an obstructed view to the rear (hereafter referred to as “covered vehicles”), whether intended for operation in off-road work zones or over the road transportation or hauling.

**Group Response: Approved**

16 VAC 25-97-30.A., Covered vehicle requirements.

*A.* No employer shall *use operate* any covered vehicle *in reverse* unless:

1. The covered vehicle has a reverse signal alarm audible above the surrounding noise level, and

2.a. The covered vehicle is *operated in reverse backed-up* only when a designated observer or ground guide signals that it is safe to do so; *or*

*2.b. Before operating the covered vehicle in reverse, the driver visually determines that no employee is in the path of the covered vehicle.*

[NOTE: NEW LANGUAGE IN 2.b. WAS ADDED IN RESPONSE TO 4.16.08 MEETING: “visually”.]

**Group Response: Approved**

The above language change in 2.b. is based on 1910.266(f)(2)(v) of the Logging Standard which provides:

“Before starting or moving any machine, the operator shall determine that no employee is in the path of the machine.”

The change in text was added to address potential cost issues associated with the exemption in the original proposed regulation from use of a designated observer/ground guide that would have allowed drivers to get out of the vehicle to determine that no employees are in the backing zone and that it is reasonable to expect that no employees will enter the backing zone. The change would also provide a level of consistency by providing drivers of covered vehicles in construction and general industry the same reverse operation option as provided drivers in the logging industry.

This change would also help to address situations like a driver pulling into a large shipping terminal and having to back-up to a loading dock – the change would allow the driver as he pulls in to determine that no employees are in the back-up area and then continue with back-up without having to get out of the vehicle. Finally, the Department also considered concerns expressed at the April 16<sup>th</sup> meeting by construction contractors that significant costs could be incurred by the delays on large road building projects where a constant flow of dump trucks could result in each driver having to stop his vehicle, exit the cab to check for employees in the back-up zone, re-enter the cab and proceed with reverse operations for hundreds of yards.

16 VAC 25-97-30.B., Covered vehicle requirements.

~~**B. C.**~~ Covered vehicles that were not equipped with a reverse-signal alarm upon manufacture or were not later retrofitted with an alarm are exempt from subdivision A.1 of 16 VAC 25-97-30. ***If the manufacturer of the covered vehicle offered the employer a reverse signal alarm retrofit package at a reasonable and economically feasible cost and the employer did not have the retrofit package installed, this exemption does not apply.***

**[NOTE: NEW LANGUAGE IN B. IN RESPONSE TO 4.16.08 MEETING: “at a reasonable and economically feasible cost”.]**

**Group Response: Approved**

This changed section is being moved from the 16 VAC 25-97-60 Exemptions, section so that all coverage issues are addressed in one area. The new text regarding retrofit packages

is added for consistency purposes – federal OSHA has a similar policy for older industrial trucks (forklifts) that were originally manufactured without seat belts. OSHA’s policy is that if a manufacturer offered to retrofit a seatbelt onto a forklift, and OSHA can prove that the retrofit package was offered to and refused by the employer, then OSHA will issue a citation to the employer for failure to provide a seatbelt. If no retrofit package is available or it was not offered to the specific employer, no citation can be issued for failure to have the retrofit completed.

16 VAC 25-97-30.C., Covered vehicle requirements.

**C. Covered vehicles equipped with a reverse signal alarm that is not operational or is not functioning properly shall be either:**

**1. operated in reverse only when a designated observer or ground guide signals that it is safe to do so; or**

**2. removed from service until the reverse signal alarm is repaired.**

**[NOTE: NEW LANGUAGE IN C.1. IN RESPONSE TO 4.16.08 MEETING: “either:**

***1. operated in reverse only when a designated observer or ground guide signals that it is safe to do so; or***

***2.”***

**Group Response: Approved**

The new text is added to assure that malfunctioning reverse signal alarms are promptly repaired. A concern was expressed at the April 16<sup>th</sup> meeting about what a general contractor is supposed to do if an independent dump truck driver attempts to enter a road construction site with a malfunctioning reverse signal alarm. One option mentioned by a participant was to not allow the dump truck onto the work site. Department personnel agreed with that approach.

Another concern was raised on the issue of what the Department would require if it was found that a back-up alarm stopped functioning after it was already on the work site (and the alarm had been properly functioning when it entered the work site). Department personnel indicated that in such a circumstance, and in light of it being impossible for the employer to comply with the reverse signal alarm portion of the regulation, it would be permissible to

operate the vehicle with only a designated observer/ground guide, and that the revised proposed regulation would be changed to allow such operation. All agreed that the malfunctioning alarm is then to be fixed as soon as possible.

16 VAC 25-97-30.D. Covered vehicle requirements.

~~D. A.~~ Covered vehicles with operable video or similar technological capability used by the driver and capable of providing the driver to provide the driver with a full view behind the vehicle are exempt from subdivision ~~2. A.2.a~~ of 16 VAC 25-97-30.

**Group Response: Approved**

This section is being moved from the 16 VAC 25-97-60, Exemptions, section so that all coverage issues are addressed in one area. Text changes were made to clarify that the equipment has to be operable and used in order for the exemption to apply.

16 VAC 25-97-30.E., Covered vehicle requirements.

E. To the extent that any federal Department of Transportation (DOT) regulation applies to covered vehicles conflicts with this chapter, the DOT regulation shall take precedence.

**Group Response: Approved**

This changed section is being moved from §16 VAC 25-97-70., Applicability of Federal Regulations, so that all coverage issues are addressed in one area.

16 VAC 25-97-40. Responsibilities while engaged in signaling reverse signal operation activities.

A. While engaged in reverse signaling activities, an employee is functioning as the designated observer/ground guide during reverse signaling activities (e.g., collecting tickets from drivers, giving verbal instructions to drivers, signaling to drivers once reverse

operation of the covered vehicle has begun), the designated observer/ground guide shall:

**Group Response: Approved. The new text was distributed to the group on April 23<sup>rd</sup>, asking that any suggested comments to be provided by May 14<sup>th</sup>. No suggested changes were received.**

**NOTE: NEW LANGUAGE IN A. IN RESPONSE TO 4.16.08 MEETING: “*an employee is functioning as the designated observer/ground guide during reverse signaling activities (e.g., collecting tickets from drivers, giving verbal instructions to drivers, signaling to drivers once reverse operation of the covered vehicle has begun), the designated observer/ground guide shall:*”. ]**

The new text is to make clear that the provisions in A.1 – 8 only apply to employees while they are functioning as designated observers/ground guides for covered vehicles when the vehicles are operating in reverse. When the employees are not engaged as designated observers/ground guides, they are free to do other assigned work.

16 VAC 25-97-40.A.1 - .7. Responsibilities while engaged in signaling reverse signal operation activities.

1. Have no other assigned duties;

2. 1. Not engage in any other activities unrelated to back up operations other than those related to the covered vehicle being signaled;

3. 2. Not use personal cellular phones, personal head phones or similar items that could pose a distraction for the designated observer/ground guide; and

4. 3. Be provided with and wear during daytime operations a safety vest or jacket in orange, yellow, strong yellow green or fluorescent versions of these colors ,reflective warning garments; and

~~5.4.~~ Be provided with and wear during nighttime operations a safety vest or jacket with retroreflective material in orange, yellow, white, silver, strong yellow green or a fluorescent version of these colors and shall be visible at a minimum distance of 1,000 feet.

~~6.5. Not cross behind in close proximity to of a covered vehicle while it is operating in reverse;~~

~~7. Only work from the driver's side of the covered vehicle;~~

~~8. Avoid covered vehicle blind spots;~~

~~9.6. Always maintain eye visual contact with the driver of the covered vehicle while it is operating in reverse; and~~

~~10.7. Maintain a safe working distance from the covered vehicle.~~

**Group Response: The new text was distributed to the group on April 23<sup>rd</sup>, asking that any suggested comments to be provided by May 14<sup>th</sup>. As noted below, comments were received with regard to formerly designated A.1, as duplicative of A.2, and potentially confusing to employers; and formerly designated A.6 as being too rigid to allow employers some flexibility to address work site configurations.**

**[NOTE: NEW LANGUAGE IN REDESIGNATED A.5. IN RESPONSE TO 4.16.08 MEETING COMMENTS: “in close proximity to”**

**NEW LANGUAGE IN REDESIGNATED A.6. IN RESPONSE TO 4.16.08 MEETING: “visual”**

**FORMER ITEM A.1 DELETED AS DUPLICATIVE OF A. AND A.2.**

**FORMER ITEMS A. 7 AND A.8 DELETED IN RESPONSE TO 4.16.08 MEETING.]**

The above changes are added to address unsafe behaviors of designated observers/ground guides identified by the Department that have led to fatal accidents in the past. Violation of these requirements by a trained employee would normally constitute employee misconduct. The wording for the additional provisions comes from safety rules instituted by a Virginia employer following the death of their employee who was functioning as a designated

observer/ground guide.

16 VAC 25-97-40.B, Responsibilities while engaged in signaling reverse signal operation activities.

B. When using a designated observer/ground guide, ~~No~~ driver of a covered vehicle shall operate travel in reverse unless they maintain constant visual contact with the designated observer/ground guide. If visual contact is lost, the driver shall immediately stop the vehicle until visual contact is regained and a positive indication is received from the designated observer/ground guide to restart back-up reverse operations.

**Group Response:** The new language at the beginning of the paragraph was submitted after in response to the April 16<sup>th</sup> meeting and clarifies that this section only applies when the driver is using a designated observer/ground guide. The other non-substantive changes were approved by the group.

**NEW LANGUAGE IN B. IN RESPONSE TO 4.16.08 MEETING COMMENTS:**  
*“When using a designated observer/ground guide”.*

16 VAC 25-97-40.C., Responsibilities while engaged in signaling reverse signal operation activities.

*C. Except as provided for in subdivisions A. and B. of 16VAC25-97-40, ~~no~~ employees shall not enter or cross the path in close proximity to of a covered vehicle while it is operating in reverse, unless they maintain a safe distance of not less than one hundred (100) feet from the rear vehicle.*

**Group Response:** The new text was distributed to the group on April 23<sup>rd</sup>, asking that any suggested comments to be provided by May 14<sup>th</sup>. As noted above, comments were received with regard to formerly designated 16 VAC 25-97-40.A.6. as being too

**rigid to allow employers some flexibility to address work site configurations. The commenters also noted that A.6. and 16 VAC 25-97-4.C. should use the same language since the same hazard of walking behind a vehicle while it is operating in reverse.**

**NEW LANGUAGE IN C. IN RESPONSE TO 4.16.08 MEETING COMMENTS: “*in close proximity to*”**

**NEW LANGUAGE DELETED IN RESPONSE TO 4.16.08 COMMENTS: “*unless they maintain a safe distance of not less than one hundred (100) feet from the rear vehicle.*”**

This new language is to address the issue where a covered vehicle is backing up for a long distance and an employee needs to cross the back-up path, but the truck may still be several hundred yards from the where the employee is going to cross; or the paving example used during the meeting where the employee cannot walk across the newly paved roadway. a 100 foot distance was ORIGINALLY chosen so that there would be no blind spot issues with large vehicles and keeping in mind that a vehicle traveling at 5 MPH covers about 7.3 feet/second - Comments were requested on this distance issue. One commenter suggested more “performance oriented” language such as “in the immediate vicinity” to give employers more flexibility to address site configuration issues. Department staff recommend use of the phrase “in close proximity to.” The Department intends to address the issue of vehicle backing speeds and blind spots in its training materials on the eventual standard.

16 VAC 25-97-50. B., Training.

B. Refresher training shall be provided by the employer for any driver of a covered vehicle or any designated observer/ground guide when the driver or designated observer/ground guide has:

1. Been observed to violate the requirements of this chapter;
2. Been involved in an accident or near miss accident; or
3. Received an evaluation that reveals that the driver or designated signaler observer/ground guide is not operating under this chapter in a safe manner.

**Group Response: Approved**



**[NOTE: NEW LANGUAGE IN B.3. AFTER 4.16.08 MEETING TO CORRECT TERMINOLOGY ERROR: “*signaler observer/ground guide*”]**

~~16 VAC 25-97-60. Exemptions.~~

~~A. Covered vehicles with video or similar technological capability to provide the driver with a full view behind the vehicle are exempt from subdivision 2 of 16 VAC 25-97-30.~~

~~B. Covered vehicles are exempt from subdivision 2 of 16 VAC 25-97-30 if the driver visually determines from outside the vehicle that no employees are in the backing zone and that it is reasonable to expect that no employees will enter the backing zone during reverse operation of the vehicle.~~

~~C. Covered vehicles that were not equipped with a reverse signal alarm upon manufacture or were not later retrofitted with an alarm are exempt from subdivision 1 of 16 VAC 25-97-30.~~

~~16 VAC 25-97-70. Applicability of federal regulations.~~

~~To the extent that any federal Department of Transportation (DOT) regulation applies to covered vehicles conflicts with this chapter, the DOT regulation shall take precedence.~~

**[NOTE: FORMER ITEMS 16 VAC 25-97-60 AND -70 DELETED AND MOVED TO 16 VAC 25-97-30 SO THAT ALL COVERAGE ISSUES ARE ADDRESSED IN ONE AREA.]**

**Group Response: Approved**

After review of the revised proposed regulatory text was completed, Delegate Cosgrove expressed a significant concern that the original proposed regulation would have had a significant impact and cost for small employers and on public sector employers, such as county and city governments that engage road crews. He asked why the regulation had not been designated as having a significant impact on small employers, which would have resulted in its being referred to the General Assembly's Joint Commission on Administrative Rules. Department staff explained that state agencies rely heavily on the Department of Planning and Budget (DPB) to analyze cost impacts and that apparently under Virginia Regulatory Town Hall procedures, DPB is responsible for indicating whether a proposed regulation does or does not have a significant impact on small employers. In this case they did not.

Department staff requested information from participants on average wages for drivers and designated observers/ground guides be submitted with any comments on the revised proposed text.

At the close of April 16<sup>th</sup> meeting, participants were told that changes would be made to the revised proposed regulation text and distributed for comment and that comments would be due back by the close of the 30 day comment period, May 14, 2008. The following comments were submitted directly to the VOSH Program:

**Commenter 1: April 24, 2008      Steven C. Vermillion, Chief Executive Officer, Associated General Contractors of Virginia, Inc.**

“1. On page 8, I understand that you need some specificity with regard to crossing the path of a covered vehicle, but I think 100 feet is excessive in many instances. For example, if it is a small site and a loader is operating "in the middle", does this mean workers might have to leave the site in order to go to another portion of the project? In other words, a flat 100 foot rule is a problem. Perhaps it should say in the immediate vicinity (and I know this is subject to interpretation, but it would cause fewer problems).

2. In drafting our comments to you for sharing with the Board, should we treat this draft as a replacement for the original proposal, or do we need to comment on each?

3. Re hourly rates, based on the information we have (others may have better info), you should probably figure, on average, about \$20 per hour for operators, plus fringes, and \$15 per hour, plus fringes, for laborers. But please note...the training cost will be minimal as compared to the cost of the observer.”

**Agency Response:** With regard to comment 1-1, the Department has inserted the phrase “in close proximity” into redesignated sections 16 VAC 25-97-40.A.5 and 16 VAC 25-97-40.C.

The Department has no response to comments 1-2 and 1-3.

**Commenter 2: April 29, 2008      Terry Pruitt, Precon Construction Company**

1. "Thank you for the revisions, having reviewed these changes, I am much more comfortable with the proposed rules; with one exception. Please refer to your page 8, paragraph C "Except as provided for in subdivisions A. and B. of 16VAC25-97-40..." I can foresee that it may not always be possible to provide at least 100' safe distance from the rear of a backing vehicle. In the alternative, I suggest language to the effect that the person crossing the path of a backing vehicle only do so, after determining that the speed and distance of the backing vehicle allow sufficient time and space to permit safe crossing. Of course this element would also have to be addressed in the training component for the observer/ground guide.

2. You may also, already know, VDOT has a Flagger Certification Program, that could be amended to include observer/ground guide duties as well."

**Agency Response:** With regard to comment 2-1, the Department has eliminated the "100' safe distance" requirement from 16 VAC 25-97-40.C., and inserted the phrase "in close proximity" into redesignated sections 16 VAC 25-97-40.A.5 and 16 VAC 25-97-40.C.

The Department has no response to comment 2-2.

**Commenter 3: May 9, 2008 Jim Patterson, F. G. Pruitt, Inc.**

1. "Having attended the open meeting on April 16, 2008, we look forward to your consideration of implementing the positive feedback derived from that meeting. "

**Agency Response:** None.

**Commenter 4: May 10, 2008 Mark I. Singer, Legislative Representative, Virginia Utility & Heavy Contractors Council**

"The VUHCC strongly supports the following changes proposed and discussed at the 4/16/08 meeting of industry stakeholders.

[1.] **16VAC 25-97-30 adding the following language -**  
*or 2.b. Before operating the covered vehicle in reverse, the driver determines that no employee is in the path of the covered vehicle.*

[2.] Modification to the new language creating Section B adding a "reasonable time" provision.

[3.] Modification to the new language creating Section C by adding a "use of spotter" provision that would allow the vehicle to remain in service.

**16VAC 25-97-40**

[4.] Eliminate items A. 7 and 8 and modify 9 by substituting "visual" for "eye".

[5.] With regard to item A. 6 this language, which also appears in a slightly different form in one other location of the proposed regulations as Section C, creates a blanket prohibition on both the ground guide and all employees such that neither shall “enter or cross the path “of a covered vehicle while it is operating in reverse. At a minimum the language should be consistent in all places. Most importantly, as was pointed out in the 4/16 meeting, there are certain applications such as in a paving train, when compliance under this proposed language simply is unrealistic. Per discussions at the meeting we believe that the words “when reasonable” or similar language need to be added to allow for unique industry circumstances.

[6.] Specific industry representatives from our three associations have also indicated to me that they may have additional unique circumstances that require the use of a “reasonable” standard, or perhaps an exemption from the proposed regulations. For example, loading a large generator or building materials onto the deck of pickup truck (that obstructs the rear view) and moving that load, in reverse for at least some of the time, to a different job location. In these instances the driver certainly should be responsible for backing up in a safe manner, but to require the addition of a back-up alarm on a vehicle for infrequent or one-time usage that would trigger compliance with the proposed regulations seems onerous, expensive, and unnecessary. We would, therefore, urge that language be added to the proposed regulations which would not require compliance in these situations.

[7.] Finally, because of the potential for placing new and significant liability on equipment operators or other company employees should any of the proposed requirements be adopted, we suggest that an emphasis on safety training with regard to procedures associated with backing up vehicles covered by this section might provide equal, if not more favorable, results than simply increasing proscriptive requirements as is being proposed.

On behalf of the VUHCC and our 350 members, I want to thank you and the Board for your willingness to both allow additional time to review this proposal to exceed federal OSHA requirements, and for arranging the 4/16 industry meeting of interested parties. With the adoption of the suggestions offered in this correspondence, VUHCC would have no objections to adoption of the proposal.”

**Agency Response:** With regard to comments 4-1, 4-2 and 4.3, the requested language is included in the revised proposed regulation text.

With regard to comment 4-4, the listed sections have been deleted from the revised proposed regulation text.

With regard to comment 4-5, the Department has eliminated the “100’ safe distance” requirement from 16 VAC 25-97-40.C., and inserted the phrase “in close proximity” into redesignated sections 16 VAC 25-97-40.A.5 and 16 VAC 25-97-40.C.

With regard to comment 4-6, the revised proposed regulation does not require an employer to add a reverse signal alarm to a vehicle that was not originally equipped with one, unless the manufacturer later specifically offers a retrofit package to that employer “at a reasonable and economically feasible cost” (see 16 VAC 25-97-30.B). If no retrofit is ever offered, the vehicle is

exempt from the requirement to have a reverse signal alarm.

With regard to comment 4-7, the Department plans to prepare and make available to employers a free training program that could be used to meet the training requirements contained in the proposed regulation.

**Commenter 5: May 12, 2008**      **Thomas Moline, Safety Director, Whitehurst Transport, Inc., Whitehurst Paving Company, Inc.**

“Our average pay for a driver is \$15 [per] hour and for the flagger is \$9.”

**Agency Response:** None.

**Commenter 6: May 13, 2008**      **Tom Witt, Engineer Director, Virginia Transportation Construction Alliance**

“I certainly think that the summary of proposed changes resulting from our April 16th meeting are improvements and will make the changes more palatable. However, I still do struggle with the concerns that the changes may not gain the desired effect but have the potential to cause other unintended consequences. My members are primarily concerned with the possibility of putting additional employees at risk as well as the impact on efficiency and costs.

....

“However, if it is determined that the changes are necessary VTCA encourages the inclusion of the changes proposed during the April 16<sup>th</sup> stakeholder meeting reflected in your summary email dated April 23, 2008.

VTCA recommends the following additional changes to the proposed language:

- [1.] Section 16 VAC 25-97-40: Delete item 1 “Have no other assigned duties;” to clarify the intent that the designated observer is allowed to have other “assigned duties” as long as they are not performed during reverse operations. Item 2 in the same section is sufficient to convey the requirement without confusion that item 1 introduces.
- [2.] Section 16 VAC 25-97-40: Modify Section B to read: “*When using a designated observer/ground guide* no driver of a covered vehicle shall operate...”. This clarifies that when a ground observer is not being utilized (as provided in the proposed language allowing visual inspection) that visual contact is not necessary (or possible).”

**Agency Response:** With regard to comment 6-1, the listed section has been deleted from the revised proposed regulation text.

With regard to comment 6-2, the recommended language has been added to the revised proposed regulation text.

**Commenter 7: May 12, 2008**

**Steven C. Vermillion, Chief Executive Officer, Associated General Contractors of Virginia, Inc.**

[1.] “While the changes discussed on the 16<sup>th</sup> to section VAC 25-97-30 to allow the operator to determine that no employees are in the path of the covered vehicle while seated in the vehicle would be a major improvement, the requirement still could be a problem for some types of equipment that frequently operate in reverse, such as a front end loader or skid steer loader.

....

[2.] We are also concerned about personal liability for operators when they make a determination that no employees are or will be in the path of the machine. While they may not be subject as an individual to a VOSH citation, we believe they may be assuming some potential liability.”

**Agency Response:** With regard to comment 7-1, see the Department’s response to Commenter 3 from the 30-day comment period on the issue of what vehicles would be considered to have an obstructed view to the rear. As noted in that response, “a number of Commenters may be under the impression that because a vehicle has a reverse signal alarm, it automatically would be considered to have an obstructed view to the rear and be covered by the proposed regulation. That is not the case.” A front end loader (with only a bucket attachment on the front of the vehicle and no attachment on the back) that has a large glass enclosed cab that allows the operator to see directly behind the vehicle through the rear glass, would not be considered to have an obstructed view to the rear. As noted in the regulation, there are certain exceptions to this general rule (e.g. damage to windows/mirrors, restricted visibility due to weather conditions or work being done after dark without proper lighting).

With regard to comment 7-2, as noted previously, the newly added language in 16 VAC 25-97-30.A.2.b. (“Before operating the covered vehicle in reverse, the driver visually determines that no employee is in the path of the covered vehicle.”), is based on a current provision from the federal OSHA Logging Standard, 1910.266. The Department is not aware of any liability issues with regard to the Logging Standard provision that did not already exist in statutory or common law. If an accident occurs “off road” then VOSH regulations will apply as will existing Workers’ Compensation laws and regulations. If an accident occurs on the highway or a street, the same laws and regulations will apply, along with existing traffic regulations that are enforced by police and sheriff’s department around the state.

**Commenter 8: May 14, 2008**

**J. R. (Randy) Bush, CAE, Virginia Forest Products Association**

“Even with suggested changes from the April 16 stakeholders meeting, concerns still lie with the level of “gray” areas (*i.e. those subject to interpretation*) that may provide confusion in the implementation of the proposed regulation. While one person may interpret language one way, another may view it differently.

This interpretation is important since requiring additional employees can create a significant financial impact, especially when all costs, potential benefits, and potential new safety hazards are considered.

**While we do not feel that a change in the current regulation is warranted**, if changes in the standard are made we feel the adoption of modifications and clarifying language from the April 16<sup>th</sup> stakeholders meeting should be implemented. In particular, the following suggested modifications are particularly critical:

[1.] **16VAC 25-97-30 adding the following language -**  
*or 2.b. Before operating the covered vehicle in reverse, the driver determines that no employee is in the path of the covered vehicle.*

This suggested change above should include appropriate implementation guidance, such as consideration of employee training regarding safe “no-go” zones and the ability for operators to scan affected areas upon approach.

**NEW LANGUAGE IN B. IN RESPONSE TO 4.16.08 MEETING: “at a reasonable and economically feasible cost”.**

[2.] Modification to the new language creating Section B adding a “reasonable time” provision.

[3.] Modification to the new language creating Section C by adding a “use of spotter” provision that would allow the vehicle to remain in service.

**Agency Response:** With regard to comments 8-1, 8-2 and 8.3, the requested language is included in the revised proposed regulation text.

## **VII. Additional 30 Day Comment Period, September 29 Through October 29, 2008**

No comments were received on the Virginia Regulatory Townhall. One comment was received directly by the Department:

**Commenter 1: October 22, 2008**

**P. Dale Bennett, Virginia Trucking Association**

“A couple of our members have finally reviewed the regs and expressed some concern about the retrofit language in paragraph B under "covered vehicle requirements." Their questions are what constitutes "at a reasonable and economically feasible cost ", what criteria will be used in making that determination and who will be making that determination? They are concerned that this is, in essence, a mandate to retrofit all trucks operating in Virginia with back-up alarms. Any answers/guidance you give me to pass on to them will be greatly appreciated.”

**Agency Response:** This response was originally provided to the Board at the July 10, 2008, Board meeting:

"The new text regarding retrofit packages is added for consistency purposes - federal OSHA has a similar policy for older industrial trucks (forklifts) that were originally manufactured without seat belts. OSHA's policy is that if a manufacturer offered to retrofit a seatbelt onto a forklift, and OSHA can prove that the retrofit package was offered to and refused by the employer, then OSHA will issue a citation to the employer for failure to provide a seatbelt. If no retrofit package is available or it was not offered to the specific employer, no citation can be issued for failure to have the retrofit completed."

The Department will not use this provision to mandate retrofitting of all trucks with back-up alarms. As the above explanation indicates, the Department would be required to prove that not only was there a retrofit package available from the specific manufacturer of the vehicle, but that it was specifically offered to the individual employer for the specific vehicle, and that the employer refused it. The above requirements pose a very difficult standard of proof to meet in a courtroom, and any use of the section would be a very rare occurrence. To the best knowledge of Department staff over the last 23 years there has not been a single instance of this issue of a retrofit package for either a seat belt on a forklift or for a back-up alarm on a vehicle.

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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 the **final** regulation to amend the following standards:

Vehicular Equipment for Electric Power Generation, Transmission and Distribution in General Industry, 16 VAC 25-90-1910.269(p)(1)(ii);

Motor Vehicles in the Construction Industry, 16 VAC 25-175-1926.601(b)(4);

Material Handling Equipment in the Construction Industry, 16 VAC 25-175-1926.602(a)(9)(ii); and,

Mechanical Equipment, Power Transmission and Distribution in the Construction Industry, 16 VAC 25-175-1926.952(a)(3).

and also consider for adoption the **final** comprehensive regulation:

Reverse Signal Operation Safety Requirements for Motor Vehicles, Machinery and Equipment in General Industry and the Construction Industry, 16 VAC 25-97.

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 at any time with respect to reconsideration or revision of this or any other regulation.

Final Regulation to Amend Reverse Signal Operation Safety Procedures Dealing with Vehicular Equipment, Motor Vehicles, Material Handling Equipment and Motor Vehicle Equipment in Existing Standards: 16 VAC 25-90-1910.269; 16 VAC 25-175- 1926.601; 16 VAC 25-175- 602 and 16 VAC 25-175- 952;

and

Proposed Regulation to Establish Reverse Signal Operation Safety Requirements for Vehicles, Machinery and Equipment for General Industry and the Construction Industry, 16 VAC 25-97.

As Adopted by the  
Safety and Health Codes Board

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



VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM

VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

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

- 16 VAC 25-90-1910.269 (p)(1)(ii), Vehicular Equipment for Electric Power Generation, Transmission and Distribution in General Industry;
- 16 VAC 25-175-1926.601 (b)(4), Motor Vehicles in the Construction Industry;
- 16 VAC 25-175-1926.602 (a)(9)(ii), Material Handling Equipment in the Construction Industry;
- 16 VAC 25-175-1926.952 (a)(3), Mechanical Equipment, Power Transmission and Distribution in the Construction Industry
- 16 VAC 25-97, Reverse Signal Operation Safety Requirements for Motor Vehicles, Machinery and Equipment in General Industry and the Construction Industry

**DRAFT REVISIONS IN RESPONSE TO 4.16.08 MEETING AND COMMENTS RECEIVED FROM 4.16.08 TO 5.14.08**

**KEY:**

- \* **BLACK LETTERING INDICATES ORIGINAL PROPOSED REGULATION TEXT.**
- \* **RED LETTERING INDICATES REVISED TEXT PROPOSED BY DEPARTMENT FOR 4.16.08 MEETING WITH INTERESTED PARTIES.**
- \* **BLUE LETTERING INDICATES REVISED TEXT BASED ON COMMENTS RECEIVED DURING 4.16.08 MEETING AND COMMENTS RECEIVED AFTER THE MEETING.**

**16 VAC 25-90-1910.269(p)(1)(ii)**

**Electric Power Generation, Transmission, and Distribution; Mechanical Equipment**

~~1910.269(p)(1)(ii): No vehicular equipment having an obstructed view to the rear may be operated on off highway jobsites where any employee is exposed to the hazards created by the moving vehicle unless:~~

- ~~(i) The vehicle has a reverse signal alarm audible above the surrounding noise level, or;~~
- ~~(ii) The vehicle is backed up only when a designated employee signals that it is safe to do so.~~

See Reverse Signal Operation Safety Requirements for Motor Vehicles, Machinery and Equipment in General Industry and the Construction Industry, 16 VAC 25-97.

**16 VAC 25-175-1926.601(b)(4)**

**Motor Vehicles**

~~§1926.601(b)(4): No employer shall use any motor vehicle equipment having an obstructed view to the rear unless:~~

- ~~(i) The vehicle has a reverse signal alarm audible above the surrounding noise level or;~~
- ~~(ii) The vehicle is backed up only when an observer signals that it is safe to do so.~~

See Reverse Signal Operation Safety Requirements for Motor Vehicles, Machinery and Equipment in General Industry and the Construction Industry, 16 VAC 25-97.

**16 VAC 25-175-1926.602(a)(9)(ii)**

**Material Handling Equipment**

~~§1926.602(a)(9)(ii): No employer shall permit earthmoving or compacting equipment which has an obstructed view to the rear to be used in reverse signal unless the equipment has in operation a reverse signal alarm distinguishable from the surrounding noise level or an employee signals that it is safe to do so.~~

See Reverse Signal Operation Safety Requirements for Motor Vehicles, Machinery and Equipment in General Industry and the Construction Industry, 16 VAC 25-97.

**16 VAC 25-175-1926.952(a)(3)**

**Mechanical Equipment**

~~§1926.952(a)(3): No employer shall use any motor vehicle equipment having an obstructed view to the rear unless:~~

- ~~(i) The vehicle has a reverse signal alarm audible above the surrounding noise level or;~~
- ~~(ii) The vehicle is backed up only when an observer signals that it is safe to do so.~~

See Reverse Signal Operation Safety Requirements for Motor Vehicles, Machinery and Equipment in the Construction Industry, 16 VAC 25-97.

CHAPTER 97.

REVERSE SIGNAL OPERATION SAFETY REQUIREMENTS FOR MOTOR VEHICLES,  
MACHINERY AND EQUIPMENT IN GENERAL INDUSTRY AND THE CONSTRUCTION  
INDUSTRY.

16 VAC 25-97-10. Applicability.

This chapter shall apply to all general industry and construction industry vehicles, machinery or equipment capable of **operating traveling** in reverse and with an obstructed view to the rear (hereafter referred to as “covered vehicles”), whether intended for operation in off-road work zones or over the road transportation or hauling.

16 VAC 25-97-20. Definitions.

The phrase “obstructed view to the rear” means anything that interferes with the overall view of the operator of the vehicle to the rear of the vehicle at ground level, and includes, but is not limited to, such obstacles as any part of the vehicle (e.g., structural members); its load (e.g., gravel, dirt, machinery parts); its height relative to ground level viewing; damage to windows or side mirrors, etc., used for rearview movement of the vehicle; restricted visibility due to weather conditions (e.g., heavy fog, heavy snow); or work being done after dark without proper lighting.

16 VAC 25-97-30. Covered vehicle requirements.

**A.** No employer shall **use operate** any covered vehicle **in reverse** unless:

1. The covered vehicle has a reverse signal alarm audible above the surrounding noise level,  
and

2.a. The covered vehicle is **operated in reverse** ~~backed-up~~ only when a designated observer  
or ground guide signals that it is safe to do so; **or**

**2.b. Before operating the covered vehicle in reverse, the driver **visually determines that**  
**no employee is in the path of the covered vehicle.****

**B. ~~C.~~ Covered vehicles that were not equipped with a reverse-signal alarm upon  
manufacture or were not later retrofitted with an alarm are exempt from subdivision A.1 of  
16 VAC 25-97-30. If the manufacturer of the covered vehicle offered the employer a  
reverse signal alarm retrofit package at a reasonable and economically feasible cost and  
the employer did not have the retrofit package installed, this exemption does not apply.**

**C. Covered vehicles equipped with a reverse signal alarm that is not operational or is not  
functioning properly shall be **either:****

**1. operated in reverse only when a designated observer or ground guide signals that it is  
safe to do so; or**

**2. removed from service until the reverse signal alarm is repaired.**

**D. ~~A.~~ Covered vehicles with **operable** video or similar technological capability **used by the  
driver and capable of providing the driver** ~~to provide the driver~~ with a full view behind the  
vehicle are exempt from subdivision ~~2-~~ **A.2.a** of 16 VAC 25-97-30.**

E. To the extent that any federal Department of Transportation (DOT) regulation applies to covered vehicles conflicts with this chapter, the DOT regulation shall take precedence.

16 VAC 25-97-40. Responsibilities while engaged in ~~signaling~~ **reverse signal operation** activities.

A. While ~~engaged in reverse signaling activities~~, **an employee is functioning as** the designated observer/ground guide **during reverse signaling activities (e.g., collecting tickets from drivers, giving verbal instructions to drivers, signaling to drivers once reverse operation of the covered vehicle has begun)**, the designated observer/ground guide shall:

~~1. Have no other assigned duties;~~

~~2. 1. Not engage in any other activities unrelated to back-up operations~~ other than those related to the covered vehicle being signaled;

~~3. 2. Not use personal cellular phones, personal head phones or similar items that could pose a distraction for the designated observer/ground guide; and~~

~~4. 3. Be provided with and wear during daytime operations a safety vest or jacket in orange, yellow, strong yellow green or fluorescent versions of these colors, reflective warning garments; and~~

~~5. 4. Be provided with and wear during nighttime operations a safety vest or jacket with retroreflective material in orange, yellow, white, silver, strong yellow green or a fluorescent version of these colors and shall be visible at a minimum distance of 1,000 feet.~~

~~6. 5. Not cross behind in close proximity to~~ **of a covered vehicle while it is operating in**

reverse;

7. Only work from the driver's side of the covered vehicle;

8. Avoid covered vehicle blind spots;

9-6. Always maintain eye visual contact with the driver of the covered vehicle while it is operating in reverse; and

10-7. Maintain a safe working distance from the covered vehicle.

B. When using a designated observer/ground guide, no driver of a covered vehicle shall operate travel in reverse unless they maintain constant visual contact with the designated observer/ground guide. If visual contact is lost, the driver shall immediately stop the vehicle until visual contact is regained and a positive indication is received from the designated observer/ground guide to restart back-up reverse operations.

C. Except as provided for in subdivisions A. and B. of 16VAC25-97-40, no employees shall not enter or cross the path in close proximity to of a covered vehicle while it is operating in reverse, unless they maintain a safe distance of not less than one hundred (100) feet from the rear vehicle.

16 VAC 25-97-50. Training.



A. Prior to permitting an employee to engage in any covered activity under this chapter, the employer shall ensure that each driver of a covered vehicle and each designated observer/ground guide is trained in the requirements of this chapter.

B. Refresher training shall be provided by the employer for any driver of a covered vehicle or any designated observer/ground guide when the driver or designated observer/ground guide has:

1. Been observed to violate the requirements of this chapter;
2. Been involved in an accident or near miss accident; or
3. Received an evaluation that reveals that the driver or designated *signaler* *observer/ground guide* is not operating under this chapter in a safe manner.

**NEW LANGUAGE IN B.3. AFTER 4.16.08 MEETING TO CORRECT TERMINOLOGY ERROR: “*signaler observer/ground guide*”**

~~16 VAC 25-97-60. Exemptions:~~

~~A. Covered vehicles with video or similar technological capability to provide the driver with a full view behind the vehicle are exempt from subdivision 2 of 16 VAC 25-97-30.~~

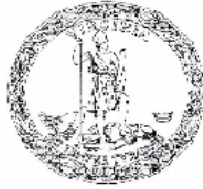
~~B. Covered vehicles are exempt from subdivision 2 of 16 VAC 25-97-30 if the driver visually determines from outside the vehicle that no employees are in the backing zone and that it is reasonable to expect that no employees will enter the backing zone during reverse operation of the vehicle.~~

~~C. Covered vehicles that were not equipped with a reverse signal alarm upon manufacture or~~

~~were not later retrofitted with an alarm are exempt from subdivision 1 of 16 VAC 25-97-30.~~

~~16 VAC 25-97-70. Applicability of federal regulations:~~

~~To the extent that any federal Department of Transportation (DOT) regulation applies to covered vehicles conflicts with this chapter, the DOT regulation shall take precedence.~~



*COMMONWEALTH of VIRGINIA*

**DEPARTMENT OF LABOR AND INDUSTRY**

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**VIRGINIA SAFETY AND HEALTH CODES BOARD  
BRIEFING PACKAGE  
FOR NOVEMBER 20, 2008**

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**NOTICE OF PERIODIC REVIEW OF CERTAIN EXISTING REGULATIONS**

**I. Action Requested**

None at this time. Approvals on periodic review reports will be requested at future Board meetings.

**II. Background and Basis**

Governor Kaine issued Executive Order Number 36 (06), "Development and Review of Regulations Proposed by State Agencies." This executive order governs the periodic review or re-evaluation of existing regulations by all State Agencies and the regulatory process to promulgate new regulations or amend current regulations. All of the regulations promulgated by the Safety and Health Codes Board are included in the periodic review process at least once every four years.

**III. Process**

The process of periodic review begins with publication of a Notice of Periodic Review in the Virginia Register. When the Notice of Periodic Review is published, a public comment period of 21 days begins. Following the public comment period (no more than 90 days), the agency will post a report on the Town Hall website indicating either that (1) the Board will retain the regulation as is, or (2) the Board will begin a regulatory action to amend the regulation.

#### **IV. Current Status**

Eleven regulations of the Safety and Health Codes Board have been identified for review in 2008. A notice of periodic review will be published in the Virginia Register. The notice will request public comment for a period of 21 days for the following regulations:

1. 16 VAC 25-20, Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fees;
2. 16 VAC 25-30, Regulations for Asbestos Emissions Standards for Demolition and Renovation Construction Activities and the Disposal of Asbestos-Containing Construction Wastes—Incorporation By Reference, 40 CFR 61.140 Through 61.156;
3. 16 VAC 25-35, Regulation Concerning Certified Lead Contractors Notification, Lead Project Permits and Permit Fees;
4. 16 VAC 25-40, Standard for Boiler and Pressure Vessel Rules and Regulations;
5. 16 VAC 25-70, Virginia Confined Space Standard for the Telecommunications Industry;
6. 16 VAC 25-80, Access to Employee Exposure and Medical Records;
7. 16 VAC 25-140, Virginia Confined Space Standard for the Construction Industry;
8. 16 VAC 25-150, Underground Construction, Construction Industry;
9. 16 VAC 25-160, Construction Industry Standard for Sanitation;
10. 16 VAC 25-170, Virginia Excavation Standard, Construction Industry; and
11. 16 VAC 25-180, Virginia Field Sanitation Standard, Agriculture

#### **V. Next Stage of Review**

Over the next several months, the Staff of the Department of Labor and Industry will be reviewing these regulations and will prepare the reports with recommendations to be presented for the Board's consideration at the next meeting.

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**VIRGINIA SAFETY AND HEALTH CODES BOARD**

**BRIEFING PACKAGE FOR**

**November 20, 2008**

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**Request to Amend the Regulation Concerning Licensed Asbestos  
Contractor Notification, Asbestos Project Permits, and Permit Fees; (16VAC25-20)**

**I. Action Requested.**

The Virginia Occupational Safety and Health (VOSH) Program requests the Safety and Health Codes Board to authorize the Department to amend the Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fees; (16VAC25-20), with an effective date of February 1, 2009.

**II. Summary of Intended Regulatory Action.**

The VOSH Program seeks the amendment of Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fees. What is being requested is the deletion of the single word "material" in the definition of "Asbestos project" and related subject-verb agreement which is included in the Definitions sub-section, 16VAC25-20-10.

**III. Basis, Purpose and Impact of the Proposed Rulemaking.**

**A. Basis**

The basis for this action is two-fold:

1. In accordance with §40.1-22(5), " The Board, with the advice of the Commissioner, is hereby authorized 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 ...All such rules and regulations shall be designed to protect and promote the safety and health of such employees. This correction supports that statutory mandate.

2. In accordance with § 2.2-4006.A.3. agency actions subject to the Administrative Process Act (APA) are exempted from the Article 2 promulgation requirements of the APA if the action consists only of changes in style or form or corrections of technical errors.

**B. Purpose.**

The purpose of this change is to correct longstanding regulatory oversight errors as well as to eliminate confusion on the part of asbestos contractors who must be licensed by the Department of Professional and Occupational Regulation (DPOR) but must file asbestos project permits with DOLI. This change clarifies typographical and verb plurality errors in the functionally consistent definitions of “asbestos project” between that used by the Department of Labor and Industry (DOLI) and that of DPOR.

**Department of Professional & Occupational Regulation (DPOR)**

**Department of Labor & Industry (DOLI)**

18VAC15-20-20. Definitions.

16VAC25-20-10. Definitions.

\* \* \*

\* \* \*

"Asbestos project" or "asbestos abatement project" means an activity involving job set-up for containment, removal, encapsulation, enclosure, encasement, renovation, repair, construction or alteration of asbestos-containing materials. An asbestos project or asbestos abatement project shall not include nonfriable asbestos-containing roofing, flooring and siding material which when installed, encapsulated or removed does not become friable.

"Asbestos project" means an activity involving job set-up for containment, removal, encapsulation, enclosure, encasement, renovation, repair, construction or alteration of an asbestos-containing material. An asbestos project or asbestos abatement project shall not include nonfriable asbestos-containing ~~material~~ roofing, flooring and siding ~~materials~~ material which when installed, encapsulated or removed ~~do~~ does not become friable.

\* \* \*

\* \* \*

The current Department of Professional and Occupational Regulation (DPOR) Asbestos Licensing Regulations only exempt "nonfriable roofing, flooring and siding materials which when installed, encapsulated or removed do not become friable."

Deletion of the extraneous word "material" in the definition of “asbestos project” prior to the term “roofing”, and correction of the related verb plurality would correct the error and clarify that roofing, flooring and siding are the only non-friable materials when installed, removed, etc., that are not regulated by DOLI's Notification and Permit regulations.

**C. Impact on Employers.**

Asbestos contractors who are required to be licensed by DPOR would be provided functionally consistent regulatory language between DPOR and DOLI of what constitutes an “asbestos project”. This change will reduce confusion as to which projects require notification filing with DOLI for an asbestos project permits.

**D. Impact on Employees.**

There would be no impact on employees.

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

As the Department has previously incorporated the change through interpretation, there would be no impact on the Department.

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### **RECOMMENDED ACTION**

Staff of the Department of Labor and Industry recommends that the Safety and Health Codes Board adopt the correcting amendments to the final rule for Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fees; (16VAC25-20), as authorized by Virginia Code §§ 40.1-22(5) and 2.2-4006.A.3., with an effective date of February 1, 2009.

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 at any time with respect to reconsideration or revision of this or any other regulation which has been adopted in accordance with Subsection 2.2-4006 A.4 of the Administrative Process Act.

**Regulation Concerning Licensed Asbestos Contractor Notification,  
Asbestos Project Permits, and Permit Fees;  
(16VAC25-20)**

**As Adopted by the  
Safety and Health Codes Board**

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



**VIRGINIA OCCUPATIONAL SAFETY AND HEALTH PROGRAM**

**VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY**

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

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

# Virginia Administrative Code

## TITLE 16 - LABOR AND EMPLOYMENT AGENCY 25 - SAFETY AND HEALTH CODES BOARD

### CHAPTER 20

#### REGULATION CONCERNING LICENSED ASBESTOS CONTRACTOR NOTIFICATION, ASBESTOS PROJECT PERMITS, AND PERMIT FEES

##### 16VAC25-20-10. Definitions.

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

"Activity" means from the set-up of negative air containment through the breakdown of that containment. Work within a single structure or building shall be considered as one "activity" so long as such work is not interrupted except for weekends, holidays, or delays due to inclement weather. Where containment is not required, all work within single structure or building shall be considered as one "activity."

"Asbestos" means any material containing more than 1.0% asbestos by area as determined by microscopy.

"Asbestos contractor's license" means an authorization issued by the Department of Professional and Occupational Regulation permitting a person to enter into contracts to perform an asbestos abatement project.

"Asbestos project" means an activity involving job set-up for containment, removal, encapsulation, enclosure, encasement, renovation, repair, construction or alteration of an asbestos-containing material. An asbestos project or asbestos abatement project shall not include nonfriable asbestos-containing ~~material~~ roofing, flooring and siding ~~materials~~ material which when installed, encapsulated or removed ~~do~~ does not become friable.

"Asbestos supervisor" means any person so designated by an asbestos contractor who provides on-site supervision and direction to the workers engaged in asbestos projects.

"Building" means a combination of any materials, whether portable or fixed including part or parts and fixed equipment of them, that forms a structure for use or occupancy by persons or property.

"Construction" means all the on-site work done in building or altering structures from land clearance through completion, including excavation, erection, and the assembly and installation of components and equipment.

"Department" means the Department of Labor and Industry.

"Friable" means that the material when dry, may be crumbled, pulverized, or reduced to powder by hand pressure and includes previously nonfriable material after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

"Person" means a corporation, partnership, sole proprietorship, firm, enterprise, franchise, association, or any other individual or entity.

"Residential buildings" means site-built homes, modular homes, condominium units, mobile homes, manufactured housing, and duplexes, or other multi-unit dwelling consisting of four units or less which are currently in use or intended for use only for residential purposes. Demolitions of any of the above structures which are to be replaced by other than a residential building shall not fall within this definition.

"RFS contractor's license" means an authorization issued by the Department of Professional and Occupational Regulation permitting a person to enter into contracts to install, remove or encapsulate nonfriable asbestos-containing roofing, flooring, and siding materials.

"Site" means a specific geographically contiguous area with defined limits owned by a single entity on which asbestos removal will occur.

"Structure" means an assembly of materials, or part or parts of them, forming a construction.

**16VAC25-20-20. Authority and application.**

- A. This chapter is established in accordance with § 40.1-51.20 of the Code of Virginia.
- B. This chapter shall apply to all licensed asbestos contractors or RFS contractors who engage in asbestos projects.
- C. The application of this chapter to contractors who work on federal property will be decided by the department based on a review of the facts in each case. The contractor shall contact the department to determine the applicability of the regulations to a specific project.
- D. This chapter shall not affect the reporting requirements under § 40.1-51.20 C or any other notices or inspection requirements under any other provision of the Code of Virginia.

**16VAC25-20-30. Notification and permit fee.**

- A. Written notification of any asbestos project of 10 linear feet or more or 10 square feet or more shall be made to the department on a department form. Such notification shall be sent by facsimile transmission as set out in 16VAC25-20-30 J, certified mail, or hand-delivered to the department. Notification shall be postmarked or made 20 days before the beginning of any asbestos project.
- B. The department form shall include the following information:
  - 1. Name, address, telephone number, and Virginia asbestos contractor's license number of persons intending to engage in an asbestos project;

2. Name, address, and telephone number of facility owner or operator;
  3. Type of notification; amended, emergency, renovation, or demolition;
  4. Description of building, structure, facility, installation, vehicle, or vessel to be demolished or renovated including present use, prior use or uses, age, and address;
  5. Estimate of amount of friable asbestos and method of estimation;
  6. Amount of the asbestos project fee submitted;
  7. Schedule set-up date, removal date, and completion date of asbestos abatement work and times of removal;
  8. Name and Virginia asbestos supervisor's license number of the project supervisor on site;
  9. Name, address, telephone number, contact person, and landfill permit number of the waste disposal site where the asbestos containing material will be disposed;
  10. Detailed description of the demolition or removal methods to be used;
  11. Procedures and equipment to control emissions and protect public health during removal, transit, loading, and unloading. Including the monitoring plan;
  12. Credit card number, expiration date, and signature of cardholder if a facsimile transmission is to be made pursuant to 16VAC25-20-30 J; and
  13. Any other information requested on the department form.
- C. An asbestos project permit fee shall be submitted with the completed project notification. The fee shall be in accordance with the following schedule unless a blanket notification is granted under subsection D of this section:
1. \$50 for each project equal to or greater than 10 linear feet or 10 square feet up to and including 260 linear feet or 160 square feet;
  2. \$160 for each project of more than 260 linear feet or 160 square feet up to and including 2600 linear feet or 1600 square feet;
  3. \$470 for each project of more than 2600 linear feet or 1600 square feet; and
  4. If the amount of asbestos is reported in both linear feet and square feet the amounts will be added and treated as if the total were all in square feet for the purposes of this subsection.
- D. A blanket notification, valid for a period of one year, may be granted to a contractor who enters into a contract for asbestos removal or encapsulation on a specific site which is expected to last for one year or longer.

1. The contractor shall submit the notification required in 16VAC25-20-30 A to the department 20 days prior to the start of the requested blanket notification period. The notification submitted shall contain the following additional information:
    - a. The dates of work required by subdivision B 7 of this section shall be every workday during the blanket notification period excluding weekends or state holidays;
    - b. The estimate of asbestos to be removed required under subdivision B 5 of this section shall be signed by the owner and the owner's signature authenticated by a notary; and
    - c. A copy of the contract shall be submitted with the notification.
  2. The asbestos project permit fee shall be 0.5% of the contract price or \$470 whichever is greater. For contracts which require payments per square or linear foot of asbestos removed or encapsulated the contract price shall be the amount of asbestos estimated pursuant to subdivision B 5 of this section times the per foot charge in the contract;
  3. The contractor shall submit an amended notification at least one day prior to each time the contractor will not be on site. The fee for each amended notification shall be \$15;
  4. A contractor shall submit an amended notification whenever the actual amount of asbestos removed or encapsulated exceeds the original estimate. If the contract was for a fixed cost regardless of the amount of asbestos the amendment fee shall be \$15. If the contract was based on a price per square or linear foot the amendment fee shall be the difference between the actual amount removed and the estimated amount times the contract price per foot times 0.5% plus \$15; and
  5. Cancellation of a blanket notification may be made at any time by submitting a notarized notice of cancellation signed by the owner. The notice of cancellation must include the actual amount of asbestos removed and the actual amount of payments made under the contract. The refund shall be the difference between the original asbestos permit fee paid and either the actual amount of payments made under the contract times 0.5% or \$470 whichever is greater.
- E. Notification of less than 20 days may be allowed in case of an emergency involving protection of life, health, or property, including but not limited to: leaking or ruptured pipes; accidentally damaged or fallen asbestos that could expose nonasbestos workers or the public; unplanned mechanical outages or repairs essential to a work process that require asbestos removal and could only be removed safely during the mechanical outage. Notification and asbestos permit fee shall be submitted within five working days after the start of the emergency abatement. A description of the emergency situation shall be included when filing an emergency notification.
- F. No notification shall be effective if an incomplete form is submitted, or if the proper permit fee is not enclosed with the completed form or if the credit card payment required for facsimile transmission in 16VAC25-20-30 J is not approved.

G. On the basis of the information submitted in the asbestos notification, the department shall issue a permit to the contractor within seven working days of the receipt of a completed notification form and permit fee.

1. The permit shall be effective for the dates entered on the notification.

2. The permit or a copy of the permit shall be kept on site during work on the project.

H. Amended notifications may be submitted for modification of 16VAC25-20-30 B 3 through 11. No amendments to 16VAC25-20-30 B 1 or 2 shall be allowed. A copy of the original notification form with the amended items circled and the permit number entered shall be submitted at any time prior to the removal date on the original notification.

1. No amended notification shall be effective if any incomplete form is submitted or if the proper permit amendment fee is not enclosed with the completed notification.

2. A permit amendment fee shall be submitted with the amended notification form. The fee shall be in accordance with the following schedule:

a. For modification to 16VAC25-20-30 B 3, 16VAC25-20-30 B 4, and 16VAC25-20-30 B 6 through 16VAC25-20-30 B 10 - \$15;

b. For modifications to 16VAC25-20-30 B 5:

(1) the difference between the permit fee in 16VAC25-20-30 C for the amended amount of asbestos and the original permit fee submitted; plus

(2) \$15.

3. Modifications to the completion date may be made at any time up to the completion date on the original notification.

4. If the amended notification is complete and the required fee is included, the department will issue an amended permit if necessary.

I. The department must be notified prior to any cancellation. A copy of the original notification form marked cancelled must be received no later than the scheduled removal date. Cancellation of a project may also be done by facsimile transmission. Refunds of the asbestos project permit fee will be made for timely cancellations when a notarized notice of cancellation signed by the owner is submitted. Fifteen dollars for processing for the original notification, \$15 for each amendment filed and \$15 for processing the refund payment will be deducted from the refund payment.

J. Notification for any project, emergency notification, or amendment to notification may be done by facsimile transmission if the required fees are paid by credit card.

#### **16VAC25-20-40. Exemption.**

No asbestos project fees will be required for residential buildings. Notification for asbestos projects in residential buildings shall otherwise be in accordance with applicable portions of this chapter.

FORMS (16VAC25-20)

Asbestos Permit Application and Notification for Demolition/Renovation (eff. 7/94).

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